Final Report of the Thirtieth Antarctic Treaty Consultative Meeting

ANTARCTIC TREATY
CONSULTATIVE MEETING

Final Report of the Thirtieth Antarctic Treaty Consultative Meeting

New Delhi, India
30 April – 11 May 2007

Secretariat of the Antarctic Treaty
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ACRONYMS AND ABBREVIATIONS

ACAP	Agreement on the Conservation of Albatrosses and Petrels
ASMA	Antarctic Specially Managed Area
ASOC	Antarctic and Southern Ocean Coalition
ASPA	Antarctic Specially Protected Area
ATS	Antarctic Treaty system or Antarctic Treaty Secretariat
ATCM	Antarctic Treaty Consultative Meeting
ATCP	Antarctic Treaty Consultative Party
CAML	Census of Antarctic Marine Life
CCAMLR	Convention on the Conservation of Antarctic Marine Living Resources and/or Commission for the Conservation of Antarctic Marine Living Resources
CCAS	Convention for the Conservation of Antarctic Seals
CEE	Comprehensive Environmental Evaluation
CEP	Comittee for Environmental Protection
COMNAP	Council of Managers of National Antarctic Programmes
EIA	Environmental Impact Assessment
HCA	Hydrographic Committee on Antarctica
HSM	Historic Site and Monument
IAATO	International Association of Antarctica Tour Operators
ICG	Intersessional Contact Group
ICSU	International Council for Science
IEE	Initial Environmental Evaluation
IHO	International Hydrographic Organization
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission.
IP	Information Paper
IPCC	Intergovernmental Panel on Climate Change
IPY	International Polar Year
IPY-IPO	IPY Programme Office
IUCN	International Union for Conservation of Nature and Natural Resources – The World Conservation Union
IUU	Illegal, Unregulated and Unreported
RFMO	Regional Fishery Management Organisation
SATCM	Special Antarctic Treaty Consultative Meeting
SCALOP	Standing Committee for Antarctic Logistics and Operations
SCAR	Scientific Committee on Antarctic Research
SC-CCAMLR	Scientific Committee of CCAMLR
SPA	Specially Protected Area
SSSI	Site of Special Scientific Interest
UNEP	United Nations Environment Programme
WG	Working Group
WMO	World Meteorological Organization
WP	Working Paper
WTO	World Tourism Organization
WWF	Worldwide Fund for Nature

PART I

FINAL REPORT

Final Report of the Thirtieth Antarctic Treaty Consultative Meeting

New Delhi, India, 30 April -11 May 2007

(1) Pursuant to Article IX of the Antarctic Treaty, Representatives of the Consultative Parties (Argentina, Australia, Belgium, Brazil, Bulgaria, 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, Ukraine, the United Kingdom of Great Britain and Northern Ireland, the United States of America and Uruguay) met in New Delhi from 30 April to 11 May 2007, 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: Austria, Belarus, Canada, Colombia, the Czech Republic, Denmark, Greece, Romania, Switzerland and Venezuela. A delegation from Malaysia was present by invitation of ATCM XXIX to observe the Meeting.

(3) In accordance with Rules 2 and 31 of the Rules of Procedure, Observers from the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), the Scientific Committee on Antarctic Research (SCAR), and the Council of Managers of National Antarctic Programs (COMNAP) attended the Meeting.

(4) In accordance with Rule 39 of the Rules of Procedure, Experts from the following international organizations and non-governmental organizations were invited to attend the Meeting: the interim secretariat of the Agreement on the Conservation of Albatrosses and Petrels (ACAP), the Antarctic and Southern Ocean Coalition (ASOC), the International Association of Antarctica Tour Operators (IAATO), the International Hydrographic Organization (IHO), the International Maritime Organization (IMO), the Intergovernmental Oceanographic Commission (IOC), the International Programme Office for the International Polar Year (IPY-IPO), the International Union for the Conservation of Nature (IUCN), the World Tourism Organization (WTO), the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP).

(5) The Host Country fulfilled its information requirements towards the Contracting Parties, Observers and Experts through Secretariat Circular Notes, letters and a website, which included both public and restricted areas.

Item 1: Opening of the Meeting

(6) In accordance with Rules 5 and 6 of the Rules of Procedure, Dr Rasik Ravindra, Head of the Delegation of India, opened the Meeting and proposed Professor U R Rao as Chair of ATCM XXX. The proposal was accepted. Professor Rao made an opening statement (Annex D, page 187 of this Report).

(7) The Honourable Minister of Earth Sciences of India, Mr Kapil Sibal, made an opening address. In his address, the Minister drew the attention of the Delegations to the role played by the Antarctic Treaty in teaching us good governance and environmental stewardship in Antarctica, besides being a pre-cursor to the Space Treaty. The International Polar Year has brought countries together for the launch of a comprehensive science mission. The Minister pointed out that in the present scenario of globalization, where national barriers are fast disappearing, where time zones have shrunk, we must embark upon a new global enterprise, charting new areas of international collaboration in the true spirit of the Antarctic Treaty. He called upon the Antarctic Treaty Parties to cooperate in the scientific pursuit and evolve consensual scientific programmes endorsed by a mutuality of interest. He spelt out India's deep commitment to playing an active role in the domain of Antarctic science and logistics with the underpinning motto to preserve the pristine environment of the last frontier on earth. He also emphasised the need to give a fresh look at the growth of tourism in Antarctica, in the context of exploitation of the resources of this vast continent, as well as the imperative of protecting the Antarctic environment. The other issue which needs to be addressed, he said, is the importance of the polar region in the context of global Climate Change and its impact on our environment and human beings, going by the recent data and issues thrown up by the Inter-Governmental Panel on Climate Change. The text of the Minister's speech can be found in Annex D, page 189.

Item 2: Election of Officers and Creation of Working Groups

(8) Dr Valery Lytvynov, Head of the Delegation of Ukraine (host country of ATCM XXXI), was elected Vice-Chair. In accordance with Rule 7 of the Rules of Procedure, Mr Jan Huber, Executive Secretary of the Antarctic Treaty Secretariat, acted as Secretary to the Meeting. Mr Ajai Saxena, head of the Host Country Secretariat, acted as Deputy Secretary.

(9) Three Working Groups were established:

Working Group on Legal and Institutional Affairs;
Working Group on Tourism and Non-Governmental Activities;
Working Group on Operational Matters.

(10) The following Chairs of the Working Groups were elected:

Legal and Institutional Affairs Working Group: Professor Olav Orheim of Norway;

Tourism and Non-Governmental Activities Working Group: Mr Michel Trinquier of France;

Operational Matters Working Group: Dr José Retamales of Chile.

Item 3: Adoption of the Agenda and Allocation of Items

(11) The following Agenda was adopted:

1. Opening of the Meeting.
2. Election of Officers and creation of Working Groups.
3. Adoption of the Agenda and Allocation of Items.
4. Operation of the Antarctic Treaty System: Reports by Parties, Observers and Experts.
5. Operation of the Antarctic Treaty System: General Matters.
6. Operation of the Antarctic Treaty System: Review of the Secretariat's Situation.
7. Report of the Committee for Environmental Protection.
8. Liability: Implementation of Decision 1 (2005).
9. Safety and Operations in Antarctica.
10. The International Polar Year 2007-2008.
11. Tourism and Non-Governmental Activities in the Antarctic Treaty Area.
12. Inspections under the Antarctic Treaty and the Environmental Protocol.
13. Science Issues, Particularly Scientific Cooperation and Facilitation.
14. Operational Issues.
15. Education Issues.
16. Exchange of Information.
17. Biological Prospecting in Antarctica.
18. Preparation of the 31st Meeting.
19. Any Other Business.
20. Adoption of the Final Report.

(12) The Meeting adopted the following allocation of agenda items:

- Plenary: Items 1, 2, 3, 4, 7, 18, 19 and 20
- Legal and Institutional Working Group: Items 5, 6, 8 and 17
- Tourism and Non-Governmental Activities Working Group: Item 11
- Operational Matters Working Group: Items 9,10,12,13,14,15, and 16

(13) The Meeting also decided to allocate draft instruments arising out of the work of the Committee for Environmental Protection to the Legal and Institutional Working Group for consideration of their legal and institutional aspects.

Item 4: Operation of the Antarctic Treaty System: Reports by Parties, Observers and Experts

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

- The United States Government as Depositary of the Antarctic Treaty;
- The Australian Government as Depositary of the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR);
- The United Kingdom Government as Depositary of the Convention for the Conservation of Antarctic Seals (CCAS);
- The Australian Government as Depositary of the Agreement on the Conservation of Albatrosses and Petrels (ACAP);
- The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR);
- The Scientific Committee on Antarctic Research (SCAR);
- The Council of Managers of National Antarctic Programs (COMNAP).

These reports are reproduced at Annex F.

(15) In relation to Article III-2 of the Antarctic Treaty, the Meeting also received reports from:

- The Antarctic and Southern Ocean Coalition (ASOC);
- The International Association of Antarctica Tour Operators (IAATO);
- The International Hydrographical Organization (IHO);
- The International Union for the Conservation of Nature (IUCN).

These reports are reproduced at Annex G.

(16) The United States, in its capacity as Depositary, reported on the status of the Antarctic Treaty and the Protocol on Environmental Protection to the Antarctic Treaty (see Annex F, page 269). In the previous year, the Republic of Belarus had acceded to the Treaty. There are now forty-six Parties to the Treaty. There had been no accessions to the Environmental Protocol. Bulgaria, Chile, Finland, Greece, India, Japan and USA have provided notifications on the designation of Arbitrators for the Arbitral Tribunal under the Environmental Protocol. The United States urged Parties to approve Measures where action was needed to bring such Measures into effect.

(17) The United Kingdom, as Depositary of CCAS, reported that there had been no new accessions to the Convention, and urged the Parties to CCAS to respect the deadline for submitting the required reports (see Annex F, page 283).

(18) Australia, in its capacity as Depositary for CCAMLR, reported that since the 29th Antarctic Treaty Consultative Meeting the People's Republic of China had acceded

to the Convention. Australia further advised the Antarctic Treaty Parties that since ATCM XXIX no new States had become members of the Commission for the Conservation of Antarctic Marine Living Resources (see Annex F, page 287).

(19) In its capacity as the Depositary for ACAP, Australia reported that Argentina ratified the Agreement on 29 August 2006 and Norway acceded to the Agreement on 5 March 2007 (see Annex F, page 289).

(20) The President of SCAR introduced its report (see Annex F, page 291) and informed the Meeting that through 2006, SCAR continued to focus on research in five main thematic areas: (i) the modern ocean-atmosphere-ice system; (ii) the evolution of climate over the past 34 million years since glaciation began; (iii) the response of life to change; (iv) preparations to study sub glacial lakes and their environs; and (v) the response of the Earth's outer atmosphere to the changing impact of the solar wind at both poles. SCAR's 29th meeting and the second Open Science Conference, hosted by the Australian Antarctic Division in Hobart in July 2006, attracted some 850 participants from 32 countries. Delegates elected three new members – Denmark, Portugal and the International Union for Quaternary Science (INQUA). Bulgaria and the Ukraine moved from Associate to Full membership. Planning had begun for SCAR's thirtieth meeting, which is scheduled to take place in 2008 in Russia, with the Open Science Conference in St Petersburg from July 8-11, and the Delegates meeting in Moscow from July 14-16. SCAR and IASC together will organise the 2008 Open Science Conference.

(21) The Executive Secretary of CCAMLR introduced its report (see Annex F, page 311) and informed the Meeting that the Twenty-Fifth Meeting of CCAMLR was held in Hobart from 23 October to 3 November 2006. The most notable of the issues dealt with at that meeting included:

- CCAMLR fisheries in 2005/06;
- Illegal, unreported and unregulated (IUU) fishing;
- Ecosystem monitoring and management;
- By-catch in long line and trawl fisheries;
- Protected areas (including marine protected areas and bio regionalisation of the Southern Ocean), and
- Cooperation with international organizations, particularly the ATCM.

(22) Commenting on the CCAMLR report, some delegations stressed the challenge to not only CCAMLR but also the Antarctic Treaty system posed by the continuing occurrence of illegal, unreported and unregulated (IUU) fishing in the Southern Ocean.

(23) Some delegations also noted that following ATCM Resolution 1 (2006), the ATCM should continue to reflect upon the contribution made by CCAMLR to the conservation and protection of the Antarctic environment through encouraging practical cooperation between the ATCM and CCAMLR.

(24) The Representative of COMNAP introduced his report (see Annex F, page 321) and briefed the Meeting on the international coordination of hydrography in Antarctica aimed at safety of Antarctic ship operations. There was concern about the increasing number and size of vessels deployed in the Antarctic region sometimes without adequate charting to support their safe operation. COMNAP had convened a workshop on the topic "Waste Management in Antarctica", which had encouraged national operators to implement alternative and joint programmes on waste management. COMNAP also referred to its WP 35 *Guidelines and Recommendations for Energy Management*. The electronic information exchange system developed by ATCM with input from COMNAP will also be useful to the operators. COMNAP is also working on better coordination of search and rescue efforts by the operators. In this connection, COMNAP stressed the importance of accurate and unambiguous geo-referencing.

(25) The representative of the IHO introduced its report (see Annex G, page 357), and informed the Meeting of the cooperation in hydrographic surveying and charting of Antarctic waters. The Hydrographic Committee on Antarctica (HCA) of the IHO had had its 6th Meeting at Punta Arenas, Chile in November 2006, and had made much progress. The IHO representative expressed concern, however, at the low rate of participation by the Treaty Parties in hydrographic activities. The IHO also suggested that the Meeting might wish to consider an IHO proposal for a seminar to be organised during the 31st ATCM to raise awareness on the importance of hydrographic activities in the Antarctic. The Meeting welcomed the IHO report. The UK echoed the conclusion which urged Parties to assign a high priority to hydrographic survey activities. The Meeting also welcomed the offer from the IHO to develop a seminar to be delivered at ATCM XXXI.

(26) Commenting on the IHO report, and referring to its own report (see Annex F, page 291) SCAR noted that high quality bathymetric maps are needed not only for navigation but also for science. SCAR and the IHO are working together on an International Bathymetric Chart of the Southern Ocean. In recognizing how poorly the bathymetry of the Southern Ocean is known SCAR, together with the Scientific Committee on Ocean Research (SCOR), recommended that all countries using multibeam echo sounders on the Southern Ocean should plan ship tracks to ensure that gaps in bathymetric coverage are filled and that the data be submitted to the appropriate World Data Centre.

(27) The representative of IAATO introduced its report for 2006-2007 (see Annex G, page 369). IAATO informed the Meeting that it now had 83 members active in different fields, and new applications are in progress. Despite two vessel incidents and the increase in tourists, vessels and aircraft operations the Antarctic season operated smoothly. IAATO Members continued to support established practices that have proven effective and that assure long term protection of the areas visited. All operators submitted Environmental Impact Assessments (Initial Environmental Evaluations or Preliminary Assessments) or operational documents as required by domestic legislation to their appropriate National authority. The increasing number of vessels made further development of the web-based IAATO Ship Scheduler

programme more needed than ever. This programme makes it possible to schedule site visits prior to the season, assure the presence of not more than one ship at one site at one time, and take into account the requirements of the thirty-two IAATO site guidelines and the twelve ATCM adopted site guidelines. IAATO also continues to develop its reporting systems and its data base which provides comprehensive statistical information about Antarctic tourism.

(28) The representative of ASOC introduced its report (see Annex G, page 383). He noted that ASOC is looking for productive outcomes from the meeting, and that the region faces growing environmental challenges, with cumulative impacts from more activities. Global warming causes direct harm to the region, and regional and global action is needed. ASOC suggested that key subjects for discussion include how to achieve a "greener" IPY, regulating the rapid growth of tourism, mitigating acoustic impacts in the marine environment, creating marine protected areas, and using the Protocol's tools to protect species and sites. ASOC expressed its condolences regarding the Argentine vessel *Irízar*. While thanking ASOC, Argentina noted that subject to the context created by this situation it will proceed with the Argentine scientific activities as well as with the commitments made.

(29) The Ambassador of Belarus informed the Meeting about the process of Belarus's accession to the Treaty and the steps Belarus is taking in setting up a national Antarctic research programme. Brief information on this subject was distributed among the participants in IP 130 *Brief Information on the Activities of Belarus in the Polar Regions*.

Item 5: Operation of the Antarctic Treaty System: General Matters

Review of Measures

(30) The United States of America introduced WP 2 *Open-Ended Intersessional Contact Group on Review of Measures: Area Protection and Management* and commented on the low level of participation in this ICG. The United States reminded delegations that ATCM XXIX had requested the United States to chair an open-ended e-mail contact group to review in detail all recommendations and measures related to area protection and management; propose which would be appropriate for citation in a resolution or decision on the subject; draft a proposed resolution or decision; and prepare a working paper on the subject for consideration by ATCM XXX.

(31) The United States noted that it had circulated a paper in August 2006 analysing measures of a general nature on the subject of area protection and management relevant to Annex V of the Environmental Protocol. The United States noted that it had received no responses until just before the working paper deadline, and questioned whether there was sufficient support for this exercise. Delegations thanked the United States for its efforts and applauded the work to date. While some had not so far participated in the debate, this did not signify a lack of interest. Further work would be needed to take this issue forward. Japan, while supporting most of the conclusions reflected in the United States paper, raised questions relating to legal reasoning and

the use of terminology. The United Kingdom noted that further discussion to secure the right terminology could help resolve this issue. The Meeting supported continuing work on this issue.

(32) The United States chaired a contact group focusing on measures of a general nature on the subject of area protection and management. The Meeting adopted Decision 1 (2007) (see Annex B, page 135).

(33) The United States stated that, as depositary government, it would review its practice in relation to these measures, including how to adapt its annual report to the Parties in the light of Decision 1 (2007).

(34) The Secretariat introduced SP 9 *The Recommendations of the ATCM: Survey of Their Status* and SP 10 *Review of the Status of ATCM Recommendations on Environmental Issues*. The Meeting thanked the Secretariat for the significant work resulting in the two papers and noted that it had not had time to review these papers in detail.

(35) The United Kingdom commented that measures on "Historic Sites and Monuments" should be treated as within the category of measures on "Area Protection and Management", which referred to the whole of Annex V. The Meeting agreed that this adjustment should be reflected in any further versions of SP 9 and SP 10.

(36) Italy noted that the current wording in page 17, paragraph 6, of SP 10 which suggested some of the liability instruments were obsolete, was incorrect. Annex VI of the Protocol on Environmental Protection to the Antarctic Treaty did not cover all of the issues addressed by those instruments and Article 16 of the Protocol.

(37) Italy also noted that Decision 3 (1998) and Resolution 5 (1999) could not be considered obsolete since such instruments did not concern the specific issues of liability arising from environmental emergencies, as in Annex VI, but addressed liability in general terms. The Executive Secretary agreed that the wording in SP 10 was mistaken as it had only reflected environmental issues.

(38) With regard to the way forward on the review of the status of measures, the Meeting concluded that delegations should come to ATCM XXXI prepared to review the status of (1) measures concerning individual Antarctic Specially Protected Areas and Historic Sites and Monuments which were originally designated prior to the entry into force of Annex V to the Protocol on Environmental Protection to the Antarctic Treaty, with a view to considering the possibility of adopting a Decision or a Measure or Measures; and (2) measures of a general nature relating to other subject matter covered by the Protocol and its other Annexes, taking into account SP 10, with a view to adopting a Decision similar to Decision 1 (2007).

Review of Annex II

(39) The Russian Federation presented WP 19 *On Review of Annex II to the Protocol on Environmental Protection to the Antarctic Treaty: Conservation of Antarctic Fauna and Flora*. The United Kingdom introduced IP 137 *Re-Issue of WP 44 (ATCM XXIX)*

Review of Annex II of the Environmental Protocol. The Meeting thanked the Russian Federation and the United Kingdom for their papers which served as a good starting point for discussion.

(40) ASOC introduced IP 81 *Amendment or Modification of Annex II and the Implications for Further Annex Review* and suggested that this whole issue should be treated as a package rather than in parts.

(41) Several delegations noted that the review of Annex II had continued for a long period and that the Meeting should aim at early closure. Many Parties expressed a strong desire to complete work on Annex II at this meeting. Other delegations noted that some technical aspects of Annex II could be improved, but negotiation and entry into force of revisions could take a long time and the benefit might be limited compared to other possible avenues of protection.

(42) Some delegations indicated that they were not fully aware of the scientific background to the review. Other delegations emphasized that further scientific input was not needed and that what was required was a legal and policy perspective.

(43) Some delegations stated that they reserved their position as to whether Annex II should be amended and wished to hear explanations of proposed amendments to Annex II. Other Parties referred to the CEP's justification for the proposed amendments, working through Annex II article by article (up to Article 4.3). Parties agreed to reflect on these presentations and return to the issue of Annex II at ATCM XXXI.

CCAMLR

(44) Referring to the report of the CCAMLR observer, the United Kingdom and Australia suggested a further discussion of CCAMLR's efforts to address IUU fishing and its impact on the Antarctic environment.

(45) Australia, New Zealand and the United Kingdom introduced WP 45 rev 1 *Support for CCAMLR and Action to Combat Illegal, Unreported and Unregulated Fishing*, identifying IUU fishing in the Antarctic Treaty area as a huge threat and proposing a draft Resolution.

(46) Argentina noted the complex questions arising from the concept of unregulated fishing. Many delegations, including the USA, Spain and Argentina expressed support for the draft Resolution. Spain and Chile stressed the importance of reinforcing international cooperation in regard to closing ports to IUU fishing vessels.

(47) Consensus could not be reached on the adoption of a Resolution because a few delegations were concerned about the procedure involved. However, having considered items related to the work of the Commission for the Conservation of Antarctic Marine Living Resources and its cooperation with the ATCM, the Meeting:

- Noted with appreciation the report of the CCAMLR observer at ATCM XXX and the priorities of CCAMLR's work, as described in this report,

including the high priority given by it to combating illegal, unreported and unregulated (IUU) fishing;

- Reaffirmed their support for the work of CCAMLR and, inter alia, its continued efforts aimed at eliminating IUU fishing expressed in Resolution 3 (1999), Resolution 2 (2000), Resolution 2 (2001), and Resolution 3 (2002);
- Recalled Resolution 1 (2006), which recommended that the ATCM regularly reflect upon the contribution made by CCAMLR to the Antarctic Treaty system in respect of the conservation and protection of the Antarctic environment;
- Reminded also that the objective of the Convention on the Conservation of Antarctic Marine Living Resources is the conservation of Antarctic living resources, which includes rational use;
- Noted that within the area of the above mentioned Convention, IUU fishing is considered to be a threat to the conservation status of species, ecosystems and habitats upon which those species and associated and dependent species depend;
- Welcomed the progress made by CCAMLR in reducing IUU fishing in the Convention Area, including through the use of the system of inspection, implementation of the catch documentation scheme and centralized vessel monitoring scheme, and closing ports to IUU vessels;
- Expressed their common understanding that the activities of CCAMLR as one of the integral elements of the Antarctic Treaty system, including those in the area of combating IUU fishing, are to be conducted in accordance with the purposes and principles of the Antarctic Treaty, including those referred to in its preamble.

(48) Following the discussion on the items the Meeting recommended that all Parties to the Antarctic Treaty that are Parties to the Convention on the Conservation of Antarctic Marine Living Resources continue and strengthen their efforts to address IUU fishing in accordance with the conservation measures adopted by CCAMLR.

Other Matters

(49) The United Kingdom presented WP 43 *Guidance for Working Papers on Area Protection and Management*. Parties applauded this initiative. As CEP X indicated that it would continue consideration of the details at ATCM XXXI, the Meeting encouraged Parties to use the guidance during the intersessional period on a trial basis, and provide comments to the United Kingdom to facilitate the submission of a revised version of the guidance to CEP XI.

(50) The Russian Federation presented IP 65 *Concept and Structure of the Draft Federal Law of the Russian Federation "On regulating activities of the Russian citizens and legal entities in the Antarctic"*. The Meeting thanked the Russian Federation for this useful update on its legal process.

(51) The Netherlands introduced WP 34 *Identification of Activities Covered by Article VII.5 of the Antarctic Treaty*. The paper envisaged a two-step process with a view to compiling an indicative list of the types of activities covered by Article VII.5 of the

Antarctic Treaty. As a first step, it proposed to request Parties to submit, on a voluntary basis, a list of the type of activities for which advance notice is given under Article VII.5 of the Antarctic Treaty. Some delegations expressed the view that, considering the workload imposed on the Parties by the proposal, the practical need and purpose of this exercise should be more clearly identified. Some delegations expressed the view that the identification of activities covered by Article VII.5 of the Antarctic Treaty could be useful, in particular for the implementation of Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty on Liability Arising from Environmental Emergencies. It was suggested that Parties interested in this proposal pursue it in informal consultations on liability.

(52) ASOC presented IP 84 *Strengthening the CEE Process*, describing it as an initial contribution to the longer term future scrutiny of Annex I to the Protocol on Environmental Protection to the Antarctic Treaty and criticizing the fact that no CEE had resulted in a proposal being cancelled. Some delegations commented that the quality of draft CEEs showed that their own national preparations in advance of presenting a CEE were rigorous, and this was a reason why many proposals did not require significant alteration.

(53) The Executive Secretary introduced SP 6 *Manual for the Submission of Documents to the Antarctic Treaty Consultative Meeting and the Committee for Environmental Protection*. The Meeting thanked the Secretariat for its work on this paper, and noted that in its present form it was mind-numbingly technical and that, for some purposes, a simpler version would be more helpful. The Executive Secretary undertook to produce a simpler version more appropriate for those Working Papers that do not have illustrative material.

(54) Chile introduced the subject of official translations of Antarctic place-names and the Meeting agreed that further examination was required to clarify the ATCM practice on this matter.

(55) The Meeting decided to send a Message to stations in the Antarctic (see Annex I, page 401).

Item 6: Operation of the Antarctic Treaty System: Review of the Secretariat's Situation

2006/07 Activities

(56) The Executive Secretary introduced SP 2 *Antarctic Treaty Secretariat Report 2006/07* and gave a brief resume of each of the sections of the report. The Executive Secretary noted that due to the timing of the ATCM, the financial report should be considered as provisional as it had still to be audited.

(57) Delegations complimented the Secretariat for the work during 2006/07 put into timely publication of the ATCM XXIX report, updating the websites, the electronic information exchange system, and the database of resolutions and decisions taken at ATCM. One delegation suggested, with support from the Meeting, that the section

on Secretariat travel should include a summary of the objectives for each period of travel and an assessment of whether these were met.

(58) The Meeting thanked the Executive Secretary for the Provisional Financial Report and on the financial management of the Secretariat during 2006/07.

Antarctic Treaty Handbook

(59) Some Parties questioned the invitation to academics to contribute to the Antarctic Treaty Handbook. The Executive Secretary explained that as none of the Secretariat were lawyers, such legal expertise had been sought from respected authoritative sources only for the purpose of completing the draft of introductory narratives. This appeared to be more expeditious than asking the 28 Consultative Parties to become involved in the drafting process, and the intention had always been to circulate it in draft to all ATCPs for review and approval.

(60) The Meeting noted that the Handbook was the property and the responsibility of the Antarctic Treaty Consultative Parties, and for purposes of copyright could not be transferred. A version produced by the Secretariat would be perceived as – and should be – authoritative, with explanatory texts agreed by the Parties. It was noted that transfer to the Secretariat of responsibility for preparing the Handbook made this especially important, compared with the previous versions edited by the United Kingdom, Chile, and the United States. It was agreed that individuals assisting the Secretariat in preparing the Handbook would not receive credit as authors and would not be compensated.

(61) The Meeting agreed that the updating of the Handbook should take as its starting point the Ninth Edition, produced by the United States, which had a concise factual introduction.

(62) Chile reminded the Meeting of its handbook produced in 1991 in Spanish and suggested especially that its structure could be useful in assisting with the updating of the Handbook.

(63) The Meeting instructed the Secretariat to proceed with production, and transmit the draft Handbook to the Consultative Parties with sufficient time for them to review it, provide comments, and indicate if they have any objection to its publication.

Staffing Matters

(64) The Executive Secretary was asked for further clarification of the position of secretariat staff under Argentine labour and social welfare legislation, taking into account the Declaration received from the Argentine Ministry of Foreign Affairs. The Executive Secretary expanded on the written report and expressed his confidence that the issue of implementation would be successfully resolved shortly. At the same time he noted that Argentine authorities had been extremely helpful in this regard.

(65) Argentina stated that every time the Executive Secretary had requested assistance this had been provided, consistent with the Declaration of the Argentine Republic on the Antarctic Treaty Secretariat (Annex H, Final Report of ATCM XXIX).

(66) The Executive Secretary noted that the employment situation of the part-time employees would be regularized following approval of the Draft Secretariat Programme 2007/08 (see Paragraph 77 below) by the Meeting.

(67) The Meeting noted that the current term of the Executive Secretary was due to expire in September 2008 and therefore needed to consider this issue. Noting the information from the Executive Secretary that he would be available for one further year, it was decided to re-appoint Mr Johannes Huber for an additional term of one year. The Meeting adopted Decision 2 (2007) to this effect (see Annex B, page 139).

(68) The Meeting decided to consider developing procedures for the appointment of the next Executive Secretary at ATCM XXXI.

Financial Matters

(69) The Meeting discussed the issue of the surplus accumulated up to 31 March 2006 ($324,533) as mandated by Paragraph 7 of Decision 1 (2006) and the newly accumulated surplus from the year 2006/07 ($58,600). The Meeting considered several options regarding the disposition of this total accumulated surplus of $383,133. The Meeting also considered the rights of each Party under Financial Regulation 6.3 to request from the Secretariat a credit for its proportional share of a surplus.

(70) From the perspective of good financial management, the Meeting agreed to treat the total amount of the surplus as income for the year 2008/09, and to reduce the variable part of the Parties' 2008/09 assessed contributions in proportion to their relative contributions to the budget over the past three years (2004/05, 2005/06, and 2006/07). The Meeting recognized that this was a one-off solution to exceptional circumstances resulting in a significant surplus during the formative years of the Secretariat.

(71) Whilst agreeing to this, the United Kingdom, Spain and Sweden indicated that they had a strong preference that further time be made available to consider options to use the surplus for practical one-off initiatives which would benefit the Antarctic Treaty system. Further, these Parties noted that it may prove difficult in the future to secure investment for new initiatives from Parties if the surplus was used to reduce contributions in 2008/09.

(72) The Executive Secretary introduced SP 4 rev 1 *Contributions to the Secretariat 2005 – 2008*. Some delegations noted that they had paid their contributions before the paper was issued and these had not been included. The Executive Secretary noted that contributions were recorded by the Secretariat as soon as the bank informed the Secretariat that these remittances had been received.

(73) The Meeting welcomed the announcement by the Russian Federation that it had upgraded its financial contribution to level 'C'. The Executive Secretary noted that this would take effect from 2008/09.

(74) Parties noted the importance to them of receiving information containing details of the size of their financial contribution and the due date. The Executive Secretary reminded the Meeting of the provisions of Decision 2 (2003) and Decision 3 (2004), which provided that the Secretariat notifies all Parties of their assessed contributions before 1 January preceding the financial year in question. The Secretariat is ready to provide Parties with additional notification in any desired format or timing consistent with the provisions of the relevant Decisions.

(75) Argentina introduced WP 44 *Appointment of External Auditor* and IP 141 *Supplemental information to WP 44 on the external audit of the Antarctic Treaty Secretariat*. The Meeting agreed with the recommendation to re-appoint the auditor and adopted Decision 3 (2007) to this effect (see Annex B, page 145).

2007/08 Activities and Budget

(76) The Executive Secretary introduced SP 3 *Draft Secretariat Programme 2007/08*. The Executive Secretary also noted that although the draft budget indicated an increase to cover inflation, the exchange rate between the Argentine Peso and the US Dollar had been fairly stable over the last three years and was not expected to change.

(77) The Meeting took note of the provisional accounts for 2006/07 (Attachment to SP2). The Meeting approved Decision 4 (2007) containing the Secretariat's Programme and Budget for 2007/08, as revised during the Meeting (see Annex B, page 149).

Other Matters

(78) Belgium asked for an update on the current status of Measure 1 (2003). The Executive Secretary noted that 20 of 27 countries had approved it. The Meeting urged those Parties that had not yet approved Measure 1 (2003) to do so as soon as possible.

(79) India suggested that the Secretariat produce guidelines for ATCM host countries, to improve coordination between a host country and the Secretariat. The Meeting supported this proposal, which would indicate clearly the respective responsibilities of the host country and the Secretariat, as well as listing the deadlines for submission of papers in advance of an ATCM.

(80) Referring to Rule 26 of the Rules of Procedure, the Meeting noted the importance of having definitive versions of Measures adopted in accordance with the procedures of Article 6.1 and 8.2 of Annex V to the Protocol on Environmental Protection within sufficient time to implement them prior to their coming into force within 90 days. To this end, the Parties asked the Secretariat to ensure the texts as adopted were available on its website in all Treaty languages within seven days following the end of the ATCM. Parties then agreed to provide any additional corrections required within a further fourteen days. The Secretariat would ensure that these corrections were clearly marked in the texts posted to the ATS website for a further seven days for final comments. The definitive texts would then be confirmed and circulated by the Secretariat to all Parties.

(81) The Executive Secretary presented SP 5 *Status of the Secretariat Archive of Final Reports*. The Executive Secretary asked Parties to scour their archives for old Final Reports for inclusion in the Secretariat Archive.

Item 7: Report of the Committee for Environmental Protection

(82) Dr Neil Gilbert, Chair of the Committee for Environmental Protection, introduced the report of CEP X (see Annex E, page 197). The CEP considered more papers than ever before: Thirty-two Working Papers, seventy-five Information Papers and four Secretariat Papers. The full list of the papers, listed under the CEP agenda items, can be found in Annex I to the CEP Report.

Operation of the CEP and Strategic Discussions on its Future (CEP Agenda Items 3 and 4)

(83) In order to deal more efficiently with its ever increasing work load, the Committee had considered a five year work plan, which had been prepared by an intersessional contact group. The CEP had agreed to endorse the plan on a provisional basis and to provide opportunity for further comment on it during the intersessional period. The provisional draft plan can be found in Appendix 1 of the CEP Report.

(84) The Committee had addressed a proposal to establish a standing group to improve the intersessional process for reviewing management plans for protected and managed areas, and had agreed to establish an informal group on a trial basis to be convened by CEP Vice-chair Tania Brito (Brazil). The Committee had adopted proposed terms of reference and timelines, which can be found in Appendix 2 to the CEP Report.

(85) After receiving a report by the Secretariat on the environmental sections of the Electronic Information Exchange System, the Committee had agreed to continue with the trials of the system during the intersessional period and had agreed that all Members should participate in populating the system with the required data.

Environmental Impact Assessment (CEP Agenda Item 6)

(86) The Committee had considered a draft CEE for a new Indian research base at Larsemann Hills and had concluded in its advice that the draft CEE meets the requirements of Annex I to the Environmental Protocol. The Meeting endorsed the advice, which can be found in Appendix 3 of the CEP Report. Australia congratulated India on the hard work that had gone into the CEE and expressed its desire to work together with all Parties operating in the Larsemann Hills region to make the ASMA a success. India thanked the other partners in the ASMA for their understanding and appreciation for the points raised by India in the process.

(87) The Committee had considered an update on the drilling above Lake Vostok, noting that a Final CEE for water sampling of the lake will be presented at ATCM XXXI.

(88) On the question addressed to the Committee by the 29th ATCM, "whether the proposal to prevent ships carrying more than five hundred passengers from landing in Antarctica was an environmentally responsible and precautionary approach or whether they would recommend an alternative", the vast majority of the CEP members had endorsed the proposal to prevent ships carrying more than five hundred passengers from landing. However, the Committee recommended that more consistent and dedicated monitoring of tourism be undertaken to ensure that data and information are available to support such decision making. The Meeting addressed landings from large passenger vessels further under Agenda Item 11 below.

(89) The Committee had considered options for strengthening the CEE process. It had decided to amend its guidelines on CEP handling of draft CEEs to make the establishment of an Intersessional Contact Group on the draft CEE automatic. The Committee also had agreed to ask the ATCM to consider allocating funds to allow for the translation of draft CEEs into the four Treaty languages.

(90) Parties welcomed the Committee's decisions on strengthening the CEE process and were supportive of its proposal to translate draft CEEs into the four Treaty languages. Parties noted that translation of the draft CEEs should occur at the time of circulation of such documents, at least 120 days before the next CEP meeting. The budgetary consequences of translating the CEEs would have to be taken into account. Although the CEP Chair informed the Meeting that he was not aware of any planned CEEs for the coming year, China subsequently announced its plans in this regard (see below).

(91) Consistent with discussion in the CEP about the benefits of Parties providing advance notification of activities that may be subject to a CEE, China informed the Meeting that it was considering establishing a new research station at Dome A. The new station would be a summer-only facility with the capacity of holding fifteen expeditioners. Following the required environmental assessment process, the construction might take place in either the 2008/09 or 2009/10 season. In accordance with Annex I of the Environmental Protocol, an environmental impact assessment would be undertaken for this proposed activity and China would notify Parties and the CEP at the earliest opportunity.

Area Protection and Management (CEP Agenda Item 7)

(92) The Committee had considered new or revised draft management plans for three Antarctic Specially Managed Areas and seven Antarctic Specially Protected Areas. The Committee also had considered a proposal for one new Historic Site or Monument. Five management plans had been referred by the Committee for intersessional review.

(93) The Meeting adopted Measure 1 (2007) containing the two revised management plans for ASPA 109 (Moe Island) and ASPA 129 (Rothera Point) referred to it by the Committee (see Annex A, page 57).

(94) The Meeting also adopted Measure 2 (2007) instituting ASMA 5 (Amundsen-Scott South Pole Station) and 6 (Larsemann Hills) (see Annex A, page 75).

(95) The Meeting also adopted Measure 3 (2007) adding the Monument to the Antarctic Treaty to the list of Historic Sites or Monuments (see Annex A, page 131).

(96) On Site Guidelines for Visitors, the Meeting adopted Resolution 1 (2007) containing two new site guidelines for Brown Bluff and Snow Hill (see Annex C, page 171).

Conservation of Antarctic Fauna and Flora (CEP Agenda Item 8)

(97) The Committee had had a substantial discussion on the issue of whether the southern giant petrel should be designated as a Specially Protected Species under Annex II to the Protocol, given the high degree of uncertainty over the status of the species. In order to prepare a better basis for decision-making on the issue, the Meeting adopted Resolution 2 (2007) (see Annex C, page 175). The Meeting encouraged Parties to make available existing relevant scientific data and results to SCAR for this purpose.

(98) With reference to Paragraph 260 of the CEP Report, the Meeting noted the comment from Germany, in response to a question from SCAR, that the atypical strandings of giant squid mentioned in that paragraph, which had been reported by Spanish scientists, had taken place outside the Antarctic region.

(99) On the basis of SCAR's advice, the Committee had agreed to retain the Ross seal on the list of Specially Protected Species under Annex II.

Environmental Monitoring and Reporting (CEP Agenda Item 9)

(100) The Committee had agreed to add Climate Change as a sub-item under its agenda item on Environmental Monitoring and Reporting. Delegations welcomed this decision, which recognized the importance of the issue, and looked forward to further work by the Committee on this topic.

Other Matters

(101) The Committee had considered a draft checklist for inspecting protected areas and had decided that the list would be resubmitted to CEP XI for further consideration.

(102) The Committee had endorsed a set of guiding principles on best practice for energy use prepared by COMNAP.

(103) The Committee had re-elected Dr Yves Frenot for a second term as first Vice-chair of the CEP. The Chair congratulated Dr Frenot on his re-election and congratulated Dr Neil Gilbert, Dr Frenot and second Vice-chair Tania Brito on a successful and productive CEP meeting.

Item 8: Liability: Implementation of Decision 1 (2005)

(104) The United Kingdom introduced IP 54 *Antarctic Liability: Domestic Implementation of Annex VI to the Environmental Protocol: Key Issues and Areas of Difficulty*, noting that the starting point was Decision 1 (2005). The United Kingdom noted that the

various issues included in the list had been contributed by experts from a wide range of Parties. It was not intended to constrain Parties in their interpretation of the Annex, but to facilitate exchange of ideas and experience among those involved in preparing legislation. There were several areas where experts could usefully pool information, for example about the availability of adequate affordable insurance cover. Many delegations expressed appreciation for this paper and thanked the United Kingdom, as it would be of great assistance in their respective paths towards ratification of Annex VI.

(105) The delegations also warmly welcomed the assistance from Sweden, the first Party to approve Annex VI and to enact domestic legislation covering this issue, in helping them to understand the implications for their own future domestic legislation.

(106) Delegates exchanged views on a number of the issues listed in IP 54, including: the meaning of "strict liability" in common law and civil law systems, and how to translate it into Spanish; the relevance of identifying activities covered by Article VII.5 of the Antarctic Treaty; the availability of suitable insurance cover; the extensive interface with various aspects of domestic legal systems, and the need of many Parties for coordination with a range of ministries and agencies.

(107) In addition to the sixteen Parties who had announced this step at ATCM XXIX, India, Italy, Japan, Peru and South Africa all informed the Meeting that they had started their internal review process. The Meeting warmly welcomed this information.

(108) The Meeting urged Parties to approve Annex VI as soon as possible and, to this end, agreed that it would be useful for experts to continue exchanging views and information informally. It was agreed that those interested in participating in any intersessional exchanges should ensure they were on the email address list of Annex VI experts maintained by the Secretariat.

(109) The Meeting urged delegations to be prepared at ATCM XXXI to present information on their domestic implementation or work in progress, including any problems encountered.

Item 9: Safety and Operations in Antarctica

(110) Norway introduced WP 37 rev 1 *The M/S Nordkapp incident*, describing the grounding of the cruise vessel *M/S Nordkapp* which occurred on 30 January 2007 during passage of Neptune's Bellows, Deception Island.

(111) Norway advised that the cause of the grounding was human error (faulty navigation). A spill of marine diesel oil (MGO) occurred during response action following the grounding. Although the grounding was extensive, and the damages sustained by the ship were large, the overall consequences for human safety were limited. No long term environmental impacts of the incident were observed.

(112) Many Parties thanked Norway for its detailed report and highlighted the importance of keeping the national programmes and nearby stations informed during an incident and the need for feedback after the incident to better organise emergency planning.

Norway stressed appreciation to all Parties that provided assistance during and after the incident. Norway will work with Parties in the intersessional period as outlined in the Working Paper, on issues such as oil spill response equipment carried on vessels, and will report back to the next ATCM.

(113) Chile presented IP 119 *Varamiento de buques en Isla Decepción y situación ocurrida con la M/S "Nordkapp"*, with information about assistance offered by Chile and other information. Chile also reported about the Argentine-Chilean Joint Naval Patrol, which operates during the austral summer providing assistance in the case of incidents in the Antarctic Peninsula region. Chile stressed concern about the possible occurrence of incidents similar to the *M/S Nordkapp* incident in the future. Spain pointed out another incident which took place on Deception Island during the same season with the grounding of the vessel *Lyubov Orlova*. Spain and Argentina suggested that in incidents similar to that of the *Nordkapp* and *Orlova* the nearest stations and/or vessels should be informed immediately in order to facilitate effective response.

(114) IAATO was pleased to note assistance provided by Parties to the *M/S Nordkapp*. The Marine Committee of IAATO would make a detailed assessment of the incident at its Annual General Meeting in June this year. The assessment would focus on the lessons to be learnt, in particular for the prevention of and responses to incidents. IAATO supported the various parties that proposed an improved communication system and would be pleased to work with COMNAP to that end.

(115) In response to a question posed by the Russian Federation, COMNAP noted that although it was possible to include information on the position of non-IAATO tourist vessels in its systems, it was unlikely that this information would be provided to COMNAP regularly. COMNAP also advised that it had plans for further expansion of the Ship Position Reporting System into a general voyage information system, including schedule information and a range of new parameters including information on doctors and helicopters on board. This work would be coordinated with IAATO and the two organizations' systems would interact and exchange information.

(116) COMNAP introduced IP 50 *International Coordination of Hydrography in Antarctica: Significance to Safety of Antarctic Ship Operations,* mentioning that whilst there had been relatively few accidents in the Antarctic region, there was an increase in the number and size of vessels deploying into the region and pushing into sea areas where hydrographic surveys and charting are inadequate to support their safe operation.

(117) COMNAP stressed that accurate charts are essential to the management of human activity. Since hydrographic activity was expensive and assets scarce, coordination of international efforts would be of the utmost importance. There was an urgent need to uphold, and where necessary clarify, responsibilities of both government and private sector operators. Top-level support would be required for the ongoing efforts of COMNAP, IAATO and the IHO HCA. Several Parties agreed that the work of this IHO HCA Committee was particularly important and that resources and funding should be provided to undertake hydrographic charting in Antarctica.

(118) The US noted the need to establish priorities among mapping efforts because of their cost and the scarcity of mapping assets.

(119) Several Parties and SCAR stressed the relevance of hydrographic information in Antarctic activities and research.

(120) COMNAP also presented IP 99 *Contingency Planning and Emergency Response*, noting that this was a work in progress on which the ATCM would be kept informed.

(121) COMNAP highlighted that current systems were essentially structured around and supported by a range of international agreements in place. Safety in the Antarctic region was actively supported by the five Rescue Coordination Centres (RCCs) in South Africa, Australia, New Zealand, Chile and Argentina. The RCCs functioned well and it was noted that an effective way of supporting safety was to collaborate with and support the RCCs. COMNAP also highlighted the unique presence in the Antarctic Peninsula region every summer of the Combined Antarctic Naval Patrol of Argentina and Chile that provided dedicated rescue assets.

(122) IP 118 *Seguridad en la aeronavegación en la península Antártica* (Chile) was not introduced and was taken as read. Argentina declared that due to time constraints this document could not be studied and it reserved its position.

(123) France recalled that many international agreements and instruments were relevant to this question and suggested that an analysis of these international agreements and instruments would be very useful, in particular as input into COMNAP's ongoing work on the matter.

Item 10: The International Polar Year 2007-2008

(124) On behalf of SCAR and the IPY-IPO, Dr David Carlson introduced IP 73 *IPY Report for ATCM XXX* with some recent updates from IPY. Recalling the central themes from the Edinburgh Declaration on IPY, he then described IPY launch activities. In a 24-hour period on 1 March, many schools around the world conducted polar activities and then launched virtual balloons on a Google site that all could view. The IPO will work to expand the networks of schools and teachers to Africa, Asia, Russia and South America. The IPY web site functions as the information centre for IPY activities – it has already a report from this ATCM.

(125) Dr Carlson showed the 228 IPY-endorsed projects at the start of IPY, and emphasized the international nature of these projects. In terms of IPY funding, he estimated, for the 2-year IPY period, existing science funds (annual polar research resources reprogrammed for IPY) at $820 million and new science funds at $430 million for a 2-year total of $1.25 billion. He emphasized the need for approximately $250 million of additional funds. Many parties plan new ships and new or refurbished Antarctic stations during IPY. Although it was difficult to estimate at this stage, the total amount of these infrastructure investments during IPY probably ran to several hundred millions of dollars.

(126) Dr Carlson emphasized the urgency of plans for legacy activities, in particular for sustained observational capabilities in both polar regions and for networks of young scientists – the future generations of polar researchers. Finally, he described plans for IPY science conferences approximately every second year. There would be a mid-term IPY assessment conference as part of the SCAR/IASC Open Science Conference in July 2008 in St Petersburg, an early IPY science conference in June 2010 in Oslo, and the SCAR Open Science Conference in July 2010 in Buenos Aires. He noted that the IPY meeting in 2012 would address science and policy and invited the ATCM to consider its input to that meeting in due course. Dr Carlson noted that the Executive Secretary of the Antarctic Treaty Secretariat attended the ICSU-WMO Joint Committee as an observer.

(127) Chile noted that although it might have omitted to inform IPY-IPO, it did however issue a declaration regarding this significant international event. Furthermore, Chile organised an IPY event on board of the Swedish ice-breaker *Oden* when she stopped in Punta Arenas on her way to Antarctica, and other activities mentioned in WP 41.

(128) The United Kingdom thanked Dr Carlson for the IPY Report and noted the request by IPY for Parties to maintain and extend long term monitoring of change in all parts of the Antarctic and for Parties to cooperate with SCAR and other appropriate international bodies to create a coordinated Antarctic observing network.

(129) The Meeting recalled that the CEP in its advice to the ATCM had encouraged the Parties to adopt a statement on this issue, perhaps by means of a Resolution.

(130) The UK therefore proposed that the Meeting adopt a Resolution on long-term monitoring and sustained environmental observation in Antarctica. This was agreed and the Meeting adopted Resolution 3 (2007) (see Annex C, page 177).

(131) Uruguay introduced IP 24 *Pasantías antárticas para el Año Polar Internacional*, describing their traineeship programme oriented to final year students, for them to conduct their thesis research at Base Artigas.

(132) Argentina introduced IP 28 *Scientific Activities at the Argentine Antarctic Bases and International Polar Year* and offered their facilities for new projects from other Parties.

(133) SCAR introduced IP 49 *Aliens in Antarctica* (Australia, SCAR), noting that the cooperation of Parties and of COMNAP was sought to facilitate the collection of samples from visitors to Antarctica and from cargoes, so as to identify the flux of spores, seeds and other propagules into the continent from elsewhere. COMNAP confirmed that it was working with the project and investigators to find how COMNAP and national Antarctic programmes could best support this project. SCAR noted that propagules may well have been introduced into Antarctica before Antarctic exploration began, as components of wind-blown dust. There was therefore merit in analysing dust in ice cores for pollen and the like, to establish a baseline for the non-human introduction of propagules.

(134) The Russian Federation introduced IP 66 *Activities of Russia in Antarctica at the first stage of the International Polar Year (2007-2008),* detailing that they started

IPY activities in November 2006 during their 52nd expedition. Russia's IPY projects cover the Arctic and the Antarctic. They have also ten bipolar projects and twenty social projects. In March 2007, the Russian Federation successfully completed a joint Russian-German project studying the structure of the sediment layer of the Sea of Cooperation and of Prydz Bay from the Russian vessel Academic Alexander Karpinsky and the German vessel Polarstern.

(135) ASOC introduced IP 86 rev 1 *The Human Footprint of the IPY 2007-2008 in Antarctica*, highlighting the large spatial extent of IPY activities in the Treaty area as part of ASOC's IPY endorsed project *Enhancing the Environmental Legacy of the IPY in Antarctica*.

(136) Romania introduced IP 90 *Participation of Romanian Scientists in the International Polar Year 2007-2008*, with information on a series of projects covering areas such as: glaciology, limnology, pedology, biology, biodiversity, microbiology, medicine, biotechnology and others.

(137) Japan introduced IP 106 *IPY 2007-2008 Launch in Japan,* commenting that the projects with Japanese participation include the following disciplines: upper atmosphere science (2 projects); atmosphere science (16); glaciology (16); permafrost studies (4); biology (10); geosciences (8); oceanography (9); marine biology (7); data management (4) and outreach activities (8). To celebrate the beginning of the IPY, Japan organised the International Symposium "Asian Collaboration in IPY 2007-2008" in Tokyo in March 2007.

(138) The Netherlands introduced IP 142 *The International Polar Year in the Netherlands* and announced that the Netherlands participates in about thirty-six international endorsed IPY projects, including thirty-one science projects, one data project and four projects on education and outreach. Most of the science projects with active involvement by Dutch researchers focus on the Arctic region or both polar regions.

(139) Spain introduced IP 143 *The Spanish Research Activities During IPY*, including twenty-five funded research projects at both poles, using national and international facilities, several cultural exhibitions, a short description of the Spanish infrastructures available during the IPY and planned research activities.

(140) China congratulated all Parties for their good start to the IPY, and briefly introduced information about the Chinese IPY Program, which included the plan for PANDA (Prydz Bay, Amery Ice Shelf and Dome A Observatories), a plan for an Arctic scientific research expedition, a plan for international cooperation, and an education outreach data sharing plan.

(141) Other Information Papers submitted under this Agenda Item included:

- IP 76 *Australia in the International Polar Year (2007/08)* (Australia)
- IP 87 *Marine Protected Areas – Steps Forward for the ATCM* (ASOC)

Item 11: Tourism and Non-Governmental Activities in the Antarctic Treaty Area

(142) The issues discussed under this agenda item were divided into the following broad categories:

- Overview of Antarctic Tourist Activity in the 2006/07 Season
- Ships Carrying More than 500 Passengers
- Management of Maritime Traffic
- Use of Sites
- Tourist Vessels Flagged to Non-Parties
- Other Matters

Overview of Antarctic Tourist Activity in the 2006/07 Season

(143) IAATO introduced IP 121 *IAATO Overview of Antarctic Tourism 2006-2007 Antarctic Season*, giving the industry's comprehensive and detailed report of nearly all tourist activities in Antarctica. It noted that both IAATO and non-IAATO Antarctic tourism activities resulted in an estimated total of 37,506 tourists entering the Antarctic Treaty Area, a 14% increase in visits over the 2005/06 season. IAATO noted the importance of looking at the spread of activities in which tourists engaged.

(144) IAATO drew attention to proposed plans for large ship activities in Antarctica being considered by tour operators organised from non-Parties to the Antarctic Treaty (and non-members of IAATO) which could operate outside the Antarctic Treaty system.

(145) IAATO also requested Parties to ask operators to use the standard Post Visit Report Form for inclusion of data in the database of tourism statistics.

(146) ASOC introduced IP 85 *Tourism and the Duty for ATCP Action*. The paper expressed ASOC's concerns about the accelerated rates of growth of tourism in Antarctica, in particular in the Antarctic Peninsula region. ASOC said that in its view the ATCPs had a duty to act to ensure appropriate and effective regulation of commercial tourism, in order to protect the environment of Antarctica and other values to which they are committed in the Environmental Protocol. ASOC identified three key areas for action and urged Parties to adopt appropriate measures aimed at: ending the use of very large cruise liners; preventing the establishment of tourism infrastructure ashore; and constraining the absolute scale of Antarctic tourism.

(147) Norway presented WP 37 rev 1 *The M/S Nordkapp Incident* on the grounding of a Norwegian tourist vessel during passage of Neptune's Bellows, Deception Island, Antarctic Peninsula, in January 2007. The incident had no serious consequences for passengers and crew and the environmental consequences were limited. Norway reported that during transferring of ballast from damaged tanks, some oil contaminated water and fuel was released into the waters of Port Foster at Deception Island.

(148) A number of IAATO tour operators and ships of the national programmes offered immediate assistance. The sister ship *M/S Nordnorge* evacuated all the passengers and the *Golden Princess* part of the crew. Norway was particularly grateful for the

assistance offered by the Spanish station *Gabriel de Castilla*, the Argentine Antarctic Programme and *HMS Endurance* (UK) which provided technical advice on the damage and on the use of maritime pollution equipment, as well as assistance for the evacuation of passengers.

(149) Norway informed the Meeting that immediately after the incident, it gave the Antarctic Treaty Parties a series of information bulletins through the Antarctic Treaty Secretariat until they considered that the situation was under control.

(150) Norway noted the main lessons learned from the incident which were related to types and use of response equipment, type of fuel used in Antarctic waters to reduce the consequences of an oil spill, preparation of passenger ships for SAR capabilities in remote areas, communication and cooperation during incidents, and issues related to information exchange by Treaty Parties.

(151) Chile recommended that Parties read IP 119 *Grounding of Vessels on Deception Island and the M/S "Nordkapp" Incident* with information about assistance offered by Chile and other information. In relation to the possible installation of a facility for marine monitoring capabilities on Deception Island, Chile pointed out that this initiative will be analyzed within the framework of the existing Management Group of ASMA 4, Deception Island. Argentina expressed reservations on the content of this document.

(152) A Party highlighted another incident in Deception Island in which the tourist vessel *Lyubov Orlova* ran aground and was towed away undamaged by the Spanish vessel *Las Palmas*.

Ships Carrying More than 500 Passengers

(153) The US introduced WP 6 *Approaches to Tourism Policy*, which contained a number of concrete proposals for action on the issue of tourism, as well as a draft resolution for consideration by ATCPs. It first proposed, based on a UK proposal introduced in Edinburgh, to establish a policy to limit landings by ships carrying 500 passengers or more, and also proposed a non-binding statement of policy endorsing for use by all tour operators a series of regulations that have proven necessary and successful for IAATO. The US also outlined a proposal to seek advice from appropriate expert bodies regarding issues related to vessels and necessary maritime standards to ensure passenger safety and minimize potential adverse effects of maritime activities on the Antarctic environment.

(154) In addition, the US encouraged Parties to take necessary steps to approve Measure 4 (2004) and for Parties to fulfil the provisions of the related Resolution 3 (2004) that was also adopted by the 27th ATCM at Cape Town. The US encouraged Parties and vessel operators to improve communications systems as a means for promoting safety of passengers and crew on tour and other vessels in Antarctica.

(155) The US believed that it was important that the ATCM underscore the importance of the Protocol in regulating tourism and suggested that the ATCM call on all Parties to

implement their obligations fully, including through ensuring that sufficient resources are available for governmental oversight.

(156) The Meeting noted that the CEP had considered the question directed to it by ATCM XXIX on whether a proposal to prevent ships carrying more than 500 passengers from landing passengers would be an environmentally sensitive and precautionary approach (see CEP X Final Report Paragraphs 94 – 103, Annex E, page 211). The vast majority of members concluded that they could support a precautionary approach as referred to by the ATCM and endorsed the proposal to prevent ships carrying more than 500 passengers from landing.

(157) The Meeting also noted that there were other issues including safety of maritime navigation and potential adverse effects on the Antarctic environment.

(158) Many delegations supported the proposal by the USA regarding a Resolution to discourage landings from ships carrying more than 500 passengers, although some delegations indicated their concern that this limitation would restrict the scope of the Protocol and that greater stress should be placed on the number of passengers actually landing rather than on the numbers carried on the vessel.

(159) The discussion also addressed the proposal to limit the number of passengers landing at any one time, the appropriate ratio of guides to passengers on land, and having only one tourist vessel visit a site at a time. ASOC paper IP 79 *The Case Against Tourism Landings from Ships Carrying More than 500 Passengers* reviewed the arguments for prohibiting landings for ships carrying more than 500 passengers.

(160) After lengthy discussion on all these aspects, Parties adopted Resolution 4 (2007) *Ship-based Tourism in the Antarctic Treaty Area* (see Annex C, page 179). Japan expressed the view that the phrase "consistent with their national law" in the Resolution be understood to mean "in accordance with their national law and regulations."

(161) Whilst welcoming the Resolution, some Parties noted that many tour operators, specifically those who are members of IAATO, already voluntarily operate under these and other standards and that the ATCM should return to this issue in the future.

(162) The Meeting also addressed the other issues in the United States proposal regarding a need for additional design, operational, and search and rescue guidelines; a possible need for special construction standards for large vessels; more stringent, regionally-specific navigational standards; and a general re-assessment of procedures whereby limited SAR resources can be employed to respond to potential maritime accidents.

(163) The Meeting agreed to establish, with support from the Secretariat, an informal open-ended web-based Intersessional Contact Group (ICG) until ATCM XXXI to examine the issue of further steps to address passenger vessels in the Antarctic Treaty area. The Meeting recognized that the International Maritime Organization (IMO) is currently considering guidelines for ships operating in Arctic and Antarctic ice-covered waters. The Meeting urged Parties to engage their shipping experts. The work of the ICG is not intended to delay or duplicate the work of the IMO. The ICG will have the following terms of reference:

1. Endeavour to:
   (a) develop a list and description of issues related to passenger vessels operating in the Antarctic Treaty area that deserve further review by bodies within the Antarctic Treaty system or by other expert bodies. Examples could include: (1) risk mitigation, such as (i) additional design and construction standards; (ii) operation and navigational standards; (iii) carriage and proper use of safety equipment; and (iv) vessel communications; and (2) search and rescue, such as (i) guidelines and (ii) assessment of procedures;
   (b) identify specific questions or proposals for further discussion by the ATCM for possible presentation to relevant expert bodies; and
   (c) suggest which expert bodies may be most appropriate to address the questions or proposals resulting from the ICG's work.
2. Relevant ATCM Observers and Experts will be invited to participate in the ICG.
3. Norway will act as the convenor of the ICG and will report to ATCM XXXI on the work of the ICG.

Management of Maritime Traffic

(164) The United Kingdom introduced WP 23 *Safety Issues Relating to Passenger Vessels in Antarctic Waters*, covering a series of practical steps that the ATCM could take towards further enhancing the safety of passenger vessels in Antarctic waters through making the "pairing" element of the IMO guidelines mandatory, endorsing IAATO's ship scheduler and seeking ATCM adoption of a Decision to formalize the role of IAATO in delivering the management of maritime traffic in the Antarctic Peninsula region. The UK also suggested developing an ice-map for each austral month to identify areas where the sea ice was greater than 1/10th ice cover.

(165) The Meeting welcomed the opportunity to discuss these important issues. However, some Parties questioned whether "pairing" of vessels or developing an ice-map was appropriate, and wanted more time to consider these issues further. While they acknowledged the work of IAATO, many Parties did not feel it appropriate to delegate the responsibility for regulating tourist maritime traffic in the Antarctic Peninsula area to the industry. The UK commented that the intention had not been to delegate the responsibility but rather to identify options to provide for a mechanism to deliver the terms of Parties' authorising or permitting requirements.

(166) Some Parties thought that as COMNAP had an existing responsibility for coordinating national ship activity, it should also have a role in the management of tourist maritime traffic. COMNAP said its Ship Position Reporting System (SPRS) had been operational since 2001. It was an optional, voluntary system for exchange of information about national programme ship operations and capabilities. Its primary purpose was to facilitate collaboration between national programmes. Other Parties made reference to the important role of Rescue Coordination Centres (RCCs) with responsibility for search and rescue in the Treaty area.

(167) COMNAP noted that the SPRS could not, and did not, constitute an operational alert and rescue system on which vessels should count in case of emergency. However it could make a very useful contribution to safety with all SPRS information made available to the five RCCs which cover the Antarctic region, as an additional source of information complementing all other national and international systems in place.

(168) Some Parties suggested that operators might contribute their information to this system. IAATO noted that its system was specific to the activities of its members. They hoped that in the future a link could be established between the IAATO and COMNAP systems.

Land-Based Tourism

(169) New Zealand introduced WP 13 *Environmental Impact of Tourism and Other Non-Governmental Activities in the Antarctic Treaty Area*. Recalling discussions on this issue at the ATCM XXIX, and in particular a proposal by IAATO that "the ATCM should endorse the concept that all tourism activity is guided by the principle that tourism should have no more than a minor or transitory impact on Antarctica", New Zealand stated that it was tabling this as a draft Resolution.

(170) New Zealand recalled that the EIA procedures of Annex I to the Environmental Protocol apply to "any activities undertaken in the Antarctic Treaty area pursuant to scientific research programmes, tourism and all other governmental and non-governmental activities…". Therefore any proposed tourist activity which is likely to have more than a minor or transitory impact required preparation of a Comprehensive Environmental Evaluation (CEE).

(171) New Zealand added that the adoption of such a Resolution would have the support of the majority of the Antarctic tourism industry, and would provide reassurance to members of the public and to the wider international community that the ATCM is alert to the risks posed by the rapid expansion and diversification of tourism and other non-governmental activities in Antarctica.

(172) Some Parties expressed concern that the Resolution, as drafted, could conflict with the Environmental Protocol and its Annex I. Argentina noted that these did not make any distinction among tourist activities and that there was no evidence of adverse impact on the Antarctic environment arising from the two already existing government-run tourist infrastructures. Others noted that as a resolution was not mandatory there would be no conflict, and that the New Zealand proposal would help them to implement procedures established by the Protocol. Other Parties questioned whether the use of environmental impact assessment procedures under Annex I of the Protocol was an appropriate means to restrict or prohibit tourism-related activities.

(173) Argentina reserved its right to install at any time interpretative centres for tourists with some lodging capacity in any of its bases.

(174) There was detailed discussion of the proposed draft Resolution attached to WP 13. Following further discussion the Meeting agreed a revised text, adopted as Resolution 5 (2007) (see Annex C, page 181).

(175) While agreeing to adopt the Resolution, some Parties raised concerns about the adverse effects of land based infrastructure for tourism and non-governmental activities, and stated that the Meeting could have taken a more concrete decision on limiting possible future development of such infrastructure in Antarctica. These Parties considered the Resolution to be a valuable first step, but noted that Article 3, Paragraph 1 of the Protocol had a wider scope than the agreed Resolution.

Tourist Vessels Flagged to Non-Parties

(176) New Zealand presented WP 14 *Tourist Vessels Flagged to Non-Parties; Implications for the Effectiveness of the Antarctic Treaty System.* New Zealand noted the significant proportion of tourist vessels operating in the Antarctic Treaty area that are not flagged to Antarctic Treaty Parties and identified some challenges that could arise from such vessels:

- in implementing some requirements of the Environmental Protocol such as requirements for environmental impact assessment, problems may arise since, according to Article 94 of UNCLOS, it is the flag state which has the duty to "effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag";
- concerning emergency response action (Article 15 of the Protocol), there was no agreement to provide a response action in an emergency involving a non-Party vessel;
- non-Party vessels were not obliged to submit to inspection procedures under Article VII of the Antarctic Treaty.

(177) The Meeting agreed that this was an issue of considerable concern. One delegation noted that obligations derived from other international agreements should be fulfilled by all Parties, including non-Treaty Parties.

(178) Parties were told that the statistics obtained in Ushuaia last austral summer comparing Party and non-Party tourist ships showed that 58% were from non-Parties and 42% from Parties.

(179) One delegation noted that this showed that the Antarctic Treaty system had to work with other international organizations and that the ATCM should seek a way to ensure better cooperation with those organizations.

(180) It was noted that many non-Party flagged ships had operators with offices in states Parties to the Treaty. It was also suggested that Parties should inform the passengers and operators of the disadvantages of travelling on non-Party flagged vessels which could operate outside Antarctic Treaty regulations.

(181) New Zealand thanked Parties for their contributions to a useful debate on this topic. It noted that in its view in a real maritime emergency reliance on the obligations of

the organiser would likely not be sufficient because the responsibility for the vessel lay with the flag state.

(182) The Meeting agreed to re-visit this matter at ATCM XXXI.

(183) The delegation of Italy expressed its concern over the information provided by IAATO according to which a large vessel intends to land up to 1200 passengers in Antarctica. The tour operator was based in a state non-Party to the Treaty with offices in several states Parties to the Treaty.

(184) As a result the Meeting decided to send a letter to the Government of Cyprus (see Annex H, page 397), the registration location of the tour company operating the vessel, informing it of the existing legal framework.

(185) The Meeting urged Parties to follow up with company representatives based in their countries to convey the messages included in the letter.

Other Matters

(186) Argentina rejected the incorrect references at this ATCM XXX made in, *inter alia*, documents, reports (for example IP 121 and IP 134 of IAATO), bibliography, other publications and presentations, as well as the incorrect use of foreign toponomy and incorrect reference made to ships flying an alleged flag and to alleged authorities not recognized by the Argentine Republic, all this, concerning the territorial status of the Malvinas (Falkland) Islands, South Georgia and the South Sandwich Islands and the surrounding waters, which are subject to a sovereignty dispute between Argentina and the United Kingdom. This dispute has been recognized by several international organizations. Argentina reaffirms that those islands and the surrounding waters are an integral part of the Argentine national territory.

(187) In response, the United Kingdom stated that it had no doubt about its sovereignty of the Falkland Islands, South Georgia and South Sandwich Islands and their surrounding maritime areas. In that regard, the United Kingdom had no doubt about the right of the Government of the Falkland Islands to operate a shipping register for United Kingdom-flagged vessels.

(188) Argentina rejected the declaration by the United Kingdom and reaffirmed its legal position.

Item 12: Inspections under the Antarctic Treaty and the Environmental Protocol

(189) Sweden introduced WP 16 *Report of the Antarctic Treaty inspections undertaken jointly by Sweden, France and New Zealand in accordance with Article VII of the Antarctic Treaty and Article 14 of the Protocol on Environmental Protection to the Antarctic Treaty*, which provided details of inspections carried out at Amundsen-Scott South Pole Station (USA) and Concordia (Italy-France).

(190) In this context, Sweden noted that the inspection checklists provided a useful review tool for the stations monitoring their compliance with the Treaty and the Protocol.

(191) The report concluded that the two stations inspected, Amundsen-Scott South Pole Station and Concordia Station, both fulfill their obligations to the Treaty and the Protocol and that they are driven by science and the implementation of research programmes of the highest quality.

(192) Many Parties welcomed the report by Sweden, France and New Zealand.

(193) The United States introduced IP 10 *United States Report of Inspections,* in which it described its inspections of Rothera Research Station, General Bernardo O'Higgins Base, German Antarctic Receiving Station, Esperanza Base, Bellingshausen Station and Great Wall Station, and thanked Parties for the cooperation received from the stations visited. They stressed that the conclusions and recommendations of the report could be useful to other Parties, and for developing policies within the Antarctic Treaty system.

(194) Many Parties thanked the United States for its report. Argentina and China noted that they had made comments on the US inspection report in the report of the CEP.

(195) Several Parties stressed the importance of making all facilities available for inspection teams. Inspections are useful not only to improve the operations of those stations that are inspected but they also benefit the inspecting Parties, and are in full accordance with the spirit of the Antarctic Treaty. The amount of collaboration and the quality of science is what counts.

(196) New Zealand referred Parties to the recent work of COMNAP in reviewing best practice for fuel handling and storage guidelines, which could assist in addressing some of the environmental issues identified in the United States inspection report.

(197) The Russian Federation introduced WP 20 *Peculiarities of conducting inspections of infrastructure facilities of the Antarctic Programs*, and underlined that language is a very important issue when inspections are carried out. The Russian Federation urged inspection teams to have at least one person fluent in the language of the station inspected. It noted it was translating the Inspection Checklists into the four official languages of the Antarctic Treaty.

(198) COMNAP confirmed that national programmes found inspections very helpful and useful. However, it stressed that inspections could only be truly helpful and useful if clear communication and full understanding was guaranteed and that this was best met by the inspection team including one person fluent in the local language used on the station inspected.

(199) Many members agreed that the Inspection Checklists should be available in the language of the station.

(200) The United States agreed that having clear communication between an inspection team and an inspected station or vessel is very important. It noted its view that there were no substantial language issues during its inspections.

(201) ASOC thanked the countries involved for both inspection reports, noting their importance for transparency of the Antarctic Treaty system to the general public, as

well as for improving environmental protection by following up on earlier recommendations about oil containment, waste disposal and other matters.

(202) Another Information Paper submitted under this Agenda Item was IP 122 *Antarctic Treaty Inspection Process for Tourist Vessels. Suggested Improvements* (IAATO).

Item 13: Science Issues, Particularly Scientific Cooperation and Facilitation

(203) Norway introduced WP 28 *Climate Changes*. The importance of the subject was acknowledged and it was noted that Climate Change had already been adopted as a sub item in the CEP Agenda Item 9 *Environmental Monitoring and Reporting*. However, after extensive consideration, the Meeting agreed to revise Agenda Item 13 to read as follows: *Science Issues, Including Climate-Related Research, Scientific Cooperation and Facilitation*.

(204) ASOC supported Norway's proposal for a separate agenda item, noting that climate change is the biggest threat to the Antarctic, and urged the ATCM to take responsibility for the emissions from their programmes and logistics, which are not covered by the Kyoto Protocol. ASOC proposed establishing an inventory of emissions, taking steps to reduce those emissions, and creating an off-set programme for those emissions that could not be avoided, with the goal of making Antarctic science and logistics carbon-neutral.

(205) Finland introduced IP 3 *Antarctic Research in Finland 1998–2005: International Evaluation*, stressing that although highlighting successes in Finland's Antarctic research, it was a very critical evaluation intended as advice for future activities. Several members congratulated Finland for being so transparent and highlighted the importance of the international evaluation of the Antarctic Programmes.

(206) SCAR introduced IP 5 *State of the Antarctic and Southern Ocean Climate System (SASOCS)*, noting that it was now clear that the Antarctic climate since the last glacial maximum had been quite variable on millennial and finer scales, and that observations sustained over the long term were therefore essential to enable differentiation between natural and human-induced climate change. This realisation underpinned the proposal by the ICSU-WMO Joint Committee for the IPY that one of the IPY legacies should be sustainable observation systems.

(207) SCAR listed the dramatic changes in climate that had occurred in the region, especially around the Antarctic Peninsula, where there was extraordinary warming, shrinkage of glaciers, shrinkage of sea ice, and the collapse of ice shelves. These changes were now believed to be driven by global warming, further evidence for which was the newly discovered tropospheric warming accompanied by stratospheric cooling over the Antarctic continent, and the warming of Southern Ocean waters.

(208) SCAR noted that although the ice sheets played a critical role in controlling global sea level, it was not currently possible to effectively model the dynamic processes of ice sheet decay. SCAR therefore called on Parties to work closely with SCAR to facilitate improvements in ice sheet dynamic models so as to improve forecasts of sea level change.

(209) SCAR introduced IP 15 *Sub glacial Antarctic Lake Environments (SALE) in the IPY*, noting that these lakes seemed to be part of a complex, continent-wide hydrological system comprising interconnected lakes and streams. This system was one of the Earth's last great unexplored frontiers and could be expected to contain clues about fundamental earth and life processes. The latest SALE report was available through the SCAR web page (*www.scar.org*).

(210) SCAR noted that SALE was one of five major research projects detailed in *SCAR Report to XXX ATCM* (see Annex F, page 291), which included research on the modern climate system, Antarctic climate history, the evolution of biodiversity, and sun-Earth interactions. Key upcoming meetings included the International Antarctic Earth Sciences meeting (Santa Barbara, August 2007), the SCAR-IASC Open Science Conference (St Petersburg, July 2008), and the 10th International Antarctic Biology Symposium (Sapporo, 2009).

(211) SCAR introduced IP 52 *The Sixth Continent Initiative*, noting that this addressed capacity building during the IPY by means of support for fellowships to undertake research on Antarctic bases or from Antarctic ships. SCAR asked Parties to identify potential candidates for the fellowship programme, which was co-sponsored by the International Polar Foundation (IPF), the United Nations Environment Programme (UNEP), and the International Antarctic Institute (IAI).

(212) Ecuador introduced IP 16 *Ecuador's National Policy Proposal for Antarctica*, describing Ecuador's national objectives and specific policies for Antarctic activities.

(213) The Republic of Korea introduced IP 44 *Collaborations with Other Parties in Science and Related Activities During 2006/2007*, including cooperation or joint projects together with Australia, Chile, China, Japan, Israel, Norway, the Russian Federation, Spain, Sweden and Uruguay. Korean international collaboration for scientific research would be highlighted during the period of IPY 2007-2008.

(214) India introduced IP 58 *Studies in the Indian Sector of the Southern Ocean: India's initiative and future Plans*, providing details on the objectives of Indian expeditions to that region covering hydrodynamics, biological oceanography, chemical oceanography and geological oceanography. India also presented IP 60 *Scientific activities at Indian station Maitri and proposed new research base at Larsemann during 2006-2007 season.* India recognised the need for hydrographic surveys in Antarctica and informed the Meeting that data are being collected for uncharted areas in India Bay. Some data had also been collected from the Larsemann Hills area during the 2006 and 2007 expeditions.

(215) The Russian Federation introduced IP 63 *Preliminary results of Russian expedition studies of the sub glacial Lake Vostok in 2006-2007*, with data on the progress made by the Russian Federation in its drilling programme at Vostok, and on the study of the characteristics of the sub-glacial Lake Vostok using ground penetrating radar and seismic probing.

(216) Romania introduced IP 91 *Cooperation Research Opportunities in Larsemann Hills, East Antarctica*, stressing that Romania welcomed projects from other Parties to be

carried out in the Romanian scientific station Law-Racovita. It referred to the study of the host-virus relationship and biodiversity in Larsemann Hills ecosystems and their response to environmental changes.

(217) New Zealand introduced IP 97 *International Polar Year Research: Project ANDRILL*, informing the Meeting that during the 2006/07 Antarctic season the ANDRILL science consortium of the United States, Italy, Germany and New Zealand national programmes extracted a core depth of 1,285 metres from the drill site on the McMurdo Ice Shelf, which forms the northwest corner of the Ross Ice Shelf. This was the deepest sedimentary drill core yet achieved in Antarctica and the first through an ice shelf site, combining hot water and sedimentary drill technology. Through this very successful collaborative programme, information on climate evolution over the last ten million years in Antarctica has been gained.

(218) Japan introduced IP 104 *Japan's Antarctic Scientific Programs in 2006/07 - Selected Highlights*, including a new 3,035 m deep ice core at Dome Fuji Station and airborne atmospheric observations under international cooperation. Japan also introduced IP 107 *Asian Forum for Polar Sciences (AFoPS): Report of the Sixth Delegates Meeting, 2007*, which gave an account of the meeting in which nearly thirty members from China, India, Japan, Korea and Malaysia were present to exchange information on polar sciences and to discuss collaboration between Asian countries.

(219) Australia introduced IP 32 *Census of Antarctic Marine Life (CAML)* (Australia, SCAR), noted the announcement made in Wellington by the New Zealand Government of a ship to participate in the Census, and further noted this as an excellent example of cooperation in IPY.

(220) Other papers submitted under this agenda item were:

- WP 26 *The Application of IUCN Endangerment Criteria at the Regional Level of the Antarctic Treaty Area* (SCAR)
- IP 12 *Science Supported by Antarctica New Zealand 2006/2007* (New Zealand)
- IP 20 *Ukrainian Antarctic Research for the 2006-2007 Summer Season* (Ukraine)
- IP 28 *Scientific Activities at the Argentine Antarctic Bases and International Polar Year Argentina* (Argentina)
- IP 33 *Australian Research on the Assessment and Remediation of Contaminated Sites in Antarctica* (Australia)
- IP 34 *On-site Assessment of Metal Contamination During Remediation of a Waste Disposal Site in Antarctica* (Australia)
- IP 37 *Hull Fouling as a Source of Marine Invasion in the Antarctic* (SCAR)
- IP 64 *Russian Scientific Studies of the Antarctic in 2006* (Russian Federation)
- IP 68 *Investigación científica del Perú en el periodo 2006-2007 (Temporada de verano)* (Peru)
- IP 77 *Australia's Antarctic Scientific Research Programme 2006/07* (Australia)
- IP 82 rev 1 *The Antarctic and Climate Change* (ASOC)

- IP 110 *Chile incrementa la investigación científica en la Base "O'Higgins"* (Chile)
- IP 130 *Brief information on the activities of The Republic of Belarus in the Polar Regions* (Belarus)
- IP 138 *Antarctica and climate change – implications for governance* (United Kingdom)

(221) A special lecture on "Climate Change" was organised by SCAR. The lecture, given by Professor Chris Rapley, President of SCAR and Director of the British Antarctic Survey, was very informative on global warming and climate change and the importance of Antarctic research in continuous monitoring of climate variations.

Item 14: Operational Issues

(222) Uruguay introduced WP 24 *Use of Ecodiesel in Antarctica - Experience at "Artigas Station"*, which described the use of biodiesel, an agro fuel of biological origin, and encouraged other Parties to conduct further studies and experiments with biodiesel during the Austral summer, with the purpose of contributing to a reduction in emissions in the Antarctic environment.

(223) The Republic of Korea introduced IP 45 *Korea's First Ice Breaker* underscoring that the 7,000-ton vessel was currently under construction and scheduled to be completed by the end of 2009. The vessel was designed for operation in one-meter thick, multiple-year ice condition (KR PL 10) and it would be equipped with twin azimuth propulsion units driven by a diesel-electric propulsion plant. It will accommodate up to 85 persons, including 25 crew members. The vessel would be operated for scientific and logistic purposes in both Antarctic and Arctic waters.

(224) India introduced IP 61 *Proposed New Polar Research Vessel (PRV) of India for Bi-Polar Expeditions and Southern Ocean Research*, which provided general information about the vessel. The vessel would be registered in India and would comply with all statutory and regulatory national and international requirements applicable at the time of construction and delivery. The design, construction and delivery were scheduled within the XI-Plan period of India, due to end on March 2012 or well before.

(225) New Zealand presented IP 40 *Fire on Board the Japanese Whaling Vessel Nisshin Maru*, describing the *Nisshin Maru* incident based on information recorded by New Zealand's Rescue Coordination Centre. New Zealand noted that it received a number of requests for information from other Consultative Parties during the incident which it endeavoured to respond to as fully as possible on the basis of the information available at the time. New Zealand noted that it had remained in close contact with Japan throughout the incident and due to its concerns over the potential for a serious environmental emergency, had urged the vessel be removed from the Antarctic Treaty area as soon as possible. New Zealand also thanked the United States Antarctic Program for its readiness to assist.

(226) Several Parties thanked New Zealand for the information provided. Japan thanked New Zealand and the United States for their work during the incident, and informed the Meeting that there were no oil spills or explosions during the incident. Japan also noted that it was investigating the cause of the fire to prevent such incidents recurring in the future.

(227) ASOC noted that this was one of the most serious emergencies ever in the Antarctic which, in its view, could have resulted in a serious oil and chemical spill, raising in its mind serious questions for the ATCPs about how such an event should be dealt with in terms of emergency response and liability.

(228) The United Kingdom stated it would like to be informed of the lessons that could be learnt from this incident at the next Meeting based on the results of the maritime inquiry being held by Japan.

(229) Japan stated that it would not be constructive to further discuss the *Nisshin Maru* incident in the next Meeting because further discussion on this incident might lead to discussion on the whaling issue, on which Parties had differing views.

(230) New Zealand stated that it had no intention of raising whaling activities in the ATCM, but remained concerned that the ATCM be able to address serious maritime incidents that occur in the Antarctic Treaty area.

(231) The United States and the United Kingdom thanked New Zealand for their report.

(232) After a brief introduction of its IP 48 *Mawson Station Wind Farm – Four Years of Operational Experience*, Australia reported considerable fuel savings as a result of its introduction of wind turbines. In answer to a question it noted that the wind farm has not caused any electromagnetic interference with scientific activities.

(233) Australia introduced IP 78 *Australia's Antarctic Air Service 2006/07* and informed the Meeting that it would commence flying from Hobart to Casey in October/ November 2007, carrying up to 20 passengers and 4.5 tonnes of cargo and additional equipment. The journey would be around 4-5 hours. Australia thanked operators who helped in this regard and looked forward to collaboration with others.

(234) Romania introduced IP 92 *Romanian Antarctic Activities in Law-Racovita Station*, describing their studies on psychrophilic micro-organism potential, pedobiology, biomedicine and other subjects. Romania also thanked Australia and China for their support during the 2005-2006 expedition.

(235) Chile introduced IP 109 *Patrulla de Rescate en Base "O'Higgins"* on their rescue patrol on Base O'Higgins. Since 2004 this team has carried out a joint exercise with Argentina between the O'Higgins and Esperanza bases.

(236) After a detailed presentation of its IP 120 *Report on an Aircraft Accident and Aircraft Removal During Dronning Maud Land Air Network Operations in Season 2006/ 2007* (Finland, Germany), Germany thanked the Parties and commercial operators involved for their support and highlighted the lessons learnt, including the need for solar panels for recharging communication equipment in the emergency equipment on board of the aircrafts. In its presentation of IP 100 *Accidents and Medical*

Evacuations within the German Antarctic Program during Season 2006/2007, Germany emphasized that the success of the medical evacuation flight proved the effectiveness of the logistic cooperation within the Dronning Maud Land Air Network (DROMLAN).

(237) In response to a question from New Zealand, Germany confirmed that the assigned Rescue Coordination Centre had not been asked to assist with the Basler BT-67 accident in the Muehlig-Hofmannfjella on 10 November 2006 nor with the medical evacuation flight from Neumayer station to Capetown on 23 January 2007.

(238) Argentina presented IP 131 rev 1 *Status of the Argentine Icebreaker "Almirante Irízar"*, describing the accident that occurred on 10 April at approximately 42° 30' S in waters under Argentina's jurisdiction and the vessel's current condition. Currently, inquiries prescribed by Argentine law were being conducted, and damages to the vessel evaluated.

(239) Bulgaria and COMNAP noted that the accident on the *Almirante Irízar* icebreaker was a painful blow, not only to the Argentinean Antarctic Programme but to many Antarctic Programmes. The *Almirante Irízar* had always given support to Antarctic programmes working in the area of the Antarctic Peninsula.

(240) Another paper submitted under Agenda Item 14 was IP 113 *Pruebas de un sistema de radar FMCW en las cercanías de base O'Higgins, península Antártica* (Chile).

Item 15: Education Issues

(241) UNEP presented IP 35 *Global Outlook for Ice and Snow.* In order to raise awareness of the changes to the cryosphere and to highlight the consequences of these changes for the global community, UNEP was preparing a new assessment report *Global Outlook for Ice & Snow*. The report will provide an up-to-date, concise review of the state of the environment and the trends in ice and snow-covered regions of the world and will be launched on 5 June 2007 on World Environment Day (WED) in cities around the world.

(242) The UK presented IP 135 *Consideration of Education and Outreach Issues by the Antarctic Treaty Consultative Meeting (ATCM)*. The UK acknowledged Chile's help in the translation of *www.discoveringantarctica.org.uk* (the UK's interactive website on Antarctica) into Spanish. The website was being further developed to include new sections about IPY. The UK gave a presentation of "Ice Station Antarctica", an interactive exhibition which challenged young people to survive the extreme conditions faced by scientists researching the frozen continent. The exhibition would be launched at the end of May 2007 at the Natural History Museum in London, and it would then tour internationally starting in Spain in May 2008.

(243) The United Kingdom offered to host an International Workshop on Antarctic Educational Projects in 2007 or early 2008. The aim of the UK workshop would be to enable participants to learn more about a variety of the education and outreach projects being undertaken during IPY; examine whether projects might be linked to

maximise resources and overall impact; and consider how to support delivery of the IPY legacy. New Zealand offered to assist with this workshop. Several Parties welcomed the UK proposal and the United Kingdom agreed to take it forward during the intersessional period.

(244) Japan presented IP 103 *The 50th Anniversary of the Japanese Antarctic Research Expedition.* In celebration of this anniversary several memorial events were held in 2006 and 2007. The National Science Museum in Tokyo hosted "The Antarctic Exhibition – A Continent of Wonder". The National Institute of Polar Research in Tokyo hosted the "Open Forum Antarctica" and conducted several outreach initiatives, including "Bring School Pupils Ideas to the Arctic and the Antarctic", an activity programme for school pupils.

(245) Other information papers submitted under this agenda item included:

- IP 46 *A Korean Public Awareness Program 'Pole-to-Pole Korea'* (Republic of Korea)
- IP 95 *60 años del primer vuelo antártico chileno y sus repercusiones 1947 – 2007* (Chile)
- IP 101 *The International Polar Year 2007/08 in Germany. Education and Outreach* (Germany)
- IP 116 *Information Outreach to Private One-off Non-Member Expeditions* (IAATO).

Item 16: Exchange of Information

(246) The Secretariat introduced SP 11 *Electronic Information Exchange System* and gave a demonstration on how the information exchange system would work, noting that the system needed to be tested for a year before transition from the current system. COMNAP and the ATCM were coordinating the development of their respective Electronic Information Exchange Systems (EIESs). An essential objective was that these systems should be able to exchange information between each other as appropriate, in particular to avoid duplication of data entry and to ensure consistency of information across systems. This would be an option that would be available on the system but it will be up to each Party to decide whether to use it or not.

(247) Several Parties found the system very interesting and promising and asked different questions about how to operate with it. COMNAP gave a presentation on import/export mechanisms between the ATCM and COMNAP systems, which provided some answers. On the question of who could access this information it was stressed that presently the information was provided only to the Party concerned, on a trial basis. Later, if the ATCM agreed, the information could be made available to all Parties and to the public, in accordance with the information exchange requirements and Article 17 of the Environment Protocol.

(248) Several Parties observed that the information provided by ATS and COMNAP was very useful.

(249) France expressed the wish that the Electronic Information Exchange System should be kept flexible, in order to accommodate any new information that the Treaty System might require in the future.

(250) The Meeting agreed, in line with the decision of CEP X, that the system should remain on a trial basis during the intersessional period and all Parties should participate and provide feedback.

(251) COMNAP gave a presentation on WP 42 *Antarctic Information Exchange: Importance of Unambiguous and Consistent Geo-referencing.* It argued that geo-referencing was best achieved through associating information directly with relevant Antarctic geographic and administrative features whenever applicable, and by identifying each feature with a persistent, unique Antarctic identifier (AQ-UID). Effective, unambiguous and consistent geo-referencing was essential if countries were to share data.

(252) COMNAP proposed to use two non-overlapping lists. One would be a master list of administrative features maintained as appropriate by the Antarctic Treaty Secretariat and Parties, and one a list of geographic features based on the existing SCAR Feature Catalogue and Composite Gazetteer of Antarctica. This would provide for a more effective exchange of Antarctic information and better input into management decision processes – with benefits in many areas including safety of life, international collaboration and environmental management.

(253) While some Parties raised strong concerns, other Parties supported this approach and recognised its value.

(254) The US noted that geo-referencing was relevant both to annual exchange of information and to national operators in their field operations. Different systems might be most appropriate for the different applications. Therefore, the national operators would need to assess the utility of the proposal before they adopted it for their operations.

(255) COMNAP confirmed that the proposal contained in WP 42 related to the Electronic Exchange of Information System currently in place, and only to this system, and not to operations.

(256) The Meeting noted that COMNAP would continue its work in liaison with the Antarctic Treaty Secretariat and SCAR, and would report back to ATCM XXXI.

(257) Another Secretariat Paper submitted under this agenda item was: SP 12 *Information Exchange System: Survey of current practice*.

Item 17: Biological Prospecting in Antarctica

(258) The Netherlands presented WP 36 *Biological Prospecting in the Antarctic Treaty Area – Scoping for a Regulatory Framework*. The Netherlands noted that work was ongoing in other bodies and that it was important that biological prospecting be addressed by the ATCM.

(259) UNEP introduced IP 67 *Biological Prospecting in Antarctica: Review, Update and Proposed Tool to Support a Way Forward*, providing an update of activities since the adoption of Resolution 7 (2005). Some delegations welcomed the proposal to develop a web-based database on biological prospecting, as proposed in IP 67, and looked forward to considering it.

(260) Parties welcomed and applauded the work that went into the two papers. The Meeting confirmed its readiness to push forward with work on this topic.

(261) Several delegations agreed with the Netherlands that the ATCM should not wait for the results of the work in other international forums but should take the lead on the question of biological prospecting in Antarctica. It was further noted that besides the international ongoing process on biological prospecting, the ATCM could deal with this topic itself.

(262) After a lengthy discussion on how to proceed and terms of reference, the Meeting agreed to establish an informal open-ended web-based Intersessional Contact Group (ICG) working until ATCM XXXI to examine the issue of biological prospecting in the Antarctic Treaty area with the following terms of reference:

a) the ICG will identify issues and current activities related to biological prospecting in the Antarctic Treaty area with a view to assisting the ATCM considering the matter, including, if appropriate, working modalities; and
b) Observers and Experts participating in ATCM XXX will be invited to send information to the ICG.

(263) The Meeting welcomed the offer of the Netherlands to act as the convenor of the ICG and report at ATCM XXXI on the work of the ICG. It was agreed that the Secretariat would develop an interactive discussion forum and provide assistance to the ICG.

Item 18: Preparation of ATCM XXXI

a. Date and Place

(264) The Meeting welcomed the kind invitation of the Government of Ukraine to host ATCM XXXI in Kiev from 2-13 June 2008.

(265) For future planning, the Meeting took note of the following likely timetable of upcoming ATCMs:

2008: Ukraine
2009: United States of America
2010: Uruguay
2011: Argentina

b. Invitation of International and Non-Governmental Organizations

(266) In accordance with established practice, the Meeting agreed that the following organizations having scientific or technical interest in Antarctica should be invited to send experts to attend ATCM XXXI: the interim secretariat of ACAP, ASOC, IAATO, IHO, IMO, IOC, the IPY International Programme Office, IUCN, UNEP, WMO and WTO.

c. Invitation to Malaysia

(267) The Meeting decided to invite the Malaysian Government to send representatives to observe ATCM XXXI. The Chair reported on contact with the Delegation of Malaysia in the margins of ATCM XXX. The Consultative Parties welcomed Malaysia's continued interest in the Antarctic Treaty, and asked that Malaysia at the next meeting provide information on concrete steps it is taking to accede to the Treaty.

d. Preparation of the Agenda for ATCM XXXI

(268) The Meeting approved the Preliminary Agenda for ATCM XXXI (see Annex J, page 405).

e. The SCAR Lecture

(269) The Chair recalled the lecture given by Professor Chris Rapley on climate change (see Paragraph 221 above and Annex H, page 399). Taking into account the valuable series of lectures given on the occasion of ATCMs, the Meeting decided to invite SCAR to give another lecture on scientific issues relevant to ATCM XXXI.

Item 19: Any Other Business

(270) There was no other business.

Item 20: Adoption of the Final Report

(271) The Meeting adopted the Final Report of the Thirtieth Antarctic Treaty Consultative Meeting.

(272) This was followed by closing remarks from the Chair of ATCM XXX, Professor U.R. Rao (see Annex D, page 191).

(273) The Meeting was closed on 11 May 2007 following the special address by the Honourable Minister of External Affairs of India, Mr Pranab Mukherjee (see Annex D, page 195).

PART II

MEASURES, DECISIONS AND RESOLUTIONS

ANNEX A

Measures

Measure 1 (2007)

Antarctic Specially Protected Areas: Revised Management Plans

The Representatives,

Recalling Articles 3, 5 and 6 of Annex V to the Protocol on Environmental Protection to the Antarctic Treaty, providing for the designation of Antarctic Specially Protected Areas and approval of Management Plans for those Areas;

Recalling

- Recommendation IV-13 (1966), which designated Moe Island, South Orkney Islands as Specially Protected Area ("SPA") No 13 and annexed a map of the site;

- Recommendation XIII-8 (1985), which designated Rothera Point, Adelaide Island as Site of Special Scientific Interest ("SSSI") No 9 and annexed a Management Plan for the site;

- Recommendation XVI-6 (1991), which annexed a revised description of SPA 13 and a Management Plan for the Area;

- Measure 1 (1995), which annexed a revised description and a revised Management Plan for SPA 13;

- Resolution 7 (1995), which extended the expiry date of SSSI 9, and Measure 1 (1996), which annexed a revised description and a revised Management Plan for SSSI 9;

- Decision 1 (2002), which renamed and renumbered SPA 13 as Antarctic Specially Protected Area ("ASPA") No 109 and SSSI 9 as ASPA 129;

Noting that the Committee for Environmental Protection has endorsed the revised Management Plans for these Areas annexed to this Measure;

Desiring to replace the Management Plans for Antarctic Specially Protected Areas No 109 and 129 with revised and updated Management Plans, the latter of which includes a revision to the boundaries of ASPA 129;

Recommend to their Governments the following Measure for approval in accordance with Paragraph 1 of Article 6 of Annex V to the Protocol on Environmental Protection to the Antarctic Treaty:

II. MEASURES

That:

1. the revised Management Plans for the following Areas, which are annexed to this Measure, be approved:

(a) Antarctic Specially Protected Area No 109: Moe Island, South Orkney Islands;

(b) Antarctic Specially Protected Area No 129: Rothera Point, Adelaide Island;

2. all prior Management Plans for Antarctic Specially Protected Areas No 109 and 129 shall cease to be effective, or, if any such plans have not yet become effective, they are hereby withdrawn.

Management Plan for Antarctic Specially Protected Area No 109

MOE ISLAND, SOUTH ORKNEY ISLANDS

1. Description of values to be protected

The Area was originally designated in Recommendation IV-13 (1966, SPA No 13) after a proposal by the United Kingdom on the grounds that the Area provided a representative sample of the maritime Antarctic ecosystem, that intensive experimental research on the neighbouring Signy Island might alter its ecosystem and that Moe Island should be specially protected as a control area for future comparison.

These grounds are still relevant. Whilst there is no evidence that research activities at Signy Island have significantly altered the ecosystems there, a major change has occurred in the low altitude terrestrial system as a result of the rapidly expanding Antarctic fur seal (*Arctocephalus gazella*) population. Plant communities on nearby Signy Island have been physically disrupted by trampling by fur seals and nitrogen enrichment from the seals' excreta has resulted in replacement of bryophytes and lichens by the macro-alga *Prasiola crispa.* Low-lying lakes have been significantly affected by enriched run-off from the surrounding land. So far Moe Island has only been invaded by fur seals to a limited extent and its topography makes it less likely that seals will penetrate to the more sensitive areas.

The values to be protected are those associated with the biological composition and diversity of a near-pristine example of the maritime Antarctic terrestrial and littoral marine ecosystems. In particular, Moe Island contains the greatest continuous expanses of *Chorisodontium-Polytrichum* moss turf found in the Antarctic. Moe Island has been visited on few occasions and has never been the site of occupation for periods of more than a few hours.

2. Aims and objectives

Management of Moe Island aims to:

- avoid major changes to the structure and composition of the terrestrial vegetation, in particular the moss turf banks;
- prevent unnecessary human disturbance to the Area;
- minimise introduction of locally non-native soils, plants, animals and microorganisms into the Area;
- permit research of a compelling scientific nature which cannot be served elsewhere, particularly research related to determining the differences between the ecology of an undisturbed island and that of an adjacent occupied and fur seal perturbed island.

3. Management activities

Ensure that the biological condition of Moe Island is adequately monitored, preferably by non-invasive methods, and that the sign-boards are serviced.

4. Period of designation

Designated for an indefinite period.

5. Maps

- Map 1. The location of Moe Island in relation to the South Orkney Islands. Map specifications: Projection: WGS84 Antarctic Polar Stereographic. Standard parallel: 71° S. Central meridian 45° W.
- Map 2. Moe Island in greater detail. Map specifications: Projection: WGS84 Antarctic Polar Stereographic. Standard parallel: 71° S. Central meridian 45° W.

6. Description of the Area

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

Moe Island, South Orkney Islands, is a small irregularly-shaped island lying 300 m off the south-western extremity of Signy Island, from which it is separated by Fyr Channel. It is about 1.3 km from the northeast to southwest and 1 km from northwest to southeast. It should be noted that the position of Moe Island on Admiralty Chart No 1775 (60°44'S, 45°45'W), does not agree closely with the more accurate coordinates in Map 2 (60°44'S, 45°41'W).

The island rises precipitously on the north-eastern and south-eastern sides to Snipe Peak (226 m altitude). There is a subsidiary summit above South Point (102 m altitude) and lower hills on each of three promontories on the western side above Corral Point (92 m), Conroy Point (39 m) and Spaull Point (56 m). Small areas of permanent ice remain on the east- and south-facing slopes with late snow lying on the steeply dipping western slopes. There are no permanent streams or pools.

The rocks are metamorphic quartz mica schists, with occasional biotite and quartz-rich beds. There is a thin bed of undifferentiated amphibolite on the north-eastern coast. Much of the island is overlain with glacial drift and scree. Soils are predominantly immature deposits of fine to coarse clays and sands intermixed with gravels, stones and boulders. They are frequently sorted by freeze-thaw action in high or exposed locations into small-scale circles, polygons, stripes and lobes. There are deep accumulations of peat (up to 2 m thick on western slopes), considerable expanses of the surface of which are bare and eroded.

The dominant plant communities are *Andreaea-Usnea* fellfield and banks of *Chorisodontium-Polytrichum* moss turf (the largest known example of this community type in the Antarctic). These moss banks constitute a major biological value and the reason for the designation of the Area. The cryptogamic flora is diverse. The majority of these moss banks have received little damage from fur seals, and show few visible sign of degradation. However, the exception to this observation is the northern-most banks located around Spaull Point. Here, although still extensive, the moss turf was estimated to have suffered about 50 % damage from Antarctic fur seal (*Arctocephallus gazella*) activity during a survey in January 2006. One sub-adult male Antarctic fur seal was present on this area of moss turf during the most recent management survey in January 2006. Almost certainly fur seals gain access to this plant community via the gentle slope leading inland from the small shingle beach located at the north-eastern corner of Landing Cove.

The mites *Gamasellus racovitzai* and *Stereotydeus villosus* and the springtail *Cryptopygus antarcticus* are common under stones.

There were five colonies of chinstrap penguins (*Pygoscelis antarctica*) totalling about 11,000 pairs in 1978-79. A visit in February 1994 noted fewer than 100 pairs on the northern side of Landing Cove and more than a thousand on the southern side. The most recent visit in January 2006 noted ~100 breeding pairs on Spaull Point. Numerous other birds breed on the island, notably about 2000 pairs of cape petrels (*Daption capensis*) in 14 colonies (1966) and large numbers of Antarctic prions (*Pachyptila desolata*).

Weddell seals (*Leptonychotes weddellii*), crabeater seals (*Lobodon carcinophaga*) and leopard seals (*Hydrurga leptonyx*) are found in the bays on the west side of the island. Increasing numbers of fur seals (*Arctocephalus gazella*), mostly juvenile males, come ashore on the north side of Landing Cove and have caused some damage to vegetation in that area. However, it is possible that the nature of the terrain will restrict these animals to this small headland where damage may intensify.

6(ii) Restricted zones within the Area

None.

6(iii) Location of structures within the Area

A marker board is located at the back of the small shingle beach in the northeast corner of Landing Cove, beyond the splash zone on top of a flat rock, to which it is bolted. The board was erected on 2 February 1994. During periods of heavy snowfall, the marker board may be buried and difficult to locate.

There is a cairn and the remains of a survey mast, erected in 1965-66, on Spaull Point. This mast is of interest for lichenometric studies and should not be removed. There are no other structures on Moe Island.

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

ASPA No 110, Lynch Island, lies about 10 km north-north-east of Moe Island. ASPA No 114, North Coronation Island, lies about 19 km away on the northern side of Coronation Island. ASPA No 111, Southern Powell Island, is about 41 km to the 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 only for a compelling scientific purpose which cannot be served elsewhere;
- the actions permitted will not jeopardize 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 an authorised copy, must be carried within the Specially Protected Area;
- a report or reports are supplied to the authority or authorities named in the Permit.

7(i) Access to and movement within the Area

There are no restrictions on landing from the sea, which is the preferred method. No special access points are specified, but landings are usually most safely made at the northeast corner of Landing Cove (60°43'57"S, 45°41'5"W). If Landing Cove is inaccessible due to the ice conditions, an alternative landing site is at the western-most point of Spaull Point (60°43'54"S, 45°41'15"W), directly opposite an offshore rock of 26 m altitude.

Helicopter landings should be avoided where practicable. If a landing is necessary, however, helicopters may land only on the col between hill 89 m and the western slope of Snipe Peak. To avoid overflying bird colonies approach should preferably be from the south, though an approach from the north is permissible.

It is forbidden to overfly the Area below 250 m altitude above the highest point except for access to the landing point specified above.

No pedestrian routes are designated but persons on foot should at all times avoid disturbances to birds or damage to vegetation and periglacial features. Vehicles are prohibited on Moe Island.

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

- Compelling scientific research which cannot be undertaken elsewhere and which will not jeopardize 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 the Permit.

7(iv) Location of field camps

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

7(v) Restrictions on materials and organisms that may be brought into the Area

No living animals, plant material or microorganisms shall be deliberately introduced into the Area. All sampling equipment brought into the Area shall have been thoroughly cleaned. To the maximum extent possible, footwear, outer clothing, backpacks and other equipment used or brought into the Area shall be thoroughly cleaned before entering 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 a 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.

Fuel, food and other materials are not to be deposited in the Area, unless required for essential purposes connected with the activity for which the Permit has been granted. All such materials 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

Taking or harmful interference with native flora and fauna 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 and 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, except that debris of man-made origin may be removed from the beaches of the Area and dead or pathological specimens of fauna or flora may be removed for laboratory examination.

7(viii) Disposal of waste

All non-human wastes shall be removed from the Area. 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

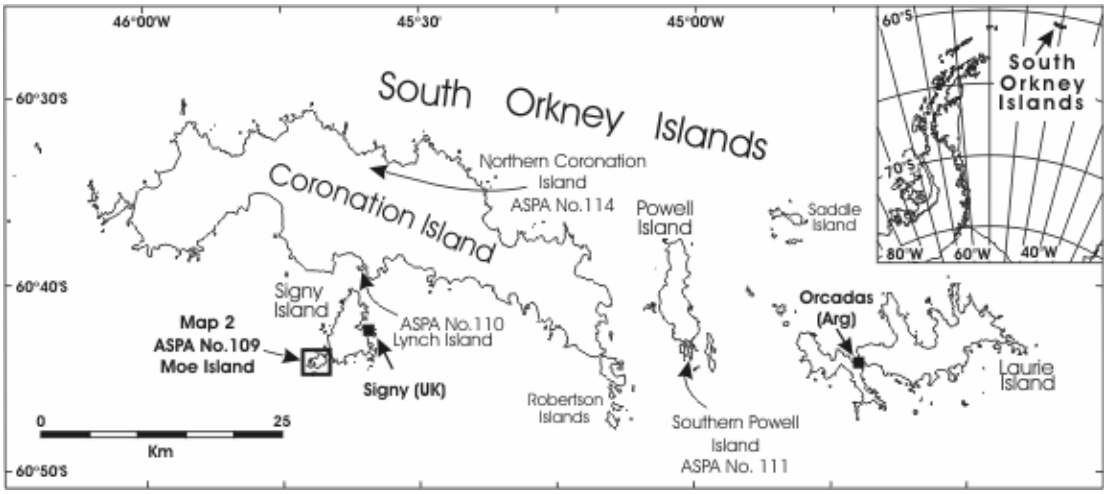
Permits may be granted to enter the Area to carry out biological monitoring and Area inspection activities, which may involve the collection of small amounts of plant material or small numbers of animals for analysis or audit, to erect or maintain notice boards, or protective measures.

7(x) Requirements for reports

The Principal Permit Holder for each issued Permit shall submit a report of activities conducted in the Area using the accepted Visit Report form suggested by SCAR. This report shall be submitted to the authority named in the Permit as soon as practicable, but not later than 6 months after the visit has taken place. 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.

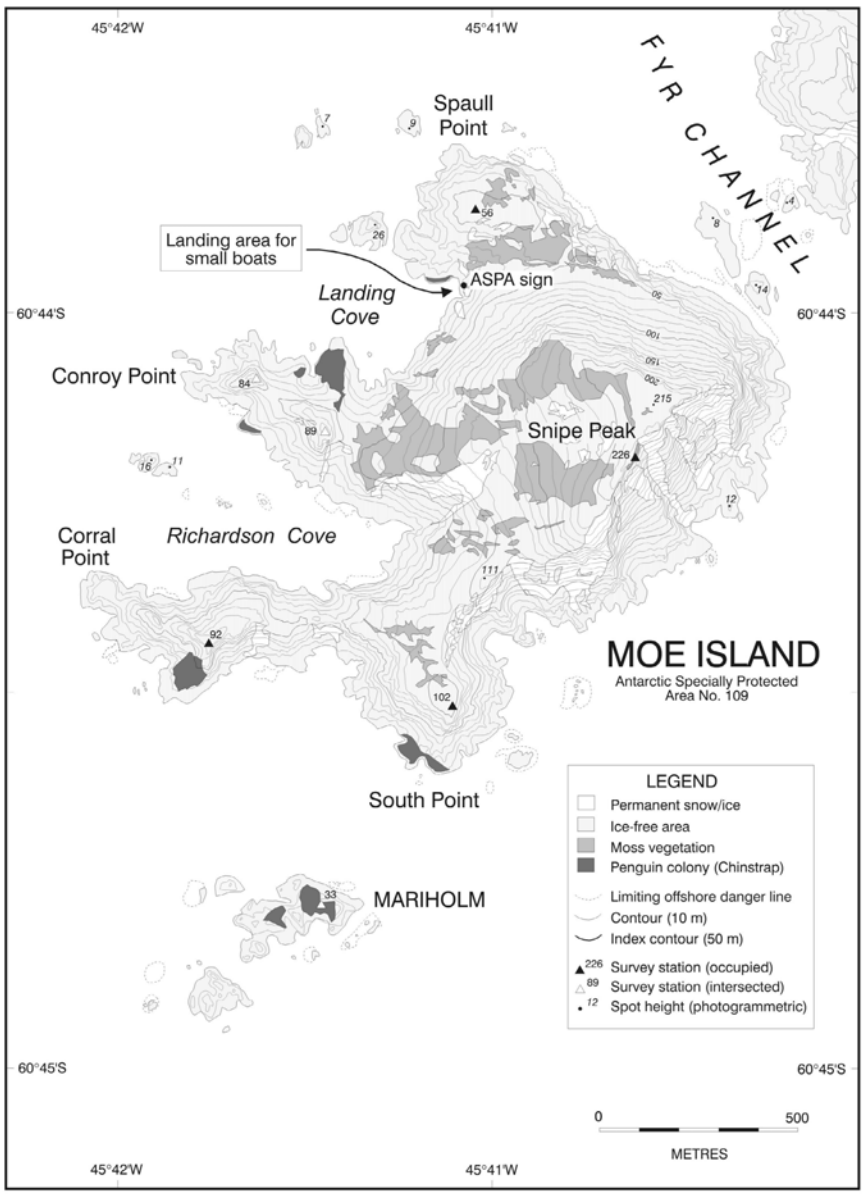
Map 1. The location of Moe Island in relation to the South Orkney Islands.

Map specifications: Projection: WGS84 Antarctic Polar Stereographic. Standard parallel: 71° S. Central meridian 45° W.



Map 2. Moe Island in greater detail.

Map specifications: Projection: WGS84 Antarctic Polar Stereographic. Standard parallel: 71° S. Central meridian 45° W.



Management Plan for Antarctic Specially Protected Area No 129

ROTHERA POINT, ADELAIDE ISLAND

1. Description of values to be protected

Rothera Point was originally designated in Recommendation XIII-8 (1985, SSSI No 9) after a proposal by the United Kingdom that the Area would serve as a biological research site and control area, against which the effects of human impact associated with the adjacent Rothera Research Station (UK) could be monitored in an Antarctic fellfield ecosystem. The Area itself has little intrinsic nature conservation value.

2. Aims and objectives

2(i) Aims

Management of Rothera Point aims to:

- avoid major changes to the structure and composition of the terrestrial ecosystems, in particular to the fellfield ecosystem and breeding birds, by:
  - preventing physical development within the Area, and;
  - limiting human access to the Area to maintain its value as a control area for environmental monitoring studies;
- allow scientific research and monitoring studies of breeding birds, terrestrial and freshwater biota, and soils, while ensuring as far as possible that the Area is protected from over-sampling; and
- allow regular visits for management purposes in support of the objectives of the management plan.

2(ii) Objectives

The Area is unique in Antarctica as it is the only protected area currently designated solely for its value in the monitoring of human impact. The objective is to use the Area as an unaffected control area in assessing the impact of activities undertaken at Rothera Research Station on the Antarctic environment.

The hypothesis being tested is that the activities undertaken at Rothera Research Station have not caused environmental impact within the Area.

Monitoring studies undertaken by the UK (through the British Antarctic Survey) began at Rothera Point in 1976, before the establishment of the station later that year, and have expanded considerably since 1989. Further long-term development of the station commenced in 2005. The UK plans to continue monitoring studies in the future.

The purposes of the monitoring programme are to:

- survey the distribution of terrestrial flora and invertebrates every decade;
- assess heavy metal concentrations in lichens every five years;

- assess petroleum hydrocarbon and heavy metal concentrations in gravel and soil every 5 years;
- survey the breeding bird population annually.

3. Management activities

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

- signboards illustrating the location and boundary of the Area and stating entry restrictions shall be erected at the major access points and serviced on a regular basis;
- a map showing the location and boundaries of the Area and stating entry requirements shall be displayed in a prominent position at Rothera Research Station;
- visits shall be made as necessary (no less than once every two years) to assess whether the Area continues to serve the purposes for which is was designated and to ensure management activities are adequate.

4. Period of designation

Designated for an indefinite period.

5. Maps

- Map 1. ASPA No 129 Rothera Point, location map. Map specifications: Projection: WGS84 Antarctic Polar Stereographic. Standard parallel: 71°S. Central meridian 67°45'W.
- Map 2. ASPA No 129 Rothera Point, topographic map. Map specifications: Projection: WGS84 Antarctic Polar Stereographic. Standard parallel: 71°S. Central meridian 67°45'W.

6. Description of the Area

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

Rothera Point (67° 34'S, 68° 08'W) is situated in Ryder Bay, at the south-east corner of Wright Peninsula on the east side of Adelaide Island, south-west Antarctic Peninsula (Map 1).

The Area is the north-eastern one-third of Rothera Point (Map 2), and is representative of the area as a whole. It is about 280 m from west to east and 230 m from north to south, and rises to a maximum height of 36 m. At the coast, the Area boundary is the 5 m contour. No upper shore, littoral or sublittoral areas of Rothera Point are therefore included within the ASPA. The southern boundary of the Area, running across Rothera Point, is partially marked by rock filled gabions, in which are placed ASPA boundary signs. The remaining boundary is unmarked. There are two signboards just outside the perimeter of the Area located at the starting points of the pedestrian access route around Rothera Point (see Map 2).

The Area boundary extends to the 5 m contour at the coast. There is unrestricted pedestrian access below this contour height around Rothera Point. The recommended pedestrians access route follows the Mean High Water Mark (MHWM) and is shown on Map 2. During periods when the ground is

snow-covered and sea ice has formed, pedestrians should ensure that they are at a safe distance from the shoreline and are not in danger of straying onto unreliable sea ice or into tide cracks.

Small areas of permanent ice occur to the north and south of the summit of the ASPA. There are no permanent streams or pools.

The rocks are predominantly heterogeneous intrusions of diorite, granodiorite and adamellite of the mid-Cretaceous-Lower Tertiary Andean Intrusive Suite. Veins of copper ore are prominent bright green stains on the rock. Soil is restricted to small pockets of glacial till and sand on the rock bluffs. Local deeper deposits produce scattered small circles and polygons of frost sorted material. There are no extensive areas of patterned ground. Around prominent rock outcrops used as bird perches by Dominican gulls (*Larus dominicanus*) there are accumulations of recent and decaying limpet (*Nacella concinna*) shells forming patches of calcareous soil. There are no accumulations of organic matter.

There are no special or rare geological or geomorphological features in the Area.

The limited terrestrial biological interest within the Area is confined to the rock bluffs where there is locally abundant plant growth dominated by lichens. The vegetation is representative of the southern "maritime" Antarctic fellfield ecosystem and is dominated by the fruticose lichen *Usnea antarctica*, *Usnea sphacelala*, and *Pseudephebe minuscula*, and the foliose lichen *Umbilicaria decussata*. Numerous crustose lichens are associated, but bryophytes (mainly *Andreaea* spp.) are sparse.

A single very small population of Antarctic pearlwort (*Colobanthus quitensis*) occurs below the northern cliff of the Area, whilst a few plants of Antarctic hair grass (*Deschampsia antarctica*) have become established at two locations since 1989.

The invertebrate fauna is impoverished and consists only of a few species of mites and spring tails, of which *Halozetes belgicae* and *Cryptopygus antarcticus* are the most common.

There are no special or rare terrestrial flora and fauna in the Area.

Brown and south polar skuas (*Catharacta lonnbergii* and *C. maccormicki*) are the most abundant breeding birds found in the Area, with five pairs of skuas recorded nesting in the 2006/7 season. A pair of Dominican gulls (*Larus dominicanus*) nest in the Area. Wilson's storm petrels (*Oceanites oceanicus*) also breed, but only one nest has been found.

Rothera Research Station (UK) lies about 250 m west of the western boundary of the Area (see inset on Map 2).

6(ii) Restricted zones within the Area

None.

6(iii) Location of structures within the Area

A rock cairn marks the summit of the Area (36 m) and 35 m to the east south east of it there is another cairn (35.4) marking a survey station.

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

ASPA No 107, Dion Islands, Marguerite Bay, lies about 15 km south of Adelaide Island. ASPA No 115, Lagotellerie Island, Marguerite Bay, lies about 11 km south of Pourquoi Pas Island. ASPA No 117, Avian Island, Marguerite Bay, lies about 0.25 km south of the south-west tip of Adelaide Island. The locations of these ASPAs are shown on Map 1.

7. Permit conditions

Entry to the Area is prohibited without a Permit. Permits shall be issued only by appropriate national authorities, and may contain both general and specific conditions.

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

- activities limited to scientific research or monitoring purposes;
- the actions permitted will not jeopardize the ecosystem or scientific or monitoring values of the Area;
- any management activities are in support of the objectives of the Management Plan;
- the actions permitted are carried out in accordance with this Management Plan;
- the permit holder must carry the permit, or an authorized copy, within the Area.

National authorities may attach further general and specific conditions to a permit.

7(i) Access to and movement within the Area

Access to the Area shall be on foot.

Landing of helicopters within the Area is prohibited. As far as practicable, helicopter overflight of the Area shall be avoided.

Vehicles are prohibited in the Area.

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

Activities which are or may be conducted within the Area are:

- scientific research or monitoring which will not jeopardise the ecosystems of the Area;
- essential management activities.

7(iii) Installation, modification or removal of structures

No structures are to be erected in the Area, or equipment installed, except for essential scientific or management activities (e.g. signboards, monitoring equipment) as specified in the permit.

All scientific and monitoring equipment, including marker stakes, installed in the Area must be approved by Permit and clearly identified to show principal investigator, project and year installation. The Permit holder must remove any scientific or monitoring equipment installed as soon as it is no longer required, or on the expiry of the permit, which ever is the sooner.

7(iv) Location of field camps

Camping in the Area is prohibited. Accommodation may be available at Rothera Research Station.

7(v) Restrictions on materials and organisms that may be brought into the Area

No non-indigenous living animals, plant material, microorganisms or soil shall be deliberately introduced into the Area. All sampling equipment brought into the Area shall have been thoroughly cleaned. To the maximum extent possible, footwear, outer clothing, backpacks and other equipment used or brought into the Area shall be thoroughly cleaned before entering the Area.

Any hazardous substances or chemicals, including radioisotopes, which may be introduced for scientific, monitoring 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, food and other materials must not be stored in the Area, unless required for essential purposes connected with the activity for which the Permit has been granted. All such materials introduced shall be removed from the Area at or before the conclusion of the activity for which the Permit was granted. Permanent depots are not permitted.

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

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

Taking of or harmful interference with native flora and fauna is prohibited, except in accordance with a Permit. Where taking of or harmful interference with animals is involved this should in accordance with the SCAR Code of Conduct for the 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

Material may be collected and/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 not brought into the Area by the Permit holder, or otherwise authorised, which is likely to compromise the values of the Area shall be removed unless the impact of removal is likely to be greater than leaving the material *in situ*. In the latter case the appropriate authority shall be notified.

7(viii) Disposal of wastes

All wastes, including all human wastes, must 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

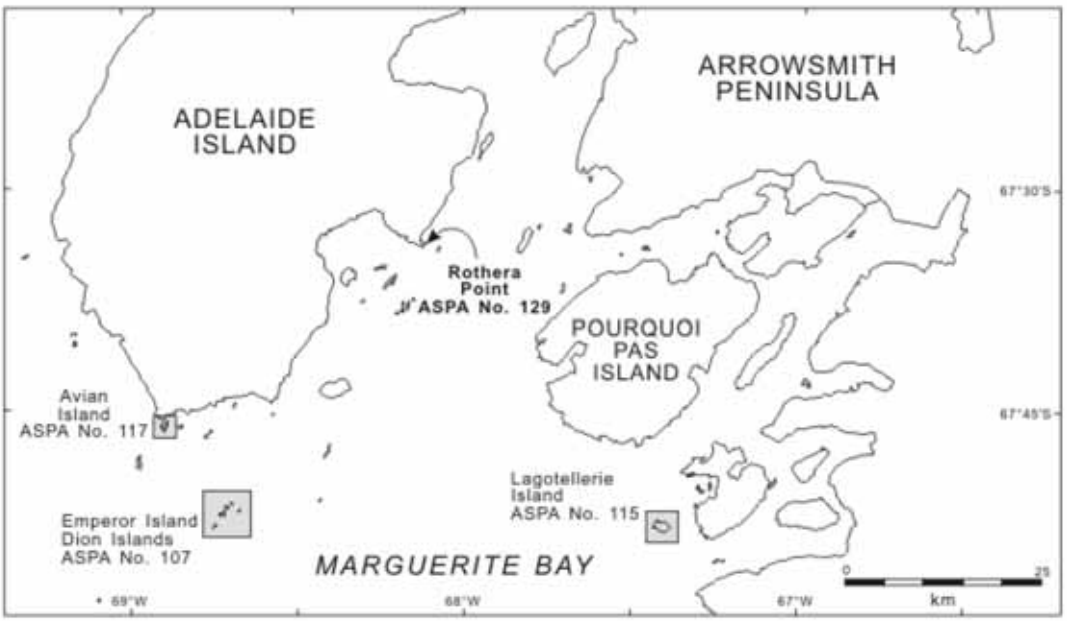
Permits may be granted to enter the Area to carry out scientific research, monitoring and Area inspection activities, which may involve the collection of a small number of samples for analysis, to erect or maintain signboards, or to carry out protective measures.

7(x) Requirements for reports

Parties should ensure that the principal holder of each Permit issued submits 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 description of activities conducted by persons subject to their jurisdiction, 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.

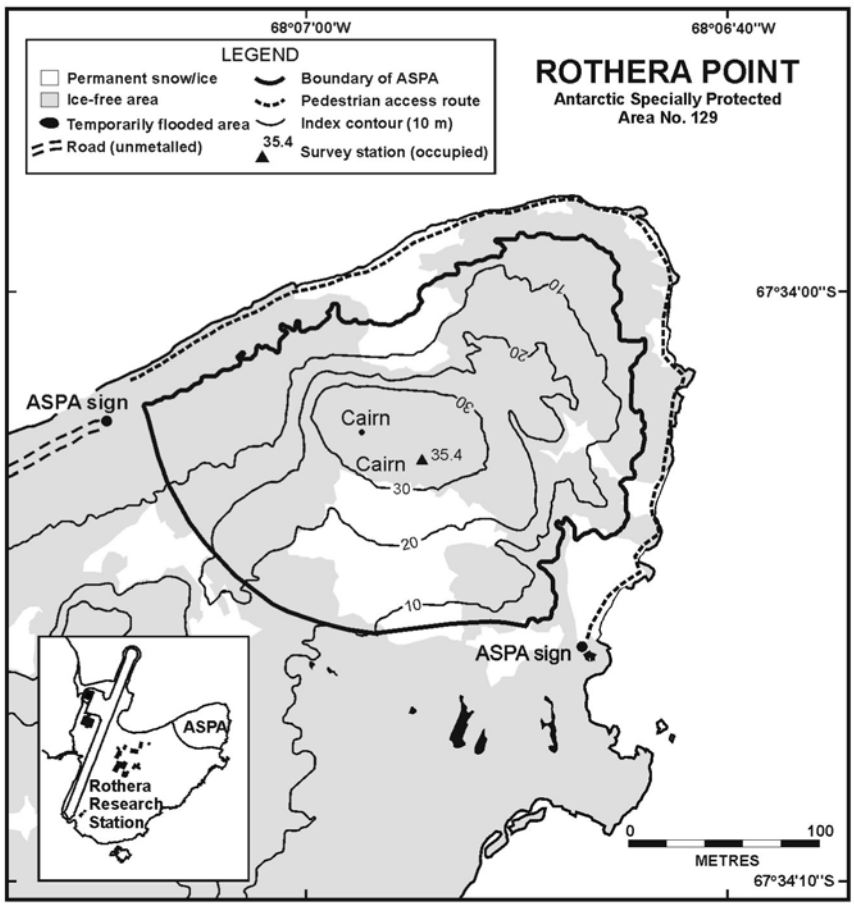
Map 1. ASPA No 129 Rothera Point, location map.

Map specifications: Projection: WGS84 Antarctic Polar Stereographic. Standard parallel: 71°S. Central meridian 67°45'W.



Map 2. ASPA No 129 Rothera Point, topographic map.

Map specifications: Projection: WGS84 Antarctic Polar Stereographic. Standard parallel: 71°S. Central meridian 67°45'W.



Measure 2 (2007)

Antarctic Specially Managed Areas: Designations and Management Plans

The Representatives,

Recalling Articles 4, 5 and 6 of Annex V to the Protocol on Environmental Protection to the Antarctic Treaty, providing for the designation of Antarctic Specially Managed Areas ("ASMA") and the approval of Management Plans for those Areas;

Noting that the Committee for Environmental Protection has advised that Amundsen-Scott South Pole Station, South Pole and Larsemann Hills, East Antarctica be designated as Antarctic Specially Managed Areas and has endorsed the Management Plans annexed to this Measure;

Recognising that Amundsen-Scott South Pole Station, South Pole and Larsemann Hills, East Antarctica are areas where activities are being conducted, in which it is desirable to plan and coordinate activities, avoid possible conflicts, improve cooperation between Parties and minimise environmental impacts;

Desiring to designate Amundsen-Scott South Pole Station, South Pole and Larsemann Hills, East Antarctica as Antarctic Specially Managed Areas and to approve Management Plans for these Areas;

Recommend to their Governments the following Measure for approval in accordance with Paragraph 1 of Article 6 of Annex V to the Protocol on Environmental Protection to the Antarctic Treaty:

That:

1. the following be designated as Antarctic Specially Managed Areas:

   (a) Antarctic Specially Managed Area No 5: Amundsen-Scott South Pole Station, South Pole;

   (b) Antarctic Specially Managed Area No 6: Larsemann Hills, East Antarctica;

2. the Management Plans for these Areas, which are annexed to this Measure, be approved.

Management Plan for Antarctic Specially Managed Area No 5

AMUNDSEN-SCOTT SOUTH POLE STATION, SOUTH POLE

1. Description of Values to be Protected

The Amundsen-Scott South Pole Station (hereafter referred to as "South Pole Station") is located on the polar plateau near the geographic South Pole, at 90° S. An area of approximately 26,400 km^2 encompassing the station and long-term research and monitoring sites is designated as an Antarctic Specially Managed Area (hereafter referred to as "the Area") to manage human activities for the protection of scientific, environmental, and historical values.

The climate at the South Pole Station is extremely cold, windy, arid, and at a high physiological altitude. The mean annual temperature is -49.3°C; annual precipitation is about 7 cm (water equivalent). The elevation at the station is 2,835 m. The landscape of the region is characterized by the flat, white surface of the ice sheet, which rises 2,700 m above the continental landmass (elevation is 135 m above sea level). The ice sheet at the South Pole is constantly shifting, and moves the Area approximately 10 m each year towards the Weddell Sea.

The Area is located in a region of high scientific value and South Pole Station facilitates exceptional scientific research with extensive international collaboration. The unique environmental conditions at South Pole Station provide special opportunities for scientific observation. The air is considered to be the cleanest air on Earth, being far removed from pollution sources and human influence. As such, the Area is an important monitoring and research area for world background levels of natural and anthropogenic atmospheric constituents. Furthermore, conditions in Antarctica reflect global change as well as indicate the regional role of Antarctica in the global climate.

The South Pole's position on the Earth's axis, the Area's climatic conditions and remoteness from light pollution facilitate extended astronomical and astrophysical observations of specific stellar objects. Also, the Area's isolation from sound, vibration, and electro-magnetic interference (EMI) is important for seismological and astrophysical research. The geophysically stable location of the Area and the operation of the Station year-round allow for continuous research of upper atmosphere physics, including solar processes, effects of short term geomagnetic phenomena (auroras, induced electrical currents, and radio wave communications interference), and long term events (relating to the ozone layer, ultraviolet radiation, atmospheric composition, stratospheric winds, weather, and climate). The area also hosts one of the Earth's most important seismic stations, critical for both its location and lack of background noise.

The unique ice conditions in the Area are of high scientific value. The thick ice serves as a storehouse of information about climate and atmospheric constituents. Also, the depth and the clarity of the ice make it an ideal medium for neutrino detection.

The unique community of people living at South Pole Station allows for specialized medical research on small, isolated groups.

The Area has significant historical value. The Ceremonial Pole (HSM No 1), surrounded by the flags of the twelve original Antarctic Treaty nations, commemorates the International Geophysical Year, and is symbolic of all expeditions that have reached the South Pole. Also, although the exact location is unknown today, Amundsen Tent (HSM No 80), is also located within the Area.

Activities conducted in the area include diverse scientific research endeavours, operations in support of science, media, arts, education, and tourism.

2. Aims and objectives

The South Pole area requires special management to ensure that the scientific, environmental, and historical values of the Area are conserved. Increasing human activity has necessitated more effective management and coordination of activities in the Area.

The aim of management at South Pole is to coordinate activities in the Area such that the scientific and environmental values of the Area can be sustained indefinitely, and the historical values preserved to the greatest extent practicable. The specific objectives of management in the Area are to:

- Facilitate scientific research while maintaining stewardship of the environment;
- Prevent conflicts among activities, including different areas of scientific research, science support activities, and non-governmental activities;
- Promote coordination for future activities, including coordination with tour operators visiting the Area;
- Maintain a safe environment in the Area;
- Maintain the historic values of the Area;
- Minimize environmental impacts of human activities;
- Minimize release of pollutants;
- Allow for necessary modifications and expansion of Station facilities in a managed, well-planned manner.

3. Management activities

The following management activities are to be undertaken to achieve the aims and objectives of this plan:

- The National Program(s) operating in the Area shall promote the dissemination of information to all parties operating in the Area to ensure the implementation of the management plan.
- The National Program(s) operating in the Area shall in particular promote, to all parties operating in the Area, general education on safety, risks related to environmental conditions, medical emergencies and incidents, Zone and Sector guidelines, and airport safety issues.
- To prevent conflicts, parties intending to conduct research in the Area shall coordinate activities with the National Program(s) operating in the area well ahead of the planned activity. National Program(s) operating in the Area shall ensure that all personnel in their program visiting the Area have been briefed on the requirements of the management plan.
- Visitation by tour groups and any other non-governmental activities shall be coordinated with the National Program(s) operating in the Area, as outlined in Appendix A. Group leaders shall ensure that all visitors have been briefed on the requirements of the management plan.
- As the operator of Amundsen-Scott South Pole Station, the US has volunteered to take the lead in coordinating activities in the South Pole ASMA.
- Visits to the ASMA shall be made as necessary by the National Program(s) operating in the Area (no less than once every five years) to evaluate whether the management plan is effective and to ensure management measures are adequate.

Additional guidelines for the conduct of specific activities and for specific Zones within the Area are found in the Appendices.

4. Period of designation

Designated for an indefinite period, subject to periodic review by the Antarctic Treaty Parties, as required by Annex V, Article 6.

5. Maps and Photographs

Due to the dynamic nature of the ice sheet and operations supporting science at the South Pole, persons intending to access the Area should contact the National Program(s) operating in the Area for the most current maps and information.

- Map 1 – general map of the Area, with full extent of Zones and Sectors, and location on the Antarctic Continent
- Map 2 – map with designated aerial approach paths
- Map 3 – map with detail of sector intersections
- Map 4 – detailed area map with Non-Governmental Organization (NGO) parking and camping area, access paths, buildings and zones specified

*Note: "Grid North," as represented on Map 4 is in reference to alignment with the Greenwich Meridian (0 Degrees Longitude).

6. Description of the Area

6(i) Geographical co-ordinates, boundary markers and natural features

The boundary of the Area comprises all structures and areas of current and planned research at South Pole Station and a buffer area for the Clean Air Sector (CAS). The boundary of the Area is a circle around the South Pole Station with a radius of 20 km, and a wedge extending 150 km from the Atmospheric Research Observatory (ARO) building (approximately 0.5 km from the 2005 Geographic South Pole), bounded by 110° and 340° (grid) from the ARO building. The point of origin of the ASMA and sectors (other than the CAS) was designated as the circular aluminum tower staircase on the elevated station, as this is a readily recognizable feature on the maps and on the ground, and the elevated station is expected to be present in the Area longer than any other structure or landmark.

Pollutants from aircraft and other sources in polar regions can travel hundreds of kilometers, affecting measurements of boundary layer air, measurements of gasses and aerosols in the air column, and measurements of contaminants in the snow, thus requiring an extensive area be kept vacant to maintain a site for research on clean air. The ARO building is situated upwind of the station, and the 150 km outer radius of this sector provides the necessary buffer for ensuring accurate measurements.

Snow accumulation has been monitored intermittently at the South Pole since the International Geophysical Year (1957-1958). An extensive network of measurement locations to monitor long-term snow accumulation around the South Pole was established in 1992 (Mosley-Thompson et al. 1999). The network of measurement stakes extends out 20 km in all directions from the pole; it is essential for the research being conducted on snow accumulation that the stakes and the area around the stakes are not disturbed.

Due to the movement of the ice sheet in the area, the geographic location of the ASMA will move approximately 10 m per year; the area is centered on the elevated South Pole Station, and all sectors are relative to this location. Treaty parties may consider shifting the Area if it becomes appropriate in the future.

6(ii) Restricted and managed zones within the area

This management plan establishes four types of managed zones within the Area: Operational Zones, Scientific Zones, Historic Zones, and a Hazardous Zone. The objective of this zoning concept is to manage for multiple uses of and activities in the Area. The Operational Zones encompass areas where science support and the majority of human activity (including tourism) occur, the Scientific Zones bound areas where scientific research occurs, the Historic Zones encompass and preserve historical sites, and the Hazardous Zone restricts all human activity for safety reasons. Each zone has specific guidelines for the conduct of activities, discussed in general in the sections below and in detail in the Appendices.

6ii(a) Operational Zone

The Operational Zone has been established to contain primary human activity in the Area, including science support activities, main station services (e.g. living facilities), ski-way operations, and tourism. Scientific activities may be conducted in the Operational Zone if they will not be in conflict with operational activities.

The following management activities should be undertaken for the Operational Zone:

- Waste management should be considered in the planning, maintenance and decommissioning of facilities within the Operational Zone;
- Standard operating procedures for activities in the Operational Zone by the National Program(s) operating in the Area should be adopted and made available to persons visiting the area where deemed appropriate by the National Program(s) operating in the Area;
- Contingency plans for emergencies in the Operational Zone should be adopted where deemed appropriate by the National Program(s) operating in the Area;
- The installation of any new structures or modernization of existing structures in the Operational Zone may from time to time be necessary. The National Program(s) operating in the area should review and coordinate any plans for construction or installations to ensure that the impact on scientific activities is minimized. Any change is subject to environmental assessment as required by Article 8 of the Protocol on Environmental Protection to the Antarctic Treaty.
- Specific guidelines for visitors not associated with a National Program are described in Appendix A of this management plan.

Map 3 shows the location of the Operational Zone.

6ii(b) Scientific Zone

The Scientific Zone has been established to protect certain types of scientific activity from disturbance. The unique scientific values of South Pole Station require special protection from the interference from sound, light, vibration, EMI, snow drifting, and visual obstruction. South Pole Station has been designed so that scientific activities of particular sensitivity are strategically located and protected from activities causing interference.

The following management activities should be undertaken for the Scientific Zone:

- Standard operating procedures for activities in the Scientific Zone should be adopted and updated as deemed necessary by the National Program(s) operating in the Area.
- The Scientific Zone has been divided into Sectors to address specific scientific requirements. The Scientific Zone Sectors are listed in Appendix B with locations, boundary descriptions and guidelines for conduct in the individual Sectors. Detailed Standard Operating Procedures for some of the sectors are available upon request from the United States Antarctic Program (USAP).

Maps 1 and 2 display the location of the Scientific Zone Sectors. Entry to these Sectors should not interfere with scientific activities.

6ii(c) Historic Zone

The Historic Zone encompasses sites designated for their historic value. Management of this Zone aims to recognize and protect the values of the sites while allowing for visitation to the Zone. The Historic Zone includes the site of the Ceremonial South Pole, located near the Geographic South Pole and is clearly marked. In addition, although the exact location or depth is unknown today, Amundsen's Tent (HSM No 80) and other relics from the 1911-12 era, are also located in the Area. The Historic Zone is located within the Operational Zone. Searching and/or removal of said relics is strictly prohibited within this zone and/or within the historic geographic confines of this zone, unless authorized by the Treaty Parties. In the future, the Treaty Parties may consider expansion of the Historic Zone; there are no restrictions on where the Historic Zone may be designated within the ASMA.

Historic Site and Monument No 1 (HSM No 1) is the flag mast at South Pole 90°S, the flag mast was erected in December 1965 at the geographic South Pole by the first Argentine Overland Polar Expedition. The precise location of HSM No 1 is not currently known due to ice sheet movement, therefore could not be identified on the management plan maps.

The Ceremonial South Pole commemorates the International Geophysical Year (IGY) as well as all expeditions that have achieved the South Pole. At the site is the Ceremonial Pole marker surrounded by the flags of the original twelve Antarctic Treaty nations.

There are no restrictions on visitation to the Historic Zone. However, visitors must abide by guidelines in this management plan and take all appropriate safety precautions.

Map 4 shows the location of the Ceremonial South Pole.

6ii(d) Hazardous Zone

The Hazardous Zone is designated to safeguard hazardous sites found in and around the original (1957) South Pole Station. For reasons of human safety, entrance to the Hazardous Zone is prohibited at all times, except for essential management activities.

The following management activities should be undertaken for the Hazardous Zone:

- The National Program(s) operating in the Area or expedition leaders from all other groups visiting the ASMA should ensure that all visitors to the Area are educated on the boundaries, purpose, and entrance prohibition of the Hazardous Zone.
- Visits to the Hazardous Zone may only be made for essential management purposes.

Map 3 shows the location of the Hazardous Zones.

6(iii) Location of structures within and adjacent to the site

Structures within the Area are identified on Map 4. Various structures have been installed in the Area since the 1950s; all were constructed by the United States. No building should be entered without permission from the National Program(s) operating in that building. For restrictions on

access to specific structures and their surrounding areas, see detailed descriptions of Zones and their Sectors in the Appendices of this plan. A new US station facility is being constructed in the Area. The 1975 US dome station and other facilities that are beyond their useful life will be removed from the Area when practicable.

When the current phase of construction is completed at the South Pole Station, the footprint of buildings remaining on site will total approximately 14,800 m^2, in the following divisions:

- Elevated Station: 5,575 m^2
- Sub-surface Arches: 5,575 m^2
- Ancillary Science Buildings: 3,715 m^2

6(iv) Location of Antarctic Specially Protected Areas within or around the Area

None.

7. Code of Conduct

7(i) Access to and movement within the Area

All approaches to the Area should be made along a route approximately 204° east of grid north to avoid restricted sectors. Access to the Area is usually by ski-equipped fixed-wing aircraft, but may be by overland vehicle traverse. Occasional access to the Area is made by helicopter, on foot, or by ski. Entry into the Area is permissible, but notification must be given to the National Program(s) operating in the Area prior to entering the Area, and specific requirements are provided below for access to the area via aircraft. Coordination with National Program(s) operating in the Area in no way implies liability of any Treaty Party or National Program for any accident or injury incurred at any time during the expedition. Pilots should refer to the Antarctic Flight Information Manual (AFIM) for specific details regarding access to the area via aircraft and requirements for prior approval for ski-way use.

Care should be taken when approaching on the ground to avoid the Very Low Frequency (VLF) antenna. Movement within the Area is usually by foot or by vehicle. Vehicles and pedestrians should stay on marked trails as much as practicable. The ski-way should not be crossed unless absolutely necessary and all crossings should be made at the designated crosswalks, adjacent to, and in accordance with the status indicated by the "crossing beacons." The ski-way shall not be crossed when the beacons' rotating lights are on, signaling an imminent aircraft landing or take-off. Restrictions exist for access into and movement within some of the Zones within the Area; refer to the Appendices of this management plan for additional movement and access guidelines in the Zones.

7i(a) Access to the Area via aircraft – National Programs

National Program(s) intending to fly into the Area should coordinate with National Program(s) operating in the area to ensure there will be no conflicts with ongoing activities. Advance planning and communication, consistent with the Antarctic Treaty's Information Exchange requirements, with confirmation at least 24 hours prior to arrival, is necessary to avoid conflicts. Pilots approaching the area should notify South Pole communications (COMMs) 30 minutes prior to landing at the South Pole to allow time to clear the ski-way, and should confirm again their approach 10 minutes before landing. Pilots should observe the flight-restricted areas defined in this management plan to preserve the integrity of the Clean Air Sector research.

7i(b) Access to the Area via aircraft – Other Expeditions

The ski-way and infrastructure are maintained by the National Program(s) in the Area and use of these resources is generally restricted to activities supported by them. Access to the South Pole ASMA via any type of aircraft is limited to activities supported by National Programs and activities granted prior approval by the National Program(s) that maintain the ski-way and associated air traffic control facilities. The ski-way is essential to the operations and safety of researchers in the Area. Use of wheeled aircraft on the ski-way or an airplane crash would have substantial deleterious impacts on the scientific research being conducted in the Area and threaten the safety of all personnel in the Area.

Approval of ski-way use for an activity not associated with a National Program does not need to include a full safety review of an expedition or its flight plan, and in no way implies liability of any Treaty Party or National Program for any accident or injury incurred at any time during the expedition. If a person or organization not associated with a National Program intends to request prior approval to access to the Area via aircraft or use of the ski-way, they should refer to the requirements and procedures for approval in the AFIM and contact the appropriate National Authorities.

7(ii) Activities that may be conducted in the Area

All activities in the Area should be conducted in a manner that will preserve the values of the Area to the greatest extent practicable. There are no restrictions on types of activities that may be conducted in the Area; however, all activities in the Area should be conducted in accordance with the guidelines in this management plan. Activities should be conducted in as energy efficient manner as possible, and renewable energy should be used as much as practicable to minimize fuel usage.

Tour operators and other non-governmental visitors to the Area should provide visitation schedules to National Program(s) operating in the Area in advance of their visits. All visitors to the Area that are not sponsored by a National Program should be educated on and follow the guidelines in this management plan, especially Appendix A.

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

The installation of new structures, or modification or removal of existing structures should be reviewed by the National Program(s) operating in the Area. Any change is subject to environmental assessment as required by Article 8 of the Protocol on Environmental Protection to the Antarctic Treaty.

7(iv) Field camps

- For visitors to South Pole not sponsored by a National Program, field camps in the Area should be located at the designated site described in Appendix A.
- All materials and equipment should be removed from field camps upon departure.
- Solid wastes, including human wastes should be brought out of field camps to the maximum extent practicable.

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

Not applicable.

7(vi) Collection or removal of material found in the Area

Aside from removal of snow and ice for scientific purposes or for drinking water supply and cooking water during expeditionary activities, nothing should be removed from the Area that was not brought

in by the visiting party, unless approved by the National Program(s) operating in the area or mandated (i.e. for environmental protection purposes).

7(vii) Waste management

- For the National Program(s) operating in the Area,
  - All waste should be removed from the Area with the following exceptions: human waste and liquid from bathing, laundry and dishwashing.
  - Human waste, garbage disposal waste, liquid from bathing, laundry and dishwashing may be deposited into deep sewer bulbs, or disposed of by other methods in accordance with the Protocol.
- For other expeditions to the Area,
  - All waste brought in or generated is to be containerized and removed from the area upon departure.

7(viii) Requirements for reports

The National Program(s) operating in the Area shall provide a record of visitations to the Area to the depository Nation annually.

8. Provisions for the Exchange of Information in Advance of Proposed Activities

Prior notification of a visit to the ASMA by visitors not sponsored by a National Program must be provided to the appropriate National Authorities. In addition to the normal exchange of information by means of the annual national reports to the Parties of the Antarctic Treaty, Scientific Committee on Antarctic Research (SCAR), and Council of Managers of National Antarctic Programs (COMNAP), Parties operating in the Area will exchange information annually. All National Programs, NGOs, and other individuals or organizations intending to visit or conduct research in the ASMA should contact the National Program(s) operating in the Area sufficiently in advance of the activity to allow for coordination of planned activities with ongoing activities in the Area.

9. Supporting Documentation

Additional guidelines for activities in the ASMA are found in the Appendices of this plan. Detailed operating procedures for some Zones and their Sectors have been written and are updated yearly; current versions may be available upon request from the USAP.

10. References

Standing Committee on Antarctic Logistics and Operations (SCALOP) and the Council of Managers of National Antarctic Programs (COMNAP). Antarctic Flight Information Manual: A Handbook of Antarctic Aeronautical Information. (See most recent update)

Mosley-Thompson, E., J.F. Paskievitch, A.J. Gow, and L.G. Thompson. 1990. Late 20th century increase in South Pole snow accumulation. Journal of Geophysical Research 104(D4):3877-3886.

APPENDIX A

Additional Guidelines for Non-Governmental Organizations at the South Pole

Guidelines for tourist activities have been established to improve coordination between the National Program(s) operating in the Area and non-governmental visitors to South Pole Station. Each austral summer, the South Pole Station receives a number of visitors associated with private expeditions and other Non-Governmental Organizations (NGOs). These visitors are most frequently associated with private companies that provide transportation, guides, and logistical support. The purpose of this Appendix is to inform NGO visitors about on-site resources, expectations, and hazards. In addition to these procedures, every person at the South Pole is expected to comply with the Antarctic Treaty and policies governing their respective National Program(s).

- For the purpose of this management plan, "Non-governmental organizations" includes all individuals or organizations that are not sponsored by a National Antarctic Program.
- The U.S. Antarctic Program (USAP) operates Amundsen-Scott South Pole Station. The USAP is not authorized to provide support for NGOs except in an emergency situation.
- All approaches to the Area should be made along a route approximately 204° east of grid north to avoid restricted sectors. Approaches from the north, east, or west would interfere with ongoing scientific activities in the Area.
- Overland approaches to the area should remain at least 10 meters to the south (grid) of the Very Low Frequency (VLF) antenna. If a group does walk under the antenna, care should be taken not to touch the masts or cables. Because of this antenna's location across the historical approach path for NGO surface expeditions, future expeditions should be warned that anyone who approaches this antenna does so at his or her own risk. The location of the VLF antenna is noted in Map 3.
- Overland approaches should also be aware of ski-way visibility markers located various distances from the geographic South Pole in four directions around the station (Table 1). All markers are four feet high by eight feet wide, except the 1 mile markers which are eight feet by eight feet, and mounted four feet off the snow surface.

Table 1. Visibility markers located around South Pole Station.

Direction (° E of grid N)	Marker 1 (miles)	Marker 2 (miles)	Marker 3 (miles)	Marker 4 (miles)	Marker 5 (miles)	Marker 6 (miles)
113	0.5	1	1.5	2	-	-
204	0.5	1	1.5	2	3	4
270	0.75	1	2	3	-	-
353	0.5	1	1.5	2	-	-

- NGOs that intend to fly aircraft into the Area or land on the ski-way must obtain prior approval to do so from the National Program(s) that maintain the ski-way and associated air traffic control equipment. If prior approval is granted, NGO pilots should refer to and follow guidance in the AFIM and information provided by the National Program(s) operating in the Area. NGOs may not conduct a parachute operation from an aircraft and no pilot in

command of an aircraft may allow a parachute operation to be conducted from that aircraft over or near the ski-way or other infrastructure in the Area.

- No access to email, telephones, or radios will be provided except as authorized by the appropriate National Program.
- The ideal timeframe for visits to the South Pole Station is on Sunday from 13:00 to 17:00 South Pole Station Time [00:00 to 04:00 GMT/UTC]. This time period is recommended to minimize disruption to station science, construction, and operational activities. Services and access to the station at other times are highly unlikely.
- When NGO visitors are required to spend the night in the Area, they must use their own provisions for food and camping.
- Except for emergency situations, unescorted guests are expected to stay within the designated camping area, the NGO parking area, or the area immediately surrounding the Pole markers, unless otherwise authorized by the National Program(s) operating in the area.
- The designated camping area has been chosen for the following reasons: it is located near the NGO parking area, it is close to medical or other emergency services (if needed), it does not usually interfere with vehicle traffic or USAP aircraft operations, and it is far removed from most hazardous areas and construction areas.
- To avoid disruption of official USAP activities, all South Pole Station buildings and operation and science areas are off limits to NGO personnel except when guided by an individual designated by the USAP or when within the aforementioned areas.
- In the event of an aircraft or medical emergency in the Area, NGOs shall notify COMMS immediately by any means possible. COMMS staff will notify the on-site National Science Foundation (NSF) Representative and other personnel as necessary.
- South Pole Communications personnel will record NGO arrivals and departures; this information may be made available to Antarctic Treaty Party members upon request.

APPENDIX B

Additional Guidelines for the Scientific Zone

The Scientific Zone encompasses the Clean Air Sector, the Quiet Sector, the Downwind Sector, and the Dark Sector (Maps 1-4). The Clean Air Sector (CAS) ensures a pristine air- and snow-sampling environment for climate systems research. The Quiet Sector is an area where noise and equipment activities are limited for seismology and other vibration-sensitive pursuits. The Downwind Sector provides an area free from obstructions for balloon launches, aircraft operations, and other "downwind" activities. The Dark Sector provides an area free from light pollution and electromagnetic noise for astronomy and astrophysics research. Following are descriptions of the objectives of and special guidelines for activities in each sector of the Scientific Zone. For ease of description, the Sectors, with exception of the Clean Air Sector, originate at the Elevated Station. The Scientific Sectors and their guidelines apply to the area beyond the Operations Zone out to the edge of the ASMA.

1. CLEAN AIR SECTOR

The Clean Air Sector (CAS) was established to preserve the unique conditions that are required for atmospheric research at the South Pole Station. The Earth's atmosphere near the South Pole is remote from worldwide human influence, and a predominant northerly (grid) wind means the Atmospheric Research Observatory (ARO) is situated upwind of all other facilities more than ninety percent of the time. These natural conditions allow for nearly continuous measurement of important trace constituents of the atmosphere in a location remote from anthropogenic inputs. The air sampled at the South Pole is representative of the background atmosphere of the planet and is essentially the "cleanest air on Earth."

Geographic Boundaries of the Clean Air Sector

The Clean Air Sector is a wedge-shaped area upwind (grid northeast) of the main station complex. Restricted areas on land and in the air have been designated to maintain the scientific value of the CAS.

The restricted area on the ground is defined by the following boundaries:

- On the ground, a line extending grid 340º from the SW corner of ARO building.
- On the ground, a line extending grid 110º from the SW corner of ARO building.
- On the ground, extending out to 150 km/80 nautical miles NE of the ARO building.
- The De-Motorized Zone is an additional, semi-circular area extending 50 meters (m), or 150 feet (ft), downwind of the ARO building into which vehicle access is prohibited unless authorization is given by the National Program(s) operating in the area. All vehicles should approach ARO on the groomed trail and park at the "turnaround" where there is a sign stating "No Vehicles Beyond This Point."
- No aircraft operations are allowed within 2 km of the snow surface in the Clean Air Sector.

The National Oceanic and Atmospheric Administration (NOAA) has conducted many hours of aircraft air pollutant measurements and data show that plumes can be traced for hundreds of miles in stable air. To protect measurements at the ARO and in the snow it was recommended that aircraft fly above 2 km to stay out of the boundary layer air and to limit deposition of particles and gas into

the snow surface. The 150 km radius was selected as a reasonable buffer distance. However, Arctic studies suggest that twice that distance is justifiable.

Additional guidelines for the Clean Air Sector

- Where the Clean Air Sector overlaps the Dark Sector or the Quiet Sector, the procedures for all applicable sectors shall apply.
- The National Program(s) operating in the Area will document all pedestrian/surface vehicle excursions into the Clean Air Sector.
- Aircraft flying above the Clean Air Sector (above 2 km or 6,000 ft) should notify the National Program(s) operating in the Area.
- Access to the roof of the ARO building is restricted. Please contact the USAP if access is required for your project. Users of the roof area must note all roof excursions in the Clean Air Sector Log. Structures, objects, etc. are not allowed on the roof of the ARO building in a location that would interfere with air sampling intakes or at a height exceeding 1.3 m (4 ft) above the roof surface, due to interference with the current solar and terrestrial radiation instruments. Do not obstruct the roof hatches with equipment or materials.
- Access to the orange and white meteorological tower and to the snow surface near the tower is restricted. Objects and activity on the tower and on the snow surface in its vicinity (particularly within a distance of approximately three times the tower's height) can interfere with measurements conducted from the tower. Please contact the USAP if access is required.
- Activities, structures, and instrumentation located within the Clean Air Sector should not interfere with projects already established, except as specifically authorized by the appropriate National Authority.
- Structures should not be placed in a manner that they could cause drifting upwind of, under, or near the ARO building.
- All instrumentation within ARO and the Clean Air Sector must meet the criteria set for current instrumentation as determined by the appropriate National Authority.
- Due to the electromagnetic (EM) sensitivity of solar and thermal atmospheric radiation measurements being conducted at and nearby ARO, the use of EM transmitters near ARO is prohibited except for infrequent but necessary use of handheld radios.
- Any individual or organization wishing to establish an experiment within ARO and/or the Clean Air Sector must coordinate with the National Program(s) operating in the area.
- Transit within the Clean Air Sector is prohibited with few exceptions, outlined below:
  - In the event of an emergency, access will be unlimited.
  - Established experiments sometimes require access to the ARO roof and entrance into the Clean Air Sector (to clean/replace albedo instruments, take air/snow samples, etc.).
  - Occasional cleaning and maintenance to the ski-way visibility markers located along 353° east of grid north (Table 1).
  - Ski-way Maintenance: the ski-way requires frequent maintenance using heavy equipment.
  - National Program aircraft are permitted to enter the No-Fly Zone as necessary for both official activities and essential purposes, including but not limited to USAP-directed missions, FAA checks, aerial photographs, emergency flight paths, approaches, etc. In all cases, pilots are asked to minimize potential contamination of the Clean Air Sector when flying within or above the No-Fly Zone.

- The Mass Accumulation Network consists of established spokes of snow stakes radiating several km from the South Pole in all directions; snow depth is measured here annually.
- Snow/trail Maintenance: occasional excavation of the Met Tower and ARO will be required. Maintenance of the trail to ARO occurs during the austral summer. This typically requires several passes using heavy equipment and chain drags to remove snowdrifts.

Restricted Chemical Use

Below is a partial list of specific chemical substances, the atmospheric concentrations of which are currently being measured at the Clean Air facilities. Most of these substances are being measured to a precision of parts per trillion, and the measurements are particularly susceptible to contamination from local sources.

The use of chemicals listed below, or of products and equipment that contain or emit them, is prohibited at ARO and in the CAS (this includes the area beneath the building, the roof of the building, and near the orange and white NOAA meteorological tower). Please contact the National Program(s) operating in the area for help in finding alternatives to their use.

Chlorofluorocarbons (CFCs)

Used as refrigerants, solvents, foam blowing agents, aerosol propellants, and heat exchange medium (no longer manufactured in the U.S.)

CCl_3F	trichlorofluoromethane	CFC-11
CCl_2F_2	dichlorodifluoromethane	CFC-12
CCl_2FCClF_2	trichlorotrifluoroethane	CFC-113

Hydrochlorofluorocarbons (HCFCs)

Used as refrigerants, solvents, foam blowing agents, aerosol propellants, and heat exchange medium (HCFCs are found in the "blueboard" at South Pole)

$CHCl_2F$	dichlorofluoromethane	HCFC-21
$CHClF_2$	chlorodifluoromethane	HCFC-22
CF_3CHClF	chlorotetrafluoroethane	HCFC-124
CCl_2FCH_3	dichlorofluoroethane	HCFC-141b
$CClF_2CH_3$	chlorodifluoroethane	HCFC-142b

Hydrofluorocarbons (HFCs)

Used as refrigerants, foam blowing agents, and aerosol propellants

CF_3CH_2F	tetrafluoroethane	HFC-134a
CH_3CHF_2	difluoroethane	HFC-152a

Halons

Used in fire suppression and extinguishing systems (no longer manufactured in the U.S.)

$CBrClF_2$	bromochlorodifluoromethane	halon-1211
$CBrF_3$	bromotrifluoromethane	halon-1301

Chlorocarbons

Used as solvents, cleaning agents, degreasing agents, and in other less common applications

CH_3Cl	chloromethane, methyl chloride
CH_2Cl_2	dichloromethane, methylene chloride
$CHCl_3$	trichloromethane, chloroform
CCl_4	tetrachloromethane, carbon tetrachloride
CH_3CCl_3	trichloroethane, methyl chloroform
C_2Cl_4	tetrachloroethene, perchloroethene

Bromocarbons

CH_3Br	bromomethane, methyl bromide
CH_2Br_2	dibromomethane, methylene bromide
$CHBr_3$	tribromomethane, bromoform

Idocarbons

CH_3I	iodomethane, methyl iodide

Others

N_2O	nitrous oxide (commonly used as an oxidizer)
SF_6	sulfur hexafluoride (commonly used in electric transformers)
COS	carbonyl sulfide
C_6H_6	benzene

2. QUIET SECTOR

The "Quiet Sector" is an area where noise and equipment activities are limited for seismology and other vibration-sensitive pursuits. Measurement of the Earth's vibrations is the observational goal of the science of seismology. Seismographic facilities have been operated continuously at the South Pole since the International Geophysical Year in 1957. To provide a remote laboratory for experiments requiring quiet settings, the USAP has established SPRESSO—the South Pole Remote Earth Science and Seismological Observatory—located 8 km grid SE of the South Pole Station.

Geographic Boundaries of the Quiet Sector

The Quiet Sector is surrounded (clockwise, from grid North) by the Operations Sector, the Clean Air Sector, and the Downwind Sector (Map 2). The Quiet Sector extends out to 20 km from the Elevated Station. The Quiet Sector also includes the Quiet Circle, with a radius of 7.25 km from the SW corner of the SPRESSO facility (Map 2). The Treaty parties may consider changes to this Sector in the future, if there is scientific or operational need.

Additional Guidelines for the Quiet Sector

The Quiet Sector is reserved for scientific experiments that require quiet conditions or can operate under stringent quiet conditions. Sections of the Quiet Circle overlap the Clean Air Sector, Operations Sector, and the Downwind Sector; activities in this Circle should abide by the guidelines established here for the Quiet Sector as far as practicable. The Operational Communications Area overlaps the

Operations Zone and Quiet Circle. Communications equipment has been installed in this area, and additional communications equipment may be added in the future if it would not have a substantial impact on the ongoing science in the Quiet Sector.

- The Quiet-sector has the lowest measured values of seismic noise anywhere on the Earth at periods less than 1 sec. Activities, structures, and instrumentation located within the Quiet Sector should not produce seismic vibrations at levels greater than the United States Geological Survey (USGS) low noise model (LNM) at periods greater than 1 sec. At periods less than 1 second, levels should not be greater than 12 dB below the LNM (Figure B.1).

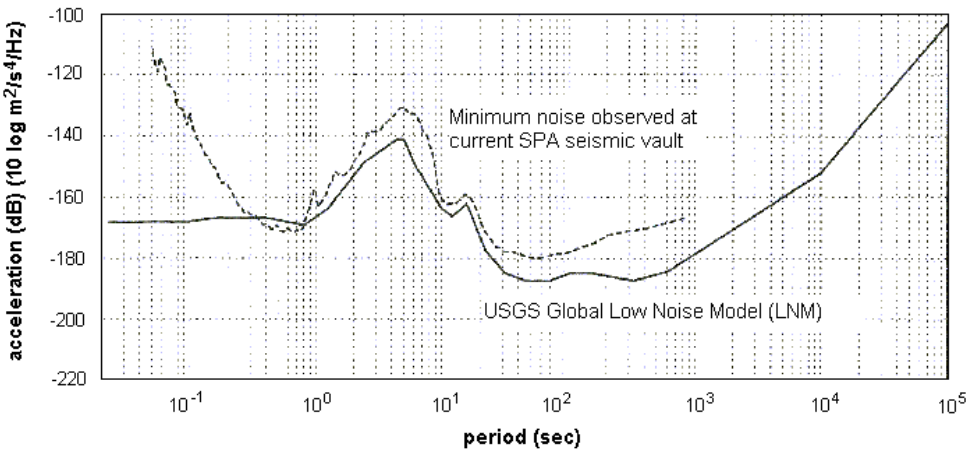


Figure B.1. Noise thresholds for the Quiet Sector. The lowest noise levels achievable at the SPA seismic vault (in 2000) and the USGS LNM based upon quietest noise conditions globally. The seismic band of interest is from 80 Hz to tidal frequencies (<0.001 MHz).

- Structures that potentially may be buffeted by the wind, producing extraneous detectable vibrations should be located below the snow surface.
- All instrumentation located in SPRESSO must meet the quiet criterion established by the National Program(s) operating in the area for seismological instrumentation.
- All instrumentation located in SPRESSO shall be remotely operable from the South Pole, particularly during the austral winter.
- Any individual or organization wishing to establish an experiment within the Quiet Sector must coordinate with the National Program(s) operating in the Area.
- Transit of motorized vehicles within or across the Quiet Zone circle within the Quiet Sector for purposes other than logistical support of SPRESSO is prohibited with few exceptions, outlined below:
  - In the event of an emergency, access will be unlimited.
  - Trail Maintenance: if a hard-packed route to SPRESSO is required, the trail may be maintained through the austral summer. This typically requires several passes using heavy equipment and chain drags to knock down drifts caused by windstorms.
  - Snow Mine: the South Pole Station snow mine is located just within the NW edge of the Quiet Sector. Snow is no longer harvested for drinking water; however, the snow mine may be maintained as a backup source of clean snow.
  - The USAP Meteorological Team requires monthly access to a snow stake field, which is located within the Quiet Circle. Snow machines and/or tracked vehicles are typically used to traverse to the field, and measurements of the stakes usually take 4-5 hours.

- Mass Accumulation Network: In addition to the meteorological snow stake field, established spokes of snow stakes to measure snow accumulation radiate several km from the South Pole in all directions. Snow depth is measured here annually.
- Antenna Field: several communications antennas are located within the Quiet Sector. These antennas require frequent maintenance and inspection, often accomplished on foot, but sometimes requiring vehicle support.
- Authorized USAP personnel may occasionally traverse the line extending 110º from ARO (the boundary between the Clean Air Sector and the Quiet Sector), passing through the Quiet Circle.
- National Program(s) operating in the Area may enter the Quiet Sector to remove scientific equipment that is no longer in use, if it will not interfere with other scientific research.

• The National Program(s) operating in the area shall document all excursions into the Quiet Sector.

3. DOWNWIND SECTOR

The Downwind Sector was established to provide an area free from obstructions for balloon launches, aircraft operations, and other activities. Both scientific activities and operations activities are permitted in the Downwind Sector.

Geographic Boundaries of the Downwind Sector

Bounded by Dark Sector, Operations Sector, and Quiet Sector, the Downwind Sector extends 20 km from the Elevated Station.

Additional Guidelines for the Downwind Sector

• Activities in the Downwind Sector should not require any maintenance (e.g., snow removal) and should not otherwise obstruct scientific balloon launches or aircraft operations.

4. DARK SECTOR

The Dark Sector was established to preserve the conditions of low light pollution and low electromagnetic interference at South Pole Station that allow for important research in astrophysical, astronomical, and aeronomical observations.

Geographic Boundaries of the Dark Sector

The Dark Sector is surrounded by the Downwind Sector, Ski-way, Hazardous Zone, and Clean Air Sector (along 340° grid line from ARO), and extends 20 km from the Elevated Station.

Additional guidelines for activities in the Dark Sector

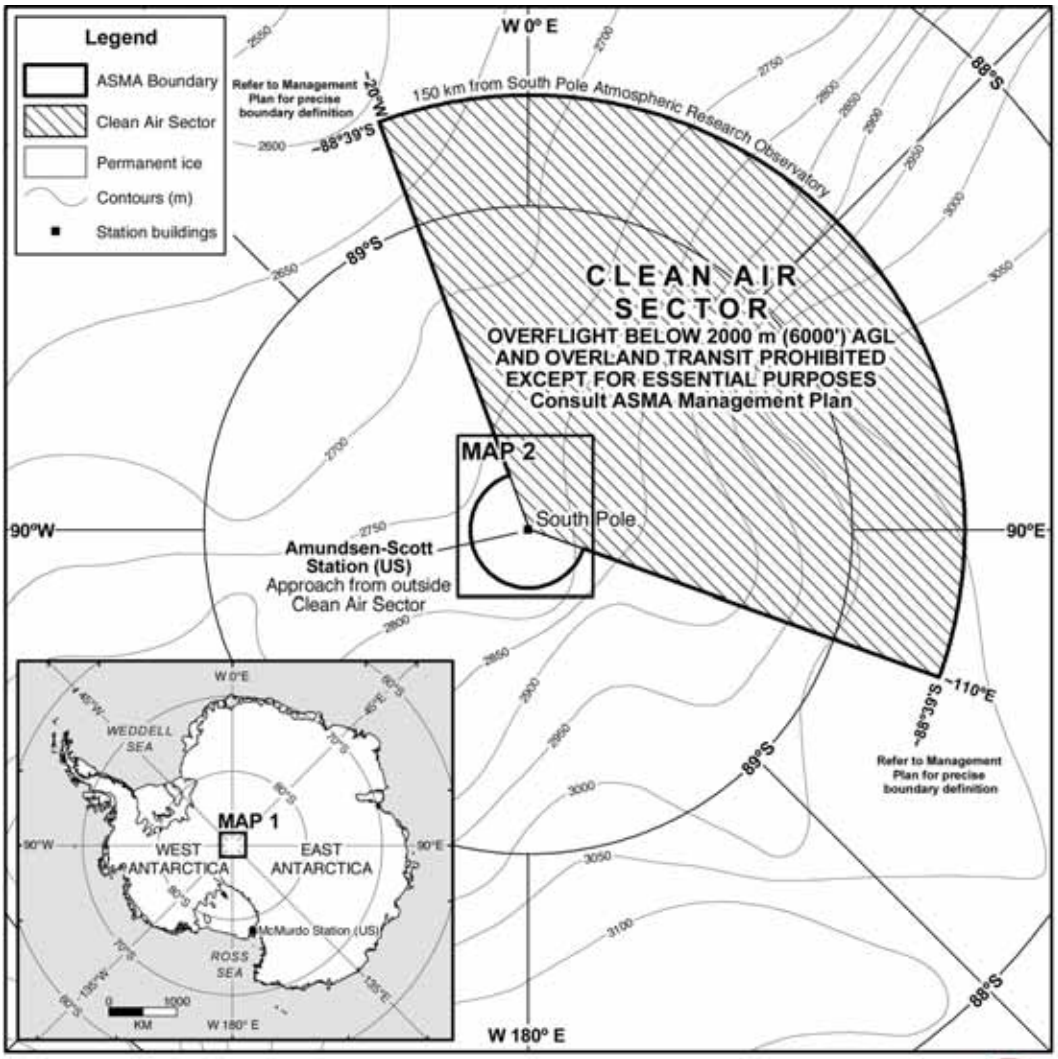
• Science activities in the Dark Sector are restricted to experiments that do not emit light or electromagnetic interference (EMI) above approved levels.
• Telescopes and other scientific instruments that are light and EMI sensitive should be contained in the Dark Sector.

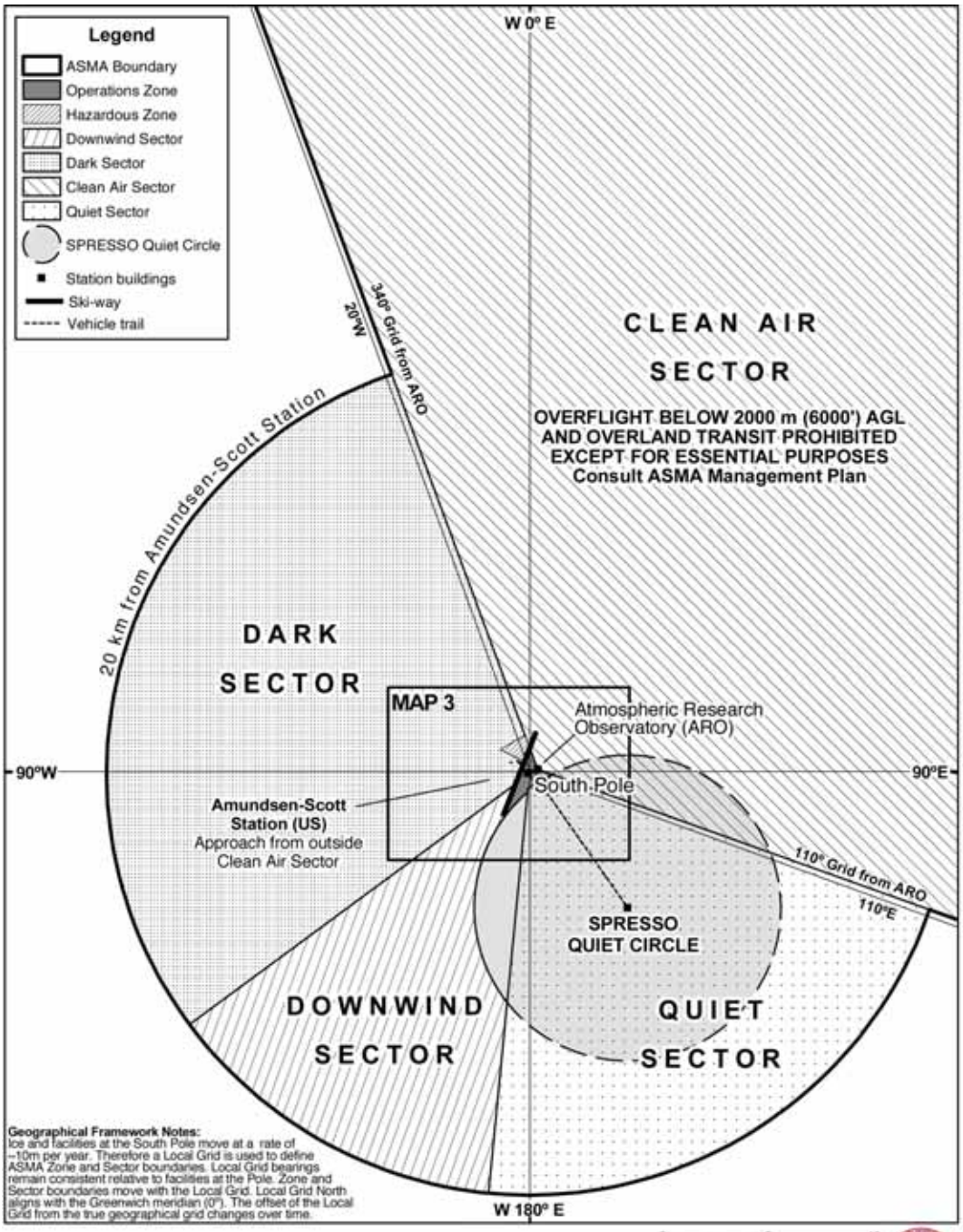
- The geographic location of the South Pole Very Low Frequency (VLF) antenna will vary slightly from year to year as the polar cap slides across the continent (grid NW @ 10 m/ year). In November 2003 the antenna was located at the following GPS coordinates:

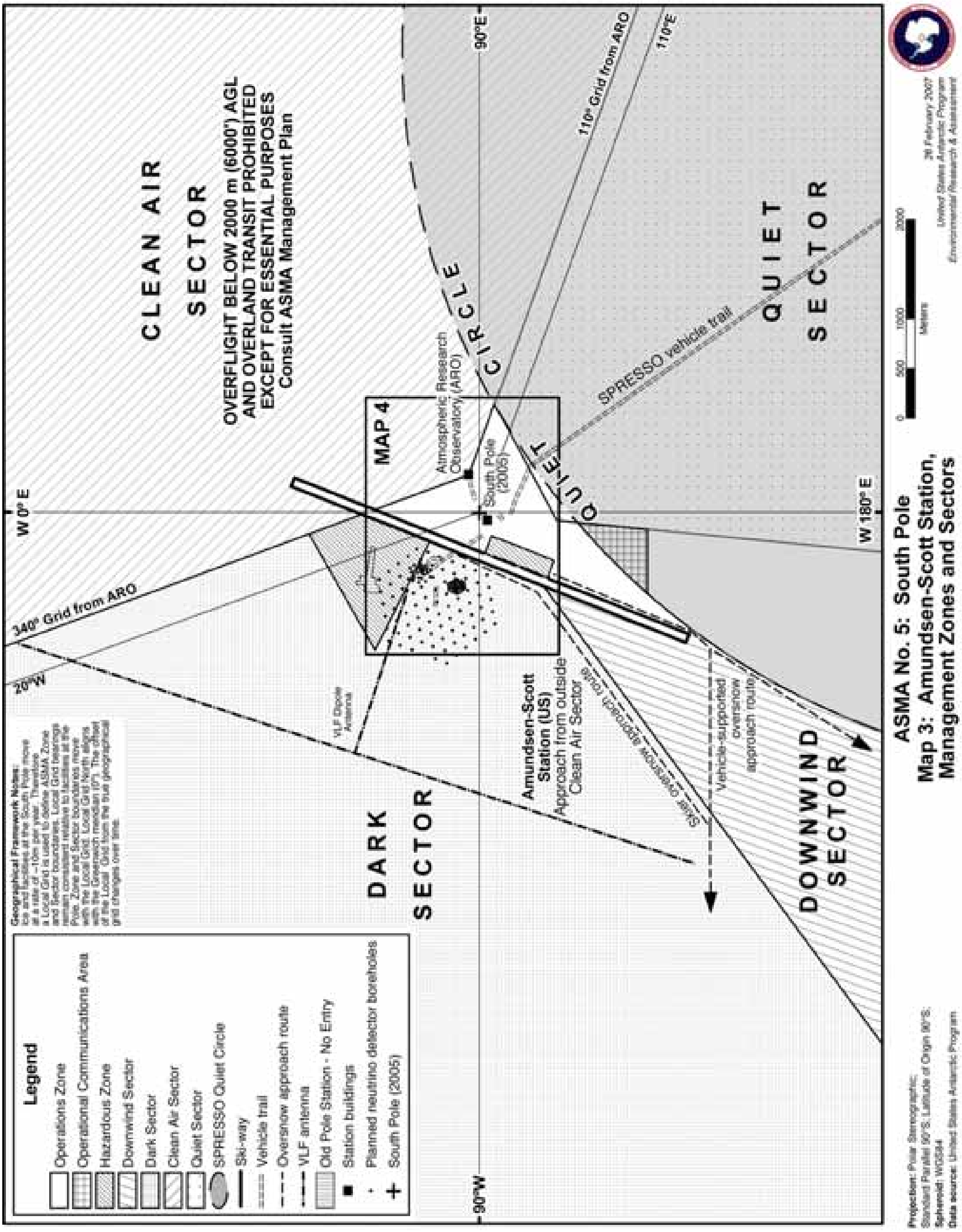
	Latitude	*Longitude*
North End	89° 57.3813’ S	15° 45.1500’ W
South End	89° 57.7733’ S	121° 11.3000’ W

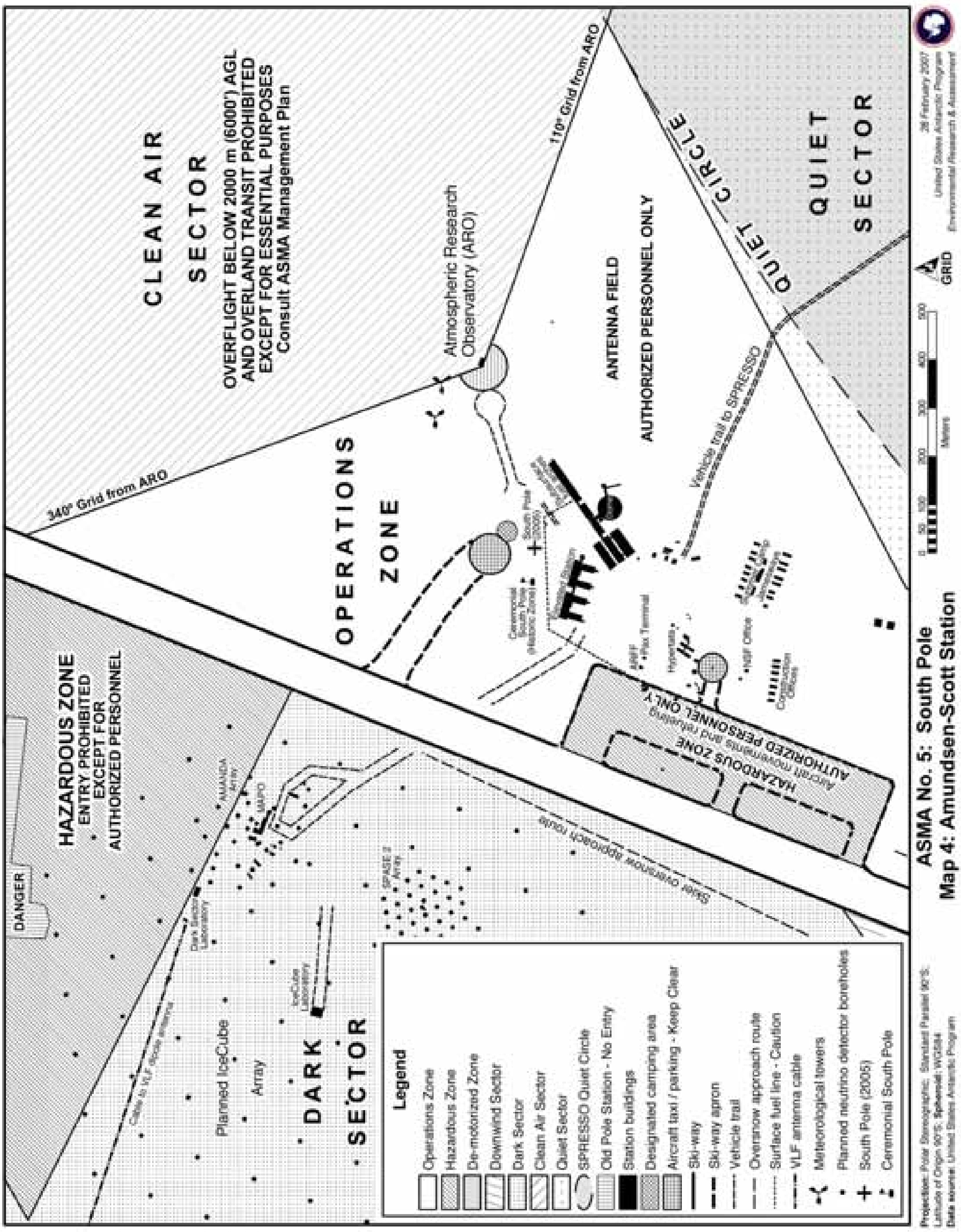
- The VLF 7-km beacon antenna is supported by upright aluminum masts held in place with guy wires.

  The masts are spaced 61 m apart and have "Danger High Voltage" signs on each side. The antenna cable is strung atop clamp-top insulators mounted on each of the antenna masts. The maximum "droop" between masts is approximately 0.6 m. It is recommended that no one touch any component of the line or masts, and do not pass under, but circle around the entire antenna line.


Legend
ASMA Boundary
Clean Air Sector
Permanent ice
Contours (m)
Station buildings
Refer to Management Plan for precise boundary definition
~20°W
~88°39'S
150 km from South Pole Atmospheric Research Observatory
W 0° E
88°S
89°S
CLEAN AIR SECTOR
OVERFLIGHT BELOW 2000 m (6000') AGL AND OVERLAND TRANSIT PROHIBITED EXCEPT FOR ESSENTIAL PURPOSES
Consult ASMA Management Plan
MAP 2
South Pole
90°W
90°E
Amundsen-Scott Station (US)
Approach from outside Clean Air Sector
~110°E
~88°39'S
Refer to Management Plan for precise boundary definition
W 180° E
MAP 1
WEDDELL SEA
WEST ANTARCTICA
EAST ANTARCTICA
McMurdo Station (US)
ROSS SEA
0 1000
KM
Projection: Polar Stereographic; Standard Parallel 90°S; Latitude of Origin 90°S;
Spheroid: WGS84; Contour interval: 50 m.
Data source:
SCAR Antarctic Digital Database v.4.1 (2005)
ASMA No. 5: South Pole
Map 1: Location and topography
0 50
Kilometers
26 February 2007
United States Antarctic Program
Environmental Research & Assessment


Legend
ASMA Boundary
Operations Zone
Hazardous Zone
Downwind Sector
Dark Sector
Clean Air Sector
Quiet Sector
SPRESSO Quiet Circle
Station buildings
Ski-way
Vehicle trail
W 0° E
20°W
340° Grid from ARO
CLEAN AIR SECTOR
OVERFLIGHT BELOW 2000 m (6000') AGL AND OVERLAND TRANSIT PROHIBITED EXCEPT FOR ESSENTIAL PURPOSES
Consult ASMA Management Plan
20 km from Amundsen-Scott Station
DARK SECTOR
MAP 3
Atmospheric Research Observatory (ARO)
90°W
90°E
South Pole
Amundsen-Scott Station (US)
Approach from outside Clean Air Sector
110° Grid from ARO
110°E
SPRESSO QUIET CIRCLE
DOWNWIND SECTOR
QUIET SECTOR
W 180° E
Geographical Framework Notes:
Ice and facilities at the South Pole move at a rate of ~10m per year. Therefore a Local Grid is used to define ASMA Zone and Sector boundaries. Local Grid bearings remain consistent relative to facilities at the Pole. Zone and Sector boundaries move with the Local Grid. Local Grid North aligns with the Greenwich meridian (0°). The offset of the Local Grid from the true geographical grid changes over time.
Projection: Polar Stereographic; Standard Parallel 90°S; Latitude of Origin 90°S;
Spheroid: WGS84;
Data source: United States Antarctic Program
ASMA No. 5: South Pole
Map 2: Management Zones and Sectors
0 5 10
Kilometers
26 February 2007
United States Antarctic Program
Environmental Research & Assessment


CLEAN AIR SECTOR
OVERFLIGHT BELOW 2000 m (6000') AGL AND OVERLAND TRANSIT PROHIBITED EXCEPT FOR ESSENTIAL PURPOSES
Consult ASMA Management Plan
QUIET SECTOR
QUIET CIRCLE
DARK SECTOR
DOWNWIND SECTOR
MAP 4
Atmospheric Research Observatory (ARO)
South Pole (2005)
Amundsen-Scott Station (US)
Approach from outside Clean Air Sector
SPRESSO vehicle trail
Vehicle-supported overshow approach route
340° Grid from ARO
110° Grid from ARO
W 0° E
W 180° E
90°W
90°E
20°W
110°E
Legend
Operations Zone
Operational Communications Area
Hazardous Zone
Downwind Sector
Dark Sector
Clean Air Sector
Quiet Sector
SPRESSO Quiet Circle
Ski-way
Vehicle trail
Overshow approach route
VLF antenna
Old Pole Station - No Entry
Station buildings
Planned neutrino detector boreholes
South Pole (2005)
ASMA No. 5: South Pole
Map 3: Amundsen-Scott Station, Management Zones and Sectors
26 February 2007
United States Antarctic Program
Environmental Research & Assessment


CLEAN AIR SECTOR
OVERFLIGHT BELOW 2000 m (6000') AGL AND OVERLAND TRANSIT PROHIBITED EXCEPT FOR ESSENTIAL PURPOSES
Consult ASMA Management Plan
340° Grid from ARO
110° Grid from ARO
Atmospheric Research Observatory (ARO)
OPERATIONS ZONE
ANTENNA FIELD
AUTHORIZED PERSONNEL ONLY
QUIET CIRCLE
QUIET SECTOR
Vehicle trail to SPRESSO
HAZARDOUS ZONE
ENTRY PROHIBITED EXCEPT FOR AUTHORIZED PERSONNEL
DANGER
HAZARDOUS ZONE
Aircraft movements and refueling
AUTHORIZED PERSONNEL ONLY
Planned IceCube Array
DARK SECTOR
Legend
Operations Zone
Hazardous Zone
De-motorized Zone
Downwind Sector
Dark Sector
Clean Air Sector
Quiet Sector
SPRESSO Quiet Circle
Old Pole Station - No Entry
Station buildings
Designated camping area
Aircraft taxi / parking - Keep Clear
Ski-way
Ski-way apron
Vehicle trail
Oversnow approach route
Surface fuel line - Caution
VLF antenna cable
Meteorological towers
Planned neutrino detector boreholes
South Pole (2005)
Ceremonial South Pole
ASMA No. 5: South Pole
Map 4: Amundsen-Scott Station
GRID
Meters
28 February 2007

Management Plan for Antarctic Specially Managed Area No 6

LARSEMANN HILLS, EAST ANTARCTICA

1. Introduction

1.1 Geography

The Larsemann Hills is an ice-free area of 40 km^2, located approximately halfway between the Vestfold Hills and the Amery Ice Shelf on the south-eastern coast of Prydz Bay, Princess Elizabeth Land, East Antarctica (69°30'S, 76°19'58"E) (Map A). The ice-free area consists of two major peninsulas (Stornes and Broknes), four minor peninsulas, and approximately 130 near shore islands. The eastern-most peninsula, Broknes, is further divided into western and eastern components by Nella Fjord. The closest significant ice-free areas are the Bølingen Islands (69°31'58"S, 75°42'E) 25 km to the south-west and the Rauer Islands (68 °50'59"S, 77°49'58"E) 60 km to the north-east.

1.2 Human presence

1.2.1 History of human visitation

The Larsemann Hills area was first charted by a Norwegian expedition led by Christensen in 1935, and brief visits were made by several nations during the following 50 years, but human activity of a significant or sustained nature did not occur until the mid-1980s. The three year period from 1986 to 1989 saw rapid infrastructure development in the area: an Australian summer research base (Law Base), a Chinese year-round research station (Zhongshan) and two Russian research stations (Progress I and Progress II) were established within approximately 3 km of each other on eastern Broknes. During this period a 2000 m skiway was also operated by Russia on the ice plateau south of Broknes, and used for over 100 inter-continental and intra-continental flights. The Chinese station has been occupied continuously since, whilst Russian activities in the area have been intermittent. The Australian base has been occupied during most subsequent summers.

1.2.2 Science

Substantial station-based research is undertaken, including meteorology, seismology, geomagnetics, atmospheric chemistry, Global Positioning System (GPS) tracking, atmospheric and space physics, and human physiology. Field-based research in the Larsemann Hills has focused on geology, geomorphology, Quaternary science, glaciology, limnology, biology, biodiversity (including molecular), biotechnology and human impacts. Land traverses to locations further afield have also been supported.

1.2.3 Tourist visits

Several ship-based tourist visits have been made to the area since 1992. These have comprised half-day trips, during which passengers were transported to shore by helicopter and then able to view station areas, lakes, bird colonies and other features around eastern Broknes while on foot. An increase in tourism Antarctica-wide has the potential over time to promote continued tourist visits to the Larsemann Hills, and the proposed establishment of a compacted snow airstrip near the site of the previous skiway may facilitate increased numbers of visits and visits of greater duration, including the potential for land-based (overnight) tourism.

1.2.4 Associated human impacts

The initial period of intensive human activity between 1986 and 1989 and the subsequent conduct of science and support operations in the area have resulted in notable localised alteration of the environment, concentrated on eastern Broknes. The construction of station buildings, associated facilities and access routes on eastern Broknes has caused physical degradation of the ice-free surface. Breakdown of rocks and exposure of the permafrost layer through repeated vehicle use has caused surface erosion and altered drainage patterns. Chemical contamination of some lakes and soils has occurred through the accidental spillage of hydrocarbons, and the disposal of wastewater on the ground surface. Several introduced floral species have been detected (and removed), and there is evidence of ingestion of human-derived food by wildlife. There is also some evidence on western Broknes of wind-blown litter and surface disturbance through repeated pedestrian access. Stornes, and the minor peninsulas and near shore islands, have been infrequently visited and are less disturbed.

1.2.5 Future activities

Continuing human activity in the Larsemann Hills is promoted by the coastal location, ice-free landscape, the potential for further scientific research, and the potential for tourist visits. Commitment to ongoing use by the Parties currently active in the area is evident both in the planned and current redevelopment of station facilities and transport routes between the facilities, and plans for future science programs. The proposed establishment of a compacted snow airstrip on the plateau south of Broknes for both inter-continental and intra-continental flights may give rise to increased activity, particularly in support of other East Antarctic locations.

1.3 Period of designation

The ASMA is designated for an indefinite period. The Management Plan is to be reviewed at least every 5 years.

2. Values of the Area

The Prydz Bay region contains a number of rock outcrops and offshore islands, which represent a significant fraction of the ice-free component of the East Antarctic coastline. Comprising an ice-free area of approximately 40 km^2, the Larsemann Hills represent the southernmost coastal "oasis" (69°30'S) in this geographic sector, and the second largest after the Vestfold Hills (~410 km^2), 110 km to the north-east. Such coastal oases are particularly rare in Antarctica. As such, the Larsemann Hills represents a significant biogeographical location, and exhibits associated environmental, scientific and logistical values.

2.1 Environmental and scientific values

Much of the scientific research in the Larsemann Hills depends on the natural environment being in a relatively undisturbed state, and for this reason the protection of scientific values will to a large extent contribute to the understanding and protection of the abundant environmental values of the Area.

With their geology significantly different from that of other outcrops in the Prydz Bay region, the Larsemann Hills provide one of few geological windows into the history of the Antarctic continent. Widespread exposed geological and geomorphological features provide a valuable insight into landscape formation, and the history of the polar ice-sheet and sea level. Many of these features are particularly vulnerable to physical disturbances.

Broknes is one of very few coastal areas of Antarctica that remained partially ice-free through the last glaciation, and sediments deposited there contain continuous biological and palaeoclimate records dating back c. 130,000 years.

The Larsemann Hills contain more than 150 lakes. Although some of the most scientifically important lakes are on eastern Broknes, the lakes of the Larsemann Hills are collectively recognised as the Area's most important ecological feature. The lakes are particularly valuable for their relatively simple natural ecosystems. However, they are susceptible to physical, chemical and biological modification within their catchment boundaries. A catchment-based approach to management of human activities is therefore appropriate to protect scientific values.

The comparatively benign microclimate and the occurrence of freshwater in summer provide a relatively hospitable environment able to support Antarctic life forms. Three species of breeding seabird are present (snow petrels, Wilson's storm petrels and south polar skuas), and Weddell seals haul out close to shore to breed and moult. Mosses, lichens and cyanobacterial mats are widely distributed, and found in high concentrations in some locations. The accessibility of these biological sites from the station areas on eastern Broknes makes them a valuable and vulnerable characteristic of the Area.

Due to the short and well-documented history of human activity concentrated in a relatively small area, the Larsemann Hills also presents an excellent opportunity for human impacts studies.

2.2 Logistical values

The Larsemann Hills is an important logistical support base for access to the southern Prydz Bay region and the Antarctic interior. Australia and China have conducted substantial inland traverses supported by facilities in the Larsemann Hills. Russia plans to relocate the support base for the resupply of Vostok from Mirny to the Larsemann Hills, and is undertaking works at Progress involving the construction of a new living/laboratory building to accommodate up to 30 people, bulk fuel tanks and a garage/workshop. In the 2004/05 summer Russia started the airborne resupply of Vostok using aircraft based at Progress runway. The existence of a compacted snow airstrip in the area, capable of facilitating both inter-continental and intra-continental flights, also presents the region as a major hub for the access and support of other East Antarctic operations.

China is also to upgrade Zhongshan in order to make it suitable for supporting long term scientific monitoring and inland operations of the Chinese Antarctic Expeditions. A project of infrastructure improving has been launched, which mainly includes refitting of the old buildings and facilities, the construction of a new garage/workshop, a new administrative and communications centre, new scientific research quarters, new laboratories, new observatory fields, a new pier, a new road to the pier, and a new heliport.

Romania plans to establish research and biological laboratory space within Law-Racovita.

India plans to establish a permanent research station in the Larsemann Hills.

There have previously been several instances of logistical cooperation between Australia, China, Russia and Romania, involving the transfer of personnel, fuel, supplies and equipment, and this Management Plan promotes such initiatives.

2.3 Wilderness and aesthetic values

Stornes, the minor peninsulas and near shore islands have seldom been visited and many show little sign of past or current human presence. The aesthetic value of the rugged ice-free hills interspersed by lakes and fjords, with a backdrop of the Dålk Glacier, near shore islands, icebergs or the plateau is noteworthy.

3. Aims and objectives

The Larsemann Hills are designated as an ASMA in order to protect the environment by promoting coordination and cooperation by Parties in the planning and conduct of all human activities in the Area.

With the adoption of this Management Plan, the Treaty Parties commit to:

- providing guidance on the appropriate conduct of activities to all visitors (including personnel involved in national research programs, transitory national program visitors and participants in non-governmental activities);
- minimising cumulative and other environmental impacts by encouraging communication and a consistent, cooperative approach to environmental protection in the conduct of research and support activities;
- minimising physical disturbance, chemical contamination and biological impacts, primarily through appropriately managing vehicle usage;
- preventing contamination of the environment through the implementation of comprehensive waste management practices and the appropriate handling and storage of harmful substances;
- maintaining the wilderness and aesthetic values of the Area;
- safeguarding the ability to conduct scientific research by not compromising the scientific values of the Area; and
- improving the understanding of natural processes in the Area, including through the conduct of cooperative monitoring and recording programs.

4. Description of the Area

4.1 Geography and Area boundary

The ASMA comprises the ice-free area and near-shore islands collectively known as the Larsemann Hills (see Map A), and the adjacent plateau. The ASMA includes the land:

beginning at	69°23’20"S, 76°31’0"E east of the southern tip of Dalkoy and from there
north to	69°22’20"S, 76°30’50"E north of Dalkoy
north-west to	69°20’40"S, 76°21’30"E north of Striped Island
north-west to	69°20’20"S, 76°14’20"E north-east of Betts Island
south-west to	69°20’40"S, 76°10’30"E north-west of Betts Island
south-west to	69°21’50"S, 76°2’10"E north-west of Osmar Island
south-west to	69°22’30"S, 75°58’30"E west of Osmar Island
south-west to	69°24’40"S, 75°56’0"E west of Mills Island
south-east to	69°26’40"S, 75°58’50"E south of Xiangsi Dao
south-east to	69°28'10"S, 76°1’50"E south-west of McCarthy Point
south-east to	coastline at 69°28’40"S, 76°3’20"E
north-east to	69°27’32"S, 76°17’55"E south of the Russian airstrip site
south-east to	69°25’10"S, 76°24’10"E on the western side of the Dålk Glacier
north-east to	69°24’40"S, 76°30’20"E on the eastern side of the Dålk Glacier
north-east returning to	69°23’20"S, 76°31’0"E.

The intention is however to manage, in accordance with this management plan, the conduct of all substantial human activity associated with the Larsemann Hills.

No artificial boundary markers are in place.

4.2 Climate

A major feature of the climate of the Larsemann Hills is the existence of persistent, strong katabatic winds that blow from the north-east most summer days. Daytime air temperatures from December to February frequently exceed 4°C and can exceed 10°C, with the mean monthly temperature a little above 0°C. Mean monthly winter temperatures are between –15°C and –18°C. Pack ice is extensive inshore throughout summer, and the fjords and bays are rarely ice-free. Precipitation occurs as snow and is unlikely to exceed 250 mm water equivalent annually. Snow cover is generally deeper and more persistent on Stornes than Broknes, due to north-easterly prevailing winds and the perennial sea ice held in by the islands offshore from Stornes.

4.3 Natural features

4.3.1 Bedrock geology

Bedrock exposures in the Larsemann Hills are composed of supracrustal volcanogenic and sedimentary rocks metamorphosed under granulite facies conditions (800–860°C, 6–7 kbar at peak) during the early Palaeozoic "Pan-African" event (~500-550 Ma). Peak metamorphic conditions were followed by decompression. The rocks were subjected to extensive melting and several deformational episodes, and have been intruded by several generations of pegmatites and granites. The supracrustal rocks are underlain by, and possibly derived from, a Proterozoic orthopyroxene-bearing orthogneiss basement. The Larsemann Hills (and neighbouring Bolingen Islands and Brattstrand Bluffs) differ from other parts of Prydz Bay, mainly due to the absence of mafic dykes and large charnockite bodies.

4.3.2 Geomorphology

The elongated form of large-scale topographic features of the Larsemann Hills results from compositional layering, folds and faults (lineaments) in the metamorphic bedrock. The landscape is dissected by large, structurally controlled, steep sided fjords and valleys rarely exceeding 100 m in depth on land; the maximum is 3 km in length (Barry Jones Bay). The maximum elevation above mean sea level is 162 m (Blundell Peak).

The coastline is generally bedrock, and beaches occur only at the heads of fjords or in isolated sheltered bays. There are several examples of sequences of ice-dammed lakes and associated gorges and alluvial fans. The offshore islands are likely to be roches moutonnees, isolated by the current sea level.

Numerous geomorphological features are found within the area. Landforms produced by wind are common, though ice and salt wedging clearly play a considerable role in grain detachment with wind primarily acting as a transporting agent. Periglacial landforms are also widespread, but not particularly abundant or well developed.

True soils are virtually absent due to a lack chemical and biological soil-forming processes. Surficial deposits are widespread but confined to lower areas and include snowpatch gravels, wind deposited materials, talus and fluvially deposited materials. Very thin soils (less than 10 cm) are also found in association with scattered moss beds and discontinuous lichen. A permafrost layer exists 20–70 cm below the surface in areas.

On north-eastern Stornes at approximately 69°31'48"S, 76°07'E there is an outcrop of post-depositionally placed marine Pliocene (4.5–3.8 Ma) sediment. These sediments, with a maximum thickness of 40 cm, occupy a narrow bench approximately 55 m above sea level and have yielded abundant well preserved foraminifera, less well preserved diatoms and molluscs.

On Broknes, areas that have remained ice-free through the Last Glacial Maximum contain sediment deposits (in lakes) that record climate, biological and ecological changes spanning the last glacial cycle.

4.3.3 Lakes

The Larsemann Hills contains more than 150 lakes ranging in salinity from freshwater to slightly saline, and in size from shallow ponds to large ice-deepened basins, although most are small (5000–30 000 m^2) and shallow (2–5 m). The surfaces of all the lakes freeze during winter, and most thaw for up to 2 months in summer, allowing them to be well-mixed by the regular katabatic winds. Most lakes are fed by snow melt and some have entrance and exit streams that flow persistently during the summer, and provide habitat for crustaceans, diatoms and rotifers; such streams are particularly evident on Stornes.

Small catchment areas and the near pristine waters make the Larsemann Hills lakes particularly susceptible to impacts resulting from human activities. Research has shown that several lakes on eastern Broknes in the immediate vicinity of the station areas and interlinking road network have experienced modified water chemistries, and inputs of nutrients, meltwater and sediment. Whilst these lakes clearly exhibit human impacts, the majority of the lakes on Broknes, and those elsewhere in the Area appear largely unmodified.

The lakes on east Broknes have the longest sediment record of any surface lakes in Antarctica. It appears that the ice sheet did not advance beyond Lake Nella and did not scour Progress Lake so these and lakes towards the north end of the peninsula are particularly valuable to the science community.

4.3.4 Lake and stream biota

Most of the phytoplankton comprises autotrophic nanoflagellates, though dinoflagellates occur in many lakes, and a desmid belonging to the genus *Cosmarium* is a major component of at least one lake. Heterotrophic nanoflagellates are more common than autotrophic nanoflagellates, though exhibiting low species diversity (only three or four species in most lakes), and particularly abundant in shallow lakes (*Parphysomonas* is very common). Ciliates are found in low numbers, with *Strombidium* the most common species, and a species of *Holyophyra* also found in most lakes. Rotifers occur sporadically in a number of lakes and the cladoceran *Daphniopsis studeri* is widespread, but found in low numbers.

The most obvious biotic feature observed in almost all the lakes are extensive blue-green cyanobacterial mats, which have accumulated since ice retreat, in places being up to 130 000 years old. These cyanobacterial mats are found to exceptional thicknesses of up to 1.5 m, not normally observed in other Antarctic freshwater systems, and are also widely distributed in streams and wet seepage areas.

4.3.5 Seabirds

Three species of seabird breed within the Larsemann Hills (south polar skuas, snow petrels and Wilson's storm petrels). Approximate numbers and locations of breeding pairs are documented for Broknes, and particularly eastern Broknes, but their distribution throughout the remainder of the area is uncertain.

South polar skuas (*Catharacta maccormicki*) are present between mid-late October and early April, with approximately 17 breeding pairs nesting on Broknes and similar numbers of non-breeding birds.

Snow petrel (*Pagodroma nivea*) and Wilson's storm petrel (*Oceanites oceanicus*) nests are found in sheltered bedrock fragments, crevices, boulder slopes and rock falls, and are generally occupied from October until February. Approximately 850–900 pairs of snow petrel and 40–50 pairs of Wilson's storm petrel are found on Broknes, with concentrations of snow petrels at Base Ridge and on rocky outcrops adjacent to the Dålk Glacier in the east and the plateau in the south.

Despite the apparent suitable exposed nesting habitat, no Adelie penguin (*Pygoscelis adeliae)* breeding colonies are found at the Larsemann Hills, possibly due to the persistence of sea ice past the hatching period. However birds visit from colonies on nearby island groups between the Svenner Islands and Bolingen Islands, during summer to moult. Emperor penguins (*Aptenodytes forsteri*) also occasionally visit from the Amanda Bay rookery 30 km to the north-east.

4.3.6 Seals

Weddell seals (*Leptonychotes weddelli*) are numerous on the Larsemann Hills coast, using the sea ice in the area to pup from October, and to moult from late December until March. Little is currently known about locations and numbers, although pupping has been observed on the sea ice adjacent to small islands north-east of eastern Broknes, and groups of moulting seals have been observed hauled out near the Broknes shore adjacent to the stations and in tide cracks in the fjords to the west. Aerial surveys during the moulting period have observed greater than 1000 seals, with multiple large groups (50–100 seals) hauled out in Thala Fjord and on rafted ice immediately to the west of Stornes, and numerous smaller groups amongst offshore islands and ice to the north-east of Broknes. Crabeater seals (*Lobodon carcinophagus*) and leopard seals (*Hydrurga leptonyx*) are also occasional visitors.

4.3.7 Terrestrial micro fauna

Little research has been conducted with regard to terrestrial invertebrates in the Larsemann Hills. Five genera of terrestrial tardigrade (*Hypsibius*, *Minibiotus*, *Diphascon*, *Milnesium* and *Pseudechiniscus*), which include six species, are known to be present in localities associated with vegetation. The lakes and streams provide a series of habitats that contain a rich and varied fauna very typical of the Antarctic region. Seventeen species of rotifer, three tardigrades, two arthropods, protozoans, a platyhelminth and nematodes have been reported. The cladoceran *Daphniopsis studeri*, one of few species of freshwater crustacea known to occur in the lakes of continental Antarctica, has been identified in most Larsemann Hills lakes and represents the largest animal in these systems.

4.3.8 Terrestrial vegetation

Sampling of the coastal areas from the Vestfold Hills to the Larsemann Hills indicate that the flora of the Ingrid Christensen Coast is relatively uniform, and restricted to a similar distribution of bryophytes, lichens and terrestrial algae. Although few collections have been undertaken, it is believed that the nature of the basement rock, the relatively recent exposure from the ice cap, and the prevailing wind direction in the greater Prydz Bay area contribute to the fact that less than 1% of the Larsemann Hills has vegetative cover. Five introduced vascular species have been observed in the vicinity of station buildings, indicating that the environment will support introduced species.

Most terrestrial life, including mosses, lichens and accompanying invertebrates are found inland from the coast. Nevertheless, large moss beds are known to occur in sheltered sites on the larger islands (particularly Kolløy and Sigdøy), associated with Adelie penguin moulting sites, and nunataks in the southwest. There are seven positively identified moss species in the region: *Bryum*

pseudotriquetum, which is most abundant*, Grimmia antarctici, Grimmia lawiana, Ceratodon pupureus, Sarconeurum glaciale, Bryum algens* and *Bryum argentum*.

The bryophyte flora also comprises one species of liverwort *Cephaloziella exiliflora,* which is found on an unnamed outcrop south of Stornes and known from only four other Antarctic localities. Lichen coverage is considerable on north-eastern Stornes and Law Ridge on Broknes and the lichen flora of the region comprises at least 25 positively identified species. Although no systematic studies have been undertaken in the area, similar work conducted in nearby locations on the Ingrid Christensen Coast suggest that it would not be unreasonable to expect the Larsemann Hills to exhibit close to 200 non-marine algal taxa, and 100–120 fungal taxa.

4.4 Human impacts

Past and ongoing human activities in the Larsemann Hills are concentrated on eastern Broknes where three stations are in close proximity to each other.

Areas outside Broknes exhibit very little evidence of human impact, with survey/photo control marks comprising the only obvious introduced features. Maintaining this well-preserved state is a major priority for management of the Larsemann Hills.

4.5 Access to the Area

4.5.1 Land access

In total, 15 km of unsealed roads, formed of local material, have been established on eastern Broknes. A principal road, 6.7 km in length, runs from Zhongshan in the north, through the centre of eastern Broknes, linking each of the stations and providing access to the continental plateau in the south. This road closely follows the most appropriate route with regard to avoiding lake catchments and steep slopes. There are four particularly steeps sections: a ridge approximately 0.5 km south of Zhongshan; a series of steep slopes between Progress II and Law-Racovita; the section of road which traverses the slope to the west of Lake Sibthorpe; and the ascent to the plateau near the Dålk Glacier. At present a survey is being conducted to identify a better route between Law-Racovita and Progress. The alternative of flattening the slope is also being investigated. The final kilometre of the route before entering the plateau proper is marked by marker canes every 50–100 m. There are also vehicle routes within the immediate station areas of Zhongshan and Progress II and a short access route connecting Law-Racovita to the main road. Vehicle access over ice-free surfaces within the Area is to be restricted only to roads, and particular care must be taken when traversing the noted steep sections.

Sea ice travel within the Area is possible, with ice persisting in the fjords and between the shore and numerous near-shore islands until late in the summer season. Ice conditions are variable at the eastern and western margins of the Area due to the presence of glaciers, and sea ice travel must take account of these conditions. In winter, sea ice access to the Zhonghan and Progress II is also feasible via the beach west of Zhongshan (69°22’30"S, 76°21’33"E) or the beach adjacent to Progress II (69°22’44"S, 76°23’36"E), depending on highly variable ice conditions. From the sea ice, it may then be possible to access the main road south of the steep section south of Progress II via either the easternmost bay of Nella Fjord (69°22’58"S, 76°22’44"E) or via Seal Cove (69°23’6"S, 76°23’49"E).

The Area can be approached on the plateau ice from Davis in the north-east (approximately 330 km) and Mawson in the west following the Lambert Glacier traverse route (approximately 2200 km). This comprises a caned route, which turns north from a marker at 69°55’23"S, 76°29’49"E then follows series of canes and drum beacons north to connect with the major access route on eastern Broknes.

4.5.2 Sea access

No established shipping anchorages or barge landings are designated for the Area due to the variable sea ice conditions present to the north-east of eastern Broknes. Vessels usually anchor approximately 5 nautical miles offshore, depending on ice conditions. Three main sites have been used in previous years:

- the bay ~250 m NNE of Zhongshan at 69°22'12"S, 76°22'15"E has been most frequently used in the past, and consists of a ~15 m opening between rock outcrops, and a large flat area on shore for vehicle operations;
- the beach adjacent to Progress II (69°22'44"S, 76°23'53"E); and
- the beach west of Zhongshan opening into Nella Fjord (69°22'30"S, 76°21'25"E).

Access from ships to the eastern shore of Broknes by small boat is difficult and sometimes impossible due to ice debris up to hundreds of metres off shore, blown by the prevailing north-easterly winds. Helicopters are therefore the only reliable means by which persons and supplies can be transported ashore quickly.

4.5.3 Air access

Designated helicopter landing and refuelling sites located at Zhongshan, Progress II, Law-Racovita and Progress I are to be used preferentially for general helicopter operations.

The Zhongshan helicopter-landing site (69°22'44"S, 76°21'32"E) consists of a circular concrete pad of 15 m diameter showing a painted map of Antarctica, and is located approximately 40 m west of the main administration / mess building (Map D). There are other possible (unconsolidated) landing sites nearby, although loose surface rocks and gravel make the use of the pad preferable. Landings are usually made travelling towards the main building from the direction of the lake, due to the north-east prevailing winds.

The usual helicopter-landing site at Progress II (69°22'40"S, 76°24'10"E) consists of a flat area (~20 x 20 m) of bare ground cleared of large rocks, and is adjacent to a large depot of 200 L fuel drums, approximately 250 m north of the largest building in the station area (Map E). The complex under construction will include a concrete helicopter pad.

The Law-Racovita helicopter-landing site (69°23'20"S, 76°22'55"E) is a flat area located approximately 60 m east of the base. Helicopters would normally land facing into the north-east prevailing winds.

There is no defined helicopter-landing site at Progress I, but Australian helicopters usually land adjacent to the fuel depot (69°24'S, 76°24'10"E).

Small ski/wheeled fixed-wing aircraft operations have previously been conducted infrequently in the region and may be possible on the sea ice adjacent to the stations, though ice conditions vary annually, and the proximity to wildlife colonies make such operations on the plateau preferable. Landings have been conducted near the site of the previous Russian runway, and proposed compacted snow airstrip at 69°25'59"S, 76°10'25"E Prevailing winds from the north-east and a slight rise in the surface suggest that landing and taking off towards the north-east is preferable. Flight paths should be selected to avoid wildlife.

4.5.4 Pedestrian access

Pedestrian access within the Area is not restricted, but is to be conducted in accordance with the accompanying Environmental Code of Conduct (see Appendix 1). Where established routes are apparent for frequently visited locations, these routes should be utilised to minimise physical

disturbance of the land surface and to prevent further track formation. Where surface modification is not apparent, the most direct route between points should be taken, with consideration given to avoiding repetitive use of the same route and avoiding vegetation and other sensitive features.

4.6 Location of structures in or near the Area

There are currently two permanent year-round research stations (Zhongshan and Progress II) and one seasonal research facility (Law-Racovita) in the Area (Map C).

4.6.1 Zhongshan (People's Republic of China)

General

Zhongshan is located on the north-eastern tip of eastern Broknes at 69°22'24"S, 76°22'40"E at approximately 11 m above sea level. The station was established in the 1988/89 summer season and has operated continuously since, to facilitate the conduct of year-round scientific research activity by the Chinese Antarctic program.

Station infrastructure

Station populations are approximately 60 personnel in summer and 20–25 in winter, with a maximum capacity to accommodate 76. The station consists of five main and several smaller buildings (Map D). Vehicle access to Zhongshan is via the main road from the plateau, and a network of routes link the main buildings within the station area. A concrete helicopter-landing pad is located west of the main station building, at 69°22'22"S, 76°22'8"E (see Section 4.5.3).

Power, fuel delivery and storage

Electrical power is provided by diesel generators. Fuel is transferred from the ship by barge or pipeline, depending on sea ice conditions, and stored in bulk tanks at the southern end of the station area. Between 200–300 cubic metres of fuel are delivered to the station each year.

Water

Water for generator cooling and shower facilities is drawn from a large tarn immediately west of the station area, and potable water is drawn from a smaller adjacent snowmelt-fed tarn in summer and obtained by melting ice or snow in winter. Wastewater is discharged to the ocean after passing through a series of gravity-driven settlement tanks.

Waste management

Combustible wastes are separated and burnt in a high temperature, diesel-fuelled incinerator. The quantity of combustible wastes produced requires an incinerator burn every three to four days on average, and incinerator ash is collected and stored for return to China. Non-combustible wastes are sorted into waste categories and stored south of the power house for removal by ship at the next opportunity.

Vehicles

Vehicles are used in the immediate station area and to transport materials to other sites on eastern Broknes via the main road. Maintenance of vehicles, generators and instruments is undertaken in the powerhouse or vehicle workshop. All waste oil is returned to China.

Resupply

Resupply is generally undertaken once a year in summer. Cargo is brought to shore using either barges, or sleds towed behind traverse vehicles.

Communications

Verbal communication with China is largely by short-wave radio and INMARSAT A, B and C systems equipped for sending and receiving telephone calls, faxes, emails and scientific data. HF radio is used for communications in the Prydz Bay area and VHF radio is used for local communications. A radio-telephone link also provides contact with Davis (and via Davis to anywhere in the world), and this is used for conveying meteorological data on a daily basis.

Science

Science programs conducted from Zhongshan are largely of a station-based nature and include: meteorology, ozone monitoring, upper atmosphere physics, auroral observations, geomagnetic observations (some in cooperation with the Australian Antarctic Program), gravimetric observations, seismology, NOAA polar orbiting satellite image processing, atmospheric chemistry, remote sensing, GPS measurement and human physiology. Activities away from the immediate station area during seasons with summer research programs include environmental evaluation and monitoring of snow-ice, soil, seawater, freshwater, moss, lichen, wildlife, geology, glaciology and sea ice ecosystems. Inland traverses have also been undertaken to conduct geology, geodesy, glaciology and meteorite studies.

4.6.2 Progress II (Russia)

General

Progress II is located on eastern Broknes, approximately 1 km south of Zhongshan, at 69°21’57"S, 76°20’59"E. The station was established in 1988 on a plateau 300 m from the western shoreline of Dålk Bay, to allow greater ease of ship-based resupply and a more sheltered location than the location of Progress I (adjacent to the ice plateau). Progress II was occupied sporadically and shut down during the 1993/94 summer, but reopened in the 1997/98 summer season for operation as a year-round research facility.

Station infrastructure

The station accommodates a population of approximately 15 people year round, but occupation has been sporadic since 1989, with a maximum population over summer of 58. The station consists of a two-storey living/office building and 12 older huts (Map E). Vehicle access to Progress II is via the main road from the plateau, and a network of routes links the main buildings within the station area. A helicopter-landing site is located north-west of the main station building, at 69°22’40"S, 76°24’10"E (see Section 4.5.3).

The station is being rebuilt within the existing station boundaries. At the time of its planned completion in 2012, the station’s facilities will include a helicopter pad, living/laboratory building providing accommodation for 30 people, a garage/workshop/diesel power station, and fuel storage.

The renovated buildings will be equipped with waste treatment facilities.

The existing routes will mostly be used to access the site. Following completion of the rebuilding program the old buildings and facilities are to be demolished and removed from the Antarctic Treaty area.

Power, fuel delivery and storage

Electrical power is provided by three diesel generators. The generators are supplied with fuel from two tanks adjacent to the power station, which are filled by wheeled tank from bulk tanks on the shore between Progress II and Zhongshan. Gas is used for cooking, and electric heaters are used to heat the buildings.

Water

Drinking water is drawn from a small lake to the north-west of the station area in summer, and from Progress Lake near the plateau in winter. Water from either lake is transported to the station in a water tank, and stored in a large tank adjacent to the mess building. In past years some fresh water has also been obtained by melting sea ice and small bergs near the station. Washing water is drawn from Stepped Lake during summer. A water condition plant has been installed, providing for the use of the lake's slightly brackish water.

Waste management

Small, non-combustible wastes are separated and compacted for removal. Kitchen wastes and combustibles are burnt in a high temperature incinerator. Sewage water from the main building is treated by an electro-chemical unit and discharged into the bay. The smaller old buildings do not have sewage treatment units; human wastes and kitchen scraps from these are stored in drums for return to Russia.

Larger wastes are stored in 200 L drums on the beach adjacent to the station, for return to Russia.

Vehicles

Vehicles are used in the proximity of the station for collecting water and transferring fuel and wastes, and to transport personnel and equipment to Progress I and to the plateau. Some vehicles are stationed at Progress I and a small outpost to the south, for use in compacted snow runway operations. Several large unused vehicles are also stored west of the main Progress II station area.

Resupply

Resupply is conducted by ship-shore helicopter operations following the summer season (April – May). Thick ice conditions are preferred, to also allow cargo to be deployed onto vehicles and driven directly to shore on the sea ice.

Communications

HF communications are used to contact other Russian stations. VHF communications are used for local aircraft, ship and field operations. INMARSAT B and C and Iridium systems are used to contact Russia and occasionally, other Russian stations.

Science

Progress II is primarily intended as a support base for inland geological and glaciological operations.

4.6.3 Law-Racovita (Australia – Romania)

General

Law-Racovita is located towards the southern end of eastern Broknes, approximately 1 km south of Progress II and 2 km south of Zhongshan at 69°23'16"S, 76°22'47"E. The Base was established in the 1986/87 summer season.

Station infrastructure

Law-Racovita consists of one prefabricated multi-purpose building, five fibre-glass huts and a small ablutions shed. All wastes generated are drummed and removed. Plans are being made to upgrade the station's infrastructure, and to relocate it to the Facilities Zone, by 2010.

Power, fuel delivery and storage

A small petrol generator is used to provide electrical power and operated only when required to charge batteries etc. A small solar panel mounted on the roof of the main hut charges batteries to power the HF and VHF radios. Gas is used for cooking and heating the main hut.

Water

Drinking and washing water is generally obtained during summer by collecting and melting snow from a nearby snow bank. Drinking water is also collected from a small tarn adjacent to the section of road connecting Law-Racovita with the main route between north-eastern Broknes and the plateau.

Logistics

Four-wheeled motorbikes are occasionally stationed at Law-Racovita for the support of science programs during summer. Use of these vehicles is strictly restricted to the designated access routes.

Law-Racovita may be supported opportunistically from Davis (by helicopter), stations in the immediate area, or from ships resupplying any of these facilities.

Communications

Law-Racovita is equipped with VHF radios.

Science

Summer research projects have included studies of the glacial history of the area, geology, geomorphology, hydrology, limnology and biology, plus human impacts studies including the contamination and eutrophication of lakes and soils, and introduced species.

4.6.4 Compacted snow runway site and associated facilities (Russia)

The proposed site of a runway approximately 5 km south of Progress II and running SW-NE at 69°25'43"S, 76°20'36"E to 69°26'51"S, 76°17'18"E is accessed by the ice-free plateau access route and the beginning of the inland traverse route. Two field huts are presently located on the southernmost rock outcrop adjacent to the route, approximately 2 km north of the runway site at 69°24'39"S, 76°20'15"E.

4.6.5 Minor structures

Progress I (Russia)

Progress I (69°24'S, 76°24'E) supported a wintering population of 16 in 1987 and 1988 and was partially dismantled and removed in 1991/92. One functional building remains at the site which is also used to store Russian airstrip construction equipment and fuel drums. Chinese traverse sleds, traverse vans, and a depot of fuel drums for traverse vehicles are stored in the immediate vicinity. Australia also maintains a depot of aviation fuel near Progress I (69°23'56"S, 76°24'37"E). A further Russian hut and airstrip construction vehicle storage area is located on the southernmost rock outcrop west of the caned vehicle route to the plateau, approximately 1 km past Progress I (69°24'43"S, 76°24'35"E).

Field hut (India)

Three fibreglass huts with basic provisions for emergency needs are currently sited on an un-named promontory at 69°24'S, 76°11'E. The huts were positioned by India in the 2004/05 and 2006/07 summers.

Monitoring sites

A long-term monitoring site, approximately 250 m north-east of Law-Racovita, was established in 1990 to measure the rate of surface lowering caused by wind abrasion and salt weathering. The site is situated on exposed coarse-grained yellow gneiss, and consists of 24 micro-erosion sites marked by painted yellow rings. Due to the nature of this study, the site should not be crossed on foot, as this will affect the measurements of natural erosion. The practice of using paint or other such permanent means of marking sites is discouraged, and collection of a GPS location is preferable.

A tide gauge, for measuring variation in the mean sea level, is located in the easternmost bay of Nella Fjord, 41.8 m from a known benchmark on shore (69°23'2"S, 76°22'19"E).

Monuments

A rock cairn laid on 8 February 1958 to mark the first Australian National Antarctic Research Expeditions (ANARE) visit to the Larsemann Hills, is located at the highest point on Knuckey Island (69°23'12"S, 76°3'55"E), the largest of a group of three islands lying approximately 1.1 km north-west of Stornes. The cairn contains a note, stored in a plastic sleeve within a glass jar, outlining the names of the landing party.

The gravesite of a Russian expeditioner who died in July 1998 is located on the hill overlooking the northern shore of Seal Cove at 69°22'58"S, 76°23'49"E. The site comprises a steel chest with affixed plaque, surrounded by a low metal railing. A headstone displaying an image of the expeditioner stands at the foot of the chest.

A small monument is located on the northern side of the hill at the northernmost tip of the eastern Broknes coast, north of Zhongshan. This site is a memorial to a previous Vice President of the Chinese Arctic and Antarctic Administration, and comprises a cement monument facing north towards Manning Island and containing a portion of the previous Vice President's ashes.

Other minor structures

A very small emergency food cache is contained within a plastic box at the summit of Blundell Peak on Stornes (69°6'14"S, 76°6'14"E), the highest peak in the Larsemann Hills.

4.7 Location of other protected areas

The only other protected area in the Prydz Bay region is ASPA 143: Marine Plain (68°3'36"S, 78°6'57"E), located on Mule Peninsula in the Vestfold Hills, approximately 110 km to the north-east. Historic Site and Monument (HSM) 6: Walkabout Rocks (68°21'57"S, 78°31'58"E) and HSM 72: Cairn on Tryne Islands (68°21'57"S, 78°24'E) are also located within the Vestfold Hills.

5. Zones within the Area

All activities within the Area are to comply with the provisions of the Protocol on Environmental Protection to the Antarctic Treaty and the appended Environmental Code of Conduct. In addition four zones are defined with restrictions on certain activities, as deemed necessary to meet the objectives for managing the Area.

5.1 Facilities Zone

The construction of station buildings and associated infrastructure on eastern Broknes has caused the greatest impact on the Larsemann Hills environment. However, these impacts have been largely restricted to the immediate station areas and connecting access routes. As the lakes are recognised as the most important ecological feature of the Area, and are susceptible to the impact of human activities undertaken within their catchment limits, a catchment-based approach is the most appropriate means of managing activities in the Area. The existing permanent stations are well situated to limit the spread of their environmental effects, due to their isolation from the rest of the Area, with most station infrastructure located in drainage basins that discharge into the sea.

To ensure that this situation is maintained, a Facilities Zone is defined within the ASMA boundary, encompassing the majority of eastern Broknes. The boundary of the Facilities Zone is defined by the Dålk Glacier in the east, the sea in the north, the western margin of impacted catchments in the west, and the ice plateau including the airstrip and access route in the south. The installation of infrastructure within the ASMA will generally be restricted to already impacted areas in the Facilities Zone. Additional activity within the ASMA involving the building of new infrastructure elsewhere may be considered based on adequate scientific and/or logistic justification.

5.2 Helicopter Zone

Helicopter operations have the potential to cause disturbance to breeding and moulting wildlife. To minimise such disturbance, it is recommended that helicopters operating in the Area take into account the presence of wildlife and maintain maximum possible separation distances. Pilots are to avoid flying and landing upwind of lakes and vegetated areas.

5.3 Magnetic Quiet Zone

Several magnetometers are operated at Zhongshan. A circular zone of 80 m radius is defined surrounding the induction magnetometer sensors located in the gully north of the station at 69°22’12"S, 76°22’8"E, and a further zone to a radius of 80 m from the magnetometer array located west of the water supply lakes and centred at 69°22’22"S, 76°21’46"E. All ferrous materials are to be excluded from these zones to avoid contamination of magnetic field measurements. Permission to enter the Magnetic Quiet Zone must be obtained from the scientist in charge of the experiment.

5.4 Restricted Zone – Stornes

Designation of Stornes as a Restricted Zone recognises the desirability of protecting this infrequently visited and consequently minimally impacted peninsula, including as a reference site for possible future comparison with Broknes.

Stornes is also geologically and mineralogically unique for the extensive development of a diverse suite of borosilicate and phosphate minerals, five and nine species, respectively. The relatively rare borosilicates prismatine and grandidierite are found abundantly in spectacular crystals and segregations over a wide area, while the ferromagnesian fluorphosphate wagnerite forms spectacular nodules locally and microscopic grains regionally. Stornes is the type locality for four new minerals. The aluminium borosilicate boralsilite was described in 1998 and subsequently found at several localities on the peninsula in 2003; to date it is known only from one other locality worldwide. Three new phosphate minerals were discovered in samples collected in 2003; description of these minerals is underway. The borosilicate and phosphate assemblages are considered scientifically significant both in their variety and origin. A major question being addressed in ongoing research is what geologic processes concentrated boron and phosphorus to such an extent.

The sediments on north-eastern Stornes at approximately 69°25'S 76°0'E contain abundant well preserved foraminifera, diatoms and molluscs. This location represents one of only two recorded sites in East Antarctica displaying sediment from this time interval. The sediments are thin and friable and thus require protection from human disturbance. Recent attempts to accurately locate and delimit the site have however been prevented by substantial snow cover.

Preparatory work on Stornes' possible designation as an Antarctic Specially Protected Area is underway.

6. Management activities

Communication between Parties, between on-ground personnel, and between on-ground personnel and national offices will be the key to the successful implementation of management measures in the Larsemann Hills; Parties with research programs in the area commit to ensuring appropriate communication at both a national program and on-ground level. Annual discussions to review the implementation of the management plan will be held during annual Treaty-related meetings.

The relevant station and field base leaders will also meet on an annual basis (logistics permitting) and maintain verbal communications throughout the year on aspects relevant to the management of the Larsemann Hills.

6.1 Logistics, including facilities

- Any further track and infrastructure development in ice-free areas will be restricted to that part of eastern Broknes already modified by human activities and delimited by the Facilities Zone (see Section 5.1), unless a location outside the Zone is justified for adequate scientific and/or logistical reasons. This restriction shall not apply to facilities to be set up for ensuring the safety of field workers.
- Environment impact assessment will proceed as required by Article 8 of the Protocol before constructing or modifying structures, and the Parties proposing to conduct such activities will inform other Parties with active research programs in the Area.
- The cooperative use of infrastructure will be promoted in preference to the construction of new facilities.
- The impacts of man-made structures on wilderness and aesthetics values will be considered and minimised by restricting new structures to already impacted areas wherever possible, and by locating structures so as to minimise their visibility from surrounding areas. Research will be continued to further develop GIS-based models to assist in the evaluation of such impacts prior to construction activities.
- Fuel storage areas will be bunded and located outside lake catchment boundaries wherever possible.
- The use of vehicles will be minimised and essential vehicle use restricted to designated ice-free routes, sea ice and plateau ice.
- Vehicle routes that do not serve the aims of this management plan will be closed with rehabilitation of the impacted area undertaken wherever possible.
- The planning and conduct of vehicle use will take into account the wildlife distances identified in the Environmental Code of Conduct.
- Options for cooperation in the transfer of personnel, supplies, and fuel will be explored.
- As a minimum, waste disposal and management activities will comply with the provisions laid down in Annex II to the Protocol.

- Wastes and disused equipment will be removed from the Antarctic Treaty Area at the earliest opportunity.
- The Parties with active research programs in the Area will jointly develop contingency plans for incidents with potential to adversely impact on the environment.
- Regular and opportunistic collection of wind-dispersed litter will be undertaken.
- All equipment left in the field will be periodically reviewed for potential removal and its interim protection from wind dispersal and the like will be assessed.
- The rehabilitation of modified and disused sites will be investigated and progressed as appropriate.

6.2 Introduced species and wildlife disturbance

- As a minimum, activities will comply with the provisions relating to introduced species and conservation of flora and fauna laid down in Annex II to the Protocol.
- The Parties with active research programs in the Area will jointly develop quarantine policies and procedures for the Area.
- The need to maintain appropriate separation distances from wildlife will be taken into account in the planning and conduct of activities in the Area.

6.3 Data management

- The Parties with active research programs in the Area will jointly develop, and provide input to, a database for recording relevant management information and metadata records to assist the planning and coordination of activities.
- Efforts will be made to increase knowledge of the environmental values of the Area, and the impacts of human activities upon those values, and to apply this knowledge to the environmental management of the Area.

6.4 Science

- Cooperation with, and coordination of, scientific research will be undertaken wherever possible.

6.5 Monitoring

- The Parties with active research programs in the Area will jointly undertake monitoring activities to evaluate the effectiveness of this Management Plan.

6.6 Monuments

- Activities will be managed to ensure the preservation of existing monuments where such action is considered desirable.
- The placement of further cairns or monuments outside the Facilities Zone is prohibited.

6.7 Exchange of information

- To enhance cooperation and the coordination of activities in the Area, avoid duplication of activities, and facilitate the consideration of cumulative impacts, Parties active in the area will:
    - distribute to other such Parties details of activities that may have a bearing on the operation of this management plan (that is, proposals to withdraw from or establish

new research activities, proposals to construct new facilities, information obtained regarding non-governmental visits etc.); and

- provide reports to the CEP on the implementation and maintenance of this management plan.

- Other Parties proposing to conduct activities in the region, including non-governmental groups, will inform at least one of the Parties active in the ASMA of their intentions – in the spirit of the aims and objectives of this management plan.

Appendix 1. Environmental Code of Conduct

The actions of individuals contribute significantly to protecting the Antarctic environment. This Code of Conduct is intended to provide general guidelines to help minimise environmental impacts when in the Larsemann Hills, particularly for activities undertaken away from main station areas.

General principles

- The Antarctic environment is highly susceptible to the impacts of human activities, and as a general rule has much less natural ability to recover from disturbance than the environments of other continents; consider this when undertaking activities in the field.
- Everything taken into the field must be removed. This includes human wastes and also means avoiding the use or dispersal of foreign materials that are difficult to collect and remove. Strip down excess packaging before going off-station, to minimise waste taken into the field.
- The collection or disturbance of any biological or geological specimen or man-made artefact may only be undertaken with prior approval and, if required, in accordance with a permit.
- Wherever possible, accurately record the contact person, location (preferably by GPS) and usage details of all field activities (such as sample sites, field camps, depots, oil spills, markers, equipment etc.) for transfer to the management database.
- This Environmental Code of Conduct is intended as a guide for field activities, but cannot be expected to cover every situation – you should always consider your responsibilities and seek to minimise your impact on all aspects of the environment.

Travel

- Some biological communities and geological formations are especially fragile, even when concealed by snow; be alert and avoid such features when travelling to and between field locations.
- Vehicle and helicopter usage should be restricted to essential tasks to minimise: atmospheric emissions; track formation, physical disturbance of the land surface or biological communities; wildlife disturbance; and the potential for fuel spills.
- When vehicle use is essential, access should be restricted to sea ice, plateau areas and designated ice-free routes. Facilities should be accessed using existing routes.
- Vehicles and other equipment should be fully fuelled on station before departure, to reduce the need for refuelling in the field.
- Avoid refuelling or changing oil in windy conditions or in areas that might direct accidental spillage into lakes, vegetation or other sensitive areas, and always use fuel cans with nozzles/funnels.
- When travelling on foot, use established tracks and designated crossing points wherever possible.
- Avoiding making new tracks. Where established tracks do not exist, take the most direct route that avoids vegetated areas and delicate geological formations such as screes, sediments, streambeds and lake margins.

Wildlife

- Do not feed wildlife.
- Distances from wildlife at which disturbance may be expected to occur are provided in the table following. When moving on foot around wildlife, keep quiet, move slowly, and stay low to the ground – increase your distance if disturbance is evident.

Field camps

- Existing accommodation should be used where possible.
- Where necessary, campsites should be located as far away as practicable from lake shores, streambeds, vegetated sites and wildlife, to avoid contamination and/or disturbance.
- Ensure that equipment and stores are properly secured at all times to prevent foraging by wildlife and dispersion by high winds.
- Collect all wastes produced at field camps, including human wastes and grey water, for return to station and subsequent treatment or disposal.
- Solar or wind powered generators should be utilised wherever possible to minimise fuel usage.

Fieldwork

- All clothing and equipment must be meticulously cleaned before being brought to Antarctica and before moving between sampling locations, to prevent contamination, cross-contamination and the introduction and spread of foreign organisms.
- Do not build cairns, and minimise the use of other objects to mark sites; such markers should be removed on completion of the related task.
- When permitted to collect samples, adhere to the sample size specified in your permit and take samples from the least conspicuous location possible.
- Always use a drop sheet when sampling soils and backfill soil pits to prevent wind erosion and dispersal of deeper sediments.
- Take great care when handling chemicals and fuels, and ensure you have appropriate materials with you to catch and absorb spills.
- Minimise the use of liquid water and chemicals that could contaminate the isotopic and chemical record within lake or glacier ice.
- Scrupulously clean all sampling equipment to avoid cross-contamination between lakes.
- To prevent lake contamination, or toxic effects on the biota at the surface, avoid reintroducing large volumes of water obtained from lower in the water column; excess water or sediment should be returned to station for appropriate disposal or treatment.
- Ensure that sampling equipment is securely tethered, and leave nothing frozen into the ice that may cause later contamination.
- Do not wash, swim or dive in lakes; these activities contaminate the water body and physically disturb the water column, delicate microbial communities, and sediments.

Note: The guidelines laid down in this Environmental Code of Conduct shall not apply in cases of emergency. All activities in the Larsemann Hills must comply with the Antarctic Specially Managed Area (ASMA) management plan for the area. As required by Article 8 of the Protocol, all activities must undergo an environmental impact assessment prior to the activity being undertaken.

Distances at which disturbance may be expected to occur when approaching wildlife on foot

Species	Distance (metres)
Giant petrels and albatrosses, breeding / nesting	100 m
Emperor penguins (in colonies, huddling, moulting, with eggs or with chicks)	50 m
All other penguins (in colonies, moulting, with eggs or chicks)	30 m
Prions, petrels, skuas, on nests Seals with pups and seal pups on their own	20 m
Non breeding penguins and adult seals	5 m

Distance at which disturbance may be expected to occur when approaching wildlife using small vehicles (e.g. quads and skidoos)

All wildlife	150 m

Distance at which disturbance may be expected to occur when approaching wildlife using tracked vehicles

All wildlife	250 m

Distances at which disturbance may be expected to occur when approaching wildlife using aircraft

Birds	**Vertical** Single-engine helicopters 2500 ft (~ 750 m) Twin-engine helicopters 5000 ft (~1500 m) **Horizontal** ½ nm (~930 m)
Seals	**Vertical and horizontal** Single-engine helicopters 2500 ft (~ 750 m) Twin-engine helicopters 5000 ft (~1500 m) Twin-engine, fixed-wing aircraft 2500 ft (~750 m)

Appendix 2: National program contact details

Australia Australian Antarctic Division Channel Highway Kingston Tasmania 7050 Australia **Phone:** +61 (03) 6232 3209 **Fax:** +61 (03) 6232 3357 **E-mail:** epps@aad.gov.au	**Romania** Romanian Antarctic Foundation Romanian Polar Research Institute 1 Libertatii, Blvd Bucharest -4 Romania **Phone/fax:** 0040213372986 **Email:** negoita_antarctic@yahoo.com
People's Republic of China The Chinese Arctic and Antarctic Administration 1 Fuxingmenwai Street Beijing 100860 People's Republic of China **Phone:** +86 10 6804 7750 **Fax:** +86 10 6801 2776 **Email:** chinare@263.net.cn	**Russian Federation** Russian Antarctic Expedition The Arctic and Antarctic Research Institute 38 Bering Street 199397 St Petersburg Russia **Phone:** +7 812 352 2930 **Fax:** +7 812 352 3011 **Email:** lukin@aari.nw.ru pom@aari.nw.ru
India National Centre for Antarctic & Ocean Research Sada, Vasco-da-Gama Goa 403 804 India **Phone:** +91 832 2525 501 **Fax:** +91 832 2525 502 +91 832 2520 877 **Email :** rasik@ncaor.org	

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Appendix 4: Larsemann Hills maps

Map A. Topography and physical features

Map B. Management zones and ice free areas

Map C. Detail of northern part of facilities zone

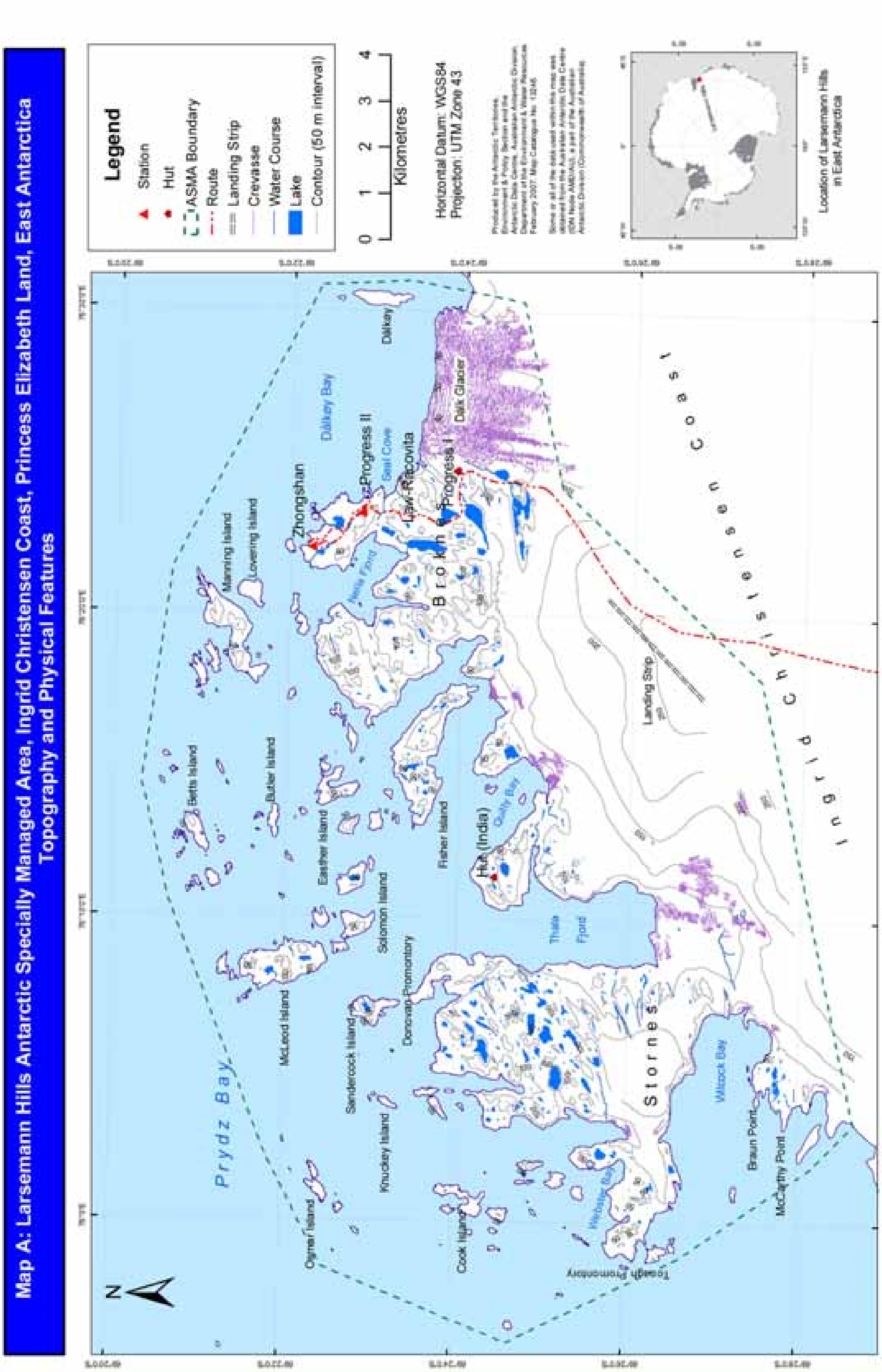
Map D. Zhongshan – buildings, facilities and zones

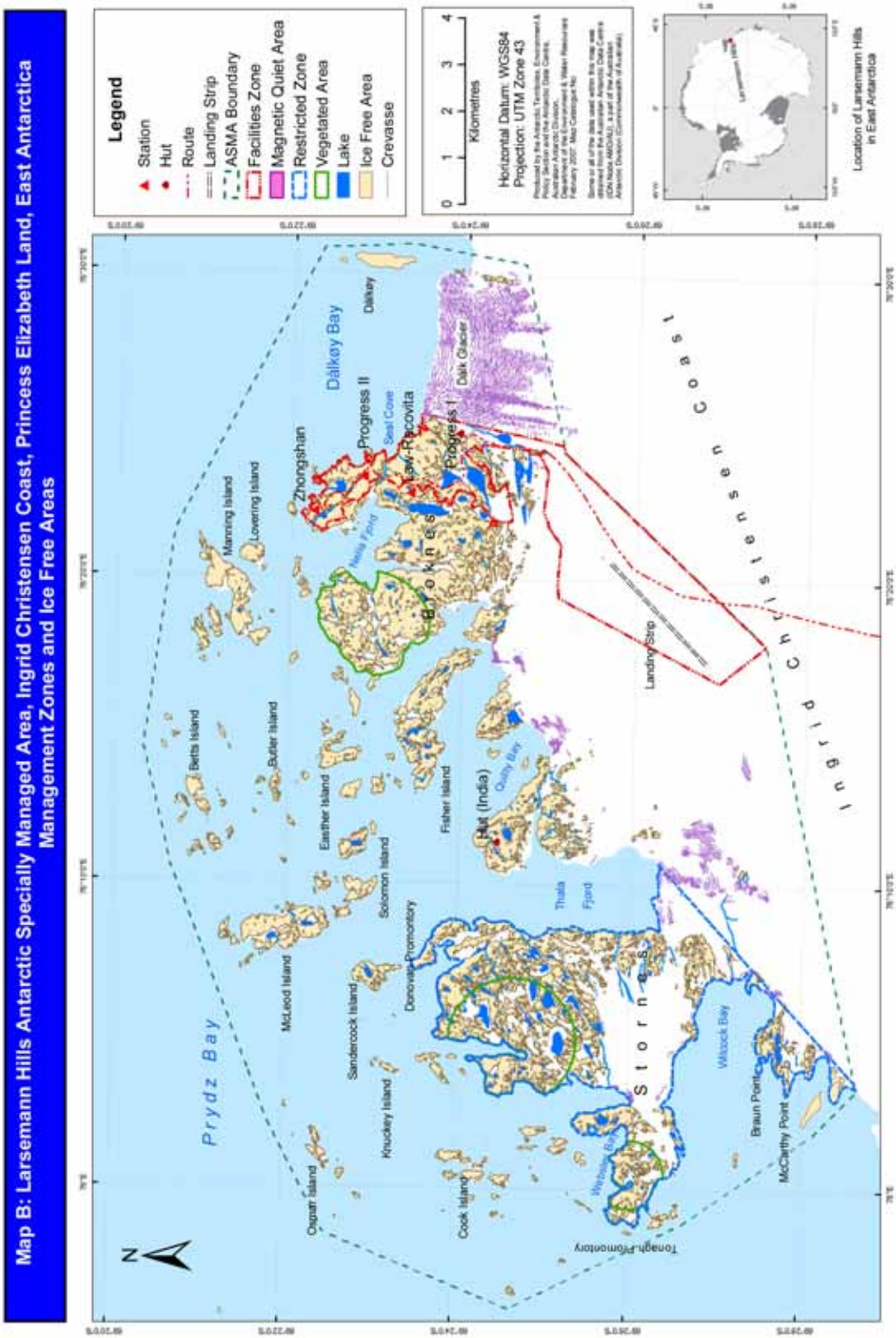
Map E. Progress II – buildings, facilities and zones

Detailed maps of the region are available via the Australian Antarctic Data Centre website at:

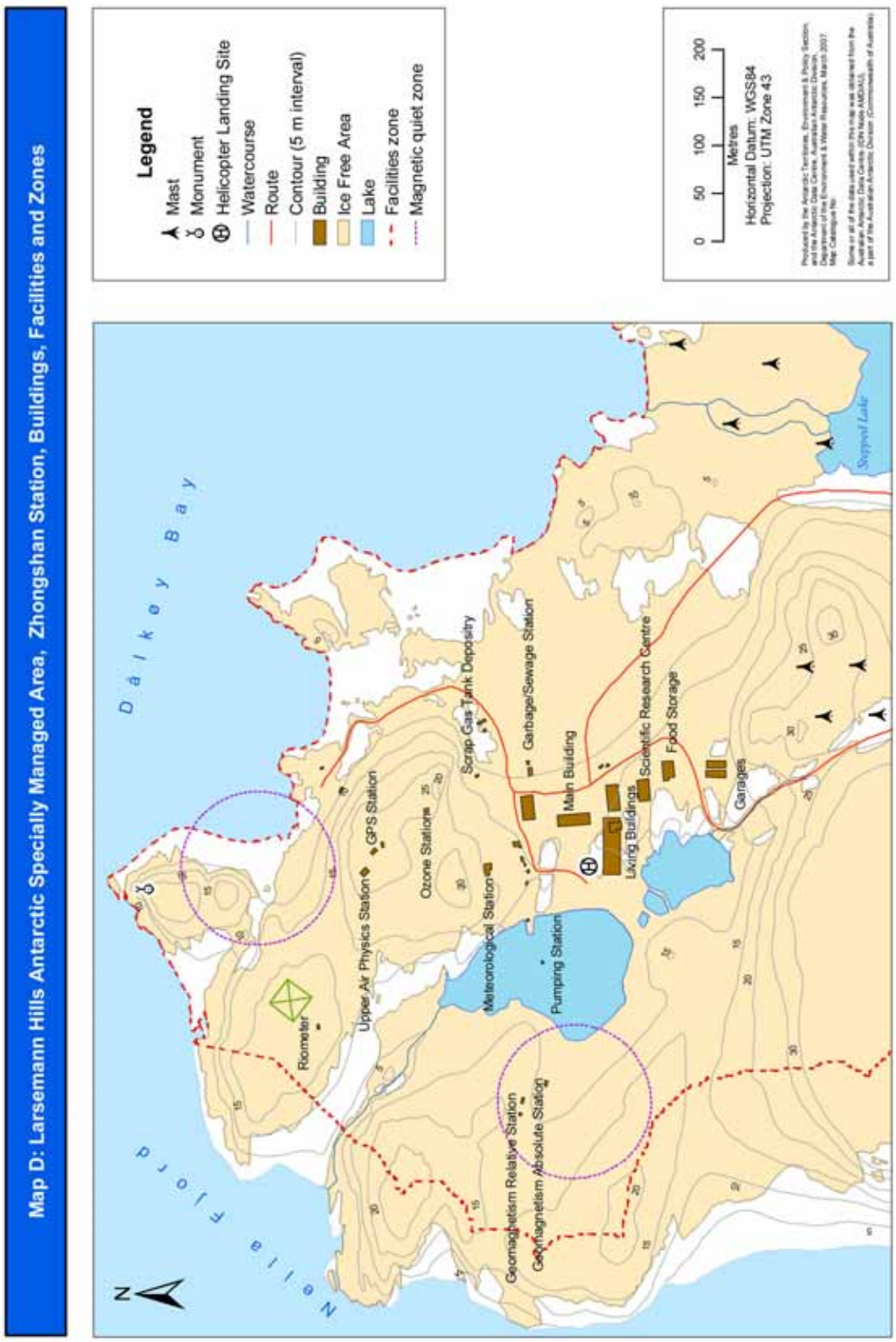
http://aadc-maps.aad.gov.au/aadc/mapcat/search_mapcat.cfm

(Map References # 13130 and 13135)

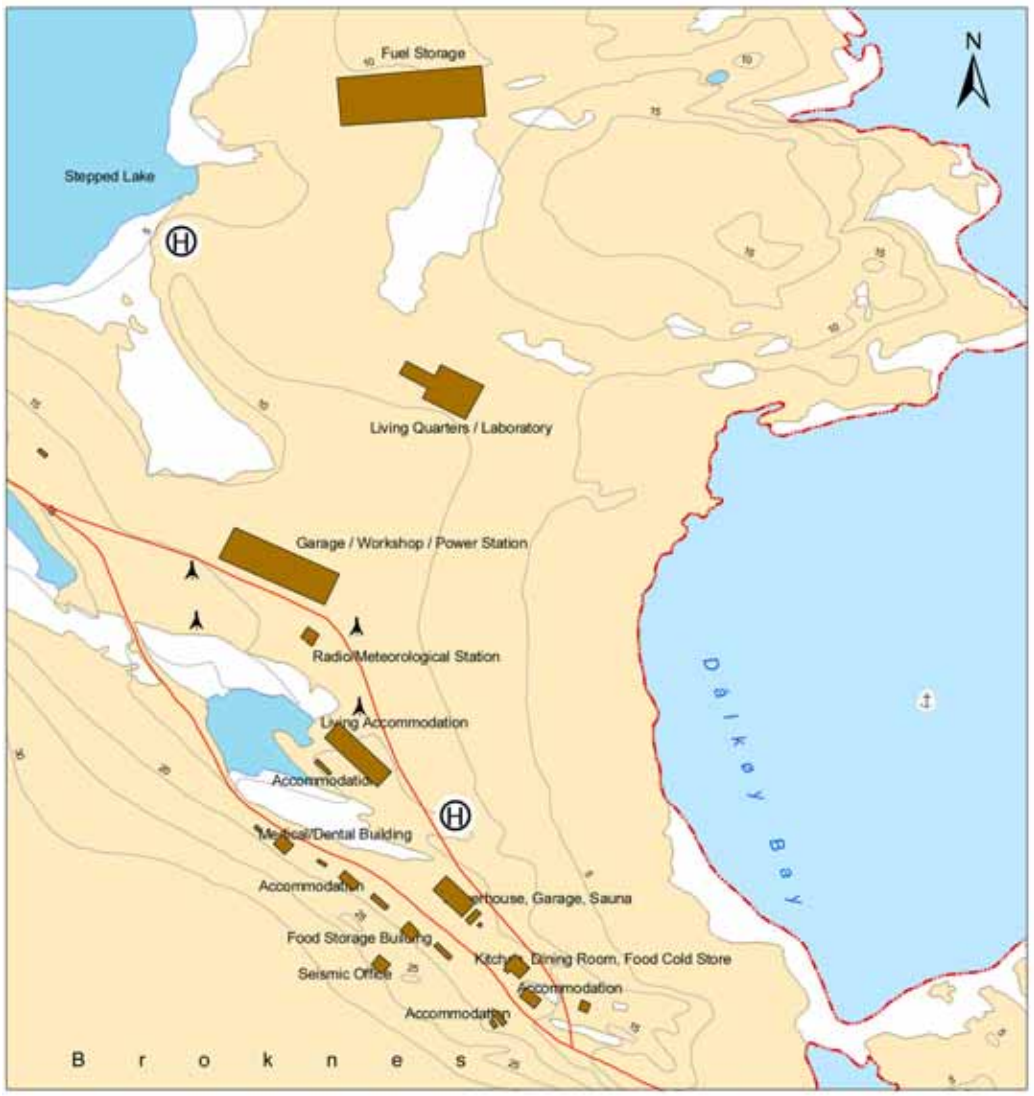

Map A: Larsemann Hills Antarctic Specially Managed Area, Ingrid Christensen Coast, Princess Elizabeth Land, East Antarctica
Topography and Physical Features
Legend
Station
Hut
ASMA Boundary
Route
Landing Strip
Crevasse
Water Course
Lake
Contour (50 m interval)
0 1 2 3 4
Kilometres
Horizontal Datum: WGS84
Projection: UTM Zone 43
Location of Larsemann Hills in East Antarctica
Prydz Bay
Dålkøy Bay
Zhongshan
Progress II
Seal Cove
Law-Racovita
Progress I
Dålk Glacier
Dålkøy
Nella Fjord
Broknes
Manning Island
Lovering Island
Landing Strip
Betts Island
Butler Island
Easther Island
Fisher Island
Quilty Bay
Hut (India)
Solomon Island
McLeod Island
Sandercock Island
Donovan Promontory
Thala Fjord
Stornes
Knuckey Island
Ogner Island
Cook Island
Warton Bay
Wilcock Bay
Braun Point
McCarthy Point
Tonagh Promontory
Ingrid Christensen Coast


Map B: Larsemann Hills Antarctic Specially Managed Area, Ingrid Christensen Coast, Princess Elizabeth Land, East Antarctica
Management Zones and Ice Free Areas
Legend
Station
Hut
Route
Landing Strip
ASMA Boundary
Facilities Zone
Magnetic Quiet Area
Restricted Zone
Vegetated Area
Lake
Ice Free Area
Crevasse
0 1 2 3 4
Kilometres
Horizontal Datum: WGS84
Projection: UTM Zone 43
Location of Larsemann Hills in East Antarctica
Broknes
Stornes
Dalkøy Bay
Prydz Bay
Ingrid Christensen Coast
Dalkøy
Dalk Glacier
Progress II
Progress I
Law-Racovita
Zhongshan
Manning Island
Lovering Island
Nella Fjord
Seal Cove
Landing Strip
Butler Island
Betts Island
Easther Island
Solomon Island
Fisher Island
Hut (India)
Quilty Bay
Thala Fjord
McLeod Island
Sandercock Island
Donovan Promontory
Knuckey Island
Ongul Island
Cook Island
Tonagh Promontory
Watson Bay
Watsick Bay
Braun Point
McCarthy Point
N

**Map C: Larsemann Hills Antarctic Specially Managed Area,
Ingrid Christensen Coast, Princess Elizabeth Land, East Antarctica.
Detail of Northern Broknes**


Map D: Larsemann Hills Antarctic Specially Managed Area, Zhongshan Station, Buildings, Facilities and Zones
Legend
Mast
Monument
Helicopter Landing Site
Watercourse
Route
Contour (5 m interval)
Building
Ice Free Area
Lake
Facilities zone
Magnetic quiet zone
0 50 100 150 200
Metres
Horizontal Datum: WGS84
Projection: UTM Zone 43
Produced by the Antarctic Territories, Environment & Policy Section, and the Antarctic Data Centre, Australian Antarctic Division, Department of the Environment & Water Resources, March 2007.
Map Catalogue No:
Some or all of the data used within this map was obtained from the Australian Antarctic Data Centre (ADN Node) AMD/AUS, a part of the Australian Antarctic Division (Commonwealth of Australia).
Dalkey Bay
Nella Fjord
Stornes Peninsula
Progress Lake
Stepped Lake
Zhongshan Station
Garbage/Sewage Station
Scrap Gas Tank Depository
Main Building
Scientific Research Centre
Food Storage
Garages
Living Buildings
Ozone Station
GPS Station
Upper Air Physics Station
Meteorological Station
Pumping Station
Riometer
Geomagnetism Relative Station
Geomagnetism Absolute Station
N

Map E: Larsemann Hills Antarctic Specially Managed Area, Progress II Station, Buildings, Facilities and Zones



Legend

- Mast
- Route
- Contour (5 m interval)
- Building
- Facilities Zone
- Ice Free Area
- Lake
- Helicopter Landing Site

0 50 100 150

Metres

Horizontal Datum: WGS84
Projection: UTM Zone 43

Measure 3 (2007)

Antarctic Historic Sites and Monuments: Monument to the Antarctic Treaty

The Representatives,

Recalling the requirements of Article 8 of Annex V to the Protocol on Environmental Protection to the Antarctic Treaty to maintain a list of current Historic Sites and Monuments, and that such sites shall not be damaged, removed or destroyed;

Recalling Measure 3 (2003), which revised and updated the "List of Historic Sites and Monuments";

Recalling the Edinburgh Antarctic Declaration on the International Polar Year 2007-2008 ("IPY") which supports the objective of delivering a lasting legacy from the IPY;

Desiring to add a monument to the Antarctic Treaty and a plaque recalling the First and Second International Polar Years, the International Geophysical Year and the International Polar Year 2007-2008, to that list;

Recommend to their Governments the following Measure for approval in accordance with Paragraph 2 of Article 8 of Annex V to the Protocol on Environmental Protection to the Antarctic Treaty:

That the following monument be added to the "List of Historic Sites and Monuments" annexed to Measure 3 (2003):

No 82: Monument to the Antarctic Treaty and Plaque

The monument is located close to the Frei, Bellingshausen and Escudero Bases at Fildes Peninsula, King George Island, South Shetland Islands. The plaque at the foot of the monument commemorates the Signatories to the Antarctic Treaty and successive International Polar Years (1882-1883, 1932-1933 and 2007-2008).

Location: 62º 12' 01" S; 58º 57' 41" W, King George Island, South Shetland Islands

Original proposing Party: Chile

Party undertaking management: Chile

ANNEX B

Decisions

Decision 1 (2007)

Review of the Status of Measures Relating to Area Protection and Management

The Representatives,

Recalling Decision 3 (2002);

Having reviewed a number of measures* of a general nature on the subject of area protection and management;

Recognising that the measures listed in the Annex to this Decision are no longer current as a result of the entry into force of Annex V on Area Protection and Management to the Protocol on Environmental Protection to the Antarctic Treaty;

Decide:

1. that the measures listed in the Annex to this Decision require no further action by the Parties; and

2. to request the Secretariat of the Antarctic Treaty to post the text of the measures that appear in the Annex to this Decision on its website in a way that makes clear that these measures are no longer current and that the Parties do not need to take any further action with respect to them.

* Note: measures previously adopted under Article IX of the Antarctic Treaty were described as recommendations up to ATCM XIX (1995).

Annex to Decision 1 (2007)

- Recommendation I-IX (1961);
- Recommendation V-4 (1968) (Historic monuments);
- Recommendation VI-14 (1970) (Historic monuments);
- Recommendation VII-2 (1972) (Review of Specially Protected Areas);
- Recommendation VII-3 (1972) (Sites of Special Scientific Interest);
- Recommendation VIII-3 (1975) (Sites of Special Scientific Interest);
- Recommendation VIII-5 (1975) (Permits for entry to Specially Protected Areas);
- Recommendation XIII-5 (1985) (Man's impact on the Antarctic environment: additional protective arrangements);
- Recommendation XIV-6 (1987) (Marine Sites of Special Scientific Interest);
- Recommendation XV-8 (1989) (Antarctic protected area system: Agreed Measures for the Conservation of Antarctic Fauna and Flora: amendment to Article VIII (Management Plans for Specially Protected Areas));
- Recommendation XV-9 (1989) (Antarctic protected area system: development of improved descriptions and Management Plans for Specially Protected Areas);
- Recommendation XV-10 (1989) (The Antarctic protected area system: establishment of Specially Reserved Areas (SRAs)); and
- Recommendation XV-11 (1989) (Antarctic specially protected area system: establishment of Multiple-use Planning Areas (MPAs)).

Decision 2 (2007)

Re-appointment of the Executive Secretary

The Representatives,

Recalling Decision 3 (2004);

Recalling Article 3 of Measure 1 (2003) regarding the appointment of an Executive Secretary to head the Secretariat of the Antarctic Treaty;

Bearing in mind Paragraph 3 of Decision 2 (2003) on the provisional application of Measure 1 (2003);

Recalling Regulation 6.1 of the Staff Regulations for the Secretariat of the Antarctic Treaty;

Decide:

1. to re-appoint Mr Johannes Huber as Executive Secretary of the Secretariat of the Antarctic Treaty for an additional term of one year, pursuant to the terms and conditions set forth in the letter of the Chair of the 30th Antarctic Treaty Consultative Meeting annexed to this Decision; and

2. that this re-appointment shall commence on September 1, 2008.

Annex to Decision 2 (2007)

Mr Johannes Huber
Executive Secretary
Antarctic Treaty Secretariat

Dear Mr Huber,

Re-appointment to position of Executive Secretary

As Chair of the XXX Antarctic Treaty Consultative Meeting (ATCM) and in accordance with Decision 2 (2007) of the XXX ATCM, I am pleased to offer to you re-appointment to the position of Executive Secretary of the Secretariat of the Antarctic Treaty (the Secretariat).

The terms and conditions of your re-appointment are set out below. If you accept this offer, kindly sign your acceptance on the attached copy of this letter and return it to me.

Terms and Conditions of Appointment

1. By your acceptance of the re-appointment you shall pledge yourself to discharge your duties faithfully and to conduct yourself solely with the interests of the ATCM in mind. Your acceptance of the position of Executive Secretary includes a written statement of your familiarity with and acceptance of the conditions set out in the attached Staff Regulations as well as any changes which may be made to the Staff Regulations from time to time.

2. The duties of the Executive Secretary are to appoint, direct and supervise other staff members and to ensure that the Secretariat fulfills the functions identified in Article 2 of Measure 1 (2003), provisionally applied by Decision 2 (2003) until that Measure becomes effective.

3. In accordance with Decision 2 (2007), your re-appointment shall commence on September 1, 2008.

4. Your term of office shall be for one year.

5. The re-appointment is to the executive staff category. Your salary shall be at Level 1B, Step 5, as detailed in Schedule A to the Staff Regulations annexed to Decision 3 (2003), as amended.

6. The above salary includes the base salary (Level 1A, Step 5, Schedule A) with an additional 25% for salary on-costs (retirement fund and insurance premiums, installation and repatriation grants, education allowances, etc.) and is the total salary entitlement in accordance with Regulation 5.1 of the Staff Regulations. In addition, you will be entitled to travel allowances and relocation expenses in accordance with Regulation 9 of the Staff Regulations.

7. The ATCM may terminate this re-appointment by prior written notice at least three months in advance in accordance with Regulation 10.3 of the Staff Regulations. You may resign at any time upon giving three months written notice or such lesser period as may be approved by the ATCM.

Yours sincerely

{signed}

Dr U.R. Rao
Chairman XXX Antarctic Treaty Consultative Meeting

I hereby accept the appointment described in this letter subject to the conditions therein specified and state that I am familiar with and accept the conditions set out in the Staff Regulations and any changes which may be made to the Staff Regulations from time to time.

_____

11 May 2007

{signed}

Johannes Huber

Dr Jorge Taiana
Minister of Foreign Affairs, International Trade and Worship
Argentine Republic
Buenos Aires

Dr Taiana:

I address you in my capacity as Chair of the XXX Antarctic Treaty Consultative (ATCM) with reference to Article 21 of the Headquarters Agreement for the Secretariat of the Antarctic Treaty, attached to Measure 1 (2003), and to Decision 2 (2003), the letter of the Argentine Republic to the Chairman of ATCM XXVI of 16 June 2003, and the notification of the Argentine Republic to the Depositary Government of 19 May 2004.

In accordance with the requirements of Article 21 as provisionally applied, I hereby notify the Government of the Argentine Republic of the re-appointment by the XXX ATCM of Mr Johannes Huber to the position of Executive Secretary for one additional term of one year, effective on 1 September 2008.

I avail myself of this opportunity to express the assurances of my highest consideration.

Yours sincerely,

{signed}

Dr U.R. Rao

Chair XXX Antarctic Treaty Consultative Meeting

Decision 3 (2007)

Appointment of an External Auditor

The Representatives,

Recalling the Financial Regulations for the Secretariat of the Antarctic Treaty annexed to Decision 4 (2003), and specifically Regulation 11 (External Audit);

Bearing in mind that the Secretariat of the Antarctic Treaty conducts the majority of its financial transactions in Argentina, and that the detailed rules of bookkeeping and accounting are country specific; and

Bearing in mind Argentina's proposal to designate the Sindicatura General de la Nación (SIGEN) as the external auditor of the Secretariat;

Decide to:

1. designate SIGEN as the external auditor of the Secretariat of the Antarctic Treaty for a period of two years, in accordance with Regulation 11.1; and

2. accept SIGEN's proposal to carry out an external audit, in accordance with Regulation 11.3 and the Annex to this Decision, for the value indicated.

Annex to Decision 3 (2007)

Tasks to be carried out by the external auditor

To provide an external audit report covering the financial years ending in 2008 and 2009, in accordance with Regulation 11.3 of Decision 4 (2003).

The activities can be summarized as follows:

- Implementation of regulations adopted by the ATCM
- Internal controls - Regulations and Procedures
- Internal oversight of administrative processes, payments, custody of funds, and assets
- Budgeting
- Comparative budget reports
- Expenditure efficiency analysis
- Budget execution oversight
- Analysis of the establishment of new area units
- Control and reporting of contributions
- Establishment and oversight of the General Fund
- Establishment and oversight of the Working Capital Fund
- Income and expense accounts
- Trust funds
- Custody of funds - Investments
- Accounting oversight in accordance with Regulation 10 of Decision 4 (2003)
- Drafting an external auditor report

The cost of the work proposed by SIGEN is:

Annual external audit ——————————————————————— US$ 7,185.

Decision 4 (2007)

Approval of the Secretariat's Programme and Budget for 2007/08

The Representatives,

Recalling Measure 1 (2003) of ATCM XXVI on the establishment of the Secretariat of the Antarctic Treaty (the Secretariat);

Recalling also Decision 2 (2003) on the provisional application of Measure 1 (2003);

Bearing in mind the Financial Regulations for the Secretariat of the Antarctic Treaty annexed to Decision 4 (2003) and especially the provisions of Regulation 6.3 of the Financial Regulations relating to the surplus;

Noting that, due to the short period of time from the end of the Financial Year 2006/07, only a Provisional Financial Report has been prepared and the definitive audited Financial Report 2006/07 will be submitted to ATCM XXXI for its consideration and approval;

Decide to:

1. take note with appreciation of the Secretariat's report on its work in 2006/07 (SP 2) and the Provisional Financial Report for 2006/07 annexed to this Decision (Annex A);

2. treat the total accumulated surplus at 31 March 2007 of $383,133 as income for the year 2008/09, and to reduce the variable part of the Parties' 2008/09 assessed contributions in proportion to their total contributions to the budget over the past three years (2004/05, 2005/06, and 2006/07);

3. approve the Secretariat's Programme annexed to this Decision (Annex B) and the Budget for 2007/08 contained therein;

4. approve the expenditure of up to one quarter of the Forecast Budget for 2008/09, contained in Annex B, in the 2008/09 Financial Year subject to the availability of sufficient funds.

Annex A

Note: As the Financial Year 2006/07 only ended on 31 March 2007 this is a provisional report. The definitive, audited Financial Report 2006/07 will be submitted to ATCM XXXI

Antarctic Treaty Secretariat

Provisional Financial Report 2006/07

1. Statement of Income and Expenditure for All Funds for the Period Starting 1 April 2006 and Ending 31 March 2007

	Budget	Actual
INCOME		
Contributions 2006/07[1]	$739.270	$686.862
Late contributions 2005/06[2]		$125.567
Other income[3]		$38.523
TOTAL	**$739.270**	**$850.952**
EXPENDITURE		
1. Appropriation for Salaries		
Executive staff salaries	$203.877	$203.919
General staff salaries	$88.457	$88.190
Total Salaries	**$292.334**	**$292.109**
2. Appropriation for Goods and Services		
Accounting and auditing	$15.490	$14.416
Communications[4]	$12.400	$19.649
Data entry, proofreading[5]	$19.000	$9.790

[1] See below under **3b**.
[2] See below under **3a**.
[3] Other Income 2006/07:

VAT Reimbursement	$14.871
Bank Interest Earned	$1.507
Fixed Term Deposit Interest	$22.108
Fiscal Interest	$37
	$38.523

[4] The expenditures on postage and shipment were higher than foreseen due to rising costs and shipment of eleven different Site Guidelines, as opposed to four in the year before. The higher than expected costs associated with the Site Guidelines also caused higher expenses for printing and for translations - see below.
[5] The amount of documents added to the ATCM Documents Database was less than expected.

Documentation services[6]	$9.000	$8.968
Legal advice	$4.800	$3.853
Miscellaneous	$8.000	$6.468
Office expenses[7]	$26.500	$11.319
Printing and copying	$20.000	$30.415
Representation	$11.502	$7.954
Training	$4.000	$1.854
Translation and editing[8]	$134.118	$158.115
Travel costs[9]	$81.520	$94.433
Total Goods and Services	**$346.330**	**$367.235**
3. Appropriation for Equipment		
Documentation material	$9.000	$4.140
Furniture, equipment[10]	$13.880	$274
IT equipment, software	$40.800	$46.650
Web and Software development	$21.000	$13.679
Total Equipment	**$84.680**	**$64.744**
TOTAL EXPENDITURE	**$723.344**	**$724.088**
To Staff Replacement Fund	$12.500	$12.500
To Staff Termination Fund	$3.426	$3.426
To Working Capital Fund		$8.024
TOTAL	**$739.270**	**$748.038**
Surplus 2006/07		$102.914
US grant[11]	$21.000	$20.680
Expenditure	$21.000	$20.680

[6] Total expenditures on documentation services were $19.182; $8.968 out of the regular budget and $10.214 out of the US grant (see Note 11).

[7] The sum budgeted for office expenses mistakenly included expenses for computer maintenance. Expenditures for this purpose have been moved to the item 'IT equipment' below.

[8] The amount of intersessional translation was higher than expected due to the Site Guidelines. Costs were also adversely affected because of the depreciation of the dollar towards the euro.

[9] Travel expenditures were higher than foreseen due to rising international travel costs.

[10] Expenditure on plant and equipment:

Disbursements during 2006/07	$26.069
Depreciation	$4.924
To assets	-$20.253
Net expenditures on plant and equipment	$10.740
(US grant)	$10.466
(Regular budget)	$274

[11] The US made a contribution of $ 30.000 to a Special Fund in lieu of its 2004/05 contribution. $ 9.320 of this was received during FY 2005/06, see Financial Report 2005/06, footnote 15. $10.466 was spent on plant and equipment (note 10) and $10.214 on documentation services (note 6).

2. Statement of Financial Position on 31 March 2007

ASSETS	
Current assets	
Cash and cash equivalents[12]	$1.118.739
Credits[13]	$85.252
Total	**$1.203.991**
Non-current assets	
Plant and equipment[14]	44.315
Total	**44.315**
Total Assets	**$1.248.306**
LIABILITIES	
Current liabilities	
Payables[15]	$40
Unearned income[16]	$243.043
Total	**$243.083**
Non-current liabilities	
Staff Termination Fund	$10.278
Staff Replacement Fund	$37.500
Total	**$47.778**
Total Liabilities	**$290.861**
NET ASSETS	**$957.445**
Represented by accumulated funds	
General Fund	$126.985
Future Meeting Fund	$400.000
Working Capital Fund	$128.788
Total Accumulated Funds	**$655.773**

[12] Cash and equivalents

Cash	$598
BNA US Dollar account	$1.044.884
BNA Argentine Peso account	$73.257
Total	$1.118.739

[13] Credits

Prepayments to suppliers	$72.088
VAT to be reimbursed	$12.435
Turnover tax to be reimbursed	$4
Total	$84.526

[14] Plant and equipment

Plant and equipment 31 March 2006	$28.986
Disbursements 2005/06	$20.253
Depreciations	-$4.924
Plant and equipment (r.v.) 31 March 2007	$44.315

[15] Payables consisted of a PayPal account ($15) and $25 owing to suppliers.

[16] I.e. contributions for 2007/08 received during 2006/07, see under **3c**.

3. Contributions

a. Late contributions for 2005/6, received during 2006/07	
Belgium	$31.927
Brazil	$31.927
Korea	$19.145
Spain	$10.641
Ukraine	$31.927
Total	**$125.567**
b. Contributions 2006/07	
Received during 2005/06	
Australia	$33.486
Finland	$22.217
Germany	$21.000
Italy	$28.978
Netherlands	$25.598
New Zealand	$33.486
Russia	$22.217
United States	$33.486
Total	$220.468
Received during 2006/07	
Argentina	$33.486
Belgium	$22.217
Brazil	$22.217
Bulgary	$18.836
Chile	$25.598
China	$25.598
Ecuador	$18.836
France	$33.486
India	$25.598
Japan	$33.486
Korea	$22.217
Norway	$33.486
Peru	$18.836
Poland	$22.217
South Africa	$25.598
Spain	$25.598
Sweden	$25.598
United Kingdom	$33.486
Total	$466.394
Total 2006/07	**$686.862**
c. Contributions 2007/8	
Finland	$23.222
France	$34.547
India	$26.756
Netherlands	$26.756
New Zealand	$35.002
Norway	$35.002
Sweden	$26.756
United States	$35.002
Total	**$243.043**

d. Share of contributing Parties in the surplus 2006/07[17]

Argentina	A	$33.486	$2.857
Australia	A	$33.486	$2.857
Belgium	D	$22.217	$1.895
Brazil	D	$22.217	$1.895
Bulgaria	E	$18.836	$1.607
Chile	C	$25.598	$2.184
China	C	$25.598	$2.184
Ecuador	E	$18.836	$1.607
Finland	D	$22.217	$1.895
France	A	$33.486	$2.857
Germany	B	$21.000	$1.792
India	C	$25.598	$2.184
Italy	B	$28.978	$2.472
Japan	A	$33.486	$2.857
Korea	D	$22.217	$1.895
Netherlands	C	$25.598	$2.184
New Zealand	A	$33.486	$2.857
Norway	A	$33.486	$2.857
Peru	E	$18.836	$1.607
Poland	D	$22.217	$1.895
Russia	D	$22.217	$1.895
South Africa	C	$25.598	$2.184
Spain	C	$25.598	$2.184
Sweden	C	$25.598	$2.184
United Kingdom	A	$33.486	$2.857
United States	A	$33.486	$2.857
Total		**$686.858**	**$58.599**

Johannes Huber

Executive Secretary

Juan Carlos Brizuela

Accountant

[17] The surplus credited to the Parties is the available surplus, that is the net surplus of 2006/07 ($102.914) - expenditures resulting in fixed assets ($44.315), see note 14.

Annex B

Secretariat Programme 2007/08

Introduction

This work programme outlines the activities proposed for the Secretariat in the financial year 2007/08 (1 April 2007 to 31 March 2008) and in the first quarter of the financial year 2008/09. The main areas of activity of the Secretariat are treated in the first four chapters, which are followed by a section on management and a forecast of the programme in 2008/09. The draft budget for 2007/08, the forecast budget for 2008/09 and the accompanying contribution and salary scales are included in the appendices.

The programme and the accompanying budget figures for 2007/08 are based on forecast budget for 2007/08 (Decision 1 (2006), Appendix 1) and the experience of the past year.

Apart from the regular activities, such as preparation of the 30th and 31st ATCM, publication of Final Reports and the various specific tasks assigned to the Secretariat under Measure 1 (2003), the priority tasks for the year 2007/08 will be:

- development of a new, fully integrated website, with more contents presented directly from the Secretariat's databases and more pages presented in the four official languages;
- the further development of the Electronic Information Exchange System;
- publication of the Handbook of the Antarctic Treaty System.

Other specific issues for the coming period will be related to the production of printed and digital material to increase both the availability of practical reference sources for the parties as well as informative materials for the public.

Contents

1. ATCM/CEP support
2. Information Exchange
3. Documentation
4. Public Information
5. Management
6. Forecast Programme 2008/09

Appendix 1: Draft budget 2007/08 and Forecast budget 2008/09

Appendix 2: Contribution scale 2008

Appendix 3: Salary scale 2007/08

1. ATCM/CEP support

ATCM XXX and XXXI

The Secretariat will support the 30th ATCM by gathering and collating the documents for the meeting and publishing them in a restricted section of the Secretariat website, linked to the ATCM XXX website. Building on the improvements made last year, such as providing insight in the work flow and the status of the ATCM papers, the ATCM XXX website will provide online registration for delegates and, based on the data thus collected, an up to date list of delegates to download. The aim of these developments is to speed up the process of registration of delegates and remove the need of distracting procedures during the ATCM to produce the list of delegates.

As in past years, the Secretariat has granted the contract for interpretation and translation of the 30th ATCM to the team of Mr Bernard Ponette. As before, the Indian Government as host of the 30th ATCM will reimburse the Secretariat for the costs of translation and interpretation during the meeting; the pre-meeting translation and the translation and editing of the Final Report are part of the Secretariat's budget.

The Secretariat will support the functioning of the ATCM through the production of Secretariat Papers, a Manual for Delegates, as well as annotated agendas for the CEP and the Working Groups, and Lists of Papers showing their status. Printed versions of the CEP Handbook in four languages will also be distributed at the CEP X meeting.

The Secretariat will maintain close contact with the Ukrainian Government in connection with the preparation of the 31th ATCM (Kiev, 2-13 June 2008), and with the United States Government in connection with the preparation of the 32nd ATCM, and will provide support for the organization of any intersessional meetings planned by the ATCM.

The Secretariat will publish and distribute the Final Report of the 30th ATCM in the four Treaty languages within six months of the end of the meeting.

Review of ATCM Recommendations

Under direction of the ATCM, the Secretariat has produced an analysis of the status of recommendations on protected areas; an analysis of the status of the recommendations on other environmental issues; and a broad overview of the status of all recommendations. In accordance with the decisions taken at the 30th ATCM, the Secretariat will produce new versions of these papers to prepare decisions of the ATCM on recommendations that are no longer current.

Coordination and contact

Aside from maintaining constant contact per email, telephone and other means with the parties and international institutions of the Antarctic Treaty system, attendance at meetings is an important tool to maintain coordination and contact.

As before, most of the travel expenses in the budget will be spent on the direct support of the ATCM. In 2007, the Executive Secretary, the Assistant Executive Officer, the Information Officer, the IT Officer and the Editor will travel to New Delhi to support the 30th ATCM and 10th CEP, in cooperation with the host government secretariat. The staff will be strengthened during the meeting with two staff members contracted *ad hoc*.

The Secretariat will attend the following meetings related to Antarctic affairs:

• COMNAP	Washington	9-13 July 2007

- Contact with COMNAP is especially important in view of the close cooperation between the Antarctic Treaty Secretariat and the COMNAP Secretariat in the development of electronic information exchange systems. Attendance at the meeting will provide an opportunity to strengthen the connections and interaction with COMNAP, brief the NAPs about the state of development of the information exchange systems, and further develop their interoperability.

• IHO / HCA	Buenos Aires	3-5 October 2007

- Attendance at the HCA Meeting was especially requested by HCA and will involve no foreign travel. The Secretariat will inform the HCA about the proceedings of the 30th ATCM related to Antarctic hydrography.

• IPY JC	Stockholm	October 2007

- On instruction from the ATCM, the Executive Secretary has been attending the IPY Joint Committee meetings as one of the two observers (the other observer being from the Arctic Council) and providing reports to the ATCM.

• CCAMLR	Hobart	November 2007

- Attendance at the CCAMLR meeting is at the invitation of CCAMLR. Consultations with the the CCAMLR Secretariat, which has been the model for the ATS in terms of its administrative and financial setup, will be used to further refine the operation of the Secretariat. Also, attendance at CCAMLR provides an opportunity to brief those ATCM Representatives that attend the CCAMLR meeting on the work of the Secretariat.

• SCAR, IPY JC	St Petersburg	July 2008

- Attendance at the SCAR meeting will provide an opportunity to brief SCAR on the progress with the Secretariat's work, especially in the field of information systems. This time the travel will be combined with attendance at the IPY JC (see above).

In some cases attendance will be limited to those parts of the meeting which are relevant for the work of the Secretariat. To save costs, travels to the abovementioned meetings will be combined where possible with visits to Kiev and Washington to consult with the host government secretariats of ATCM XXXI and XXXII.

The Consultative Parties will be consulted pursuant to Rule 46 on any proposals to attend other meetings to which the Executive Secretary might be invited.

Development of the Secretariat Website

It should be noted that the Secretariat website is used not only to support the ATCM and CEP, but also to perform other tasks described in the following sections. In the next year, the website will be further developed in the following areas:

- The CEP Website was transferred from the Australian Antarctic Division to the Secretariat at the end of 2006, but because of the fact that the two websites used different operating and database systems, the only way to do this was to tack on most of the CEP Website as a whole, keeping part of its internal structure. This causes some duplication and makes the navigation through the website needlessly complicated. During this year the website will be redesigned to fully integrate the parts related to the CEP.

- The CEP Discussion Forum, currently administrated by the Secretariat but hosted at the Australian Antarctic Division, will be transferred to the Secretariat.
- A restricted section for ATCM contact points will be added, where the Secretariat circulars will be posted. This will not replace the distribution of the circulars by email, but it will make it easier for the parties to check recent circulars.
- During the previous year, a web-based ATS Contacts database has been developed. Based on this database, sections of the website which until now are static (lists of contact points etc.) will be made dynamic and directly linked to the database. This, and the fact that the parties themselves through their Contact Data Administrators can edit their data themselves, will make these sections more complete and up to date.
- As far as possible, French, Russian and Spanish versions of the various sections will be developed. It must be noted in this connection that a 100% quadrilingual website will be impossible to achieve in the short term, as some of the material is not available in some languages or is so voluminous that it is not feasible to have it translated in total. The aim is, however, to have the complete structure of the website available in all four languages.

2. Information Exchange

General

From the survey of current practice presented in SP 12, it can be seen that exchange of information through the current system (posting reports or links on the Secretariat website) is increasing, although the participation of the parties is still worryingly low. The Secretariat will continue to assist parties in posting their information exchange materials, as well as integrating information on EIAs in the EIA database and so on.

Electronic Information Exchange System

The 29th ATCM instructed the Secretariat to develop a trial Electronic Information Exchange System (EIES), in order to allow Parties to test carrying out their information exchange requirements by uploading data into the EIES instead of exchanging the data in written form or publishing them on their own web sites. During the past year trials were started with a few online forms, and after obtaining feedback, they were expanded to forms covering most sectors of the system. In the coming year the complete system will be made available on a trial basis, enabling the Parties to upload the data required by the Treaty, the Environment Protocol and measures of the ATCM to the Secretariat website.

The Secretariat will continue to work closely with COMNAP to analyze how their respective Information Exchange Systems can complement and collaborate.

3. Records and documents

Documents of the ATCM

The Secretariat will continue its efforts to complete its archive of the Final Reports and other records of the ATCM and other meetings of the Antarctic Treaty system in the four Treaty languages (the current status of the ATS Archive is presented in SP 5). Assistance from the Parties in searching their archives will be essential in achieving a complete archive.

Recommendations database

The database of the Recommendations, Measures, Decisions and Resolutions of the ATCM is at present complete in English and almost complete in Spanish and French, although the Secretariat is still lacking a few copies of Final Reports in those languages to get the authentic texts of those measures. In Russian, more Final Reports are lacking, and materials that have been received are being converted into electronic formats and proofread. After all recommendations and measures have been incorporated, the database will be expanded to include also working papers and information papers of the ATCM.

Documentation Centre

The physical control of the books, periodicals and multimedia resources of the Secretariat has been assured through a 3M library system contributed with funds from the United States. The next step will be the organization of the library on the basis of standard cataloguing data to be provided by the Scott Polar Research Institute library.

Now that a basic technological platform for the Documentation Centre has been set up, communication with other libraries will be developed on the basis of exchange of materials and links. The Secretariat's collection of reference materials and periodicals on the Antarctic Treaty system will be further developed by acquisition of books and subscriptions to electronic or hard copy journals.

The electronic version of the Documentation Centre needs further testing and quality assurance, in order to prepare making its resources available to the parties, scholars and libraries, and the wider public.

Antarctic Treaty Handbook

Volume I of the 10th Edition of the Handbook of the Antarctic Treaty System will consist of the texts of the Antarctic Treaty and the subsidiary Antarctic agreements and short factual introductions.

4. Public Information

The Secretariat and its website will continue to function as a clearinghouse for information on the Parties' activities and relevant developments in Antarctica as well as specific information related to the development of the International Polar Year (IPY, 2007-9). The Secretariat will maintain the special IPY section in its website to provide information, links, news and other material related to the event.

The Secretariat Newsletter will continue to be published every quarter and the News section of the website will be kept up to date to inform Parties and the public on Antarctic issues. Brochures on the Antarctic Treaty system will be published and circulated during this financial year. A leaflet with the text of the Antarctic Treaty and another pamphlet with the Environment Protocol and its annexes will also be published and distributed.

A publishing policy will be developed so as to make all the Secretariat's publications (Final Report, CEP Handbook, brochures, leaflets and Site Guidelines) available to the public both in hard copy and in digital format.

5. Management

Personnel

At the end of the previous financial year, the Secretariat staff consisted of the following persons:

Executive staff

Name	Nationality	Position	Rank	Since
Johannes Huber	Netherlands	Executive Secretary	E1	1-9-2004
José María Acero	Argentina	Assistant Executive Officer	E3	1-1-2005

General staff

José Luis Agraz	Argentina	Information Officer	G2	1-4-2005
Diego Wydler	id.	Information Technology Officer	G2	1-2-2006
Pablo Wainschenker	id.	Editor	G3	1-2-2006
Ms Gloria Fontán	id.	Office Manager	G5	1-4-2006

The following persons, who have been working under contract, will be appointed as part time staff members (see the 2006/7 Report, Management section).

Mr Juan Carlos Brizuela	id.	Accountant (part time)	G2	1-4-2007
Ms Violeta Antinarelli	id.	Librarian (part time)	G3	1-4-2007
Ms Karina Gil	id.	Data Entry Assistant (part time)	G6	1-4-2007

In order to carry out the activities in this programme, the current staff complement should be adequate.

The current contract of the Assistant Executive Officer, which started on 1 January 2005, ends at the end of 2007. In view of his excellent performance, Mr Acero's contract will be renewed for another three years.

Financial matters

The budget has been compiled on the basis of the figures in the Forecast Budget. The main adjustments are as follows:

- The sum for General Staff salaries has been adjusted upwards and the budget lines for Accounting and auditing, Data entry and proofreading, and Documentation services have been adjusted downwards to take into account the appointment on a part time basis of Mr Brizuela and Ms Antinarelli and Ms Gil.
- The budget line for Communications has been split into two: Telecommunications and Postage and shipping. The character of these two sections and the development of the costs is quite different. Postage and shipping costs have been subject to continuing increases. In order to keep these costs in control, the Secretariat ships by regular mail as much as possible, avoiding expensive courier services. Where possible, special arrangements are made, such as transport in bulk of pamphlets to Ushuaia instead of distribution directly to tourist companies.
- The amount for Office expenses in the draft budget is lower than in the forecast budget, because in the forecast budget computer and network maintenance was also included in this budget line. This type of cost has now been included in the budget line for IT equipment.
- The budget line for Printing and copying has been increased from the amount in the forecast budget. The price rise in this sector is reflected in the actual expenses during the previous year, which were much higher than expected; one of the reasons for this was the large number of Site Guidelines adopted by the 29th ATCM. The amount in

the draft budget was kept to the same level as the number of Site Guidelines to be adopted is expected to be lower.

- Considering the concerns of parties expressed during the 29th ATCM the budget line for representation expenses has been lowered from that in the forecast budget.
- The amount for translation and editing has been increased somewhat from the amount in the forecast budget, but it is lower than the actual expenses in 2005/6, which was caused among other things by the large number of Site Guidelines.
- Travel costs for 2007/08 will be higher than foreseen because a) the costs of flight tickets has been rising considerably and b) the travel expenses and the lodging costs in New Delhi will be higher than in those in Edinburgh.
- Because of the tight financial situation, the amount allocated to furniture and equipment has been reduced to one third of the amount in the forecast budget.
- Similarly, the amount for IT equipment and software has been reduced. The replacement schedule of some existing equipment will be postponed.
- The amount in the forecast budget for web and software development was overestimated, so the amount in the draft budget has been reduced.

The salary scale has been calculated on the basis of the salary scale for 2006/7 with adjustments on the basis of the inflation figures of the IMF World Economic Outlook of April 2007, that is 1,4% international inflation in case of the executive staff and 10,3 % domestic inflation in the case of the general staff. In the general staff salaries table the figures for the rank G-1 differed too little from those of the rank G-2 to serve any useful purpose, so they were increased somewhat. As the rank is not being used, there are no budgetary effects.

6. Forecast programme 2008/09

The forecast budget has been compiled using the inflation figures from the IMF World Economic Outlook of April 2007.

It is expected that most of the ongoing activities of the Secretariat will be continued in 2008/09. As development of the Secretariat website should be finished during the financial year 2007/08, it is expected that website development will take less effort during the 2008/09 financial year. It is expected that development of the Electronic Exchange of Information System will continue, as will the publication of the Handbook. Unless the programme would undergo major changes, no changes in the staff complement are foreseen for 2008/09.

Although prices for international travel are expected to continue to rise, the cost of attending the 31st ATCM in Kiev are expected to be lower than those in connection with the 30th ATCM, so the overall travel budget in the forecast budget has been reduced somewhat.

Appendix 1

Budget 2007/08 and Forecast Budget 2008/09

	Spent 2006/7[1]	Forecast Budget 2007/08	Budget 2007/08	Forecast Budget 2008/09[2]
Surplus			$383.133[3]	$383.133
Contributions	$686.862	$772.730	$772.730	$394.567
Late contributions 2005/6	$125.567			
Other income	$38.523			$25.000
Total	**$850.952**	**$772.730**	**$772.730**	**$802.700**
1. Appropriation for salaries				
Executive staff salaries	$203.919	$212.188	$210.733	$219.463
General staff salaries	$88.190	$106.275	$124.042	$147.447
Total	**$292.109**	**$318.463**	**$334.775**	**$366.910**
2. Appropriation for goods and services				
Accounting and auditing	$14.416	$17.814	$7.185	$7.185
Data entry, proofreading	$9.790	$19.136	$5.870	$6.600
Documentation services	$8.968	$8.970	$8.600	$8.700
Legal advice	$3.853	$5.520	$4.800	$5.400
Miscellaneous	$6.468	$7.142	$7.074	$7.805
Office expenses	$11.319	$30.475	$13.700	$15.400
Postage & shipping	$13.184	$14.260[4]	$11.900	$13.800
Printing and copying	$30.415	$23.000	$30.700	$34.600
Representation	$7.954	$11.500	$7.600	$8.600
Telecommunications	$6.465		$7.000	$7.000
Training	$1.854	$4.600	$6.500	$7.400
Translation and editing	$158.115	$135.262	$152.600	$154.900
Travel costs	$94.433	$81.500	$99.500	$96.000
Total	**$367.235**	**$359.178**	**$363.029**	**$373.390**
3. Appropriation for equipment				
Documentation material	$4.140	$3.063	$4.000	$4.100
Furniture, equipment	$274	$15.962	$5.500	$6.200
IT equipment, software	$46.650	$41.657	$35.000	$35.600
Web and Software development	$13.679	$18.481	$14.500	$16.500
Total	**$64.744**	**$79.162**	**$59.000**	**$62.400**
to Staff Replacement Fund	$12.500	$12.500	$12.500	
to Staff Termination Fund	$3.426	$3.426	$3.426	
TOTAL	**$740.013**	**$772.730**	**$772.730**	**$802.700**
US grant	$20.680			
Surplus			$383.133	**$0**

[1] According to the Provisional Financial Report 2006/7

[2] The Forecast Budget has been calculated using the figures of 12,7% for domestic inflation and 1,7% for international inflation according to the IMF World Economic Outlook of April 2007.

[3] The surplus at 31 March 2007 is calculated as follows:

Net surplus 31-3-2006	$324.533
Net surplus 2006/7	$102.915
To fixed assets	-$44.315
Net surplus 31-3-2007	$383.133

[4] Incl. telecommunications.

Appendix 2

a. Contribution scale 2008/09

	Cat.	Mult.	Variable	Surplus share	Fixed	Total[1]
Argentina	A	3,6	$21.146	$20.085	$13.888	$14.948
Australia	A	3,6	$21.146	$20.085	$13.888	$14.948
Belgium	D	1,6	$9.398	$13.381	$13.888	$9.905
Brazil	D	1,6	$9.398	$13.381	$13.888	$9.905
Bulgaria	E	1	$5.874	$11.313	$13.888	$8.449
Chile	C	2,2	$12.923	$15.357	$13.888	$11.453
China	C	2,2	$12.923	$15.422	$13.888	$11.388
Ecuador	E	1	$5.874	$11.340	$13.888	$8.421
Finland	D	1,6	$9.398	$13.337	$13.888	$9.949
France	A	3,6	$21.146	$12.744	$13.888	$22.289
Germany	B	2,8	$16.447	$9.851	$13.888	$20.483
India	C	2,2	$12.923	$15.361	$13.888	$11.449
Italy	B	2,8	$16.447	$17.386	$13.888	$12.948
Japan	A	3,6	$21.146	$20.085	$13.888	$14.948
Korea	D	1,6	$9.398	$13.337	$13.888	$9.949
Netherlands	C	2,2	$12.923	$15.361	$13.888	$11.449
New Zealand	A	3,6	$21.146	$20.085	$13.888	$14.948
Norway	A	3,6	$21.146	$20.085	$13.888	$14.948
Peru	E	1	$5.874	$5.441	$13.888	$14.320
Poland	D	1,6	$9.398	$13.224	$13.888	$10.061
Russia	C	2,2	$12.923	$8.467	$13.888	$18.343
South Africa	C	2,2	$12.923	$9.755	$13.888	$17.055
Spain	C	2,2	$12.923	$10.358	$13.888	$16.452
Sweden	C	2,2	$12.923	$15.361	$13.888	$11.449
Ukraine	D	1,6	$9.398	$4.992	$13.888	$18.293
United Kingdom	A	3,6	$21.146	$20.085	$13.888	$14.948
United States	A	3,6	$21.146	$17.452	$13.888	$17.581
Uruguay	D	1,6	$9.398	$0	$13.888	$23.286
		66,2	**$388.850**	**$383.133**	**$388.850**	**$394.567**
Budget amount[2]	$777.700					
Base rate	$5.874					

[1] Variable contribution – share in the surplus + fixed contribution
[2] I.e. the budget amount minus expected other income

b. Surplus calculation

	Contribution paid 2004-7	Surplus share[1]
Argentina	$128.444	$20.085
Australia	$128.444	$20.085
Belgium	$85.571	$13.381
Brazil	$85.571	$13.381
Bulgaria	$72.345	$11.313
Chile	$98.210	$15.357
China	$98.623	$15.422
Ecuador	$72.520	$11.340
Finland	$85.291	$13.337
France	$81.499	$12.744
Germany	$63.000	$9.851
India	$98.237	$15.361
Italy	$111.183	$17.386
Japan	$128.444	$20.085
Korea	$85.291	$13.337
Netherlands	$98.237	$15.361
New Zealand	$128.444	$20.085
Norway	$128.444	$20.085
Peru	$34.796	$5.441
Poland	$84.571	$13.224
Russia	$54.144	$8.467
South Africa	$62.384	$9.755
Spain	$66.239	$10.358
Sweden	$98.237	$15.361
Ukraine	$31.927	$4.992
United Kingdom	$128.444	$20.085
United States	$111.608	$17.452
Uruguay	$0	$0
TOTAL	**$2.450.148**	**$383.133**

[1] The share in the net surplus, calculated in proportion to the total contribution paid from 2004 to 1-4-2007

Appendix 3

Salary scale 2007/08

Level		STEPS														
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV
1	A	$94.466	$96.224	$97.982	$99.740	$101.498	$103.255	$105.013	$106.772							
1	B	$118.083	$120.280	$122.477	$124.675	$126.872	$129.069	$131.266	$133.464							
2	A	$79.546	$81.042	$82.538	$84.033	$85.529	$87.024	$88.519	$90.015	$91.511	$93.006	$94.501	$94.671	$96.147		
2	B	$99.432	$101.303	$103.173	$105.042	$106.911	$108.780	$110.649	$112.519	$114.389	$116.258	$118.127	$118.339	$120.183		
3	A	$66.333	$67.775	$69.218	$70.662	$72.105	$73.548	$74.991	$76.435	$77.877	$79.320	$80.763	$81.071	$82.494	$83.918	$85.340
3	B	$82.916	$84.719	$86.523	$88.327	$90.132	$91.935	$93.739	$95.544	$97.347	$99.150	$100.954	$101.338	$103.118	$104.897	$106.675
4	A	$55.003	$56.339	$57.677	$59.010	$60.348	$61.683	$63.017	$64.355	$65.692	$67.026	$68.363	$68.736	$70.053	$71.371	$72.688
4	B	$68.754	$70.424	$72.096	$73.762	$75.435	$77.104	$78.771	$80.444	$82.115	$83.782	$85.454	$85.920	$87.566	$89.213	$90.860
5	A	$45.602	$46.799	$47.993	$49.189	$50.383	$51.578	$52.773	$53.965	$55.162	$56.357	$57.550	$57.936			
5	B	$57.003	$58.498	$59.991	$61.486	$62.979	$64.472	$65.966	$67.457	$68.952	$70.447	$71.937	$72.420			
6	A	$36.100	$37.249	$38.396	$39.546	$40.693	$41.841	$42.991	$44.139	$45.286	$45.984	$46.435				
6	B	$45.125	$46.562	$47.995	$49.433	$50.866	$52.301	$53.739	$55.174	$56.607	$57.481	$58.044				

Level		STEPS														
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV
1		$33.649	$35.218	$36.789	$38.358	$39.994	$41.700									
2		$28.041	$29.349	$30.657	$31.965	$33.329	$34.750									
3		$23.366	$24.457	$25.547	$26.637	$27.774	$28.960									
4		$19.473	$20.381	$21.290	$22.198	$23.145	$24.133									
5		$16.086	$16.837	$17.587	$18.339	$19.122	$19.939									
6		$13.186	$13.800	$14.416	$15.031	$15.673	$16.342									
7																
8																

ANNEX C

Resolutions

Resolution 1 (2007)

Resolution on Site Guidelines for Visitors

The Representatives,

Recalling Resolution 5 (2005) and Resolution 2 (2006) which adopted a list of sites subject to Site Guidelines;

Believing that Site Guidelines enhance the provisions set out in Recommendation XVIII-1 (Guidance for those organising and conducting tourism and non-governmental activities in the Antarctic);

Desiring to increase the number of Site Guidelines developed for visited sites;

Confirming that the term "visitors" does not include scientists conducting research within such sites, or individuals engaged in official governmental activities;

Noting that the Site Guidelines have been developed based on the current levels and types of visits at each specific site, and aware that the Site Guidelines would require review if there were any significant changes to the levels or types of visits to a site; and

Believing that the Site Guidelines for each site must be reviewed and revised promptly in response to changes in the levels and types of visits or to any demonstrable or likely environmental impacts;

Recommend that:

1. the List of Sites Subject to Site Guidelines that have been adopted by the ATCM be extended to include a further two new sites. The full List of Sites Subject to Site Guidelines is annexed to this Resolution. This Annex lists the current sites subject to Site Guidelines, and replaces the Annex to Resolution 2 (2006); and

2. the provisions of Paragraphs 2 to 5 of Resolution 5 (2005) be implemented for all sites subject to Site Guidelines listed in the Annex to this Resolution.

Annex to Resolution 1 (2007)

List of Sites subject to Site Guidelines:

1. Penguin Island (Lat. 62º 06' S; Long. 57º 54' W);
2. Barrientos Island, Aitcho Islands (Lat. 62º 24' S; Long. 59º 47' W);
3. Cuverville Island (Lat. 64º 41' S; Long. 62º 38' W);
4. Jougla Point (Lat. 64°49' S; Long. 63°30' W);

5. Goudier Island, Port Lockroy (Lat. 64°49' S; Long. 63°29' W);
6. Hannah Point (Lat. 62º 39' S; Long. 60º 37' W);
7. Neko Harbour (Lat. 64º 50' S; Long. 62º 33' W);
8. Paulet Island (Lat. 63º 35' S; Long. 55º 47' W);
9. Petermann Island (Lat. 65º 10' S; Long. 64º 10' W);
10. Pléneau Island (Lat. 65º 06' S; Long. 64º 04' W);
11. Turret Point (Lat. 62º 05' S; Long. 57º 55' W);
12. Yankee Harbour (Lat. 62º 32' S; Long. 59º 47' W);

13. Brown Bluff, Tabarin Peninsula (Lat. 63°32' S; Long. 56°55' W); and
14. Snow Hill (Lat. 64°22' S, Long. 56°59' W).

Resolution 2 (2007)

Conservation of Southern Giant Petrel *Macronectes giganteus*

The Representatives,

Recalling Resolution 4 (2006) on the conservation of southern giant petrels;

Noting that the Committee for Environmental Protection (CEP) is keeping under review the possibility of designating the southern giant petrel as an Antarctic Specially Protected Species under Annex II to the Protocol on Environmental Protection;

Recalling that the *Guidelines for CEP Consideration of Proposals for New and Revised Designations of Antarctic Specially Protected Species under Annex II to the Protocol* adopted at CEP VIII, which provide, *inter alia,* for assessments of the status of species at a regional or local level;

Recognising that, while the southern giant petrel, in its global distribution, is currently being downlisted from *Vulnerable* to *Near Threatened* by the International Union for the Conservation of Nature, concern has been expressed that populations within the Antarctic Treaty area may fulfill the criteria for higher risk status;

Recognising that the life-history characteristics of the southern giant petrel may make it particularly sensitive to human disturbance;

Noting that the Agreement on the Conservation of Albatrosses and Petrels (ACAP) encourages the Antarctic Treaty system to further protect breeding sites of southern giant petrels;

Noting that many Parties support a precautionary approach to this matter;

Recommend that:

1. all Parties be encouraged to make available existing relevant scientific data and results to the Scientific Committee on Antarctic Research and to implement new research into the population biology of southern giant petrels;

2. SCAR, in collaboration with ACAP, the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) and other relevant bodies as appropriate, complete a review as soon as practical of the population status and trends of the southern giant petrel in the Antarctic Treaty area including an assessment of:

1) whether this species fulfils the criteria for designation as a Specially Protected Species under Annex II of the Protocol at a regional scale (the Antarctic Treaty area), and;

2) the demographic mechanisms underlying any changes in the population size;

3. the Chair of CEP contact the Secretariats of ACAP and CCAMLR to seek information on current conservation management measures for the southern giant petrel;

4. all Parties are encouraged to provide to the CEP website *http://cep.ats.aq* details of all existing national regulations, management plans or site guidelines for all areas with breeding colonies of southern giant petrels which may be at risk of disturbance that may serve as an example to develop an Action Plan for the Antarctic Treaty area under the *Guidelines for CEP Consideration of Proposals for New and Revised Designations of Antarctic Specially Protected Species under Annex II of the Protocol* and better inform local and regional measures to protect southern giant petrels in the Antarctic Treaty area;

5. in the intervening period, all Government and non-Governmental activities in Antarctica be planned so as to limit negative impacts on southern giant petrels.

Resolution 3 (2007)

Long-term Scientific Monitoring and Sustained Environmental Observation in Antarctica

The Representatives,

Recalling the Edinburgh Antarctic Declaration on the International Polar Year 2007-2008 (IPY) that was agreed at ATCM XXIX, which supports the objective of delivering a lasting legacy for the International Polar Year, and promotes increasing collaboration and coordination of scientific studies within Antarctica;

Recalling that the Committee for Environmental Protection has a continuing commitment to environmental monitoring related to the implementation of the Protocol on Environmental Protection to the Antarctic Treaty;

Noting that the Arctic Council Ministerial Meeting of 26 October 2005 urged all member countries of the Arctic Council to maintain and extend long-term monitoring of change in all parts of the Arctic as well as to create a coordinated Arctic observing network;

Recalling the success of the CCAMLR Ecosystem Monitoring Programme in providing over two decades of circum-Antarctic data on the Antarctic marine ecosystem and biological environment;

Welcoming and supporting the proposal by the Scientific Committee for Antarctic Research to establish a multi-disciplinary pan-Antarctic observing system, which will, in collaboration with others, coordinate long-term monitoring and sustained observation in the Antarctic;

Recommend that the Parties:

1. urge national Antarctic programmes to maintain and extend long-term scientific monitoring and sustained observations of environmental change in the physical, chemical, geological and biological components of the Antarctic environment;

2. contribute to a coordinated Antarctic observing system network initiated during the IPY in cooperation with SCAR, CCAMLR, WMO, GEO and other appropriate international bodies;

3. support long-term monitoring and sustained observations of the Antarctic environment and the associated data management as a primary legacy of the IPY, to enable the detection, and underpin the understanding and forecasting of the impacts of environmental and climate change.

Resolution 4 (2007)

Ship-based Tourism in the Antarctic Treaty Area

The Representatives,

Concerned by the potential impacts that the increase of tourist activities may have on the Antarctic environment, including its wildlife, and on the conduct of scientific research;

Concerned also about recent incidents involving vessels in the Antarctic Treaty area;

Desiring to promote the safety of life at sea and the protection of the environment in the Antarctic Treaty area;

Desiring also to minimize the likelihood of marine oil spills due to incidents involving large tourist vessels in Antarctica;

Recommend that:

Parties, consistent with their national law,

1. discourage or decline to authorize tour operators that use vessels carrying more than 500 passengers from making any landings in Antarctica; and

2. encourage or require tour operators to:

    a) coordinate with each other such that not more than one tourist vessel is at a landing site at any one time;

    b) restrict the number of passengers on shore at any one time to 100 or fewer, unless otherwise specified in applicable ATCM Measures or Resolutions; and

    c) maintain a minimum 1:20 guide-to-passenger ratio while ashore, unless otherwise specified in applicable ATCM Measures or Resolutions.

Resolution 5 (2007)

Tourism in the Antarctic Treaty Area

The Representatives,

Conscious of the rapid expansion and diversification of tourism activities in the Antarctic Treaty area;

Recalling the Environmental Principles contained in Article 3 of the Protocol on Environmental Protection to the Antarctic Treaty;

Desiring to limit the potential impacts of tourism activities, including cumulative impacts, upon the Antarctic environment;

Recommend that the Parties discourage any tourism activities which may substantially contribute to the long-term degradation of the Antarctic environment and its dependent and associated ecosystems.

PART III

OPENING AND CLOSING ADDRESSES AND REPORTS FROM XXX ATCM

ANNEX D

Opening and Closing Addresses

Opening Address by Professor U.R. Rao, Chairman of the XXX Antarctic Treaty Consultative Meeting

New Delhi, 30 April 2007

Distinguished Chief Guest Mr Kapil Sibal, Honourable Minister for Science and Technology and Earth Sciences, Govt. of India, Dr P.S. Goel, Secretary, Ministry of Earth Sciences, Mr Jan Huber, Executive Secretary Antarctic Treaty Secretariat, distinguished delegates from various countries, members of the press, Ladies and Gentlemen,

I am indeed honoured to be the Chairman of this ATCM and am sure that with your cooperation we will' be able to conduct the meeting spread over coming two weeks smoothly and successfully. I have great pleasure in welcoming all of you to India and hope that in spite of the busy schedule you will find time to enjoy some glimpses of "Incredible India" and carry back some pleasant memories in addition to the sense of accomplishment of productive and satisfying work during your stay. I have no doubt that your Indian hosts will try to match the high standards of hospitality set by their British Colleagues at Edinburgh and do their best to make your stay in New Delhi successful and enjoyable. While the capable team of Antarctic Treaty Secretariat under Mr Jan Huber and the organizers from the host country led by Mr Ajai Saxena, will leave no stone unturned to make your stay comfortable and fruitful, I will also be available to you for any discussion and suggestion during the next two weeks.

All of us are aware that Polar Regions offer ideal locations to undertake many cutting edge research topics, particularly in the present scenario of global warming which can trigger alarming changes across the entire globe. The latest IPCC Working Committee report clearly indicates that mountain glacier and snow cover have declined in both hemispheres resulting in an increase in the average sea level by about 1.8 mm per year during 1961 to 2003. Even assuming the global carbon-dioxide emission will be restricted to not more than twice the present rate, the expected sea level rise by 2100 would be in the range of 0.20 to 0.43 metres, with severe consequences across the globe.

The significant discovery of the dramatic depletion of the ozone layer in the early 1980's, perhaps justified every penny that has been spent on Antarctic research, which no doubt led to a remarkable surge in scientific activities in Antarctic by member countries. Destruction of ozone, in addition to increasing the ultraviolet radiation can also lead to additional significant global warming through stratospheric chemistry. Fortunately with the reduced use of chloro-fluoro carbons and other industrial chemicals by all member nations under the Montreal Protocol, the ozone depletion seems to have stabilized and levelled off since the last ten years. The global warming due to increased carbon-dioxide emission as a result of excessive use of fossil fuel for energy generation, however, continues to be a great threat, which can only be solved by all nations, particularly developed nations, agreeing to minimise their contribution to carbon-dioxide emission.

Antarctica provides a unique platform for carrying out research on charged particle interaction, auroral phenomena and also astronomical studies. Close study of marine life in these areas, which have adapted themselves to the harsh conditions of low temperature, can provide deep insights into biological adaptation evolved over millennia. Likewise, the oceans surrounding the polar regions which are seamlessly linked with the ocean and atmosphere of the planet as a whole, can provide vital clues on Earth's history including the long term changes in the extra-terrestrial cosmic radiation, through the study of polar sediments and deep ice cores. Several academic institutes along with many research laboratories under the Ministry of Earth Sciences, including the National Centre for Antarctic & Ocean Research, Goa, have been carrying out significant research in several areas related to Antarctic Science. The Indian Government attaches the highest importance to scientific

investigations in Antarctica and has taken the decision to enhance its presence there in addition to starting parallel scientific investigations over the Arctic region.

The local organisers have arranged an interesting and enjoyable programme in addition to the formal meetings. There will be heritage displays, visits to historical Red Fort for a Light and Sound Programme, a special SCAR lecture, as well as several opportunities for less formal gatherings. In addition, we hope that you will find time to explore the wonderful city of New Delhi, the capital of India, during your stay here.

As stated in the IGBP document, "human driven changes are pushing the earth system beyond its natural operating domain into planetary incognita". In a highly complex system like the earth, involving a number of interconnected natural parameters, it is virtually impossible to establish a direct cause and effect relationship. While Antarctic science, due to its historical, geographical and natural position, holds important clues which point to the direction of the human habitat's drift itself, we need a global vision involving active cooperation and collaboration between several scientists and scientific disciplines to unravel the mystery. The Antarctic Treaty, considered to be the mother treaty, which came into existence in 1959, has essentially enabled scientists of all nations to work in cooperation with each other in understanding the global issues that concern the very existence of human species.

Vital issues like the anthropogenic impact on the fragile Antarctic ecosystem, the effect of global warming driven climate changes on the Antarctic region as well as enhanced scientific cooperation during the International Polar Year, will no doubt be addressed in the two week long deliberations here. I am sure fruitful discussions among ATCM delegations will lead to a significant enhancement of scientific research to understand Antarctic Phenomena and their global linkages.

At this juncture we remember the sacrifices made by the fellow Antarcticans who lost their lives in the pursuit of science in the hostile and harsh Antarctic conditions.

I would like to conclude with an appreciation for the historic role of ATCM in the past and its leadership during the current IPY Programme in understanding and protecting the Antarctic environment.

Opening Address by the Honourable Minister for Science & Technology and Earth Sciences of India, Mr Kapil Sibal

New Delhi, 30 April 2007

Mr Chairman – XXX ATCM Prof. U.R. Rao, Secretary, Ministry of Earth Sciences Dr P.S. Goel, Executive Secretary of Antarctic Treaty Secretariat Mr Jan Huber, Excellencies, Distinguished Delegates, Ladies and Gentlemen.

Good morning and a very warm welcome to you all. It is indeed an honour for me to inaugurate the XXX Antarctic Treaty Consultative Meeting in New Delhi. It is also our privilege to be hosting this meeting for the first time in the Silver Jubilee year of our signing the Antarctic Treaty. Like most, I have always been in awe and admiration of the icy continent, its pristine beauty, tough conditions, unique life form and enchanting landscapes.

I was fortunate to visit the Antarctica and see our scientists work in harsh, difficult conditions, understanding and unravelling the mysteries of nature. Ever since my association with our national Antarctic mission, with its international linkages, I have been pro-actively engaged in the growth and overall progress of the Indian Antarctic Programme.

Under the Antarctic Treaty system, the global community has demonstrated how collectively we can manage to work together as an R&D global enterprise, unravelling data adrift, afloat and exposed in a large land mass for billions of years. Apart from being a pre-cursor to the Space Treaty, the world has learnt many lessons from the Antarctic Treaty: lessons in good governance and environmental stewardship. The Antarctica is considered a natural reserve and heritage of mankind, untouched by human conflict and exploitation. Here the global community has pledged to devote itself to the cause of scientific research.

The last few years have witnessed a growing international awareness recognizing the sensitivity of the Antarctic environment; the imperative of protecting it from global change processes and endorsing the criticality of its conservation by a scientifically informed management system. The Antarctic Treaty Parties have a special responsibility to cooperate in scientific pursuit and evolve consensual programmes endorsed by a mutuality of interest. We all recognize the importance of the Antarctica as a platform for science. Despite more than 50 years of collaborative scientific research and exploration, this great Continent has still not unravelled its deep hidden secrets. We have not even touched the tip of the iceberg.

Over the years, new challenges pose our polar scientists and policy makers. In this great enterprise, we need to strike a delicate balance between science and the environment. Our scientific research projects must not negatively impact the Antarctic environment.

Antarctic research must have a transnational focus and mostly addresses global issues. The International Polar Year has brought countries together for the launch of a comprehensive science mission. Such a mission is not geared for economic gain. It is, in fact, a long term campaign through which scientists hope to unravel the enigmas of nature and space best understood from a vantage point, like the Antarctica.

I understand that the annual Antarctic Treaty Consultative Meetings provide a platform to negotiate and hammer out a consensus for adopting decisions on the operational activities in the Antarctica and the future course of action on the various scientific, logistic and environmental issues.

In the present scenario of globalization where national barriers are fast disappearing, where time zones have shrunk, I feel that we must embark upon a new global enterprise, chartering new areas of international collaboration in the true spirit of the Antarctic Treaty.

For the last 48 years this Treaty has provided a stable and robust framework for conducting scientific research and other human activities in the Antarctica. This has generated a wealth of valuable scientific information for our mutual benefit. The discovery of the ozone hole was first made by scientists working in the Antarctica, enabling us to embark on a journey to phase out ozone depleting chemicals. India is deeply committed to continue to play an active role in the domain of Antarctic science and logistics with the underpinning motto to preserve the pristine environment of the last frontier on earth.

Those who crafted the Antarctic Treaty might not have thought of the possibility of large scale human activities in the icy continent for recreational purposes. The growth of tourism in the Antarctica needs to be looked at afresh, in the context of exploitation of the resources of this vast continent, as well as the imperative of protecting the Antarctica environment. We share the concern of the global community on growing environmental pressures, which the Antarctica is now facing. I am sure these issues will be debated during the meeting and a consensus will emerge on the advisability of tourism and other human activities in the Antarctica, and a framework of regulation to contain it.

The second issue, which needs to be addressed, is the importance of the polar region in the context of global climate change and its impact on our environment, going by the recent data and issues thrown up by the Inter-Governmental Panel on climate change. International Polar Year (IPY) 2007-08 will surely be focusing on these issues. Deliberations during this meeting will further steer us in achieving goals and targets necessary for reducing the human impact on the earth systems and natural resources, to halt and thereafter reverse the impact of global climate change.

It was Albert Einstein, who aptly stated : *"As a scientist I believe that nature is a perfect structure, seen from the stand point of reason and logical analysis"*. Let us not damage or harm nature any further. I would like to recall the Edinburgh Antarctic Declaration on the International Polar Year, made last year by the XXIX ATCM. While urging countries to join in collaborative scientific pursuits, it also made clear that this Treaty has stood the test of time and has secured the Antarctica as a continent of peace and science. I hope that we will be able to further strengthen the Treaty in our forthcoming deliberations. I wish the delegates of this important meeting, meaningful discussions during the next two weeks. It is my pleasure to declare the XXX ATCM open.

Closing Remarks by Professor U.R. Rao, Chairman of the XXX Antarctic Treaty Consultative Meeting

New Delhi, 11 May 2007

Honourable Minister of External Affairs, Shri Pranab Mukherjee, Dr P.S. Goel, Secretary, Ministry of Earth Sciences, Mr Jan Huber, Executive Secretary, Antarctic Treaty Secretariat, Distinguished delegates, invitees, Ladies & Gentlemen,

As a result of intensive hard work over the last two weeks at the Thirtieth Antarctic Treaty Consultative Committee Meeting (ATCM) at Delhi, we can indeed have the satisfaction of contributing towards further strengthening of the Antarctic Treaty system. As Chairman of the ATCM, I would like to express my sincere thanks and deep appreciation to all the distinguished delegates for their significant contributions.

The Committee for Environmental Protection (CEP), in spite of having to deal with over 100 papers, has made remarkable progress in its Tenth meeting here, particularly in strengthening the Antarctic Protected Area Systems. The CEP after reviewing the revised draft Management Plans for two ASMA of Larsemann Hills and Amundsen-Scott South Pole Station, referred them to ATCM, which were finally adopted by ATCM. The CEP, after reviewing, advised that the draft CEE of the new Indian Research Base at Larsemann Hills adequately meets the requirement of Annex 1, which was subsequently endorsed by ATCM. CEP has also actively participated in the discussions on tourism management and conservation of Antarctic flora and fauna, and discussed specific guidelines on the application of 'specially protected species' provision of the protocol particularly in respect of giant petrels. Inclusion of Climate Change as a sub-item under its agenda on Environmental Monitoring and Reporting is a welcome forward looking step.

I would like to specially compliment the CEP, which has over the years firmly established itself as an essential component of the Antarctic Treaty system through its successful activities and commend Dr Neil Gilbert, the Chairman of CEP, and Dr Tania Brito, the CEP Vice-Chair, for ably guiding the Committee through a very demanding and lengthy agenda. I also congratulate Dr Frenot of France, who has been elected as the First Vice-Chair of the CEP for the next two years.

I note that the Working Group on Legal and Institutional matters addressed a number of important issues including, Review of Measures on the subject of Area Protection and Management, Review of Annexure II to the Protocol on Environmental Protection to the Antarctic Treaty, Operation of the Antarctic Treaty system, Liability – Implementation of Decision 1 (2005), Biological Prospecting in the Antarctic Treaty Area and a number of other issues, during the last week and put forth four Decisions pertaining to review of the status of measures relating to area protection and management and the matters relating to the Antarctic Treaty Secretariat, which were adopted by the ATCM.

I am glad that the Working Group on Tourism has deliberated on some very important issues which are significant and prime requirement for protecting the pristine Antarctic environment from the adverse impact of unregulated tourism activities and for preserving the biodiversity and conserving the Antarctic resources. The Tourism Working Group, after a detailed discussion, was able to agree upon two important Resolutions – one concerning ship-based tourism in the Antarctic Treaty Area, and the second associated with the issue related to Permanent Land Based infrastructures for tourism in Antarctica. The Working Group recommended that Parties consistent with their national laws, should:

1. discourage or decline to authorize tour operators that use vessels carrying more than 500 passengers from making any landings in Antarctica; and

2. encourage or require tour operators to:

    a) coordinate with each other such that not more than one tourist vessel is at a landing site at any one time;

    b) restrict the number of passengers on shore at any one time to 100 or fewer, unless otherwise specified in applicable ATCM Measures or Resolutions; and

    c) maintain a minimum 1:20 guide-to-passenger ratio while ashore, unless otherwise specified in applicable ATCM Measures or Resolutions.

The Working Group further forwarded a resolution recommending that the Parties discourage any tourism activities which may substantially contribute to the long-term degradation of the Antarctic environment and its dependent and associated ecosystems.

The above two Resolutions adopted by the ATCM, will pave the way for putting in place a framework for regulation of Tourism in Antarctica.

Similarly the Working Group on Operational matters, amongst other issues considered the important aspects of safety and operation in Antarctica; and the activities/projects undertaken by various Parties during the International Polar Year covering wide areas of science, international collaboration on data management, education, outreach and communication activities. This Working Group discussed the outcome of the inspections of the infrastructure facilities of the Antarctic Programme carried out by various designated agencies, tourist vessels, and also the science issues particularly with reference to scientific cooperation and facilitation programmes of the Parties/NGOs.

The ATCM has passed a resolution to support long-term monitoring and sustained observations of the Antarctic environment and the associated data management as a primary legacy of the International Polar Year, to enable the detection, and underpin the understanding and forecasting of the impacts of the environmental and climate change. This is one of the significant outcomes of the meeting.

It is indeed a pleasure to congratulate Professor Olav Orheim, Chair of the Legal and Institutional Working Group; Mr Michel Trinquier, Chair of the Tourism and Non-Governmental Working Group and Dr Jose Retamales, Chair of the Operational Matters Working Group, for their efficient handling of a number of sensitive, legal and operational issues and coming out with excellent reports. We owe to their strong commitment and contribution, which has resulted in the successful consideration and adoption of a number of Measures, Resolutions and Decisions by ATCM XXX.

The "bureau" assisted by all Chairs, Vice-Chairs, Dr Valery Lytnynov, the ATCM Vice-Chair, the Executive Secretary Mr Jan Huber, the Head of the host country Secretariat Mr Ajai Saxena and the Chief Rapporteur Dr V. Sampath met almost every morning to ensure that the activities planned for each day were well coordinated and successfully conducted as per the schedule. I am grateful to the members of the "bureau" for their invaluable support and guidance to me as the Chairman of this ATCM.

I place on record my sincere thanks to the Scientific Committee for Antarctic Research (SCAR) for providing support to ATCM and arranging the special SCAR Lecture on "Climate Change" by Prof. Chris Rapley, Director of the British Antarctic Survey. Dr Rapley's highly informative lecture on the recent findings of IPCC on global warming and climate change and the importance of Antarctic research in continuous monitoring of climate variations was a highlight of the conference.

I appreciate COMNAP and CCAMLR for their excellent contributions to this ATCM. I must compliment Mr Jan Huber and his dedicated team at Antarctic Treaty Secretariat for their valuable assistance. The contribution of the Secretaries of various Working Groups and the rapporteurs under the able guidance of the Chief Rapporteur in recording the proceedings of the meetings has been very valuable. Last but not the least, I wish to express our sincere thanks to the interpreters and translators who facilitated smooth flow of communication between the delegates from different nations.

As your Indian hosts, we have tried our best to make your stay here both fruitful and enjoyable, thanks to the untiring work of the Members of the Host Country Secretariat, and Staff of Vigyan Bhavan, National Informatics Center and India Tourism Development Corporation. We hope that in addition to the satisfying work here, you have had the opportunity to enjoy the wonderful sights and sounds of Incredible India.

We look forward to mutual cooperation in the fields of Antarctic Governance and its scientific exploration as well as in our common effort in efficiently tackling the global climate change. The presence of Honourable Minister of External Affairs, Mr Pranab Mukherjee, is indeed a testimony to India's firm commitment to Antarctic Treaty and preservation of the fragile ecosystem of Antarctica.

I, on behalf of your Indian hosts wish you good bye and Bon Voyage till next year when we will meet at Kiev in Ukraine.

Thank you.

Special Address by the Honourable Minister of External Affairs of India, Mr Pranab Mukherjee

11 May 2007

Chairman Prof. U.R. Rao, Secretary, Ministry of Earth Sciences Dr P.S. Goel, Executive Secretary of Antarctic Treaty Secretariat Mr Huber, excellencies, distinguished delegates, ladies and gentlemen.

I am happy to be here at the concluding session of a very successful and historic 30th Antarctic Treaty Consultative Meeting. Historic in the sense that India has hosted this meeting for the first time coinciding with the 25th year of it's joining the Antarctic Treaty. The two week long deliberations have resulted in some significant outcomes and decisions. These mutually agreed decisions not only strengthen the Antarctic Treaty in providing good governance to the Antarctic continent, but underline the need of cooperative research and environmental protection.

The Treaty has certainly grown in stature and strength in the last 48 years with newer entrants to its fold. Adoption of the Madrid Protocol on Environment Protection in 1991, which came into force in 1998, was a significant landmark for the Treaty. It indicated the concern of the Treaty Party nations about the importance of the fragile Antarctic ecosystems and their significance at a global level. The Protocol is a testimony of farsightedness and a global vision of the mentors of the Antarctic Treaty. It has gained further importance at a time when we are passing through a most critical phase of the global environmental scenario, especially after the report of the UN's fourth Intergovernmental Panel on Climate Change. It is becoming increasingly clear that to counter the projected impacts of global warming we need coordinated efforts across the world.

The intensive collaborative research work which is being carried out during the ongoing International Polar Year 2007-2008 therefore assumes greater importance. I am sure policy and law makers world over will be benefiting by the research work being carried out by the polar scientists in Antarctica, in taking informed decisions and remedial steps against the impacts of global warming.

I am happy to note that the Meeting has adopted a comprehensive report of the 10th meeting of the Committee for Environmental Protection, which has included a specific agenda item on 'Climate Change' for its deliberations in the next ATCM. This is significant considering the report on climate change by the IPCC.

Detailed deliberations on the growing tourism in Antarctica and the decisions taken by this ATCM will surely help in providing necessary direction and a framework for developing a regulatory mechanism to safeguard the Antarctic environment.

The Antarctic Treaty system has become an epitome of coordinated research and cooperation, carried out by the nations and organisations represented here in this august Meeting. The path shown by the Antarctic Treaty system by forging ties in collaborative research and enforcing a strict regime of environmental protection through a detailed consultative process is not only unique to the Treaty but needs to be followed in other areas as well.

I hope that you have enjoyed your stay with us as much as we enjoyed hosting the ATCM. You must have got some time away from the hectic schedule of the Meeting to visit some of the historical monuments and sites in and around Delhi.

Let me conclude by stating that India remains committed to scientific and technical cooperation in the polar regions. Antarctica being a common heritage of mankind and the foremost symbol of peaceful use and cooperation needs to be protected for posterity.

ANNEX E

Report of the Committee for Environmental Protection (CEP X)

Report of the Committee for Environmental Protection (CEP X)

New Delhi April 30 - May 4, 2007

Item 1: Opening of the Meeting

(1) The CEP Chair, Dr Neil Gilbert (New Zealand), opened the meeting on Monday 30 April 2007.

(2) The Chair thanked India for arranging and hosting the meeting, and also thanked the Secretariat of the Antarctic Treaty for its support during the intersessional period.

(3) The Chair summarized the work undertaken by the Committee since CEP IX, noting that the majority of actions arising had either been addressed or would be the subject of further attention at CEP X. The Chair also noted that two intersessional contact groups had been established at CEP IX to deal with respectively, the draft Larsemann Hills ASMA management plan and the development of a five-year workplan for the CEP. The Chair noted that the outcomes to these ICGs would be addressed during the meeting.

Item 2: Adoption of the Agenda

(4) The Committee adopted the following agenda and confirmed the allocation of papers to Agenda Items:

1. Opening of the Meeting
2. Adoption of Agenda
3. Strategic Discussions on the Future Work of the CEP
4. Operation of the CEP
5. International Polar Year
6. Environmental Impact Assessment
    a) Draft Comprehensive Environmental Evaluations
    b) Other EIA Matters
7. Area Protection and Management
    a) Management Plans
    b) Historic Sites and Monuments
    c) Site Guidelines
    d) Systematic Environmental Geographic Framework
    e) Other Annex V Matters

8. Conservation of Antarctic Fauna and Flora

   a) Quarantine and Non-native Species

   b) Specially Protected Species

   c) Marine Acoustics

   d) Other Annex II Matters

9. Environmental Monitoring and Reporting

10. Inspection Reports

11. Emergency Response and Contingency Planning

12. Waste Management

13. Prevention of Marine Pollution

14. Cooperation with Other Organisations

15. General Matters

16. Election of Officers

17. Preparation for Next Meeting

18. Adoption of the Report

19. Closing of the Meeting

(5) The Committee considered 32 Working Papers, 75 Information Papers and 4 Secretariat Papers (Annex 1, page 243).

(6) The Chair commented that many papers had been submitted after the agreed deadlines and some very close to the start of the meeting. This created difficulties not only for the Secretariat and the translators, but also for all delegates in preparing for the meeting. The Chair urged all Members to submit Working and Information Papers to the Secretariat in accordance with the Revised Guidelines on Circulation and Handling of CEP Documents (Decision 2 (2001)).

Item 3: Strategic Discussions on the Future of the CEP

(7) The Chair of the CEP introduced WP 15 *A Five-Year Work plan for the CEP: Report of the Intersessional Contact Group* (New Zealand). The Chair reminded the meeting of the discussions that had taken place at the informal workshop held in Edinburgh in advance of CEP IX to discuss *"Antarctica's Future Environmental Challenges"*. In discussing the outcomes to the workshop CEP IX had agreed to establish an intersessional contact group (ICG) to develop a five-year work plan for the Committee.

(8) The ICG had agreed that the CEP is unable effectively to continue to try and address every issue at every meeting and that there was a pressing need to prioritise the CEP's

workload and to consider other ways of managing the work. To that end the ICG had prepared a series of tables setting out the main issues facing the CEP divided into tools (i.e. management mechanisms under the Protocol) and environmental pressures. Using a risk based approach these issues had been prioritised and a timetable for addressing the issues developed over the next five meetings, based on the agreed priority rating.

(9) In commending this five-year plan to the Committee the ICG had noted that it would be important for the plan to be routinely reviewed and updated to ensure that it remained current. If endorsed by the CEP and the ATCM, the ICG noted that the CEP's agenda would also need to be routinely modified to ensure consistency with the work plan.

(10) The Chair also noted that the ICG had identified the potential to establish one or more subsidiary bodies to assist in managing certain elements of the CEP's work load. However, the ICG had not been able to conclude discussions on key aspects of this proposal including how subsidiary bodies might be established, whether they would be expected to meet intersessionally, and if so whether funding might be available to support intersessional meetings.

(11) The Committee thanked the CEP Chair for coordinating the intersessional discussions and agreed that good progress had been made.

(12) In discussing the ICG report many Members agreed that the CEP has a high workload and noted that the majority of papers submitted to an ATCM are handled by the Committee. It was therefore important to consider options for improving the efficiency with which the Committee undertakes its work programme.

(13) Several Members therefore supported the work plan as outlined by the ICG. These Members noted that a prioritised work plan would assist the CEP in developing a more strategic and proactive approach to its work, as well as providing dedicated time at CEP meetings to make significant progress on key issues.

(14) In supporting the plan some Members and ASOC highlighted the need for the Committee to also develop a more strategic framework, including the setting of longer-term objectives and goals. The Chair also noted in this regard that the Edinburgh informal workshop had produced a number of other ideas and proposals that the Committee may wish to continue to explore.

(15) However, some Members expressed concern over the process for assigning priorities to the CEP's task list within the draft five-year plan, noting that a more objective approach should be explored. Some Members questioned whether a prioritised work plan would restrict the right of any Member of the CEP to present papers at any meeting on issues it considered to be of importance.

(16) The Committee agreed that it would be important to retain flexibility in any work plan as well as on the CEP's annual agenda, and to retain the option for Members to submit papers at any meeting on issues they considered to be important. Some Members expressed the view that at this stage the proposed prioritised work plan in WP 15, might be considered to be no more than an indicative plan to be used by the CEP as a guide for future work.

(17) The Committee therefore agreed to endorse the five-year work plan as set out in WP 15 on a provisional basis, and to append it to the Final Report of CEP X (Appendix 1). The Committee also agreed that the provisional five-year plan should be posted on the CEP discussion forum, to provide an opportunity for all Members to comment further on it during the intersessional period. The Chair offered to provide a summary of all the comments received to assist further discussion of the plan at CEP XI.

(18) On the issue of establishing subsidiary bodies, many Members agreed that this was a useful opportunity to reduce the workload at annual CEP meetings and supported the proposal contained in WP 15, to establish a subsidiary body on a trial basis to assess and report on new and revised protected area management plans. However, other Members expressed concern over the status of such bodies, how they might be constituted, the possible financial implications and the need to provide for the four languages of the Treaty to ensure opportunity for participation by all Members' countries.

(19) On the issue of subsidiary bodies Australia introduced WP 10 *Intersessional CEP Consideration of Draft Management Plans,* on the need for an effective intersessional process for reviewing draft Management Plans as a means for reducing the workload of the annual CEP meeting. The paper proposed the establishment of a Standing Group as a way to guarantee a coordinated intersessional process to review new and revised management plans. Australia also suggested that such a standing group might, in due course, also undertake other tasks related to Annex V.

(20) Many Members thanked Australia for its constructive paper.

(21) The Committee considered several issues raised by Members in relation to Australia's proposal including whether a subsidiary body established to review Management Plans would:

- hold physical meetings, or operate remotely;
- require funding to facilitate its operation;
- have formal status as a subsidiary body under the CEP Rules of Procedure;
- need to operate in all official languages;
- make recommendations to the CEP or have formal decision-making power.

(22) The Committee agreed that establishing a formal subsidiary body under the CEP Rules of Procedure would require detailed consideration of such issues, and was unlikely to be resolved in the context of the present discussions. Nevertheless, it was considered important that such detailed consideration be given to that issue in the future.

(23) There was good support for the objectives of WP 10, and the Committee agreed it could be helpful to trial some elements of the proposal. Recalling the discussion of subsidiary bodies outlined above, several Members noted the importance of ensuring the informal nature of any group convened to support such a trial. While the original proposal referred to a standing group, it was felt this term could imply an inappropriate degree of formality or

permanency for a trial. The group discussed alternative descriptors, such as "provisional", "ad hoc" and "informal" – the latter term is used below to capture the sentiment of these discussions.

(24) The Committee agreed that a trial of such an informal group:

- could operate generally in accordance with the Terms of Reference proposed in WP 10;
- should be coordinated by a convenor agreed by the CEP (possibly a CEP Vice-chair);
- should focus only on reviewing draft Management Plans referred by the CEP for intersessional review;
- should remain open to participation by all Members and Observers volunteering to participate;
- should operate remotely, using the CEP Discussion Forum;
- could utilise the translation services offered by the Secretariat to post to the Discussion Forum in all official languages its recommendations to proponents;
- should outline its recommendations to the CEP on the adoption or otherwise of draft Management Plans in a report submitted as a Working Paper. Such a report should indicate areas of consensus agreement and areas where differing views are expressed.

(25) It was noted that such a trial would not differ greatly from the present practice for ICGs, and have little or no impact on the Secretariat's workload or expenditure, but would have the potential for improvements over individually convened ICGs, by providing centrally coordinated advice to proponents and to the CEP, and by providing translation for key documents.

(26) The Committee also noted the need to identify an appropriate timeline for the intersessional process. Based on the contact group discussions, modified versions of the 'Proposed terms of reference' and 'Possible timeline for consideration of draft management plans' in WP 10 are attached (Appendix 2, page 259).

(27) The Committee welcomed the offer from Tania Brito (Brazil) in her capacity as CEP Vice Chair to act as the convenor of the informal group. The Committee encouraged Members wishing to participate in the group to contact Tania Brito.

Item 4: Operation of the CEP

(28) The Secretariat presented SP 2, *Secretariat Report 2006/07*, reporting on its activities to support the work of the CEP during the intersessional period. Among the tasks achieved the Secretariat noted that the CEP website had been transferred from the Australian Antarctic

Division, redesigned and integrated into the ATS website. In addition the CEP Handbook had been translated into the four Treaty languages, copies of which were distributed to each delegation. Further, key datasets had been maintained and updated including the EIA and Protected Areas databases.

(29) The Committee thanked the Secretariat for the substantial work it had achieved during the intersessional period.

(30) Argentina noted that the EIA database contained very few EIAs and consisted largely of metadata. The Committee encouraged all Members to submit electronic copies of past EIAs for inclusion in the database.

(31) The Secretariat also introduced SP 11, on the *Electronic Information Exchange System (EIES)*, which reported on the trial system developed by the Secretariat and tested by a number of Parties during the intersessional period. The Secretariat recalled that at CEP IX it was required to trial the online system for a year before committing to a transition from the current information exchange process. The Secretariat made an online presentation on the results of the intersessional work.

(32) Those Members that had participated in the intersessional trial commented on the usefulness of the electronic system as a mechanism for exchanging information required by Article 17 of the Protocol. However, some Members expressed concern that the EIES included prompts for information that is not required to be exchanged by the Protocol. The Committee agreed to continue with the trial system during the intersessional period, and agreed that all Members should participate in populating the system with key information. The Committee also agreed to send further comments on the EIES to the Secretariat in a timely manner, to assist the Secretariat in finalising the system.

(33) Other papers submitted under Agenda Item 15 were:

- IP 8 *Annual Report of Spain Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty*, (Spain)
- IP 14 *Annual Report submitted by France on the Protocol on Environmental Protection to the Antarctic Treaty as required by Article 17 of the Protocol 2007*, (France)
- IP 17 *Annual Report of China Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty*, (China)
- IP 27 *Informe Anual de Acuerdo al Artículo 17 del Protocolo al Tratado Antártico sobre la Protección del Medio Ambiente Periodo 2006 - 2007*, (Uruguay)
- IP 31 *Annual Report Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty,* (Ukraine)
- IP 39 *Annual Report of New Zealand pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty 2006/2007,* (New Zealand)

- IP 47 *Annual Report of the Republic of Korea Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty,* (Korea)
- IP 55 *Report on the Implementation of the Protocol on Environmental Protection as Required by Article 17 of the Protocol*, (United Kingdom)
- IP 70 *Annual Report Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty 2006-2007*, (Italy)
- IP 89 *Annual Report Pursuant to the Protocol on Environmental protection to the Antarctic Treaty* (Romania)
- IP 93 *Informe Anual del Perú de acuerdo con el Artículo 17 del Protocolo al Tratado Antártico sobre Protección del Medio Ambiente* (Peru)
- IP 96 *Informe Anual del Ecuador de acuerdo con el Artículo 17 del Protocolo al Tratado Antártico sobre Protección del Medio Ambiente* (Ecuador)
- IP 129 *Annual Report Pursuant to the Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty* (Japan)

(34) The list of CEP Contact Points was updated (Annex 2, page 249).

Item 5: International Polar Year

(35) The IPY International Programme Office (IPY-IPO) provided a presentation on the current status of the International Polar Year (IPY) describing IPY related activities and gave examples of specific projects. More than 30 institutions, organizations and nations had conducted IPY launch celebrations. The IPY Launch Opening Ceremony (Paris, March 2007) had a broad international participation. All these events received important and extensive international press coverage.

(36) IPY-IPO noted that IPY currently has 227 endorsed Projects: 170 in wide areas of science, 1 broad international collaboration on data management, and 57 education, outreach and communication activities. Of the IPY science Projects, 82 focussed on Antarctic systems or on global processes that connect to and influence Antarctic systems. These Antarctic Projects included a very broad range of science, from geology to glaciology and from archaeology to astronomy. Unlike previous Polar Year's, IPY 2007-2008 included a very strong focus on ecology, biodiversity and biological processes, particularly in the Southern Ocean. The 57 IPY Endorsed Education and Outreach Projects included films, books, museum exhibitions, atlases, classroom materials, conferences, workshops, voyages, and expeditions.

(37) The IPY-IPO was pleased to report on plans for a series of science conferences to consider the results of IPY-specific or IPY-focused research events every 2 years, starting in 2008. SCAR introduced IP 73, *IPY* Report *for ATCM XXX - 30 March 2007,* noting that Arctic Council countries had recently agreed a statement on the establishment of a pan-Arctic monitoring network. Similarly, SCAR suggested that the ATCM adopt a similar

statement urging Treaty Parties to maintain and extend long-term monitoring of change in all parts of the Antarctic, and request its subsidiary bodies to co-operate with SCAR in efforts to create a co-ordinated Antarctic observing network.

(38) The Salekhard Declaration, 26 October 2006, of the Arctic Council Ministers urged "coordinated action…to ensure the full realisation of a comprehensive Arctic Observing Network". The Committee fully supported this proposal recognising CEP interests in state of the environment monitoring and reporting and encouraged the ATCM to adopt such a statement, perhaps by means of a Resolution.

(39) ASOC presented IP 86, *The Human Footprint of the IPY 2007-2008 in Antarctica*. As part of the IPY endorsed project No 454, ASOC examined the endorsed projects in Antarctica during the IPY and found that these included some 350 research activities planned around existing centres of human activity (e.g., the Peninsula) as well as in areas that have been hitherto seldom accessed (e.g., Gamburtsev Mountains). ASOC contends that IPY is likely to expand the human footprint in Antarctica and increase pressure on Antarctica's wilderness values. It urged Treaty Parties to ensure that all IPY projects take place in full compliance of the Protocol, and highlighted the need for strategic-level planning and cumulative impact assessments.

(40) IPY-IPO welcomed the ASOC paper and noted that all IPY endorsed projects must conform fully with the requirements of the Environmental Protocol. IPY-IPO also noted that the IPY website included a statement of ethical policy that it expects all IPY projects to conform to.

(41) The Committee urged all Parties and national programmes to ensure that all Antarctic IPY related projects were assessed and undertaken in full compliance with the provisions of the Protocol as with all other projects. IPY-IPO supported this view and agreed to ensure that the IPY Programme Office was made aware of this statement from the Committee.

(42) India presented IP 59 *IPY - Indian Contribution* informing the meeting on its scientific and outreach program for the IPY. India noted that two scientific programs related to monitoring of ocean circulation and to aerosol impact on Antarctica had received endorsement from IPY. An extensive outreach programme for school children during the IPY had also been launched.

Item 6: Environmental Impact Assessment

6a) Consideration of Draft CEEs forwarded to the CEP in accordance with paragraph 4 of Article 3 of the Protocol

(43) India made a presentation on WP 4 *Draft Comprehensive Environmental Evaluation of New Indian Research Base at Larsemann Hills, Antarctica* and IP 7, with the same title, which contained the full draft CEE document and IP 139 *Additional information on draft CEE on proposed new Indian research base at Larsermann Hills, East Antarctica*.

(44) India proposes to locate the station on an unnamed promontory between Stornes and Broknes Peninsulas in the Larsemann Hills area. The CEE was prepared by the National

Centre for Antarctic and Ocean Research (NCAOR), an R&D wing of Ministry of Earth Sciences, Government of India, which coordinates and manages all the activities of India in the Antarctic region. The station would be used for carrying out long-term research in various domains of polar, ocean and atmospheric sciences for complementing the existing studies at Maitri and adjoining areas from an additional location. It is planned to have a life span of 25 years, accommodating 25 people during summer and 15 people during winter.

(45) India informed the Committee that the conceptual design of the station has been obtained through global tenders for innovative ideas and that the architect/consultants were selected on the basis of their experience to build environmentally friendly stations in Antarctica, by a committee of experts, drawn from the national organizations and academic institutions involved in building design, construction and environmental engineering. India noted that the selected conceptual design meets the Madrid Protocol requirements.

(46) After the CEP and ATCM consideration, the construction of the station would be initiated during the subsequent austral summer. The station is expected to be commissioned in two years time from the initiation of construction activity. India considered that construction and operation of the proposed Indian research base would have more than a minor or transitory impact on the Antarctic environment and announced that mitigation measures have been proposed to minimize the expected impacts.

(47) The Committee thanked India for its presentation. Several Members made comments on the draft CEE and asked India to clarify a number of points. France asked India to clarify the means to be taken to minimise or prevent the introduction of non-native species during construction and operation of the new base.

(48) India mentioned that several measures would be taken including inspections of containers, sterilisation of equipment, cleaning of vegetables, restrictions in the importation of some products, and on ballast water exchange. These provisions would be in full compliance with relevant Indian legislation.

(49) Germany asked India to clarify how they had selected the proposed location for the new station.

(50) India responded that they had taken the decision on the basis of a number of factors, including the need to avoid additional pressure on Broknes peninsula, ease of access to the selected site and available potable water.

(51) The US asked India to comment on the potential impacts on the local lakes for supplying water and whether this would compromise the scientific value of the lakes. The US noted that in their experience reverse osmosis plants had less impact on the local environment.

(52) India responded that there were several lakes in the area and it was their intention to minimise impacts on these freshwater bodies. To do this India intended to extract water only from the lake at the lower end of the promontory. They also intended to regularly monitor the lakes to ensure the lake levels were not altered.

(53) ASOC commended India on their plans to remove the station after 25 years and asked how India intended to monitor cumulative impacts.

(54) India responded that they had already undertaken a baseline study of the area and that further monitoring was planned once the station was established.

(55) New Zealand noted the need to provide examples of good environmental practice within the Antarctic Treaty system and that one of the primary reasons for designating areas such as the Larsemann Hills as an ASMA was to encourage co-operation between all operators. New Zealand suggested that the need for early notification and more inclusive co-operation were important lessons to learn with respect to the new station and the proposed ASMA.

(56) Australia noted that the additional information circulated by India in IP 139 stated the final CEE would address many of the comments Australia had provided to India during the intersessional period. Australia thanked India for its responses to those matters, and sought reassurance that its other comments would also be addressed.

(57) India explained that the 2006/07 expedition to the Larsemann Hills had collected additional information, which would inform its responses to the other comments.

(58) Several Members expressed similar concern over the limited acknowledgement of the proposed ASMA for the Larsemann Hills in the draft CEE and asked how the two activities would be integrated.

(59) The Chair proposed that in order to assist the discussion and to consider the two activities jointly, the draft ASMA management proposal be introduced at this point.

(60) On behalf its co-authors, Australia introduced WP 8 *Larsemann Hills east Antarctica, Antarctic Specially Managed Area Management Plan* (Australia, China, India, Romania and Russian Federation, noting that the idea of establishing an Antarctic Specially Managed Area in the Larsemann Hills goes back to discussions held between Australia, China and the Russian Federation in the mid to late 1990s.

(61) A draft management plan had been submitted to CEP VIII as Working Paper 27, and referred for intersessional review. A revised version, taking into account comments received from the United Kingdom, was submitted to CEP IX as Working Paper 8 by Australia, China, the Russian Federation and Romania.

(62) Following unresolved discussions at CEP IX about the relationship between the ASMA proposal and India's intentions to establish a new station in the Larsemann Hills, outlined in Working Paper 20 also submitted to that meeting, the draft management plan was referred for a second round of intersessional review.

(63) A revised version of the management plan was prepared following stakeholders discussions at the July 2006 COMNAP. Comments received from the United States, United Kingdom and Ecuador were considered and incorporated in the final revised Management Plan appended to WP 8.

(64) The Larsemann Hills is a rare and important ice-free oasis on the coast of East Antarctica, and the management plan aims to protect the environment of the Larsemann Hills by promoting coordination and cooperation by Parties in the planning and conduct of all human activities in the Area.

(65) Australia noted that the management plan did not indicate a specific site for India's station. The stakeholders agreed that to do so would pre-empt the CEP's consideration of India's draft CEE (WP 4 and IP 7), and the required consideration of alternatives, including alternative locations.

(66) India commented that it looked forward to working with those countries working in the area to accommodate the new base within the ASMA management plan.

(67) New Zealand asked how sensitive to human activities were the identified restricted areas within the ASMA.

(68) Australia commented that these ice-free areas were of significance and that scientific advice received suggested that these sites were likely to be sensitive to human activity and were therefore deserving of increased protection.

(69) Romania emphasised the importance of wide dissemination of the ASMA management plan to ensure that all those working in the area were aware of its requirements. To this end Romania suggested translation of the plan into the languages of all scientists working in the Larsemann Hills.

(70) Having considered the draft CEE and its implications for the ASMA proposal in depth, the CEP agreed its advice to the ATCM (Appendix 3) on the draft Indian CEE.

(71) On the basis of the Committee's advice to the ATCM with respect to the draft CEE, Australia submitted a slightly revised version of the Larsemann Hills ASMA management plan (WP 8 rev 1). Australia noted that the plan would need further revision in due course to take full account of the construction of the new Indian research station.

(72) On this basis, the Committee recommended that the ASMA management plan be forwarded to the ATCM for adoption.

6b) Other EIA Matters

(73) Ukraine introduced IP 30 *The Replacement of Fuel Tanks at Vernadsky Station,* and provided a presentation on the draft CEE process associated to this activity, and the construction of the fuel tanks during the 2006/2007 season. It informed that the need for the replacement was recommended by different inspections in 1993, 1999 and 2005.

(74) Ukraine explained that the first initial public discussion of this Project was carried out at the International Workshop of Antarctic Competent Authorities, in Berlin, in November 2006. But, considering the unsatisfactory technical conditions of old fuel tanks, the decision

was taken to start with the replacement in the 2006-2007 season, in order to avoid any environmental emergency situation.

(75) Ukraine informed the Committee that construction work and operational activities were in compliance with the requirements of the Environmental Protocol.

(76) The CEP Chair explained that, despite the best efforts of Ukraine, the draft CEE had not been circulated in accordance with the requirements of the Protocol. Intersessional consultation with all Members suggested that the document should be submitted to CEP X as an Information Paper.

(77) Many Members questioned whether a CEE was the appropriate level of EIA for this activity and gave examples of similar activities that had been held under an IEE.

(78) Germany asked what Ukraine intended with the old fuel tanks.

(79) Ukraine responded that they intended first to clean the old fuel tanks and would then take a decision whether to dismantle and remove them or leave them in place.

(80) Some Members suggested that Ukraine might present an update of this activity at the next meeting of the CEP.

(81) Italy informed on IP 71, *Initial Environmental Evaluation. Construction and Operation of Nansen Ice Runway (Terra Nova Bay, Ross Sea, Antarctica),* and IP 72, *Initial Environmental Evaluation. Restructuring works of the pier at the Mario Zucchelli Italian Scientific Station (Terra Nova Bay, Ross Sea, Antarctica)*. Both IPs had attached the full IEE documents. These activities were necessary to support logistic and scientific activities at Mario Zuchelli Station. As a result of the IEEs, the environmental impacts associated with those activities were predicted to be no more than minor or transitory.

(82) With respect to IP 71, New Zealand noted the importance of consulting with other national operators with experience of operating blue-ice runways. New Zealand also asked Italy for clarification of the reference in the IEE to the potential use of the runway for tourist activities.

(83) Italy commented that at present they were unaware of any plans for tourist flights in to the region now or in the future. To clarify the situation Italy offered to revise IP 71 and issue a rev 1 of the paper.

(84) Some Members commented that an activity of this scale, should in their view, be the subject of a CEE. Some other Parties noted that the level of EIA to apply, in accordance with the Protocol, is dependent on the significance of the impacts identified and not on the type of activity *per se*.

(85) Spain noted that according to the Madrid Protocol, the level of EIA to apply, remains the decision of each competent national authority.

(86) The Russian Federation presented IP 63 *Preliminary results of Russian expedition studies of the sub glacial Lake Vostok in 2006-2007,* on the studies undertaken over the lake area by the 52nd Russian Antarctic Expedition. Based on a preliminary EIA, Russia continued with the ice drilling samples in the deep bore hole 5-G1.

(87) Russia informed the Meeting that in January 2007 further drilling at a depth of 3658.26 m had resulted in the drill becoming stuck. The drilling operations in the borehole were suspended and significant effort put into extracting the drill from the borehole. In order to free the drill from the borehole bottom, about 200 litres of antifreeze was delivered using a special device to its lower part, which allowed melting the ice in the area of its contact with the stuck bore bit and release it. The drill was successfully recovered to the surface in February 2007. The antifreeze was later recovered although its use had left a significant void in the bottom of the borehole. As a result the drill had to be redesigned for further drilling activity. Russia plans to restart drilling operations in May 2007.

(88) Russia noted that ongoing research in the region of the subglacial Lake Vostok during the season of 2006-07 made a significant contribution to the existing information about this unique water body. Russia informed the Meeting that the Final CEE for the water sampling in the lake will be presented at ATCM XXXI.

(89) New Zealand asked Russia to explain in more detail the means by which fluids had been extracted from the base of the borehole.

(90) Russia explained that a special instrument has been developed for pumping out drill fluids using the drilling tool itself. Russia offered to provide further detail on this at the next CEP meeting.

(91) Romania presented IP 88 *Initial Environmental Evaluation law-Racovita Base*, on the assessment of impacts associated to scientific and logistic activities at Law-Racovita Base, Larsemann Hills, during the Romanian Antarctic Expedition 2006/07.

(92) ASOC introduced IP 79, *The Case Against Tourism Landings From Ships Carrying More Than 500 Passengers*, which, based on the ongoing rapid growth and diversification of Antarctic tourism, proposed prohibiting landings from ships carrying more than 500 passengers. ASOC argued that the reasons behind this were related to changes in industry standards, safety of operations, potential conflict of interest among users, and environmental impact associated with these activities. In this context, a prohibition on landings from very large vessels would be a first step towards "stabilising" tourism operations.

(93) A number of Members thanked ASOC for its report.

(94) The Chair recalled also the question posed to the CEP by ATCM XXIX (para. 152 of the Final Report of ATCM XXIX) on whether the proposal to prevent ships carrying more than 500 passengers from landing in Antarctica was an environmentally responsible and precautionary approach, or whether they would recommend an alternative.

(95) Several Members commented that the passenger carrying capacity of a vessel does not necessarily have a direct influence on the nature of impacts ashore, and that there is currently little scientific data, or routine tourism monitoring being undertaken that would allow the Committee to comment specifically on a ban on landings from ships carrying more than 500 passengers.

(96) It was stressed that environmental impacts including cumulative impacts at any site from vessels landing passengers could be dependent upon the sensitivity of the receiving environment. Therefore, any limits on the numbers of people visiting a site ideally need to be made on a site-by-site basis, taking into account the specific values, features and sensitivities of the area. Spain considered that these situations could frequently be solved via self regulation or via the Codes of Conduct of their respective ASMAs

(97) However, several Members noted that larger vessels posed significant concerns with relation to safety of navigation, search and rescue, and environmental consequences should an accident occur.

(98) New Zealand noted that if an environmental risk assessment approach was taken it would likely show that larger vessels posed an increased risk to the environment due to the need for increased time ashore, increased contact time with wildlife, larger draft and windage of vessels operating close to shore, as well as larger fuel quantities and fuel types.

(99) In relation to this issue, Argentina suggested that the Committee ask the ATCM to re-emphasise the importance of Measure 4 (2004) and Resolution 4 (2004), which, if fully applied, are important means of reducing the risk of accidents or incidents. It also noted that it could not support the proposed "prohibition" of certain types of tourism as proposed in the ASOC paper, as tourism is a permitted activity under the provisions of the Protocol. This would establish a bad precedent because this type of position would restrict the scope of the Madrid Protocol.

(100) IAATO agreed with the previous interventions that it is very difficult to consider this question in isolation as the limit depends significantly on other factors and management tools (including how and where the activity is being conducted). IAATO noted that it has already self imposed this restriction as an appropriate maximum as being both prudent and precautionary. Since the CEP-endorsed Site Guidelines already acknowledge that the 500 limit is appropriate at some sites but not at others, IAATO would suggest that the CEP consider 500 as an appropriate maximum limit but over time assess, through Site Guideline work, whether this maximum is suitable for specific sites.

(101) Several Members noted that ultimately the decision would need to be taken on political rather than environmental grounds.

(102) The vast majority of Members concluded that they could support a precautionary approach as referred to by the ATCM and endorsed the proposal to prevent ships carrying more than 500 passengers from landing.

(103) However, the Committee recommended that more consistent and dedicated monitoring of tourism impacts be undertaken to ensure that data and information are available to support such decision making.

(104) The Committee also recommended that site-specific guidelines continue to be developed for all sites visited by tourists.

(105) ASOC presented IP 84 *Strengthening the CEE Process*. Based on the analysis of all CEEs prepared so far, ASOC noted that some significant generic limitations are still evident in the CEE process. Among these limitations, ASOC noted that in no case had a consideration of draft CEEs by the CEP led to substantial modification of the activity as first elaborated by the proponent, nor to a decision not to proceed with the activity, despite this being a mandatory consideration in Annex I of the Protocol.

(106) The Committee commended ASOC on their paper and agreed that the EIA provisions were a fundamental and significant component of the Protocol.

(107) Sweden noted that the handling of EIAs and CEEs would be considerably facilitated if there was a vision for the future of Antarctica. Sweden also stated that the environment would benefit from an increased cooperation amongst countries such as, for example, the Concordia Station and the Nordic expeditions.

(108) Germany commented that there was a need for a more standardised approach as to the level of EIA that should be applied to certain types of activity. However, several Members responded that this could only be judged on a case by case basis through individual national processes.

(109) New Zealand supported the proposal in the ASOC paper to have earlier notification of draft CEEs that are in preparation, as a means of facilitating early consultation between Members.

(110) Argentina supported this view and suggested that having draft CEEs translated into the four Treaty languages would help improve assessment of the document by CEP Member countries.

(111) France, supported by several other Members, suggested that a more automatic, rather than voluntary, process of assessing draft CEEs ahead of annual CEP meetings, coupled with the idea of having the documents translated may also aid improved scrutiny of these important documents. It was also noted that the need for a standing group for draft CEEs had been identified in the context of the CEP five-year work plan and that an automatic process could provide a way forward with regard to this.

(112) The Committee agreed and modified the Guidelines for CEP handling of Draft CEEs and operational procedures accordingly (Appendix 4, page 263).

(113) The Committee also agreed that the translation of draft CEEs would be very useful and agreed therefore to ask the ATCM to consider allocating funds to allow for the translation of draft CEEs into the four Treaty languages, by the Treaty Secretariat.

(114) In this regard the Committee noted that since the Protocol entered into force, 11 draft CEEs have been sent to the CEP in accordance with Annex I to the Protocol, an average of approximately 1 per year. However, the Committee recalled that the frequency with which draft CEEs are submitted has varied with no draft CEEs in some years and up to three being submitted in other years.

(115) The Secretariat introduced SP 8 *Annual list of Initial Environmental Evaluations (IEE) and Comprehensive Environmental Evaluations (CEE) prepared between April 1st 2006 and March 31st 2007*, in accordance with the requirements of Resolution 1 (2005). The Secretariat noted that this information, together with information submitted on IEEs and CEEs since 1988, was also available in the EIA database located at the ATS website. The Secretariat noted that the online template for uploading information on EIAs was used by some members during the intersessional period which had facilitated submission and consistency of the information reported. The EIA database now contains information on EIAs prepared since 1988 including many actual EIA documents in electronic format.

(116) Other Information Papers submitted under this agenda item were: IP 2 *Initial Environmental Evaluation for Placement of Shelter Huts at the proposed site of new Indian Research Base, Larsemann Hills, East Antarctica* (India); IP 19 *Future perspectives for Kohnen Station (Dronning Maud Land)* (Germany); IP 51 *Construction and Operation of the new Belgian Research Station, Dronning Maud Land, Antarctica. Final Comprehensive Environmental Evaluation (CEE)* (Belgium); IP 102, *Final Comprehensive Environmental Evaluation (CEE) for the Proposed Construction and Operation of Halley VI Research Station, and the Demolition and Removal of Halley V Research Station, Brunt Ice Shelf, Caird Coast, Antarctica* (UK); IP132, *Initial Environmental Evaluation. Replacement of Fuel tanks at the Comandante Ferraz Antarctic Station* (Brazil).

Item 7: Area Protection and Management

7a) Management Plans

i. Draft management plans which had been reviewed by an ICG

(117) The Committee considered 2 draft management plans for Antarctic Specially Managed Areas (ASMAs) under this category.

(118) The United States presented WP 3 *Draft Management Plan for ASMA No X: Amundsen-Scott South Pole Station, South Pole.* The ASMA will be located on the polar plateau at the geographic South Pole, at 90°S covering an area of approximately 26,400 km^2. The area encompasses the Amundsen-Scott South Pole Station as well as long-term research and monitoring sites. It was proposed as an Antarctic Specially Managed Area to manage human activities for the protection of scientific, environmental, and historical values.

(119) The United States submitted the draft Management Plan to CEP VIII in 2005. After review by an ICG, the United States presented an update on the status of the Management Plan to the CEP IX in 2006. Comments received were considered and small changes related to the South Pole Modernization Project were incorporated. Therefore the United States considered the revision process is now complete and the draft Management plan was presented for consideration by Committee for Environmental Protection.

(120) The UK supported the proposal recognising the high scientific value of the area, and welcomed in particular the zonation of the ASMA as a tool for managing sites with different values and activities.

(121) Norway commended the US on the draft management plan and supported its adoption by the ATCM. Norway also requested further information on the proposed website.

(122) The US responded that the website was under development, but was seen as a good way for exchanging information on the ASMA as well as for disseminating information on the science undertaken at Amundsen-Scott base.

(123) The Committee endorsed the management plan and recommended its adoption by the ATCM.

(124) WP 8 *Larsemann Hills, East Antarctica, Antarctic Specially Managed Area Management Plan* (Australia) was also submitted under this agenda item, but was addressed by the meeting under agenda item 6a.

ii. Draft revised management plans which had not been reviewed by an ICG

(125) The Committee considered 4 draft management plans for Antarctic Specially Protected Areas (ASPAs) under this category:

- WP 11 *Review of Antarctic Specially Protected Area (ASPA) No 130 Tramway Ridge, Mt Erebus, Ross Island*, (New Zealand).
- WP 25 *Revisión del Plan de Gestión de la Zona Antártica Especialmente Protegida Nº 150 Isla Ardley, Bahía Maxwell, Isla Rey Jorge (Isla 25 de Mayo),* (Chile).
- WP 30 *Revised Management Plan for Antarctic Specially Protected Area No 129, Rothera Point, Adelaide Island,* (United Kingdom)
- WP 31 *Revised Management Plan for Antarctic Specially Protected Area No 109 Moe Island, South Orkney Islands,* (United Kingdom)

(126) In introducing WP 11, New Zealand noted that a review of the management plan had been undertake including consultation with scientists working in the ASPA and with other Parties working in the area. The review had concluded that no changes to the management plan were required.

(127) The Committee accepted the proposal by New Zealand that no changes to the management plan were needed, and agreed that the five year review procedures of Annex V to the Protocol, required only that a plan be reviewed and that these provisions did not necessarily require plans to be modified.

(128) In introducing WP 25 Chile recalled that it had indicated its interest in establishing an ICG to consider revising the management plan for ASPA 150. Chile regretted that they had not had the opportunity to do this during the intersessional period. However, the submitted plan had been modified and Chile suggested that an informal group now be established to consider the revised plan.

(129) Following a question from ASOC regarding the criteria that had been used to determine the area of Ardley Island not included in the ASPA, Chile responded that this is seen as a buffer zone and is already used as a transit route for scientists working in the site.

(130) The Committee agreed to refer the plan for intersessional review using the CEP Discussion Forum.

(131) The UK introduced WP 30 and WP 31, noting the minor changes that had been made to the management plans.

(132) The Committee therefore agreed to refer these two ASPA management plans to the ATCM for adoption.

iii. New draft management plans for protected/managed areas

(133) The Committee considered WP 5 *Draft Management Plan for Antarctic Specially Managed Area No X: Southwest Anvers Island and Palmer Basin* (USA). The region, that includes southwest Anvers Island and the Palmer Basin and its fringing island groups, has a wide range of important natural, scientific and educational visitor values and is an area of considerable and increasing scientific, tourist and logistic activities.

(134) The importance of these values and the need to provide an effective means to manage the range of activities had been recognised with adoption of the area as a Multiple-Use Planning Area (MuPA) for voluntary observance at the XVI Antarctic Treaty Consultative Meeting (1991). With the acquisition of new data and information and changes to logistics and the pressures arising from human activities in the region, the original plan has been comprehensively revised and updated to meet current needs as an Antarctic Specially Managed Area (ASMA).

(135) The United States, therefore, proposed the ASMA draft Management Plan for the Committee's consideration.

(136) Chile commented favourably on the importance of scientific research and monitoring activities in this region and recognised that the plan that had been presented was very complete. The Committee agreed to refer the plan for intersessional review, and also agreed

that, due to the marine component of the Area, the draft plan should be submitted to CCAMLR for its consideration.

(137) Australia introduced WP 9 *Draft Antarctic Specially Protected Area (ASPA) Management Plan for Amanda Bay, Ingrid Christensen Coast, Princess Elizabeth Land, East Antarctica* (Australia and China). The Management Plan aimed to protect the breeding colony of approximately 3000 pairs of emperor penguins annually resident in the south-west corner of Amanda Bay, while providing for continued collection of valuable long-term research and monitoring data.

(138) The United Kingdom presented the WP 21 *Area Protection and Management Proposal for a new Antarctic Specially Protected Area at Marion Nunataks, Charcot Island, Antarctic Peninsula*. The Area, of 116 km^2, is proposed primarily for its unique species assemblage, in particular for the absence of key ecological components such as predatory arthropods and springtails. This provides unique scientific opportunities.

(139) The draft Management Plan contains comprehensive and wide ranging precautions to protect these ecological and scientific values, in particular measures to prevent the introduction locally non- native species.

(140) SCAR endorsed the management plan proposal noting the exceptional nature of the site due to the absence of springtails and arthropod predators in the terrestrial community.

(141) China Presented WP 32 rev 1 *Draft Management Plan for the Antarctic Special Protected Area Mount Harding, Grove Mountains, East Antarctica.* China made a visual presentation on the natural features of the site proposed to be protected by the proposed ASPA. China noted that designation was based on the integral remains of the advance and retreat of the ice sheet of inland Antarctica and the precious physiognomy of glacier erosion preserved in the ice sheet of inland Antarctica, which is of great scientific, aesthetic and wilderness values. China informed that the aim of this protected area was to preserve its scientific, aesthetic and wilderness values.

(142) Several Members congratulated China for its presentation, noting that such a presentation provided a very clear understanding of the proposed protected area.

(143) The Committee agreed to refer these three draft management plans for intersessional review and encouraged all Members to participate in reviewing the plans ahead of CEP XI.

iv. Other matters relating to management plans for protected / managed areas

(144) The Secretariat introduced SP 7 *Register of the Status of Antarctic Specially Protected Area and Antarctic Specially Managed Area Management Plans, updated March 2007*, noting that the online version now links to all ASPA and ASMA management plans. The Secretariat also informed the meeting that both this register and the Archive on Protected Areas are now using the same information from the same database, so possible mistakes have been significantly reduced.

7b) Historic Sites and Monuments

(145) Chile Introduced WP 41, *Monument to the Antarctic Treaty,* proposing the addition to the List of Historic Monuments and Sites of the "Monument to the Antarctic Treaty", which was installed close to the Frei, Bellingshausen and Escudero Bases, at Fildes Peninsula, King George Island. It occupies a central position in the inter-face of the above mentioned bases and the path towards the settlement designated as "Villa Las Estrellas", and immediately attracts the attention of visitors to King George Island. Chile also noted that they intended to add a plaque to the monument commemorating the signatories to the Antarctic Treaty.

(146) The Committee supported the proposal and referred it for adoption by the ATCM.

(147) Chile introduced WP 38 *Antarctic Protected Areas System: Revised List of Historic Sites and Monuments (Measure 3 (2003) Draft Guidelines for its Application).* Chile proposed changes and improvements to the guidelines for selecting and designating historic sites and monuments (HSMs), and proposed testing the revised guidelines on the existing list of HSMs, and its application in respect of any new HSM proposals.

(148) Argentina and Spain made comments in respect of certain historic references in the paper. Spain expressed its interest in participating in any review of this document. While thanking Chile, with respect to Appendix 1 to WP 38, Argentina noted that well before 1819 sealers from Buenos Aires hunted for fur seals in the South Shetland Islands. It also noted that vessels referred to were granted patents as corsairs by the Government in Buenos Aires and were under the joint command of Admiral Brown, himself taking part at that time in the wars leading to South American independence in the service of Buenos Aires.

(149) The UK welcomed the Chilean proposal and indicated their interest in working with Chile on revising the HSM guidelines.

(150) The US also welcomed the proposal and noted the importance of ensuring all HSMs were properly managed as a legacy for future Antarctic generations.

(151) The US, Spain, and Argentina expressed their interest in working with Chile and the UK on revising the guidelines in the intersessional period.

(152) Chile presented IP 94 *Avances al plan de gestión territorial, manejo ambiental y conservación del patrimonio histórico de la base Gabriel González Videla, Verano 2007*, on an approach for the management historic Chilean Station, which considered the various historic, and natural resources of the area. Chile informed the Committee that around the station there is an important Gentoo penguin colony as well as two historic sites (HSMs 30 and 56).

(153) In introducing IP 123 *Historical Sites of Byers Peninsula, Livingston Island, South Shetland Islands, Antarctica,* Chile noted that an inventory of archaeological sites on Byers Peninsula needed further consultation with the UK as the principal interested Party.

(154) Chile introduced IP 127 *Historic Sites of the Northern Coast of Fildes Peninsula, King George Island (South Shetland Group)*. Chile reported on the difficulties of protecting

historic sites from both natural and human impacts, particularly when such artefacts tempted visitors to remove them as souvenirs. It was suggested that a code of conduct would be needed at this site such as the Resolution on the handling of pre-1958 historic remains (Resolution 2 (2001)). In the particular case of this region, significant human activity made it particularly difficult to apply that Resolution.

(155) The UK welcomed the Chilean paper noting that this was possibly the first report to the CEP of archaeological finds in Antarctica, and noting the challenges of protecting such material. The UK suggested that there were a number of options for managing such sites including designation as ASMA, ASPA and site guidelines. In this instance the UK felt that site guidelines might be useful.

7c) Site Guidelines

(156) The United Kingdom introduced the WP 22 *Site Guidelines for Brown Bluff, Tabarin Peninsula*, which was co-sponsored by the United States and prepared in conjunction with IAATO.

(157) The United Kingdom noted that WP 2 tabled at XXIX ATCM had highlighted a range of policy issues arising form the work of the review team and included recommendations for the further development of Site Guidelines. One of the recommendations was that "priority be given to preparing visitor Guidelines for Brown Bluff", recognizing that this site was the only site in the top 15 visited sites in Antarctica without site specific visitor guidelines and not covered by a management plan or managed by a national operator.

(158) The guidelines were prepared by IAATO and reviewed by the US group Oceanites. The draft guidelines had also been the subject of on-site review in January 2007 by the UK, in the same way as the 12 existing site guidelines had been reviewed. Therefore it was proposed that the CEP recommends to the ATCM the adoption of the Site Guidelines for Brown Bluff.

(159) Some Members raised general questions on the draft guidelines including, the rationale for the numbers of passengers allowed ashore at any one time, the scientific basis for including a resting period of no visitation, and the basis for the 5m separation distance from fauna.

(160) The UK said that the Site Guidelines previously adopted had used similar mechanisms and urged adoption of the guidelines for Brown Bluff as soon as possible to avoid leaving the site with no management in place. A number of Members agreed with this view.

(161) ASOC requested IAATO for clarification regarding what appeared to be contradictory guidelines about the extent of free roaming that was acceptable, and whether the landing should be suspended in the event that the beach was crowded.

(162) IAATO encouraged early adoption of the Brown Bluff guidelines and noted that the 5m distance from fauna had been in practice for many years and experience had suggested that this was an appropriate precautionary distance. In response to ASOC's question IAATO

noted that the beach had adequate capacity to cope with a number of passengers stated in the guidelines.

(163) After a request from the CEP, SCAR agreed to provide a report on the current state of knowledge with respect to human disturbance of wildlife.

(164) Australia, supported by the US, reminded the meeting that site guidelines do not exempt Parties and other operators from their obligations with respect to undertaking environmental impact assessments, which should also address these issues.

(165) Argentina introduced WP 40 *Guidelines for Visitors to Snow Hill* (Argentina and Sweden) noting that both the ATCM and the CEP had considered the designation of visitor site guidelines as an important and complementary tool to the wider framework of area protection and management. In particular, at CEP IX the Committee asked members and observers that, for visited sites not already covered by visitor guidelines or other forms of site management, they should undertake site reviews and draft Site Guidelines, using a consistent format, as appropriate.

(166) Therefore Argentina, in conjunction with Sweden, expressed the view that these guidelines for Snow Hill aimed to improve the management of the increasing tourist visits to the Otto Nordenskjöld expedition hut and its surroundings, designated as HSM 38. The guidelines will help to ensure tourist visits do not impact on the conservation activities being undertaken. Both countries noted that the elaboration of these guidelines was supported by a visit this summer to the site. Likewise Argentina and Sweden stated that maintenance and conservation work in the area will continue.

(167) Several Members and IAATO congratulated Argentina and Sweden on developing the guidelines for this important historical site and for their conservation work. Some Members suggested minor changes and corrections to the Guidelines.

(168) Taking into account the suggested changes, the Committee endorsed these two sets of guidelines and recommended their approval by the ATCM.

(169) ASOC introduced IP 83 *A Commentary on Policy Issues Arising from On-Site Review of Guidelines for Visitor Sites in the Antarctic Peninsula*, making comments on the recommendations presented at CEP IX by the site guidelines on-site review team that reported on ATCM XXIX WP 2. ASOC expressed the view that Parties should consider how Antarctic tourism as a whole could and should develop, and how it should be most effectively managed before investing too much effort in the development of Site Guidelines. ASOC expressed the view that the guidelines cannot and should not be the main mechanism for tourism management in the Antarctic and that the CEP should develop a long-term process for reviewing all visited sites to determine whether visitation is appropriate, and at what level.

(170) IAATO introduced IP114 *A Brief Update on the Antarctic Peninsula Landing Site Visits and Site Guidelines*. The paper outlines the changes in levels of use at landing sites in this area where the majority of tourist activities take place. IAATO intends to provide this

information annually to the CEP and ATCM to ensure that these bodies have good information on which to base their debates. The second part of the paper provided feedback and analysis on the twelve adopted site guidelines. Overall the guidelines have been well received and data analysis indicates that they worked well throughout the season, with queries only being raised with regard to the quality of maps and seasonal appropriateness.

(171) The United States presented IP 11 *Antarctic Site Inventory: 1994-2007*, updating the results of the Antarctic Site Inventory project through February 2007. This program has collected biological data and site-descriptive information in the Antarctic Peninsula since 1994. In 13 seasons the Inventory has made 784 visits and collected data at 114 Antarctic Peninsula locations. During the recently concluded 2006-07 field season, the Inventory made 80 visits and collected data at 41 sites, including 10 sites not previously visited by Inventory researchers. The United States commented that the Inventory Project regularly censuses the 12 visitor locations for which site guidelines were adopted at ATCM XXIX.

(172) Sweden congratulated the US and Oceanites on their long-term monitoring work and suggested that this data should be taken into account to assist SCAR's review of wildlife disturbance information.

(173) South Africa also offered to assist SCAR's review based on considerable experience of South African bird biologists.

(174) SCAR encouraged any unpublished data and information to be supplied to the SCAR contact, Professor Steven Chown, to assist in its review.

7d) Systematic Environmental Geographic Framework

(175) New Zealand introduced WP 12 S*ystematic Environmental Protection in Antarctica: Final progress report on Environmental Domains Analysis for the Antarctic continent*. The document and accompanying presentation provided a revised classification of the Antarctic Environmental Domains Analysis (EDA) at the continental scale and improved the "proof of concept" presented both at CEP VIII and CEP IX.

(176) In its presentation, New Zealand noted that this last version better incorporated the ice-free terrain and that a reapplication of the ice sheet temperature "ground truthing", which had been presented at CEP IX, showed that the classification remained realistic for the ice sheet.

(177) New Zealand commented that the addition of further data, including biotic and permafrost/soils databases at the continental scale would continue to improve the EDA. The current classification was expected to provide a scientifically sound basis for a systematic spatial classification of Antarctica into 21 Environments of quantifiable character.

(178) New Zealand announced that a final report will be presented to the CEP XI as a dynamic basis for a systematic environmental geographic framework for the continent.

(179) New Zealand also presented IP 41 *Systematic Environmental Protection in Antarctica: local and regional scale application of Environmental Domains Analysis for the Antarctic continent*, noting that a regional scale classification around the Larsemann Hills ice-free area showed that the system could also work at finer scales.

(180) New Zealand thanked COMNAP and the Treaty Secretariat for their support in determining methods for disseminating and using the EDA.

(181) The Committee commended New Zealand and Harry Keys in particular for this excellent work and for the progress made in providing a tool to meet the systematic environmental geographic framework requirements of the Protocol.

(182) The UK noted that they had used the EDA in preparing the draft management plan for Charcot Island.

(183) Russia commented that Antarctic lakes would be a useful layer in the EDA given their important scientific and environmental value.

(184) New Zealand agreed that this was an environmental domain that needed to be included, but such a fine scale data layer was technically challenging to include. Nevertheless, New Zealand agreed to consider Russia's suggestion in preparing the final version of the EDA.

(185) SCAR recalled that they had been requested by New Zealand to undertake an assessment of the EDA. Rather than undertaking a desktop review, SCAR was proposing to assess the potential fit of existing biological data into the EDA, which it considered would be a more beneficial exercise. SCAR anticipated reporting on this at CEP XI. The Committee welcomed this proposal.

(186) Australia noted that whilst this work had stemmed from the need to fulfil a requirement of Annex V to the Protocol, it was now evident that the EDA tool would support a much wider range of tasks of relevance to the CEP.

7e) Other Annex V Matters

Marine Protected Areas

(187) The Russian Federation introduced WP17 *On the concept of the Antarctic Marine Protected Areas*. This paper noted the objectives of the CEP and CCAMLR in relation to protection of the marine environment, and highlighted the importance of cooperation with CCAMLR on the issue of marine protected areas. The Russian Federation noted the mechanism for marine ASPAs and ASMAs to be designated in accordance with the approval of CCAMLR, and emphasized the need to clarify the procedure for coordinating proposals for MPA designation with CCAMLR.

(188) The CCAMLR observer welcomed the Russian paper and noted the importance of CEP and CCAMLR working together on MPA initiatives. On the issue of CCAMLR's

scrutiny of management plans with a marine component, CCAMLR noted that the Commission had at its last meeting agreed to maintain the current practice where all such plans are sent to CCAMLR for assessment in accordance with Decision 9 (2005). However, it is expected that the current practice will require review in due course. In the meantime CCAMLR offered to work with the CEP on the practical implementation of this process to ensure that the review of all such management plans can be expedited.

(189) For practical efficiency therefore CCAMLR encouraged the CEP and ATCM to provide Management Plans for review by CCAMLR under Decision 9 (2005) as soon as possible after they had been designated for referral to CCAMLR by the ATCM.

(190) CCAMLR introduced IP38 *Update on progress towards the CCAMLR Workshop on Bioregionalisation of the Southern Ocean (Brussels, Belgium, 13-17 August 2007)*. This workshop will be an important step towards the establishment of a system of marine protected areas as part of a harmonised regime across the Antarctic Treaty system. The workshop will focus on the technical development of methods for bioregionalisation of the Southern Ocean. Work on consideration of methods for the selection and designation of MPAs will proceed separately, in parallel. CCAMLR encouraged CEP participation in this workshop, and noted the relevance of this work to the Committee, particularly with regard to the elaboration of the 'systematic environmental geographic framework', environmental monitoring, and identification of sensitive or vulnerable areas. The importance of this work in relation to ongoing cooperation between the CEP and CCAMLR was also highlighted.

(191) Australia strongly supported the work being undertaken towards selection and designation of marine protected areas in the Southern Ocean.

(192) South Africa commented on its experience in developing a marine protected area around the Prince Edward Islands and looked forward to offering this as an example MPA within the CCAMLR area.

(193) Japan stressed the importance of selecting and designating MPAs on best available scientific knowledge and thus welcomed the proposed workshop.

(194) The Committee thanked Belgium for hosting the CCAMLR Bioregionalisation Workshop in August 2007, and looked forward to the outcomes of this work. Members were encouraged to work together with their CCAMLR colleagues on this initiative.

(195) The UK Presented IP 53 *Criteria for the selection of Marine Protected Areas (MPAs)*, on how existing selection criteria for protected areas, might be applied in the identification of candidate marine sites for special protection and management. The UK noted the similarities and differences with respect to existing criteria, inside and outside the Antarctic Treaty system. It considered that MPAs could be selected based on a combination of tools such as bioregionalization, risk assessment, feasibility analysis and decision-support software, as well as selection criteria.

(196) The Committee thanked the UK for its paper and recognised that further work on selection criteria would need to proceed in parallel to the bioregionalisation work being undertaken through the workshop.

(197) ASOC presented IP 87 *Marine Protected Areas – Steps Forward for the ATCM,* identifying actions to protect the Antarctic marine environment and issues to be considered by the ATCM in developing the existing ASPA and ASMA system to achieve a better protection of the marine environment. ASOC supported the participation of the CEP in the forthcoming CCAMLR workshop on bioregionalisation, and noted that this work complemented wider international commitments to the development of MPAs.

(198) The UK introduced WP 43 *Guidance for Working Papers on Area Protection and Management*, proposing a new template to be provided at the time of submitting new or revised management plans for protected or managed areas. The aim of the template was to streamline the processing of management plans with respect to their legal adoption.

(199) Several Members welcomed the UK proposal and recognised the benefits of completing such a template.

(200) One Member supported the proposal in principal but, due to time constraints, wished to adequately analyse it.

(201) The Committee looked forward to the UK preparing a revised version of the proposal for submission at CEP XI.

(202) Germany introduced IP 22 rev 1 *Progress Report on the Discussion of the International Working Group about Possibilities for Environmental Management of Fildes Peninsula and Ardley Island* (Chile and Germany). Germany reminded the meeting of previous papers on this matter and provided a report on the work of the international working group, established to discuss management approaches to the Fildes Peninsula region. The international working group intends to continue its discussions taking into account the outcomes to the workshop held in Punta Arenas in March 2007; the final report of a risk assessment for the region undertaken by Germany and the CEP's review of the management plan for ASPA 150.

(203) The Committee welcomed this report and looked forward to further progress on the matter.

(204) Germany introduced IP 112 *Possible Modules of a "Fildes Peninsula region" ASMA Management Plan,* noting that it had been prepared on the basis of substantial data collection on human activities in the region as well as a risk analysis evaluating the impacts on the values to be protected.

(205) Chile introduced IP 115 *Management and further protection within ASPA 125: Current situation*, which provided a review of the status of the two sites protected by ASPA 125.

(206) Chile reported that the review had concluded that only one of the two sites retained paleontological values for which the areas were first designated. As a result Chile suggested that a new management scheme for ASPA 125 was now required including a code of conduct for those wishing to visit and undertake research in the area.

(207) Chile introduced IP117 *Workshop on Coordination of Activities in the Fildes Peninsula Region.* The Workshop examined a range of approaches to a multiple use management system, including the scientific and environmental studies leading towards an ASMA. The Workshop did not produce findings and recommendations but its materials and methodology shall remain available to the International Working Group, and the different presentations, which will be published by INACH, and on the ATS Secretariat website.

(208) ASOC introduced IP 136 *Implementing the Madrid Protocol: A Case Study of Fildes Peninsula, King Geroge Island* on an evaluation of implementation of the Protocol at Fildes Peninsula, to analyse how stations active in the area collectively implement the Protocol. ASOC noted that Fildes Peninsula is in many regards unique, and currently has a greater concentration of facilities than most other parts of Antarctica. ASOC commented that progress is still needed in matters that require international cooperation, and that use of the ASMA instrument would be beneficial.

(209) Germany reported on a parallel meeting of the International Working Group that defined concrete steps to develop a work plan and will work to address and solve management issues for the Fildes Peninsula Region on the basis of the tabled papers.

(210) The Chair thanked Chile and Germany for the updated information and recognised, on behalf of the CEP, the work that the Parties active in Fildes Peninsula had started developing for the protection of the area.

(211) Spain presented IP 9 *Opening of Lago Escondido at Deception Island,* on the opening of part of a natural wall which had contained the Escondido lake in the north west area of Deception Island. What had been a distinct lake was now an embayment linked directly to Port Foster. This had resulted in a significant change to what had been a scientifically important ASPA within the Deception Island ASMA. Spain had proposed place names for the resulting new geographic features.

(212) On behalf of its co-authors the United Kingdom introduced IP 108 *Report of the Deception Island Antarctic Specially Managed Area (ASMA) Management Group,* (Argentina, Chile, Norway, Spain, United Kingdom and United States) giving an overview of the scientific and operational activities undertaken on Deception Island during the 2006/07 austral summer, including tourist activities and two cruise ship incidents which occurred within the ASMA.

(213) The UK informed the Committee on the planned intersessional work that the Management Group are considering in light of concerns raised by these incidents and to identify what further actions are required to protect the important natural values of Deception Island, so as to support implementation of the ASMA Management Plan. The group will

redraft the existing codes of conduct for Whalers Bay, Pendulum Cove, and Bailey Head in the format of ATCM site guidelines working closely with IAATO and ASOC. The UK has completed its two year term chairing the Management Group. Argentina will chair the Group for the next two years.

(214) Spain expressed concern over increasing visitation to this important island and suggested that tourist activity should be better regulated given the significant environmental and scientific values that the ASMA is designed to protect. Recalling the two shipping incidents which had occurred during the 2006/07 season, Spain noted that the ASMA status of the island should demand that any incident should be treated as an emergency and Parties present in the island should be immediately informed.

(215) Argentina fully supported Spain's view and expressed concern that the two stations active on the island had not been notified immediately that the groundings occurred. Argentina made a proposal that the two existing bases should be set up as a communications center for such cases.

(216) India expressed its concern on the two incidents and wanted to know the number of non IAATO member vessels, including small yachts, that visited the Island during the last season. IAATO responded by stating that the figures tabled included only two non IAATO member vessels and information on others was not available.

(217) IAATO thanked the Management Group for IP 108 and welcomed the opportunity to be included in discussions of all these issues during the intersessional period.

(218) ASOC regretted the two recent incidents of tourist vessels grounding at Deception Island and asked Norway for an estimate of the amount of fuel spilled during the grounding of the *Nordkapp*.

(219) Norway noted that WP 37 reported that an estimated spill of between 500 and 750 litres of light marine diesel oil had been reported at the time of the incident but that the maritime enquiry later established that it is not possible to make an accurate estimate of the actual amount spilled.

(220) On behalf of its co-authors, Brazil introduced IP 62 *Admiralty Bay Antarctic Specially Managed Area (ASMA No 1) Management Group Report* (Brazil, Ecuador, Peru, Poland and the United States). The paper reported that the first meeting of the Management Group was held at the XXIX ATCM and several management activities were identified as priorities. The second meeting was held in King George Island and the group had the possibility to visit different sites and facilities in the Area and to discuss the actions related to the Management Plan as well as the development of a Monitoring Program which was one of the activities identified as priority.

(221) Brazil informed the Committee that it was very important that the Management Group could meet in Antarctica to visit the different sites and facilities in the Area and to discuss the actions related to the Management Plan *in situ.* There has been a good support for

planning joint actions on monitoring, waste management, emergency plans, cumulative impact, and potential scientific cooperation. Brazil noted that establishment of the ASMA has definitely contributed to improving the level of mutual assistance and co-operation among Parties operating in the Area.

(222) The Committee welcomed these reports from two ASMA management groups which demonstrated how ASMA designation is assisting co-operation between those working in the region.

Item 8: Conservation of Antarctic Fauna and Flora

8a) Quarantine and non-native species

(223) SCAR introduced IP 37 *Hull fouling as a source of marine invasion in the Antarctic,* indicating that it is an important route for the transport of marine non-native species to the Antarctic region. SCAR drew attention to the research required to fully understand the sources of and species contributing to hull fouling and the extent to which hull fouling could be reduced as a risk of introducing non-native species.

(224) New Zealand introduced IP 43 *The Invasive Species Database* on the potential utility of the Global Invasive Species Database (GISD) (managed by IUCN's Invasive Species Specialist Group) for recording Antarctic alien species.

(225) New Zealand noted that the GISD focuses only on invasive alien species and does not include information on simply alien species. Nevertheless, New Zealand suggested that a centralised database would assist in managing Antarctic non-native species, and in this regard drew attention to IP 126 *Prevention and Management of Harmful Non-native Species in the Antarctic and the sub-Antarctic* (IUCN), which contained other non-native species databases and information sources.

(226) SCAR welcomed New Zealand's and IUCN's papers, and noted that SCAR scientists hold a substantial database on both indigenous and non-indigenous terrestrial species found in the Antarctic region.

(227) SCAR introduced IP 49 *Aliens in Antarctica* (Australia and SCAR), recalling that impacts produced by alien species on Antarctic ecosystems will be exacerbated with rapid climate change now being experienced in parts of Antarctica. SCAR explained that *Aliens in Antarctica* is an international project sponsored by SCAR to assess the pathways for transfer of propagules (seeds, spores, eggs), and the extent to which people from many nations unintentionally carry propagules of alien species into the Antarctic region.

(228) The project will help inform the Antarctic Treaty Parties of the size and nature of the threat and possible mitigation methods. Results are expected to be generated within 8 to 12 months, and recommendations should be available for consideration by the ATCM / CEP in 2009.

(229) Australia noted that this project would also provide the centralised database suggested by New Zealand.

(230) Sweden recalled that the issue of non-native species had been identified as one of the high priority issues in the CEP's provisional five-year work plan, and proposed that preventative measure should be considered by Parties when preparing environmental impact assessments. Sweden also suggested that guidelines should be developed to reduce the risk of introduction.

(231) Sweden also encouraged all Parties to ratify the IMO's Ballast Water Convention at the earliest opportunity, and the UK noted that the adopted ATCM Ballast Water Guidelines (Resolution 3 (2006)) would be considered by IMO next July.

(232) Responding to a question from France, SCAR reported that their work on developing a code of conduct for minimising the introduction of alien species would be the subject of a workshop in May 2007.

(233) The Committee looked forward to the product of this work at CEP XI.

(234) Also submitted under this agenda item was IP 36 *Non-native species: Pathways and Vectors between New Zealand and Scott Base, Antarctica*.

8b) Specially Protected Species

(235) SCAR provided an explanation on the withdrawal of its working paper on the issue of designating southern giant petrels as specially protected species. Subsequent to the submission, SCAR's attention was drawn to the fact that new, unpublished data on the species at the South Orkney islands had been collected, and that these data suggested that the designation of the species as 'critically endangered' might require revision.

(236) Given that the large majority of the regional, that is Antarctic, population of the southern giant petrel is found on the South Orkney and South Shetland islands, SCAR immediately requested additional, unpublished information and advice from a range of scientists working in these areas, and from other organizations which have an interest in this species. SCAR also re-reviewed all available information in the public domain concerning this species in light of these data and the opinions expressed.

(237) Based on careful consideration of all of the available data and opinions, it was SCAR's view that the status of the regional population of the species can not now be convincingly determined. The scarcity of data, the lack of review of data that are available, and the inability of experts to reach consensus, means that the picture is much more complex than SCAR's Working Paper originally suggested. This complexity meant that SCAR could not offer the CEP a clear, scientifically defensible statement about the status of the regional population of the southern giant petrel.

(238) Given the current situation, and Resolution 4 (2006), SCAR agreed to facilitate a meeting of experts to review thoroughly the available information and to report back to the CEP on the outcome of that review meeting.

(239) Many Members and ASOC expressed their regret at the withdrawal of the SCAR working paper and suggested that the CEP could still recommend listing of the species as specially protected as a precautionary measure, whilst SCAR conducted a review of all the available data. These Members recognised the importance of scientific advice on which the Committee's decisions should be based. However, in the absence of reliable information at this stage, some of these Members considered that listing the species would be the least risky approach.

(240) Many Members were unable to support listing of the species until SCAR was able to provide unambiguous scientific advice. In the view of these Members, listing any species in the absence of clear scientific information would risk undermining the objective approach that needed to be taken, and would establish an unfortunate precedent.

(241) In this respect, Argentina pointed out that this kind of unfortunate precedent regrettably had already been established during debate on the Annex II review.

(242) If the species were listed on a precautionary basis, several Members commented that they would be prepared to delist the species should SCAR's reassessment of the data suggested that the southern giant petrel did not require special protection.

(243) Some Members commented that without a thorough assessment of the status and trends of the species it would be difficult to complete an adequate action plan including receipt of advice from relevant bodies such as CCAMLR.

(244) ASOC noted that SCAR would not be in a position to report on its reassessment until the CEP meeting in 2009. ASOC expressed its view that the protection of southern giant petrels was a critical issue and encouraged Members to reflect on the possibility of CEP failing to protect this species if adequate action was not taken. However, the Committee urged SCAR to consider bringing forward its planned workshop so as to provide the CEP with the necessary information before CEP XI.

(245) SCAR responded that the uncertainties associated with unpublished data made it difficult to predict how quickly its advice could be available. However, SCAR undertook to consider changing the time of the workshop. SCAR also urged Parties to ensure that their respective experts provided all relevant data at the earliest opportunity.

(246) The Committee agreed that this would be essential and several Members suggested they would consider undertaking additional surveys to assist in re-evaluating the status of the species.

(247) On the suggestion of Norway, and recognising importance of the issue, the Committee agreed to prepare a new resolution based on Resolution 4 (2006) for consideration by the ATCM.

(248) In the meantime, and as a means of continuing to test the CEP's guidelines on specially protected species, New Zealand offered to work with interested Parties to compile current management practices with respect to these species so as to prepare a draft action plan as an example. This could then be put into effect should the species be listed in the future.

(249) Several Members offered to assist New Zealand with this work.

(250) SCAR presented WP 27 *Current Status of the Ross Seal (Ommatophoca rossii): A Specially Protected Species under Annex II,* noting that the current status was based on a thorough review of available information appended to the paper. SCAR further noted that the species could be considered data deficient, and that therefore no change should be made to the species status, but that further information should be collected to improve knowledge, recognising future risk of habitat loss, especially given the baseline information now available from the Antarctic Pack Ice Seals Programme.

(251) The Committee agreed that the status of the Ross seal remain as a Specially Protected Species.

(252) SCAR introduced WP 26 *The Application of IUCN Endangerment Criteria at the Regional Level of the Antarctic Treaty Area,* noting the several important differences between regional and global listing procedures, the potential utility of the regional criteria for designation of Specially Protected Species under Annex II to the Protocol, and the information required to undertake such a regional listing.

(253) New Zealand welcomed SCAR's paper which provided a workable response to an issue that has been discussed at length by the CEP. New Zealand suggested the Committee may, in due course, consider adding the guidelines contained in the paper to the CEP's own guidelines for managing specially protected species.

(254) ASOC drew the Committee's attention to the importance of information on the potential impact of krill harvesting on populations of Antarctic fur seals, including the development and effectiveness of mitigation methods in reducing incidental mortality noted in Measure 4 (2006). XXIV CCAMLR Commission received advice from its Scientific Committee that the provision of such information would require observer coverage from all vessels engaged in the krill fishery. ASOC urged Parties who were Members of the Commission to give high priority to the provision of such information.

8c) Marine acoustics

(255) The CEP Chair presented IP 42 *Marine Acoustics in Antarctic Waters: Report of an International Whaling Commission Workshop,* recalling that at CEP IX the Committee had agreed to invite a representative from the IWC to provide a presentation on this workshop. The IWC had not been able to provide a representative, however, the Secretary to the IWC Commission, Dr Nicola Grandy had kindly provided copies of the IWC workshop report as well as the report of the Scientific Committee response to its recommendations.

(256) The Committee welcomed the information contained in the reports.

(257) Russia presented WP 18 *Russian studies of acoustic influence on marine biota*, noting that acoustic influence on Antarctic marine biota had been the focus of attention of the CEP since 2003. Russia considered that some similarity could be established in ice and hydrological regimes and biodiversity between the Barents Sea and Antarctic seas, and therefore offered the results of its experience of studies carried out by Russian specialists in the Arctic since the 1970's.

(258) Russia concluded that marine seismic activities could not create a threat for Arctic marine organisms, since their action is very restricted in space and does not produce a significant influence at a distance of more than 3-10 m. The risks connected with the use of all scientific hydroacoustic instruments including seismic transmitters, are less or comparable with the risks connected with shipping noise *per se*.

(259) SCAR welcomed this information and expressed interest in consulting with Russia further on this matter.

(260) Germany introduced IP 4 *International Workshop "Impacts of seismic survey activities on whales and other marine biota"*. The workshop, organised by the Umweltbundesamt (UBA), was held in Dessau, Germany in September 2006. Sixty-five experts from ten countries had participated. The workshop focused on the impact of airguns on marine species, which significantly contribute to anthropogenic noise in the marine environment in some world regions. Considerable gaps in our knowledge on the impact of seismic surveys on marine taxa were identified, but at the same time new and substantial information was provided which helps to assess seismic activities. Accordingly marine seismic surveys have the potential to significantly alter the behaviour of marine mammals, fish and cephalopods. Atypical strandings of giant squids with multiple internal lesions took place in spatio-temporal correlation with seismic surveys.

(261) Germany noted that the full report of the workshop is available at *www.umweltbundesamt.de/ius/index.htm* and offered to provide the results of a risk assessment it planned to undertake at CEP XI.

(262) ASOC introduced IP 80 *Taking Action on Marine Noise in the Southern Ocean,* describing recent scientific events addressing the matter as well as forthcoming conferences on marine pollution. ASOC made recommendations to the Committee related to:

- the need to assess potential marine acoustic impacts in IEE and CEE processes;
- the need for seismic mitigation guidelines for all vessels conducting seismic research in Antarctica;
- the potential for establishing a working group between the CEP and SCAR to deal with this issue.

(263) New Zealand supported the proposal to ensure that all marine acoustic activities were adequately addressed by EIAs, and encouraged further CEP attention on the issue of developing appropriate guidelines.

(264) Germany notified the Committee that there will be an International Conference on the Effects of Noise on Aquatic Life taking place in Nyborg, Denmark 13-17 August 2007. Further information can be found at *www.NoiseEffects.umd.edu*

8d) Other matters relating to the conservation of Antarctic fauna and flora

(265) On behalf of Australia and SCAR, Australia introduced IP 32 *Census of Antarctic Marine Life (CAML),* noting that the CAML was both a major IPY initiative and a key SCAR activity. The objective of the census is to develop a benchmark of the distribution and abundance of marine biodiversity in Antarctic waters, and to leave a legacy of observation sites against which future change in the marine environment can be assessed.

(266) Australia noted that the fieldwork started in November 2006 in areas previously covered by the Larsen A and B ice shelves. The Larsen region has proved to be a unique site for understanding how marine ecosystems in Antarctica respond to global warming. The first CAML voyage reported some 15 potentially new species of crustacean, and four new species related to the corals, sea anemones and jellyfish. The majority of CAML's field surveys will be completed in the 2007/08 Antarctic season. CAML is scheduled to end in 2010 with a major contribution on the distribution and abundance of Southern Ocean biodiversity to the Census of Marine Life. Australia indicated that a summary of early results from CAML will be presented at a future meeting.

(267) SCAR presented IP 15 *Subglacial Antarctic Lake Environments (SALE) in the International Polar Year 2007-2008*, explaining that subglacial environments are important continental-scale interconnected phenomena under thick ice sheets and include a spectrum of geologic settings, ages, evolutions, and limnological conditions. SCAR therefore noted that subglacial environments provided an opportunity to advance understanding of how life, the environment, climate, and planetary history combine to produce the world as we know it today.

(268) Russia commented that satellite data provide information only on surface changes of ice over the lake rather than movement of water within the subglacial lakes and streams.

Item 9: Environmental Monitoring and Reporting

(269) Norway presented WP 28 *Climate Change*, highlighting the unequivocal warming of the climate system, remarking on the important role that the Arctic and the Antarctic have in regulating the global climate system and describing the grave consequences that those changes may have for the Antarctic environment, as well as on earth systems and inhabitants.

(270) Norway recalled that, when signing the Protocol, the Antarctic Treaty Parties committed themselves to the comprehensive protection of the Antarctic environment and that an

extensive knowledge on the consequences of climate change on the Antarctic environment was a prerequisite for the Parties to fulfil these commitments.

(271) Norway therefore recommended that the CEP and the ATCM, expressing their concern over the projected adverse effects of climate change on the Antarctic environment, include the issue as a new item on their respective agendas.

(272) There was wide recognition by the Committee of the importance and significance of climate change in Antarctica and the implications for the CEP's and the ATCM's environmental management responsibilities in the continent.

(273) The Committee also agreed on the importance of supporting and undertaking climate change research in Antarctic that is of global significance including abrupt change that might be related, for example, to threshold limits of ice sheet decay.

(274) Some delegations expressed concern over ensuring that CEP and ATCM attention on the issue of climate change should be restricted to the Antarctic context, and to avoid duplicating work done by other organisations such as the IPCC.

(275) The Committee therefore agreed to add climate change as a sub-item under its agenda item on Environmental Monitoring and Reporting.

(276) SCAR introduced IP 5 *State of the Antarctic and Southern Ocean Climate System (SASOCS)*, which was complementary to the SCAR lecture (IP 124) that had been presented to ATCM XXX by the SCAR President, Professor Chris Rapley. IP 5 represents phase one of the review of Antarctic climate that SCAR had introduced at XXIX ATCM, and addresses what is known of the physics of the climate system of Antarctica and the Southern Ocean. The review will not be known as an 'assessment', but as the Review of Antarctic Climate and Environment. Phase II, which SCAR hopes to present to XXXI ATCM, will include a review of the response of the biota to climate change.

(277) SCAR urged Parties to (i) improve, enhance and sustain observations of the climate system in the region, so as to detect, understand and underpin forecasts of climate change; and (ii) as a matter of some urgency to work together with SCAR to improve models of ice sheet dynamics in relation to sea level rise, owing to the inadequacy of present understanding.

(278) ASOC presented IP 82 *The Antarctic* and *Climate Change* which provided an overview of recent Antarctic climate change research. ASOC made several recommendations to the meeting and encouraged CEP and ATCM to discuss climate change as a separate agenda item each year at their meetings.

(279) Norway presented WP 29 *Environmental Monitoring in Antarctica – lessons learned from the Arctic,* recalling that at CEP IX it had offered to bring forward information on the monitoring work under the Arctic Council. Monitoring activities are undertaken both by the Arctic Monitoring and Assessment Program Working Group (AMAP) and the Circumpolar Biodiversity Monitoring Program (CBMP) under development by the Arctic Council Working Group Conservation of Arctic Fauna and Flora (CAFF).

(280) Norway explained both Arctic programs and described the differences and similarities between the Antarctic and the Arctic for designing monitoring programs. It recognized that there are still many of the same challenges to be tackled in both regions, in order to develop scientifically sound, robust and long lasting coordinated monitoring.

(281) Among the lessons that can be learned from the Arctic Norway mentioned:

- The need of a clear organizational structure behind the process;
- The monitoring framework should be built based on already existing monitoring activities;
- The need to undertake a selection process for indicators or parameters;
- Funding for long-term monitoring programmes;
- The design of an strategy for regular assessment of the process;
- The need to maintain contact with the Arctic monitoring programs for regular updates and discussions.

(282) Norway noted that a clear organisational structure supporting coordinated monitoring seems to be necessary, and therefore suggested the CEP consider establishing a permanent group with the mandate to develop and implement a coordinated monitoring program for Antarctica.

(283) The Committee thanked Norway for its excellent paper and noted that the issue of environmental monitoring had been the subject of much attention by the CEP over several meetings and ICGs, though with limited progress.

(284) Several Members welcomed the suggestion for establishing a group to develop a more coordinated pan-Antarctic approach to monitoring and reporting.

(285) Other Members agreed this might be useful, but emphasised the importance of synthesising the significant amount of information that currently existed on the issue in an Antarctic context, including CEP deliberations and work undertaken by COMNAP, including for example, COMNAPs' own survey of monitoring activity and the Practical Guidelines for Developing and Designing Environmental Monitoring Programmes in Antarctica (Resolution 2 (2005)).

(286) Following a request from the CEP, SCAR agreed to provide available information on current long-term environmental and observational monitoring research programmes. However, SCAR noted that environmental monitoring activities were often not a major focus of research programmes.

(287) The Committee agreed to spend time on this issue at its next meeting and encouraged all Members to submit information on their current monitoring activities.

(288) CCAMLR offered to contribute to this synthesis noting its 23 year old marine ecosystem monitoring programme.

(289) Brazil introduced IP 111 rev 1 on *A Monitoring Programme for the Admiralty Bay Antarctic Specially Managed Area (ASMA Nº 1)*, (Brazil, Ecuador, Peru and Poland) reporting on the considerable success in developing a co-ordinated monitoring programme within the ASMA framework. Brazil reported that the ASMA Management Group met in Antarctica in January 2007 to consolidate the work undertaken in previous meetings. Monitoring parameters were divided into the two broad categories of environmental monitoring proposed at CEP IX, operational monitoring and state of the environment monitoring. The next phase will be to elaborate a system of long-term monitoring, with detailed information, resources and timetable of activities, and prepare the implementation of the monitoring programme. Discussions will progress through the forum in the ASMA website and workshops.

(290) Ecuador and Peru expressed strong support for the work being undertaken.

(291) New Zealand congratulated the countries involved and commented that this provided an excellent example of coordinated monitoring within the framework of an ASMA.

(292) Uruguay presented IP 26 *Fluxgate and Proton Precession technology for fixed monitoring station in BCAA,* on a fixed station to be placed at Artigas station, in the framework of the IPY which included a triaxial fluxgate sensor, a scalar proton precession sensor, and associated data acquisition and storage electronics.

Item 10: Inspection Reports

(293) On behalf of its co-authors Sweden introduced WP 16 *Antarctic Treaty Inspections undertaken jointly by Sweden, France and New Zealand in accordance with Article VII of the Antarctic Treaty and Article 14 of the Protocol on Environmental Protection to the Antarctic Treaty*, (Sweden, France and New Zealand). Sweden informed that two stations were inspected: Amundsen-Scott South Pole (United States) and Concordia (France and Italy) in January 2007 as a joint venture between Sweden, France and New Zealand.

(294) Amundsen-Scott South Pole Station was last inspected in 1988, before construction of the new station building, and Concordia Station had never been inspected. Both stations had several features in common. They were remote central locations of Antarctica, situated high on the polar plateau in extremely hostile environments. They were science driven and science support was the dominating operational issue.

(295) Sweden informed the meeting that the Inspection Team had concluded that both Amundsen-Scott South Pole and Concordia stations were complying to a high standard with the provisions and spirit of the Antarctic Treaty and the Protocol on Environmental Protection.

(296) Sweden concluded that in both stations scientific activities were of a remarkably high standard and also noted that Concordia Station is an excellent example of Antarctic cooperation.

(297) Italy and the US thanked the inspection team for their positive and supportive comments.

(298) The United States introduced IP 10 *United States Report of Inspections* on their inspection program conducted from November 12 to December 1, 2006, as part of its long-term program of inspections. The US inspected six Stations and three tour vessels. A review of tour operations was undertaken because of the considerable attention that has recently been devoted by Treaty Parties to issues related to tourism and the increasing number of tourists visiting Antarctica.

(299) The US expressed their appreciation for the cooperation shown by all stations and ships inspected.

(300) Among the main issues noted by the inspection team at stations inspected were a high level of understanding of the Treaty and the Environmental Protocol and good cooperation among stations. However, in some visits its was noted that environmental practices were not as high as might be expected, including for example, lack of secondary containment on fuel tanks, and limited waste management procedures. Regarding tourism vessels the inspection team was impressed by the high standard of compliance with Protocol provisions.

(301) The UK thanked the US for the very positive report in respect of the Rothera research station which noted the very high level of compliance.

(302) Argentina made additional comments to those specifically related to the Argentine station that had been inspected. These were intended to offer clarifications on the current situation of two refuges and two summer stations, references of which had been included in the US inspection report.

(303) Whilst thanking the awareness and recommendations of the US inspection to China'sAntarctic Great Wall Station, China offered some corrections with regard to certain issues in the inspection report such as waste heat and the fuel tanks, and also clarified the EIA process in China.

(304) Chile thanked the US for their Inspection Report for O'Higgins Station and the inclusion in the document of the Chilean comments. Chile also corrected that the scientific laboratory mentioned was built during the modification of the station in 1999-2000 and that it was equipped during the past season, to support scientific research in the area.

(305) The US thanked these Members for their feedback and welcomed the additional information provided by Argentina.

(306) Russia welcomed the US report and suggested that inspection teams should ensure they have a good understanding of the stations and facilities to be inspected in advance. Russia proposed to the Parties conducting inspections to obtain initial information about aspects of legal and organisational structure of the corresponding entities.

(307) COMNAP noted that their website would soon be used to compile information on Antarctic stations and bases in the form of the Treaty inspection checklists. COMNAP also noted that communication is an essential component of undertaking inspections therefore urged inspection teams to have appropriate translation available.

(308) Many Members and observers commended Sweden, France, New Zealand and the US for their inspections, which showed a broad range of Protocol implementation practices and standards.

(309) New Zealand introduced WP 33 *A Proposed Checklist for Inspecting Protected Areas in Antarctica,* on behalf of New Zealand, the United Kingdom and the United States. New Zealand noted that it had consulted with a number of countries on the checklist and would bring a revised version for the consideration of CEP XI.

Item 11: Emergency Response and Contingency Planning

(310) Norway presented WP 37 *The M/S Nordkapp incident,* on the grounding of a Norwegian tourist vessel during passage of Neptune's Bellows, Deception Island, Antarctica, in January 2007. The incident had no serious consequences for passengers and crew and the environmental consequences were limited. Norway informed the Committee that during transfer of fuel from damaged tanks, oil contaminated water was released into the waters of Port Foster at Deception Island. Observations made by personnel at the Spanish Station Gabriel de Castilla and the Argentine station Decepcion as well as IAATO members indicated that the spill of light marine diesel disintegrated after a few days.

(311) Norway noted that the main environmental lessons learned from the incident were related to types and use of response equipments and type of fuel used in Antarctic waters to reduce the consequences of an oil spill.

(312) IAATO informed the meeting that the incident will be assessed in detail by the association's marine committee at the next general meeting taking into consideration such factors as oil spill response equipment to ensure that lessons can be learned in responding to such incidents in the future.

(313) In response to ASOC's question Norway noted that the need for and type of follow-up monitoring was still under consideration.

(314) Chile recalled the importance of the combined Antarctic Naval Patrol of Argentina and Chile to assist in such emergencies, underscoring the support given to the vessel during its stay in Maxwell Bay.

(315) France noted that this incident illustrated the necessity to pursue efforts in order to find appropriate collective responses to face up to this type of critical situation.

(316) India expressed its concern on the two incidents and wanted to know the number of non-IAATO member vessels, including small yachts that visited the island during the last season.

(317) IAATO responded by stating that the figures tabled in IAATO's annual report included only two non-IAATO members vessels and that other information was not available.

(318) Argentina stressed the importance of compliance with Measure 4 (2004) and Resolution 4 (2004) with the objective of minimising the occurrence of such incidents.

(319) The Committee thanked Norway for this information and looked forward to further reports in respect of actions taken to minimise the risk of such incidents in the future as well as measures taken with respect to managing increasing human activity in Deception Island.

(320) COMNAP introduced IP 99 *Contingency Planning and Emergency Response,* on the importance of safety as a priority matter for National Antarctic Programs and the ATCM. COMNAP noted that safety is a relevant part of the current as well as the planned exchange of information system in which COMANP is working closely with the Antarctic Treaty Secretariat, and recalled the importance of advance exchange of information on planned activities, support plans and available response infrastructure. Among the current practice to promote safety in Antarctica, COMANP recalled the work of its *ad hoc* working groups.

(321) COMNAP highlighted that systems in place were essentially structured around, and supported by, a range of international agreements in place. Safety in Antarctica is actively supported by the five Rescue Coordination Centres (RCCs) in South Africa, Australia, New Zealand, Chile and Argentina, which under international agreements cover the Antarctic region. These RCCs function very well and the most effective way of supporting safety is to collaborate with and support these RCCs. COMNAP also highlighted the unique presence in the Antarctic Peninsula region every summer of the Combined Antarctic Naval Patrol of Argentina and Chile that provides dedicated rescue assets.

(322) COMNAP expressed that through good planning, sound use of risk management processes, effective contingency planning and strong cooperative relationships, individual members of the COMNAP community, have proven their ability to respond effectively to emergency events and search and rescue incidents.

(323) Uruguay presented IP 25 *Monitoreo Ambiental Biológico para el Plan de Contingencia de la descarga de combustible en la Base Científica Antártica Artigas*. The objective of this monitoring activity is to evaluate biological integrity of the area between Collins Bay and Ardley Cove before, during and after the process of offloading fuel in order to verify that there are no alterations in the biota as a result of such activities.

Item 12: Waste Management

(324) Australia presented IP 33 *Australian Research on the Assessment and Remediation of Contaminated Sites in Antarctica*, reporting on continuing Australian research to develop a range of techniques to clean up Antarctic and subantarctic contaminated sites. Australia noted that it would welcome collaboration with researchers working on similar problems in Antarctic ecosystems, and that it would report back to future CEP meetings on further advances in this work.

(325) Australia also presented IP 34 *On-site Assessment of Metal Contamination During Remediation of a Waste Disposal Site in Antarctica*, which reported on the on-site assessment

techniques used during the remediation of the Thala Valley waste disposal site near Australia's Casey station. A detailed report is available from a website listed in the paper.

(326) The Committee commended Australia on the significant monitoring work it was undertaking in respect of this clean up programme.

(327) COMNAP introduced IP 98 *COMNAP's 2006 Workshop on Waste Management in Antarctica*, on the results of the workshop held by the Antarctic Environmental Officers Network (AEON) in conjunction with the 2006 COMNAP Annual General Meeting. It was the first workshop on this issue since the Madrid Protocol was signed in 1991 and was focused on current waste management practices and clean up of old wastes, and offered an invaluable opportunity to bring waste management officers together. The full workshop report is available on request.

(328) Ukraine provided information on biotechnology for solid food waste processing that was developed and introduced at Vernadsky Station. It allows a 20-fold reduction of waste weight within 5-7 days and may be efficient at stations with a large number of personnel.

(329) Ukraine isolated metal-resistant microorganisms making it possible to treat wastewaters with high heavy metal concentrations. It allows both obtaining technically clean water and ensuring energy efficiency, which is also essential nowadays.

(330) The US submitted IP 21 *Borehole Remediation and Closure Activities at Lake Vida in the McMurdo Dry Valleys Antarctic Specially Managed Area* under this agenda item.

Item 13: Prevention of Marine Pollution

(331) Sweden commented on its support of a proposal from the organisation Intertanco according to which the global limit for sulphur content in marine fuels should be reduced from 4.5% to 1%. Sweden encouraged other countries to support this in IMO and the MARPOL negotiations of Annex VI.

(332) CCAMLR noted its recent adoption of Conservation Measure (CM 26-01) "General Environmental Protection During Fishing". The measure deals with disposal of plastic packaging bands, translocation of poultry and the prohibition of discharges in high latitude fisheries. In respect of the latter, vessels fishing south of 60° South are prohibited from dumping or discharging such substances as oil or fuel products (except as permitted under MARPOL Annex 1), garbage, food waste, poultry, sewage within 12 miles of land or ice shelves, or sewage (while the ship is travelling at less than 4 knots), offal or incineration ash.

(333) The Committee welcomed this amalgamation and strengthening of CCAMLR's environmental conservation measures.

Item 14: Cooperation with Other Organisations

(334) The Chair in his capacity as CEP Observer to CCAMLR's Scientific Committee WP 7 *Report of the CEP Observer to the Twenty-fifth meeting of the Scientific Committee to CCAMLR, 23 to 27 October 2006*, (New Zealand). The Chair recalled the Committee's request at CEP IX that such reports should be provided in the form of working papers and include background information on CCAMLR and its various working groups.

(335) The Chair drew the attention of the meeting to a number of issues of interest to the CEP, including:

- The work being undertaken towards a Bioregionalisation Workshop in Belgium
- The Scientific Committee's intention to conduct work on the potential effects of climate change on Antarctic marine ecosystems;
- The significant reductions in by-catch of seals and seabirds in the legal fishery;
- CCAMLR's marine debris database.

(336) Argentina raised some issues included in this report which were associated to krill fisheries. This was mainly focused on estimated tripling of krill captures and took into account some uncertainties on the establishment of capture limits expressed in WP 7.

(337) In response, CCAMLR indicated that the issues associated with the designation of precautionary catch limits, collection of data necessary to inform decision-making on such limits and their allocation, and modelling of relationships between predators, the natural environment, fisheries and krill were all work in progress within the CCAMLR Scientific committee. More detailed information is available from the CCAMLR Secretariat.

(338) Australia, as host of the ACAP Interim Secretariat, introduced IP 69 *Progress with the implementation of the Agreement on the Conservation of Albatrosses and Petrels (ACAP)* on the development and activities of this multilateral agreement aimed to conservation of albatrosses and petrels. Australia drew the Committee's attention to ACAP's priorities for action, namely: fisheries by catch of Albatrosses and petrels; and management and protection of breeding sites.

(339) Australia also noted that the paper outlines ACAP's desire to work with the Antarctic Treaty Parties and lists some areas by which this cooperation can occur.

(340) New Zealand noted that, with respect to southern giant petrels, ACAP would welcome any measures taken by the Antarctic Treaty Parties to protect breeding sites for this species, including any designation of the species as an Antarctic Specially Protected Species.

Item 15: General Matters

(341) COMNAP introduced WP 35 *Best Practice for Energy Management – Guidance and Recommendations,* highlighting the importance of ensuring that energy management is considered on Antarctic facilities and presenting to the Committee a set of guidance principles on best practice for use of energy.

(342) COMNAP noted that these principles, developed by the COMNAP energy management group, related to measurements and identification of use of energy, introduction of educational programs, replacement of inefficient facilities, use of energy efficient equipments, analysis of possibilities of alternative energies and reduction of operational needs where possible.

(343) The Committee endorsed and adopted the following guiding principles set out in the paper for use by all in Antarctica:

- Measure and clearly identify where energy and power is being used.
- Introduce an education programme to recognise the need for energy saving and encourage personnel to implement and maintain energy saving measures.
- Replace inefficient buildings or install enhanced insulation to ensure that heat loss is reduced.
- Replace power and lighting systems with energy efficient equipment and controllers that ensure that equipment is only using power when there is an operational need.
- Install energy efficient generator systems and make use of heat recovery systems where feasible.
- Investigate and where feasible install renewable energy systems to reduce the dependence on fossil based fuel.
- Reduce where possible operational activities. Particular attention to be paid to the routing of ships and the operation of engines to ensure lower fuel burn.

(344) On behalf of its co-authors, Germany presented IP 18 *International Workshop of Antarctic Competent Authorities* (Belgium, France, Germany, Netherlands, Peru, Russian Federation, Ukraine and the United Kingdom). Germany informed the meeting that experts from 8 Antarctic Treaty Parties as well as ASOC participated in the workshop. It was a very constructive meeting and the discussions emphasised clearly the usefulness of the informal exchange of views and experiences in respect of various issues regarding the implementation of the Protocol. Detailed information about the workshop can be found in the website of the Discussion Forum of Competent Authorities (DFCA) at *http://forum.cep.aq*. In order to enable as many Contracting Parties as possible to contribute to this information exchange Germany proposed that it should be checked whether a half day or a one day meeting could take place in the margins of or prior or subsequent to the next CEP/ATCM meeting in 2008.

(345) The Netherlands welcomed the report and invited representatives from all Antarctic competent authorities to join the forum.

(346) Australia introduced IP 48 *Mawson Station Wind Farm – Four Years of Operational Experience*, which provides a practical example of the guiding principles for energy management presented in COMNAP's Working Paper 35. On average over the four years since their installation in 2003, the two wind turbines have met approximately 34 percent of the station's combined electricity and heating energy load, and have produced an average annual fuel saving of approximately 29 percent. That fuel savings directly equates a savings of over 1700 tonnes of carbon dioxide, and reduced risks in the transport, storage and handling of fuel.

(347) A number of delegations congratulated Australia on this significant achievement and noted this as a model example of implementation of the energy management guiding principles that had been adopted by the Committee.

(348) In response to an inquiry from Japan, Australia noted that the frequency of bird strike had been very infrequent as had been estimated in the IEE prepared for the construction and operation of turbines.

(349) China Introduced IP 57 *Chinese Antarctic Environmental Report (2006-2007)* describing the scientific, logistic and environmental protection activities during the 23rd Chinese Antarctic Research Expedition.

Item 16: Election of Officers

(350) The meeting re-elected Dr Yves Frenot (France) for a second term as First Vice Chair of the CEP by acclamation. The Committee congratulated Dr Frenot and the CEP Chair thanked Dr Frenot for his hard work and assistance.

Item 17: Preparation for CEP XI

(351) The Committee adopted the agenda for CEP XI in Appendix 5.

Item 18: Adoption of the Report

(352) The Committee adopted the draft Report.

Item 19: Closing of the Meeting

(353) The Chair closed the meeting on Friday 4 May 2007.

ANNEX 1

CEP X Agenda and Final List of Documents

Paper Nº	Title	Submitted by

Item 1: Opening of the Meeting

Item 2: Adoption of the Agenda

Item 3: Strategic Discussion on the Future of the CEP

WP 10	Intersessional CEP Consideration of Draft Management Plans	Australia
WP 15	A Five-Year Work plan for the CEP: Report of the Intersessional Contact Group	New Zealand

Item 4: Operation of the CEP

SP 2	Secretariat Report 2006/07	ATS
SP 11 rev 1	Electronic Information Exchange System	ATS
IP 8	Annual Report of Spain Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty	Spain
IP 14	Annual Report submitted by France on the Protocol on Environmental Protection to the Antarctic Treaty as required by Article 17 of the Protocol 2007	France
IP 17	Annual Report of China Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty	China
IP 27	Informe Anual de Acuerdo al Artículo 17 del Protocolo al Tratado Antártico sobre la Protección del Medio Ambiente Periodo 2006 - 2007	Uruguay
IP 31	Annual Report Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty	Ukraine
IP 39	Annual Report of New Zealand pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty 2006/2007	New Zealand
IP 47	Annual Report of the Republic of Korea Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty	Korea, Republic
IP 55	Report on the Implementation of the Protocol on Environmental Protection as Required by Article 17 of the Protocol	United Kingdom
IP 70	Annual Report Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty 2006-2007	Italy
IP 89	Annual Report Pursuant to the Protocol on Environmental protection to the Antarctic Treaty	Romania
IP 93	Informe Anual del Perú de acuerdo con el Artículo 17 del Protocolo al Tratado Antártico sobre Protección del Medio Ambiente	Peru
IP 96	Informe Anual del Ecuador de acuerdo con el Artículo 17 del Protocolo al Tratado Antártico sobre Protección del Medio Ambiente	Ecuador
IP 129	Annual Report Pursuant to the Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty	Japan

Paper Nº	Title	Submitted by

Item 5: International Polar Year

IP 49	Aliens in Antarctica	Australia & SCAR
IP 59	IPY - Indian Contribution	India
IP 73	IPY Report for ATCM XXX	IPY-IPO SCAR
IP 86 rev 1	The Human Footprint of the IPY 2007-2008 in Antarctica	ASOC

Item 6: Environmental Impact Assessment

6a) Draft Comprehensive Environmental Evaluations

WP 4	Draft Comprehensive Environmental Evaluation of New Indian Research Base at Larsemann Hills, Antarctica	India
IP 7	Draft Comprehensive Environmental Evaluation of New Indian Research Base at Larsemann Hills, Antarctica	India
IP 139	Additional Information on draft CEE on proposed new Indian research base at Larsemann Hills, East Antarctica	India

6b) Other EIA Matters

SP 8	Annual list of Initial Environmental Evaluations (IEE) and Comprehensive Environmental Evaluations (CEE) prepared between April 1st 2006 and March 31st 2007	ATS
IP 2	Initial Environmental Evaluation for Placement of Shelter Huts at the proposed site of new Indian Research Base, Larsemann Hills, East Antarctica	India
IP 19	Future perspectives for Kohnen Station (Dronning Maud Land)	Germany
IP 30	The Replacement of Fuel Tanks at Vernadsky Station	Ukraine
IP 51	Construction and Operation of the new Belgian Research Station, Dronning Maud Land, Antarctica. Final Comprehensive Environmental Evaluation (CEE)	Belgium
IP 63	Preliminary results of Russian expedition studies of the subglacial Lake Vostok in 2006-2007	Russian Federation
IP 71	Initial Environmental Evaluation. Construction and Operation of Nansen Ice Runway (Terra Nova Bay, Ross Sea, Antarctica)	Italy
IP 72	Initial Environmental Evaluation. Restructuring works of the pier at the Mario Zucchelli Italian Scientific Station (Terra Nova Bay, Ross Sea, Antarctica)	Italy
IP 79	The Case Against Tourism Landings from Ships Carrying More than 500 Passengers	ASOC
IP 80	Taking Action on Marine Noise in the Southern Ocean	ASOC
IP 84	Strengthening the CEE Process	ASOC
IP 88	Initial Environmental Evaluation law-Racovita Base	Romania
IP 102	Final Comprehensive Environmental Evaluation (CEE) for the Proposed Construction and Operation of Halley VI Research Station, and the Demolition and Removal of Halley V Research Station, Brunt Ice Shelf, Caird Coast, Antarctica	United Kingdom
IP 132	Initial Environmental Evaluation. Replacement of Fuel tanks at the Comandante Ferraz Antarctic Station	Brazil

Paper Nº	Title	Submitted by

Item 7: Area Protection and management Plans

7a) Management Plans

WP 3	Draft Management Plan for ASMA No. X: Amundsen-Scott South Pole Station, South Pole	United States
WP 5	Draft Management Plan for ASMA No. X: Southwest Anvers Island and Palmer Basin	United States
WP 8	Larsemann Hills, East Antarctica. Antarctic Specially Managed Area Management Plan	Australia, China, India, Romania & Russian Federation
WP 9	Draft Antarctic Specially Protected Area (ASPA) Management Plan for Amanda Bay, Ingrid Christensen Coast, Princess Elizabeth Land, East Antarctica	Australia & China
WP 11	Review of Antarctic Specially Protected Area (ASPA) No. 130	New Zealand
WP 21	Area Protection and Management. Proposal for a new Antarctic Specially Protected Area at Marion Nunataks, Charcot Island, Antarctic Peninsula	United Kingdom
WP 25	Revised Management Plan for Antarctic Specially Protected Area No. 150 Ardley Island, Maxwell Bay, King George Island	Chile
WP 30	Revised Management Plan for Antarctic Specially Protected Area No. 129, Rothera Point, Adelaide Island	United Kingdom
WP 31	Revised Management Plan for Antarctic Specially Protected Area No. 109 Moe Island, South Orkney Islands	United Kingdom
WP 32 rev 1	Draft Management Plan for the Antarctic Special Protected Area Mount Harding, Grove Mountains, East Antarctica	China

7b) Historic Sites and Monuments

WP 38	Antarctic Protected Areas System: Revised List of Historic Sites and Monuments (Measure 3 (2003) Draft Guidelines for its Application)	Chile
WP 39	"Trinity Peninsula/Louis Philippe Land" (Translation of place-name)	Chile
WP 41	Monument to the Antarctic Treaty	Chile
IP 94 rev 1	Avances al plan de gestión territorial, manejo ambiental y conservación del patrimonio histórico de la base Gabriel González Videla. Verano 2007	Chile
IP 123	Historical Sites of Byers Peninsula, Livingston Island, South Shetland Islands, Antarctica	Chile
IP 127	Historic Sites of the Northern Coast of Fildes Peninsula, King George Island (South Shetland Group)	Chile

7c) Site Guidelines

WP 22	Site Guidelines for Brown Bluff, Tabarin Peninsula	United kingdom & United States
WP 40	Guidelines for Visitors to Snow Hill	Argentina & Sweden
IP 11	Antarctic Site Inventory: 1994-2007	United States
IP 83	A Commentary on Policy Issues Arising from On-Site Review of Guidelines for Visitor Sites in the Antarctic Peninsula	ASOC
IP 114	Brief Update on the Antarctic Peninsula Landing Site Visits and Site Guidelines	IAATO

Paper Nº	Title	Submitted by

7d) Systematic Environmental Geographic Framework

WP 12	Systematic Environmental Protection in Antarctica: Final progress report on Environmental Domains Analysis for the Antarctic continent	New Zealand
IP 41	Systematic Environmental Protection in Antarctica: local and regional scale application of Environmental Domains Analysis for the Antarctic continent	New Zealand

7e) Other Annex V Matters

WP 10	Intersessional CEP consideration of Draft Management Plans	Australia
WP 17	On the concept of the Antarctic Marine Protected Areas	Russian Federation
WP 43	Guidance for Working Papers on Area Protection and Management	United Kingdom
SP 7	Register of the Status of Antarctic Specially Protected Area and Antarctic Specially Managed Area Management Plans. Updated March 2007	ATS
IP 9	Opening of Lago Escondido at Deception Island	Spain
IP 22 rev 1	Progress Report on the Discussion of the International Working Group about Possibilities for Environmental Management of Fildes Peninsula and Ardley Island	Germany & Chile
IP 38	Update on progress towards the CCAMLR Workshop on Bioregionalisation of the Southern Ocean (Brussels, Belgium, 13-17 August 2007)	CCAMLR
IP 53	Criteria for the selection of Marine Protected Areas (MPAs)	United Kingdom
IP 62	Admiralty Bay Antarctic Specially Managed Area (ASMA No. 1) Management Group Report	Brazil, Ecuador, Peru, Poland & United States
IP 87	Marine Protected Areas – Steps Forward for the ATCM	ASOC
IP 108	Report of the Deception Island Antarctic Specially Managed Area (ASMA) Management Group	Argentina, Chile, Norway, Spain, United Kingdom & United States.
IP 112	Possible Modules of a "Fildes Peninsula region" ASMA Management Plan	Germany
IP 115	Management and further protection within ASPA 125: Current situation	Chile
IP 117	Workshop on Coordination of Activities in the Fildes Peninsula Region	Chile
IP136	Implementing the Madrid Protocol: A case study of Fildes Peninsula, King George Island	ASOC

Item 8: Conservation of Antarctic Flora and Fauna

8a) Quarantine and non-native species

IP 36	Non-native species: Pathways and Vectors between New Zealand and Scott Base, Antarctica	New Zealand
IP 37	Hull fouling as a source of marine invasion in the Antarctic	SCAR
IP 43	The Global Invasive Species Database	New Zealand
IP 49	Aliens in Antarctica	Australia & Scar
IP 126	Prevention and Management of Harmful Non-Native Species in the Antarctic and the Sub Antarctic	IUCN

Paper Nº	Title	Submitted by

8b) Specially Protected Species

WP 26	The Application of IUCN Endangerment Criteria at the Regional Level of the Antarctic Treaty Area	SCAR
WP 27	Current Status of the Ross Seal *(Ommatophoca rossii):* A Specially Protected Species under Annex II	SCAR

8c) Marine acoustics

WP 18	Russian studies of acoustic influence on marine biota	Russian Federation
IP 4	International Workshop "Impacts of seismic survey activities on whales and other marine biota"	Germany
IP 42	Marine Acoustics in Antarctic Waters: Report of an International Whaling Commission Workshop	New Zealand

8d) Other Anex II Matters

IP 15	Subglacial Antarctic Lake Environments (SALE) in the International Polar Year 2007-2008	SCAR
IP 32	Census of Antarctic Marine Life (CAML)	Australia & SCAR

Item 9: Environmental Monitoring and Reporting

WP 28	Climate Changes	Norway
WP 29	Environmental Monitoring in Antarctica – lessons learned from the Arctic	Norway
IP 5	State of the Antarctic and Southern Ocean Climate System (SASOCS)	SCAR
IP 26	Fluxgate and Proton Precession technology for fixed monitoring station in BCAA	Uruguay
IP 82 rev 1	The Antarctic and Climate Change	ASOC
IP 111	A Monitoring Programme for the Admiralty Bay Antarctic Specially Managed Area (ASMA Nº 1)	Brazil, Ecuador & Peru
IP 138	Antarctica and climate change – implications for governance	United Kingdom

Item 10: Inspection Reports

WP 16	Report of the Antarctic Treaty inspections undertaken jointly by Sweden, France and New Zealand in accordance with Article VII of the Antarctic Treaty and Article 14 of the Protocol on Environmental Protection to the Antarctic Treaty	Sweden, France & New Zealand
WP 33	A Proposed Checklist for Inspecting Protected Areas in Antarctica	New Zealand, United Kingdom & United States
IP 10	United States Report of Inspections	United States

Paper Nº	Title	Submitted by

Item 11: Emergency Response and Contingency Planning

WP 37 rev 1	The *M/S Nordkapp* incident	Norway
IP 25	Monitoreo Ambiental Biológico para el Plan de Contingencia de la descarga de combustible en la Base Científica Antártica Artigas (BCAA)	Uruguay
IP 99	Contingency Planning and Emergency Response	COMNAP

Item 12: Waste Management

IP 21	Borehole Remediation and Closure Activities at Lake Vida in the McMurdo Dry Valleys Antarctic Specially Managed Area	United States
IP 33	Australian Research on the Assessment and Remediation of Contaminated Sites in Antarctica	Australia
IP 34	On-site Assessment of Metal Contamination During Remediation of a Waste Disposal Site in Antarctica	Australia
IP 98	COMNAP's 2006 Workshop on Waste Management in Antarctica	COMNAP

Item 13: Prevention of Marine Pollution

Item 14: Cooperation with Other Organisations

WP 7	Report of the CEP Observer to the Twenty-fifth meeting of the Scientific Committee to CCAMLR, 23 to 27 October 2006	New Zealand
IP 69	Progress with the Implementation of the Agreement on the Conservation of Albatrosses and Petrels (ACAP)	ACAP
IP 133	COMNAP Report to ATCM XXX	COMNAP

Item 15: General Matters

WP 35	Best Practice for Energy Management – Guidance and Recommendations	COMNAP
IP 18	International Workshop of Antarctic Competent Authorities	Belgium, France, Germany, Netherlands, Peru, Russian Federation, Ukraine & United Kingdom
IP 48	Mawson Station wind farm – Four years of operational experience	Australia
IP 57 rev 1	Chinese Antarctic Environmental Report (2006-2007)	China

Item 16: Election of Officers

Item 17: Preparation for CEP XI

Item 18: Adoption of the Report

Item 19: Closing of the Meeting

ANNEX 2

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Appendix 1

Provisional Five Year Work plan for the CEP

Issue / Environmental Pressure	Provisional Priority for CEP	Suggested Actions	Provisional Timetable for actions to be addressed at CEP meetings and during the Intersessional periods (subject to further review)									
			CEP X	*Interses. period*	CEP XI	*Inters. period*	CEP XII	*Interses. period*	CEP XIII	*Interses. period*	CEP XIV	*Interses. period*	CEP XV
Introduction of non-native species	**High**	1. Review Workshop recommendations. 2. Develop practical guidelines for all Antarctic operators. 3. Establish a database of non-native species occurrences in Antarctica. 4. Review / endorse SCAR's RiSCC guidelines.		*Workshop with SCAR and COMNAP* *OR* *ICG established*	Dedicated time for discussion								
Tourism and NGO activities	**High**	1. Provide advice to ATCM as requested.	*ICG established as required*										
Global Pressure: Climate change	**High**	1. SCAR currently undertaking an Antarctic Climate Impact Assessment (ACIA).			SCAR ACIA presented to CEP - dedicated time for discussion								
Global Pressure: Pollution	**High**	1. Maintain a watching brief on pollution monitoring			SCAR report requested		SCAR report on Antarctic pollution presented to CEP - dedicated discussion time						

Issue / Environmental Pressure	Provi - sional Priority for CEP	Suggested Actions	Provisional Timetable for actions to be addressed at CEP meetings and during the Intersessional periods (subject to further review)										
			CEP X	*Interses. period*	CEP XI	*Interses. period*	CEP XII	*Interses. period*	CEP XIII	*Interses. period*	CEP XIV	*Interses. period*	CEP XV
Processing new and revised protected / managed area management plans	**High**	1. Refine the process for reviewing new and revised management plans. 2. Update existing guidelines. 3. Develop an agreed understanding of "wilderness".	Standing Group established to deal with area protection matters	*Standing Group conducts work as required*	SG Report	*Standing Group conducts work as required*	SG Report	*Standing Group conducts work as required*	SG Report and review of effective-ness of Standing Group				
Marine protected areas	**High**	1. Cooperate with CCAMLR on Southern Ocean bioregionalisa-tion. 2. Identify processes for MPA designation.		*Southern Ocean Bioregiona-lisation Workshop, Belgium (August 2007)*	Review workshop outcomes and consider further CEP action								
Operation of the CEP and Strategic Planning	**High**	1. Keep the 5 year plan up to date based on changing circumstances and ATCM requirements. 2. Identify opportunities for improving the effectiveness of the CEP.	Standing item		Standing item		Standing item		Standing item		Standing item		Standing item

Issue / Environmental Pressure	Provi - sional Priority for CEP	Suggested Actions	Provisional Timetable for actions to be addressed at CEP meetings and during the Intersessional periods (subject to further review)										
			CEP X	*Interses. period*	CEP XI	*Inters. period*	CEP XII	*Interses. period*	CEP XIII	*Interses. period*	CEP XIV	*Interses. period*	CEP XV
Human footprint / wilderness management	**Medium / high**	1. Develop an agreed understanding of the terms "footprint" and "wilderness".					Dedicated time for discussion			*Workshop*	Dedicated time for discussion		
Maintain the list of Historic Sites and Monuments	**Medium / high**	1. Maintain the list and consider new proposals as they arise.	Assign to the area protection Standing Group; OR Assign to the Treaty Secretariat; OR Maintain as a standing item on the CEP agenda.		SG report OR Secretariat report OR Standing item		SG report OR Secretariat report OR Standing item		SG report OR Secret. report OR Standing item		SG report OR Secretariat report OR Standing item		SG report OR Secret. report OR Standing item
Monitoring and state of the environment reporting	**Medium / high**	1. Identify key indicators of human impacts. 2. Establish a process for reporting to the ATCM					Standing Group established				Dedicated time for discussion and possible establishment of an Expert Group		
Exchange of Information	**Medium / high**	Assign to the Secretariat	Secretariat Report		Secretariat Report		Secretariat Report		Secret. Report		Secretariat Report		Secret. Report
Biodiversity loss	**Medium / high**	1. Maintain awareness of threats to existing biodiversity											

Issue / Environmental Pressure	Provi - sional Priority for CEP	Suggested Actions	Provisional Timetable for actions to be addressed at CEP meetings and during the Intersessional periods (subject to further review)										
			CEP X	***Interses. period***	**CEP XI**	***Inters. period***	**CEP XII**	***Interses. period***	**CEP XIII**	***Interses. period***	**CEP XIV**	***Interses. period***	**CEP XV**
Site specific guidelines for tourist-visited sites	**Medium**	1. Review site specific guidelines as required. 2. Provide advice to ATCM as required.	Assign to the area protection Standing Group	*Standing Group conducts work as required*	SG report	*Standing Group conducts work as required*	SG report	*Standing Group conducts work as required*	SG report	*Standing Group conducts work as required*	SG report	*Standing Group conducts work as required*	SG report
Implementing and improving the EIA provisions of Annex I	**Medium**	1. Refine the process for considering CEEs and advising the ATCM accordingly. 2. Develop guidelines for assessing cumulative impacts. 3. Keep the EIA Guidelines under review. 4. Consider application of strategic environmental assessment in Antarctica.			Standing Group established to handle draft CEEs (and other EIA matters) OR Dedicated discussion time to strengthen existing ICG process		SG report OR ICG report		SG report OR ICG report		SG report OR ICG report		SG report OR ICG report
Specially protected species	**Medium**	1. Consider listing / delisting proposals as they come forward.	SCAR reports presented to CEP - dedicated discussion time										

Issue / Environmental Pressure	Provi - sional Priority for CEP	Suggested Actions	Provisional Timetable for actions to be addressed at CEP meetings and during the Intersessional periods (subject to further review)										
			CEP X	*Inters. period*	CEP XI	*Inters. period*	CEP XII	*Interses. period*	CEP XIII	*Interses. period*	CEP XIV	*Interses. period*	CEP XV
Overview of the protected areas system / SEGF	**Medium**	1. Apply the domains analysis (SEGF) to the existing system – undertake a gap analysis.			Assign to the area protection Standing Group								
Emergency response action and contingency planning	**Medium**	To be determined			COMNAP advice on ERA and CP requested		COMNAP report presented to CEP – dedicated time for discussion						
Updating the Protocol and reviewing Annexes	**Medium**	1. Complete review of Annex II (currently with the ATCM). 2. Prepare a rioritized timetable for the review of the remaining annexes.	Requires CEP discussion on the need and aims for reviewing Protocol annexes.										
Inspections (Article 14 of the Protocol)	**Medium**	1. Review inspection reports as required. 2. Review environmental component of inspection checklists as required.	Standing item		Standing item		Standing item		Standing item		Standing item		Standing item
Shipping Guidelines	**Low / medium**				Review status of guidelines within IMO				Establish Expert Group to review guidelines				

Issue / Environmental Pressure	Provi - sional Priority for CEP	Suggested Actions	Provisional Timetable for actions to be addressed at CEP meetings and during the Intersessional periods (subject to further review)										
			CEP X	*Inters. period*	CEP XI	*Inters. period*	CEP XII	*Interses. period*	CEP XIII	*Interses. period*	CEP XIV	*Interses. period*	CEP XV
Ballast water guidelines	**Low / medium**	1. Guidelines already approved by the ATCM. May need reviewing in due course.			Review status of guidelines within IMO				Establish Expert Group to review guidelines				
Energy management	**Low / medium**	1. Develop best-practice guidelines for energy management at stations and bases.					COMNAP report requested		COMNAP report presented to CEP – dedicated time for discussion				
Outreach and education	**Low / medium**	1. Review current examples and identify opportunities for greater education and outreach.							Dedicated time for discussion				
Marine acoustics	**Low**	1. Develop guidelines for use of noise-emitting devices. 2. Maintain a watching brief on the issue.	IWC and German Workshops reviewed										
Waste	**Low**	1. Develop guidelines for best practice disposal of waste including human waste.							COMNAP report requested		COMNAP report presented to CEP – dedicated time for discussion		
Clean up of sites of past activity	**Low**	1. Establish Antarctic-wide inventory of sites of past activity. 2. Develop guidelines for best practice approach to clean up.									Secretariat requested to develop and maintain an inventory COMNAP report on best practice requested		Secretariat report COMNAP report presented to CEP - dedicated time for discussion

Appendix 2

Proposed Terms of Reference for a trial informal group to review draft Management Plans

The group shall:

1. In consultation with relevant experts, examine each draft Management Plan referred for intersessional review by CEP X to consider:

- whether it is consistent with the provisions of Annex V to the Protocol, particularly Articles 3, 4 and 5, and with relevant CEP guidelines;
- its content, clarity, consistency and likely effectiveness;
- whether it clearly states the primary reason for designation; and
- whether it clearly states how the proposed Area complements the Antarctic protected areas system as a whole.

2. Advise proponents, through the Discussion Forum, of suggested amendments to the draft Management Plan to address issues in relation to 1) above.

3. Prior to the Working Paper deadline, consider any revised Management Plan or comments provided by the proponent in response to the group's suggested amendments;

4. Submit a Working Paper to CEP XI with recommendations to the CEP on the adoption or otherwise of each new or revised draft Management Plan.

5. Report to CEP XI on the effectiveness of the trial.

Possible timeline for informal group to review draft Management Plans

Period	Action	Timing*
Intersessional period	• Secretariat posts all draft Management Plans referred for intersessional discussion to the online Discussion Forum.	As soon as possible following CEP meeting
	• Interested CEP Members and Observers post comments on draft Management Plans via online Discussion Forum. • The "group" considers draft Management Plans in accordance with Terms of Reference and prepares a report with recommendations for proponents. "Group" report translated and posted to online Discussion Forum.	3-6 months following CEP meeting
	• Draft Management Plans revised by proponents in response to comments provided by Members, Observers and the "group", and posted to the discussion forum.	As early as possible prior to Working Paper deadline
Working Paper deadline	• Proponents submit revised draft Management Plans as Working Papers. • "Group" convenor submits Working Paper with recommendations for the adoption or otherwise of draft Management Plans.	45 days prior to CEP meeting
CEP meeting	• Consideration by CEP of Working Paper containing "group's" recommendations. • Discussion of Working Papers containing individual Management Plans only if there is not consensus agreement on the "group's" recommendations.	

* Note: Indicative timing only. Actual timing may vary due to the length of the intersessional period.

Appendix 3

CEP Advice to ATCM XXX on the draft CEE for the "New Indian Research Base at Larsemann Hills, Antarctica"

The Committee had extensive discussions on the draft CEE presented by India for the "New Indian Research Base at Larsemann Hills, Antarctica" contained in WP 4 and IP 7, and on additional information provided by India during the meeting in IP 139. This additional information took into account comments received from Members during the intersessional period.

Members rasied several questions, reflecting concerns related to the following issues:

1. Justification for the location of the new station;
2. Use of water from pristine lakes of high scientific value and the need for consideration of alternative methods to produce fresh water;
3. The need for consideration of possible cumulative impacts of human activities in the area;
4. The need for a description of procedures to minimise the risk of introduction of non-native species.

India responded to these questions and advised that all of them, as well as other questions received directly from some Membrs, will be addressed in the final CEE.

The CEP advises that, on the basis of the information provided by India:

- The document is well structured and meets the requirements of Annex I, Article 3, of the Protocol; and
- The proposed location of India's new facility is not inconsistent with the provisions of the draft "Larsemann Hills, East Antarctica, Antarctic Specially Managed Area, Management Plan" (WP 8).

The CEP recommends that the ATCM endorse this view.

Appendix 4

Procedures for intersessional CEP consideration of draft CEEs

1. The agenda of each CEP meeting shall include an item relating to the consideration of draft CEEs forwarded to the CEP in accordance with Paragraph 4 of Article 3 of Annex I to the Protocol.*
2. The CEP shall, under this agenda item, consider any draft CEE and provide advice to the ATCM on such drafts in accordance with Article 12 and Annex I of the Protocol.*
3. Proponents are encouraged to circulate draft CEEs to the Committee as soon as practicable and, in accordance with Paragraph 4 of Article 3 of Annex I to the Protocol, shall do so at least 120 days before the next Antarctic Treaty Consultative Meeting.
4. At the same time a draft CEE is circulated to Members via diplomatic channels, the proponent shall notify the CEP Chair, preferably by e-mail, that a draft CEE has been circulated.#
5. The proponent should post the draft CEE on a web site in the original language(s). A link to that web site will also be established on the CEP web site. If the proponent does not have a web site on which it is able to post the draft CEE, an electronic version should be forwarded to the CEP Chair who will post it on the CEP web site.#

[The Secretariat shall also translate each draft CEE into all other official languages and post these versions to the CEP web site as soon as practicable.]

6. The CEP Chair shall immediately notify the CEP contact points of the availability of each draft CEE, and provide details of the web site at which such documents can be accessed.#
7. The Chair shall suggest a convenor for an open-ended intersessional contact group to consider the draft CEE. The convenor should preferably not be from the proponent Party.#
8. The Chair shall allow a period of 15 days for Members to object or offer comments, suggestions or proposals concerning:

   i. the proposed convenor.

   ii. additional terms of reference beyond the following generic issues:

   - the extent to which the CEE conforms to the requirements of Article 3 of Annex I of the Environmental Protocol.
   - whether the conclusions of the draft CEE are adequately supported by the information contained within the document.
   - the clarity, format and presentation of the draft CEE.#

9. If the Chair does not receive a reply within 15 days it will be considered that the Members agree with the proposed convenor and the generic terms of reference. If the Chair receives comments on i) or ii) listed above within the 15 day limit the Chair shall, as appropriate, circulate a revised suggestion for one or both items. A further 15 day limit applies for Members to respond.#
10. All correspondence shall be available to all representatives via the CEP Discussion Forum.
11. The right of a Party to raise an issue on a draft CEE at the CEP or ATCM is not affected by its action in relation to the establishment – or non-establishment – of an open-ended intersessional contact group.#

12. The outcome of the contact group's deliberations, indicating areas of agreement and areas where differing views are expressed, shall be reported in a Working Paper submitted by the convenor to the next CEP meeting.*

* Copied or modified from "Guidelines for CEP Consideration of Draft CEEs" (Annex 4 to CEP II Final Report, 1999).

Copied or modified from "Operational procedures for establishing intersessional contact groups for consideration of draft CEEs" (Annex 3 to CEP III Final Report, 2000).

Appendix 5

CEP XI Provisional Agenda

1. Opening of the Meeting
2. Adoption of the Agenda
3. Strategic Discussions on the Future Work of the CEP
4. Operation of the CEP
5. International Polar Year
6. Environmental Impact Assessment (EIA)
    a. Draft Comprehensive Environmental Evaluations
    b. Other EIA Matters
7. Area Protection and Management Plans
    a. Management Plans
    b. Historic Sites and Monuments
    c. Site Guidelines
    d. Systematic Environmental Geographic Framework
    e. Other Annex V Matters
8. Conservation of Antarctic Flora and Fauna
    a. Quarantine and Non-native Species
    b. Specially Protected Species
    c. Marine Acoustics
    d. Other Annex II Matters
9. Environmental Monitoring and Reporting
    a. Climate Change
    b. Other Environmental Monitoring and Reporting Matters
10. Inspection Reports
11. Emergency Response and Contingency Planning
12. Waste Management
13. Prevention of Marine Pollution
14. Cooperation with Other Organisations
15. General Matters
16. Election of Officers
17. Preparation for Next Meeting
18. Adoption of the Report
19. Closing of the Meeting

ANNEX F

Reports pursuant to Recommendation XIII-2

Report of the Depositary Government of the Antarctic Treaty and its Protocol (USA) in accordance with Recommendation XIII-2

This report covers events with respect to the Antarctic Treaty and the Protocol on Environmental Protection.

There has been one new accession to the Antarctic Treaty in the past year. The Republic of Belarus acceded to the Antarctic Treaty on December 27, 2006. There are now forty-six (46) Parties to the Treaty.

There have been no new accessions to the Protocol on Environmental Protection in the past year. There are thirty-two Parties to the Protocol.

The following countries have provided notification that they have designated the persons so noted as Arbitrators in accordance with Article 2(1) of the Schedule to the Protocol on Environmental Protection:

Bulgaria	Mrs Guenka Beleva	30 July 2004
Chile	Amb. María Teresa Infante	June 2005
	Amb. Jorge Berguño	June 2005
	Dr Francisco Orrego	June 2005
Finland	Amb. Holger Bertil Rotkirch	14 June 2006
Greece	Mr Fransiscos Verros	22 May 2003
	Dr Emmanuel Gounaris	22 May 2003
	Dr Vassilios Patronas	22 May 2003
India	Prof. Upendra Baxi	6 October 2004
	Mr Ajai Saxena	6 October 2004
	Dr N. Khare	6 October 2004
Japan	Judge Soji Yamamoto	1 May 2003
United States	Professor Daniel Bodansky	22 April 2003
	Mr David Colson	22 April 2003

Lists of Parties to the Treaty, to the Protocol, and of Recommendations/Measures and their approvals are attached.

Status of
THE 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

State	Date of deposit of instrument of ratification	Date of deposit of instrument of accession	Date of entry into force
Argentina	June 23, 1961		June 23, 1961
Australia	June 23, 1961		June 23, 1961
Austria		Aug. 25, 1987	Aug. 25, 1987
Belarus		Dec 27, 2006	Dec 27, 2006
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
Estonia		May 17, 2001	May 17, 2001
Finland		May 15, 1984	May 15, 1984
France	Sept. 16, l960		June 23, 1961

State	Date of deposit of instrument of ratification	Date of deposit of instrument of accession	Date of entry into force
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
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

State	Date of deposit of instrument of ratification	Date of deposit of instrument of accession	Date of entry into force
Turkey		Jan. 24, 1996	Jan. 24, 1996
Ukraine		Oct. 28, 1992	Oct. 28, 1992
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
Venezuela		Mar. 24, 1999	Mar. 24, 1999

l. 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.

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 23, 2007.

PROTOCOL ON ENVIRONMENTAL PROTECTION TO THE ANTARCTIC TREATY

Signed at Madrid on October 4, 1991*

State	Date of Signature	Date deposit of Ratification, Acceptance (A) or Approval (AA)	Date deposit of Accession	Date of entry into force	Date Acceptance ANNEX V**	Date of entry into force of Annex V
CONSULTATIVE PARTIES						
Argentina	Oct. 4, 1991	Oct. 28, 1993 [3]		Jan. 14, 1998	Sept. 8, 2000 (A) Aug. 4, 1995 (B)	May 24, 2002
Australia	Oct. 4, 1991	Apr. 6, 1994		Jan. 14, 1998	Apr. 6, 1994 (A) June 7, 1995 (B)	May 24, 2002
Belgium	Oct. 4, 1991	Apr. 26, 1996		Jan. 14, 1998	Apr. 26, 1996 (A) Oct. 23, 2000 (B)	May 24, 2002
Brazil	Oct. 4, 1991	Aug. 15, 1995		Jan. 14, 1998	May 20, 1998 (B)	May 24, 2002
Bulgaria			April 21, 1998	May 21, 1998	May 5, 1999 (AB)	May 24, 2002
Chile	Oct. 4, 1991	Jan. 11, 1995		Jan. 14, 1998	Mar. 25, 1998 (B)	May 24, 2002
China	Oct. 4, 1991	Aug. 2, 1994		Jan. 14, 1998	Jan. 26, 1995 (AB)	May 24, 2002
Ecuador	Oct. 4, 1991	Jan. 4, 1993		Jan. 14, 1998	May 11, 2001 (A) Nov. 15, 2001 (B)	May 24, 2002
Finland	Oct. 4, 1991	Nov. 1, 1996 (A)		Jan. 14, 1998	Nov. 1, 1996 (A) Apr. 2, 1997 (B)	May 24, 2002
France	Oct. 4, 1991	Feb. 5, 1993 (AA)		Jan. 14, 1998	Apr. 26, 1995 (B) Nov. 18, 1998 (A)	May 24, 2002
Germany	Oct. 4, 1991	Nov. 25, 1994		Jan. 14, 1998	Nov. 25, 1994 (A) Sept. 1, 1998 (B)	May 24, 2002
India	July 2, 1992	Apr. 26, 1996		Jan. 14, 1998	May 24, 2002 (B)	May 24, 2002
Italy	Oct. 4, 1991	Mar. 31, 1995		Jan. 14, 1998	May 31, 1995 (A) Feb. 11, 1998 (B)	May 24, 2002
Japan	Sept. 29, 1992	Dec. 15, 1997 (A)		Jan. 14, 1998	Dec. 15, 1997 (AB)	May 24, 2002
Korea, Rep. of	July 2, 1992	Jan. 2, 1996		Jan. 14, 1998	June 5, 1996 (B)	May 24, 2002
Netherlands	Oct. 4, 1991	Apr. 14, 1994 (A) [6]		Jan. 14, 1998	Mar. 18, 1998 (B)	May 24, 2002
New Zealand	Oct. 4, 1991	Dec. 22, 1994		Jan. 14, 1998	Oct. 21, 1992 (B)	May 24, 2002
Norway	Oct. 4, 1991	June 16, 1993		Jan. 14, 1998	Oct. 13, 1993 (B)	May 24, 2002
Peru	Oct. 4, 1991	Mar. 8, 1993		Jan. 14, 1998	Mar. 8, 1993 (A) Mar. 17, 1999 (B)	May 24, 2002
Poland	Oct. 4, 1991	Nov. 1, 1995		Jan. 14, 1998	Sept. 20, 1995 (B)	May 24, 2002
Russian Federation	Oct. 4, 1991	Aug. 6, 1997		Jan. 14, 1998	June 19, 2001 (B)	May 24, 2002
South Africa	Oct. 4, 1991	Aug. 3, 1995		Jan. 14, 1998	June 14, 1995 (B)	May 24, 2002
Spain	Oct. 4, 1991	July 1, 1992		Jan. 14, 1998	Dec. 8, 1993 (A) Feb. 18, 2000 (B)	May 24, 2002
Sweden	Oct. 4, 1991	Mar. 30, 1994		Jan. 14, 1998	Mar. 30, 1994 (A) Apr. 7, 1994 (B)	May 24, 2002
Ukraine			May 25, 2001	June 24, 2001	May 25, 2001 (A)	
United Kingdom	Oct. 4, 1991	Apr. 25, 1995 [5]		Jan. 14, 1998	May 21, 1996 (B)	May 24, 2002
United States	Oct. 4, 1991	Apr. 17, 1997		Jan. 14, 1998	Apr. 17, 1997 (A) May 6, 1998 (B)	May 24, 2002
Uruguay	Oct. 4, 1991	Jan. 11, 1995		Jan. 14, 1998	May 15, 1995 (B)	May 24, 2002

* 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)

** The following denotes date relating either to acceptance of Annex V or approval of Recommendation XVI-10
(A) Acceptance of Annex V (B) Approval of Recommendation XVI-10

State	Date of Signature	Ratification Acceptance or Approval	Date deposit of Accession	Date of entry into force	Date Acceptance ANNEX V***	Date of entry into force of Annex V
NON-CONSULTATIVE PARTIES						
Austria	Oct. 4, 1991					
Canada	Oct. 4, 1991	Nov. 13, 2003		Dec. 13, 2003		
Colombia	Oct. 4, 1991					
Cuba						
Czech Rep.[1,2]	Jan. 1, 1993	Aug. 25, 2004 [4]		Sept. 24, 2004		
Denmark	July 2, 1992					
Estonia						
Greece	Oct. 4, 1991	May 23, 1995		Jan. 14, 1998		
Guatemala						
Hungary	Oct. 4, 1991					
Korea, DPR of	Oct. 4, 1991					
Papua New Guinea						
Romania	Oct. 4, 1991	Feb. 3, 2003		Mar. 5, 2003	Feb. 3, 2003	Mar. 5, 2003
Slovak Rep.[1,2]	Jan. 1, 1993					
Switzerland	Oct. 4, 1991					
Turkey						
Venezuela						

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***Adopted at Bonn on October 17, 1991 at XVIth Antarctic Consultative Meeting.

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 provided by the Embassy of Argentina, which reads as follows: "The Argentine Republic declares that in as much as the Protocol to the Antarctic Treaty on the Protection of the Environment is a Complementary Agreement of the Antarctic Treaty and that its Article 4 fully respects what has been stated in Article IV, Subsection 1, Paragraph A) of said Treaty, none of its stipulations should be interpreted or be applied as affecting its rights, based on legal titles, acts of possession, contiguity and geological continuity in the region south of parallel 60, in which it has proclaimed and maintained its sovereignty."
4. Accompanied by declaration, with informal translation provided by the Embassy of the Czech Republic, which reads as follows: "The Czech Republic accepts the jurisdiction of the International Court of Justice and of the Arbitral Tribunal under Article 19, paragraph 1, of the Protocol on Environmental Protection to the Antarctic Treaty, done at Madrid on October 4, 1991."
5. Ratification on behalf of the United Kingdom of Great Britain and Northern Ireland, the Bailiwick of Jersey, the Bailiwick of Guernsey, the Isle of Man, Anguilla, Bermuda, the British Antarctic Territory, Cayman Islands, Falkland Islands, Montserrat, St. Helena and Dependencies, South Georgia and the South Sandwich Islands, Turks and Caicos Islands and British Virgin Islands.
6. Acceptance is for the Kingdom in Europe. At the time of its acceptance, the Kingdom of the Netherlands stated that it chooses both means for the settlement of disputes mentioned in Article 19, paragraph 1 of the Protocol, i.e. the International Court of Justice and the Arbitral Tribunal. A declaration by the Kingdom of the Netherlands accepting the Protocol for the Netherlands Antilles was deposited on October 27, 2004 with a statement confirming that it chooses both means for the settlement of disputes mentioned in Article 19, paragraph 1 of the Protocol.

Department of State,

Washington, March 23, 2007.

Approval, as notified to the Government of the United States of America, of measures relating to the furtherance of the principles and objectives of the Antarctic Treaty

	16 Recommendations adopted at First Meeting (Canberra 1961)	10 Recommendations adopted at Second Meeting (Buenos Aires 1962)	11 Recommendations adopted at Third Meeting (Brussels 1964)	28 Recommendations adopted at Fourth Meeting (Santiago 1966)*	9 Recommendations adopted at Fifth Meeting (Paris 1968)	15 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	ALL (except 10)
Bulgaria (1998)+						
Chile	ALL	ALL	ALL	ALL	ALL	ALL
China (1985)+	ALL	ALL	ALL	ALL	ALL	ALL (except 10)
Ecuador (1990)+						
Finland (1989)+						
France	ALL	ALL	ALL	ALL	ALL	ALL
Germany (1981)+	ALL	ALL	ALL (except 8)	ALL (except 16-19)	ALL (except 6)	ALL (except 9)
India (1983)+	ALL	ALL	ALL (except 8***)	ALL (except 18)	ALL	ALL (except 9 & 10)
Italy (1987)+	ALL	ALL	ALL	ALL	ALL	ALL
Japan	ALL	ALL	ALL	ALL	ALL	ALL
Korea, Rep. (1989)+	ALL	ALL	ALL	ALL	ALL	ALL
Netherlands (1990)+	ALL (except 11 & 15)	ALL (except 3, 5, 8 & 10)	ALL (except 3, 4, 6 & 9)	ALL(except 20, 25, 26 & 28)	ALL (except 1, 8 & 9)	ALL (except 15)
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 (1988)+						
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 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 principles and objectives of the Antarctic Treaty

	9 Recommendations adopted at Seventh Meeting (Wellington 1972)	14 Recommendations adopted at Eighth Meeting (Oslo 1975)	6 Recommendations adopted at Ninth Meeting (London 1977)	9 Recommendations adopted at Tenth Meeting (Washington 1979)	3 Recommendations adopted at Eleventh Meeting (Buenos Aires 1981)	8 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 (except 5)	ALL	ALL	ALL	ALL	ALL
Bulgaria (1998)+						
Chile	ALL	ALL	ALL	ALL	ALL	ALL
China (1985)+	ALL (except 5)	ALL	ALL	ALL	ALL	ALL
Ecuador (1990)+						
Finland (1989)+						
France	ALL	ALL	ALL	ALL	ALL	ALL
Germany (1981)+	ALL (except 5)	ALL (except 2 & 5)	ALL	ALL	ALL	ALL
India (1983)+	ALL	ALL	ALL	ALL (except 1 & 9)	ALL	ALL
Italy (1987)+	ALL (except 5)	ALL	ALL	ALL (except 1 & 9)		
Japan	ALL	ALL	ALL	ALL	ALL	ALL
Korea, Rep. (1989)+	ALL	ALL	ALL	ALL	ALL	ALL
Netherlands (1990)+	ALL	ALL	ALL (except 3)	ALL (except 9)	ALL (except 2)	ALL
New Zealand	ALL	ALL	ALL	ALL	ALL	ALL
Norway	ALL	ALL	ALL	ALL	ALL	ALL
Peru (1989)+	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 (except 1 & 9)	ALL (except 1)	ALL
Sweden (1988)+						
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 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 principles and objectives of the Antarctic Treaty

	16 Recommendations adopted at Thirteenth Meeting (Brussels 1985)	10 Recommendations adopted at Fourteenth Meeting (Rio de Janeiro 1987)	22 Recommendations adopted at Fifteenth Meeting (Paris 1989)	13 Recommendations adopted at Sixteenth Meeting (Bonn 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	ALL	ALL
Australia	ALL	ALL	ALL	ALL	ALL	ALL
Belgium	ALL	ALL	ALL	ALL	ALL	ALL
Brazil (1983)+	ALL	ALL	ALL	ALL	ALL	ALL
Bulgaria (1998)+				XVI-10		
Chile	ALL	ALL	ALL	ALL	ALL	ALL
China (1985)+	ALL	ALL	ALL	ALL	ALL	ALL
Ecuador (1990)+				XVI-10		
Finland (1989)+			ALL	ALL	ALL	ALL
France	ALL	ALL	ALL	ALL	ALL	ALL
Germany (1981)+	ALL	ALL	ALL (except 3,8,10,11&22)	ALL	ALL	ALL
India (1983)+	ALL	ALL	ALL	ALL	ALL	ALL
Italy (1987)+		ALL	ALL	ALL	ALL	ALL
Japan	ALL	ALL	ALL	XVI-10		ALL
Korea, Rep. (1989)+	ALL	ALL	ALL (except 1-11, 16, 18, 19)	ALL (except 12)	ALL (except 1)	
Netherlands (1990)+	ALL	ALL (except 9)	ALL (except 22)	ALL	ALL	ALL
New Zealand	ALL	ALL	ALL	ALL	ALL	ALL
Norway	ALL	ALL	ALL	ALL	ALL	ALL
Peru (1989)+			ALL (except 22)	ALL (except 13)	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 (1988)+			ALL	ALL	ALL	ALL
U.K.	ALL	ALL (except 2)	ALL (except 3, 4, 8, 10, 11)	ALL (except 4, 6, 8, & 9)	ALL	ALL
Uruguay (1985)+	ALL	ALL	ALL	ALL	ALL	ALL
U.S.A.	ALL	ALL	ALL (except 1-4, 10, 11)	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 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 principles and objectives of the Antarctic Treaty

	5 Measures adopted at Nineteenth Meeting (Seoul 1995)	2 Measures adopted at Twentieth Meeting (Utrecht 1996)	5 Measures adopted at Twenty-First Meeting (Christchurch 1997)	2 Measures adopted at Twenty-Second Meeting (Tromso 1998)	1 Measure adopted at Twenty-Third Meeting (Lima 1999)
	Approved	Approved	Approved	Approved	Approved
Argentina	ALL	ALL	ALL	ALL	ALL
Australia	ALL	ALL	ALL	ALL	ALL
Belgium	ALL	ALL	ALL	ALL	ALL
Brazil (1983)+	ALL				
Bulgaria (1998)+					
Chile	ALL	ALL	ALL	ALL	ALL
China (1985)+	ALL	ALL	ALL	ALL	ALL
Ecuador (1990)+					
Finland (1989)+	ALL	ALL	ALL	ALL	ALL
France					
Germany (1981)+	ALL	ALL	ALL	ALL	ALL
India (1983)+	ALL	ALL	ALL	ALL	ALL
Italy (1987)+	ALL	ALL			
Japan					
Korea, Rep. (1989)+	ALL				
Netherlands (1990)+	ALL	ALL	ALL	ALL	ALL
New Zealand	ALL	ALL	ALL	ALL	ALL
Norway	ALL	ALL	ALL		
Peru (1989)+	ALL	ALL	ALL	ALL	ALL
Poland (1977)+	ALL	ALL	ALL	ALL	ALL
Russia	ALL	ALL	ALL	ALL	ALL
South Africa	ALL	ALL	ALL	ALL	ALL
Spain (1988)+	ALL	ALL	ALL	ALL	ALL
Sweden (1988)+	ALL	ALL	ALL	ALL	ALL
U.K.	ALL	ALL	ALL	ALL	ALL
Uruguay (1985)+	ALL (except 2, 3, 4 and 5)	ALL (except 2)	ALL (except 3, 4 and 5)	ALL (except 2)	ALL
U.S.A.	ALL	ALL	ALL	ALL	ALL

"+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 principles and objectives of the Antarctic Treaty

	2 Measures adopted at Twelfth Special Meeting (The Hague 2000)	3 Measures adopted at Twenty-Fourth Meeting (St. Petersburg 2001)	1 Measure adopted at Twenty-Fifth Meeting (Warsaw 2002)	3 Measures adopted at Twenty-Sixth Meeting (Madrid 2003)	4 Measures adopted at Twenty-Seventh Meeting (Cape Town 2004)
	Approved	Approved	Approved	Approved	Approved
Argentina			*	XXVI-1, XXVI-2 *, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **
Australia	ALL	ALL	ALL	XXVI-1, XXVI-2 *, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **
Belgium	ALL	ALL	ALL	ALL	XXVII-1 *, XXVII-2 *, XXVII-3 **
Brazil (1983)+	ALL	ALL	ALL	XXVI-2, XXVI-3	XXVII-1, XXVII-2, XXVII-3
Bulgaria (1998)+			*	XXVI-1, XXVI-2 *, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **
Chile			*	XXVI-2 *, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **
China (1985)+	ALL	ALL	ALL	ALL	XXVII-1 *, XXVII-2 *, XXVII-3 **
Ecuador (1990)+			*	XXVI-2 *, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **
Finland (1989)+	ALL	ALL	*	XXVI-1, XXVI-2 *, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **
France			*	XXVI-1, XXVI-2 *, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **
Germany (1981)+	ALL	ALL	ALL	ALL	XXVII-1 *, XXVII-2 *, XXVII-3 **
India (1983)+	ALL	ALL	ALL	ALL	XXVII-1 *, XXVII-2 *, XXVII-3 **
Italy (1987)+			*	XXVI-2 *, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **
Japan			*	ALL	XXVII-1 *, XXVII-2 *, XXVII-3 **
Korea, Rep. (1989)+			*	XXVI-1, XXVI-2 *, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **
Netherlands (1990)+	ALL	ALL	ALL	ALL	ALL
New Zealand	ALL	ALL	ALL	ALL	XXVII-1 *, XXVII-2 *, XXVII-3 **, XXVII-4
Norway		ALL	*	XXVI-1, XXVI-2 *, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **
Peru (1989)+	ALL	ALL	ALL	XXVI-1, XXVI-2 *, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **
Poland (1977)+		ALL	*	XXVI-2 *, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **
Russia	ALL	ALL	ALL	XXVI-1, XXVI-2, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **
South Africa	ALL	ALL	ALL	ALL	ALL
Spain (1988)+			*	XXVI-2 *, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **
Sweden (1988)+	ALL	ALL	ALL	ALL	XXVII-1 *, XXVII-2 *, XXVII-3 **
Ukraine (2004)+					XXVII-1 *, XXVII-2 *, XXVII-3 **
U.K.	ALL (except SATCM XII-2)	ALL (except XXIV-3)	ALL	ALL (except XXVI-1)	XXVII-1 *, XXVII-2 *, XXVII-3 **
Uruguay (1985)+	ALL	ALL (except XXIV-1 and XXIV-2)	*	XXVI-2 *, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **
U.S.A.	ALL	ALL	*	XXVI-1, XXVI-2 *, XXVI-3 **	XXVII-1 *, XXVII-2 *, XXVII-3 **

"+Year attained Consultative Status. Acceptance by that state required to bring into force Recommendations or Measures of meetings from that Year forward."

* Management Plans annexed to this Measure were deemed to have been approved in accordance with Article 6(1) of Annex V to the Protocol on Environmental Protection to the Antarctic Treaty and the Measure not specifying a different approval method.

** Revised and updated List of Historic Sites and Monuments annexed to this Measure was deemed to have been approved in accordance with Article 8(2) of Annex V to the Protocol on Environmental Protection to the Antarctic Treaty and the Measure not specifying a different approval method.

Office of the Assistant Legal Adviser for Treaty Affairs
Department of State
Washington.

Approval, as notified to the Government of the United States of America, of measures relating to the furtherance of the principles and objectives of the Antarctic Treaty

	5 Measures adopted at Twenty-Eighth Meeting (Stockholm 2005)	4 Measures adopted at Twenty-Ninth Meeting (Edinburgh 2006)
	Approved	Approved
Argentina	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Australia	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Belgium	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Brazil (1983)+	XXVIII-2, XXVIII-3, XXVIII-4, XXVIII-5	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Bulgaria (1998)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Chile	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
China (1985)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Ecuador (1990)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Finland (1989)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
France	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Germany (1981)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
India (1983)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Italy (1987)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Japan	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Korea, Rep. (1989)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Netherlands (1990)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
New Zealand	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Norway	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Peru (1989)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Poland (1977)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Russia	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
South Africa	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Spain (1988)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Sweden (1988)+	XXVIII-1, XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Ukraine (2004)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
U.K.	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
Uruguay (1985)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***
U.S.A.	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***

"+Year attained Consultative Status. Acceptance by that state required to bring into force Recommendations or Measures of meetings from that Year forward."

* Management Plans annexed to this Measure deemed to have been approved in accordance with Article 6(1) of Annex V to the Protocol on Environmental Protection to the Antarctic Treaty and the Measure not specifying a different approval method.

** Revised and updated List of Historic Sites and Monuments annexed to this Measure deemed to have been approved in accordance with Article 8(2) of Annex V to the Protocol on Environmental Protection to the Antarctic Treaty and the Measure not specifying a different approval method.

*** Modification of Appendix A to Annex II to the Protocol on Environmental Protection to the Antarctic Treaty deemed to have been approved in accordance with Article 9(1) of Annex II to the Protocol on Environmental Protection to the Antarctic Treaty and the Measure not specifying a different approval method.

Office of the Assistant Legal Adviser for Treaty Affairs
Department of State
Washington, April 25, 2007.

Report Submitted to Antarctic Treaty Consultative Meeting XXX by the Depositary Government for the Convention for the Conservation of Antarctic Seals in Accordance with Recommendation XIII-2, Paragraph 2(D)

Submitted by the United Kingdom

This report covers events regarding the Convention for the Conservation of Antarctic Seals (CCAS) for the reporting year 1 March 2005 to 28 February 2006.

The summary at Annex A lists all capturing and killing of Antarctic seals by Contracting Parties to CCAS during the reporting period. A report of events in the 2006 – 2007 year will be submitted to ATCM XXXI, once the June 2007 deadline for exchange of information has passed.

The United Kingdom would like to remind Contracting Parties to CCAS that the reporting period for the Exchange of Information is from 1 March to the end of February each year. The reporting period was changed to the above dates during the September 1988 Meeting to Review the Operation of the Convention. This is documented in Paragraph 19(a) of the Report of that Meeting.

The Exchange of Information, referred to in Paragraph 6(a) in the Annex to the Convention, should be submitted to other Contracting Parties and to SCAR by 30 June each year, including nil returns. Currently, not all the information required in paragraph 6(a) is being provided. Neither is it being provided on time or with any regularity. The accuracy of the CCAS figures is therefore being compromised.

Since ATCM XXIII there have been no accessions to CCAS. A list of countries which were original signatories to the Convention, and countries which have subsequently acceded is attached to this report (Annex B).

Polar Regions Unit
Foreign and Commonwealth Office
London SW1A 2AH
United Kingdom
March 2007

ANNEX A

Synopsis of reporting in accordance with Article 5 and the Annex of the Convention: Capturing and killing of seals during the period 1 March 2005 to 28 February 2006

Contracting Party	Antarctic Seals Captured	Antarctic Seals Killed
Argentina*	-	-
Australia	Nil	Nil
Belgium	Nil	Nil
Brazil	165[a]	Nil
Canada	Nil	Nil
Chile*	-	-
France	574[b]	Nil
Germany	12[c]	Nil
Italy	Nil	Nil
Japan*	-	-
Norway	Nil	Nil
Poland	Nil	Nil
Russia	Nil	Nil
South Africa	Nil	Nil
United Kingdom	Nil	Nil
United States of America	3090[d]	Nil

* No report received

[a] 144 Southern elephant seals, 21 Antarctic fur seals

[b] 474 Southern elephant seals, 100 Weddell seals

[c] All Weddell seals

[d] 2310 Weddell seals, 540 Antarctic fur seals, 120 southern elephant seals, 40 crab eater seals, 40 leopard seals, 40 Ross seals

All reported capturing was for scientific research.

ANNEX B

Convention for the Conservation of Antarctic Seals (CCAS)

London, 1 June – 31 December 1972

(The Convention entered into force on 11 March 1978)

State	Date of Signature	Date of deposit (Ratification or Acceptance)
Argentina[1]	9 June 1972	7 March 1978
Australia	5 October 1972	1 July 1987
Belgium	9 June 1972	9 February 1978
Chile[1]	28 December 1972	7 February 1980
France[2]	19 December 1972	19 February 1975
Japan	28 December 1972	28 August 1980
Norway	9 June 1972	10 December 1973
Russia[1,2,4]	9 June 1972	8 February 1978
South Africa	9 June 1972	15 August 1972
United Kingdom[2]	9 June 1972	10 September 1974[3]
United States of America[2]	28 June 1972	19 January 1977

Accessions

State	Date of deposit of Instrument of Accession
Brazil	11 February 1991
Canada	4 October 1990
Germany, Federal Republic of	30 September 1987
Italy	2 April 1992
Poland	15 August 1980

[1] Declaration or Reservation.

[2] Objection.

[3] The instrument of ratification included the Channel Islands and the Isle of Man.

[4] Former USSR.

Report by the Head of the Australian Delegation in her capacity as Representative of the Depositary Government for the Convention on the Conservation of Antarctic Marine Living Resources to the Thirtieth Antarctic Treaty Consultative Meeting

Australia, as depositary Government to the Convention on the Conservation of Antarctic Marine Living Resources 1980 (the Convention) is pleased to report to the Thirtieth Antarctic Treaty Consultative Meeting on the status of the Convention.

Australia advises the Antarctic Treaty Parties that, since the Twenty-Ninth Antarctic Treaty Consultative Meeting, the People's Republic of China deposited its instrument of accession to the Convention in accordance with Article XXIX(1) of the Convention on 19 September 2006. The Convention entered into force for the People's Republic of China in accordance with Article XXVIII(2) of the Convention on 19 October 2006.

Australia further advises the Antarctic Treaty Parties that, since the Twenty-Ninth Antarctic Treaty Consultative Meeting, no States have become members of the Commission for the Conservation of Antarctic Marine Living Resources, in accordance with Article VII(2) of the Convention.

A copy of the status list for the Convention is available to States Parties to the Convention upon request to the Treaties Secretariat of the Australian Government Department of Foreign Affairs and Trade, conveyed through Australian diplomatic missions, as well as via the internet on the Australian Treaties Database at the following internet address:

http://www.austlii.edu.au/au/other/dfat/treaty_list/depository/CCAMLR.html

Report by the Head of the Australian Delegation in her capacity as Representative of the Depositary Government for the Agreement on the Conservation of Albatrosses and Petrels to the Thirtieth Antarctic Treaty Consultative Meeting

Australia, as depositary Government to the Agreement on the Conservation of Albatrosses and Petrels (the Agreement) is pleased to report to the Thirtieth Antarctic Treaty Consultative Meeting on the status of the Agreement.

Australia advises the Antarctic Treaty Parties that, since the report to the Twenty-Ninth Antarctic Treaty Consultative Meeting, Argentina ratified the Agreement on 29 August 2006 and Norway acceded to the Agreement on 5 March 2007 in accordance with Article XV of the Agreement. The Agreement therefore entered into force for Argentina on 1 November 2006 and will enter into force for Norway on 1 June 2007.

A copy of the status list for the Agreement is available to States Parties to the Agreement upon request to the Treaties Secretariat of the Australian Government Department of Foreign Affairs and Trade, conveyed through Australian diplomatic missions, as well on the Australian Treaties Database at the following internet address:

http://www.austlii.edu.au/au/other/dfat/treaty_list/depository/consalbnpet.html

SCAR Report to XXX ATCM

Executive Summary

SCAR initiates, develops, and co-ordinates high quality international scientific research in the Antarctic region, and on the role of the Antarctic region in the Earth system. SCAR adds value to national research by enabling researchers to tackle issues of pan-Antarctic scale or global reach. SCAR also provides objective and independent scientific advice on issues affecting the management of the environment to the Antarctic Treaty Consultative Meeting (ATCM); the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR); and the Advisory Committee of the Agreement on Conservation of Albatrosses and Petrels (ACAP). During 2006, SCAR's main focus was on the XXIXth SCAR Meeting and 2nd Open Science Conference, hosted in Hobart, Tasmania, by the Australian Antarctic Division, which attracted 850 participants.

Through 2006, SCAR continued to focus on research in five main thematic areas: (i) the modern ocean-atmosphere-ice system; (ii) the evolution of climate over the past 34 million years since glaciation began; (iii) the response of life to change; (iv) preparations to study sub glacial lakes and their environs; and (v) the response of the Earth's outer atmosphere to the changing impact of the solar wind at both poles. Particular highlights include the following:

- the Antarctic plateau has been shown to be the best place on Earth for surface-based astronomy – future plans call for possible installation of a terahertz telescope at Dome A, and a 2.4-metre optical/IR telescope at Dome C.
- advanced numerical models show that intermediate depths in the Southern Ocean have warmed by 0.2ºC, and would have warmed by twice as much but for the masking effect of aerosols including volcanic dust.
- analysis of climate models suggests that by 2100 the marginal ice zone will warm in winter by up to 0.6ºC/decade, resulting in a decrease of 25% in sea-ice cover; central Antarctica will warm at 0.4ºC/decade in all seasons; precipitation will increase 3.3mm/decade on average over the continent, mostly around the edges; westerly winds will strengthen over the ocean, mostly in autumn, but coastal easterlies will decrease; katabatic winds will decrease slightly as temperatures on the polar plateau rise by several degrees.
- drilling through the Ross Sea ice shelf shows that the shelf has come and gone repeatedly over the past few hundred thousand years in response to climate change.
- there is a striking biogeographical 'divide' between the biota of the Antarctic Peninsula and that of the rest of the continent, suggesting that the biota does not have a 'recent' origin.
- evidence of rapid water movement beneath ice sheets suggests that sub glacial hydrologic systems exist beneath the polar plateau and may link sub glacial lakes.
- conjugate studies of aurora showed that the onsets of simultaneous Arctic and Antarctic sub storm onsets are not symmetric, which has implications for predicting space weather events that could have deleterious technological impacts.

1. About SCAR (for further details see *www.scar.org*)

1.1 Aims and Objectives

SCAR, the Scientific Committee on Antarctic Research, is the principal non-governmental organization responsible for the international coordination of scientific research taking place in the

Antarctic region. SCAR is an Interdisciplinary Body of the International Council for Science (ICSU). ICSU began coordinating scientific research in Antarctica during the International Geophysical Year of 1957-58, and formed SCAR in 1958 to continue the work. The need for such coordination has grown as the role of Antarctica in the global system has become apparent, and continues unabated as we approach the International Polar Year (IPY) of 2007-2008, in which SCAR is playing a leading role, and which is led by ICSU and the World Meteorological Organisation (WMO). SCAR's membership includes 34 nations and 8 of ICSU's Scientific Unions, which link SCAR to a wide range of scientific activities.

SCAR aims to improve understanding of the nature of Antarctica, the role of Antarctica in the Earth System, and the effects of global change on Antarctica. Its main objectives are:

- to initiate, develop, and co-ordinate high quality international scientific research in the Antarctic region, and on the role of the Antarctic region in the Earth system;
- to provide objective and independent scientific advice to the Antarctic Treaty Consultative Meetings and other organizations on issues of science and conservation affecting the management of Antarctica and the Southern Ocean.

To meet these objectives SCAR carries out a comprehensive programme of coordinated scientific research that adds value to national research in the Antarctic by enabling national researchers to work together on major issues of pan-Antarctic scale and having global reach. In addition it provides independent scientific advice, as an official Observer, to three intergovernmental bodies having responsibilities in the Antarctic region:

- the Antarctic Treaty system through the Antarctic Treaty Consultative Meeting (ATCM) and the Committee for Environmental Protection (CEP);
- the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), and its Scientific Committee;
- the Advisory Committee of the Agreement on Conservation of Albatrosses and Petrels (ACAP).

1.2 Highlights of 2006

SCAR's XXIX meeting and 2nd Open Science Conference, hosted by the Australian Antarctic Division in Hobart in July 2006, attracted some 850 participants from 32 countries. Delegates elected three new members – Denmark, Portugal and the International Union for Quaternary Science (INQUA). Bulgaria and the Ukraine moved from Associate to Full membership. At the meeting three SCAR medals were presented: to Peter Barrett (NZ) for outstanding achievement in Antarctic Science; to Paul Mayewski (USA) for excellence in Antarctic research; and to David Walton (UK) for international scientific coordination. SCAR signed a Letter of Agreement with the International Arctic Science Committee (IASC) to promote bipolar research. Planning began for SCAR's XXX meeting, which is scheduled to take place in 2008 in Russia, with the Open Science Conference in St Petersburg from July 8-11, and the Delegates meeting in Moscow from July 14-16. SCAR and IASC will co-organise the 2008 Open Science Conference.

2. SCAR Science

2.1 Major Scientific Research Programmes

SCAR has focused its efforts on its five major Scientific Research Programmes (SRPs), each having a bearing on some key social issue, or addressing a frontier of science:

- Antarctica and the Global Climate System (AGCS), a study of the modern ocean-atmosphere-ice system;
- Antarctic Climate Evolution (ACE), a study of climate change over the past 34 million years since glaciation began;
- Evolution and Biodiversity in the Antarctic (EBA), a study of the response of life to change;
- Sub glacial Antarctic Lake Environments (SALE), a study of lakes buried beneath the ice sheet;
- Interhemispheric Conjugacy Effects in Solar-Terrestrial and Aeronomy Research (ICESTAR), a study of how the Earth's outer atmosphere responds to the changing impact of the solar wind at both poles.

Project Implementation Plans are available from the SCAR website. Main advances in 2006 are described below. SCAR welcomes the involvement of scientists in these programmes (enquiries to *infor@scar.org*), which contribute to the work of the Parties to the Antarctic Treaty, to CCAMLR and to the UN Framework Convention on Climate Change.

Earth System science tells us that everything is connected. To ensure that we have the interdisciplinary connections we need to address key scientific questions effectively, the leaders of SCAR's 5 Scientific Research Projects and the Chief Officers of SCAR's Standing Scientific Groups for the Life Sciences, Physical Sciences and Geosciences meet twice a year to explore cross-linkages. The last such meeting was in Rome (November 6-8, 2006).

2.1.1 Antarctica in the Global Climate System (AGCS)

AGCS uses meteorological, oceanographic and glaciological data, including records from deep and shallow ice cores covering the past 10,000 years, plus the output of global and regional coupled atmosphere-ocean-ice climate models, to understand Antarctica's role in the Earth's climate system, and how the climate of the Antarctic and the high southern latitudes will evolve over the next 100 years in response to natural and human forcing. Outputs will include an improved understanding of the complex interactions between the atmospheric, oceanic and cryospheric elements of the climate system in the polar regions, of natural climate variability as opposed to human influence in the polar regions, and of how signals of tropical and mid-latitude climate variability reach the Antarctic, and high latitude climate signals are exported northwards. This work on the "modern" climate system complements that on the past climate system by SCAR's ACE programme (section 2.1.1). AGCS and its various sub-programmes (*http://www.antarctica.ac.uk/met/SCAR_ssg_ps /AGCS.htm*) are co-sponsored by SCAR and the World Climate Research Programme (WCRP).

2.1.1.1 Progress

The AGCS community made a number of significant advances in 2006. A major warming of the Antarctic winter troposphere was discovered from analyses of balloon-launched radiosonde data. The warming is largest 5 km above sea level where temperatures have increased at a rate of 0.5 – 0.7ºC over the last 30 years. It is larger than any previously identified regional tropospheric warming on Earth. Work continues to find a cause.

An analysis of recent trends in Antarctic snow accumulation showed that over the continent as a whole the annual trends are small and not statistically different from zero, suggesting that recent Antarctic snowfall does not affect sea level.

Recent data show that the surface ocean west of the Antarctic Peninsula, where air temperatures rose 3ºC since 1951, has become more saline and warmed by more than 1ºC in the summer. These changes, driven by atmospheric warming and reduced rates of sea ice production, will further

accentuate warming in the region, and will have a deleterious affect on the production of krill and the rest of the Southern Ocean food web.

Modelling shows for the first time that the major, near-surface increase in summer temperature on the eastern side of the Antarctic Peninsula has been caused, at least in part, by increases in global warming. Over the last few decades global warming has shifted the Southern Hemisphere Annular Mode (SAM) into its positive phase during the summer, lowering atmospheric pressure over the Antarctic and increasing it at mid-latitudes. This has strengthened the westerly winds around the Antarctic, bringing mild, maritime air masses across the Antarctic Peninsula to help the disintegration of the ice shelves there.

A study using output from the latest generation of climate models has found that they reproduce the observed mid-depth Southern Ocean warming of 0.2ºC that has occurred since the 1950s if they include time-varying changes in anthropogenic greenhouse gases, sulphate aerosols and volcanic aerosols in the Earth's atmosphere. The agreement between observations and climate models suggests significant human influence on Southern Ocean temperatures. Climate models that do not include volcanic aerosols produce mid-depth Southern Ocean warming that is nearly double that produced by climate models that do include volcanic aerosols. This implies that the full impact of human-induced warming of the Southern Ocean has yet to be realized.

Ice core reconstructions of past atmospheric circulation suggest that modern atmospheric circulation intensity is within the range of variability of the last 1000 years. Ice core records also reveal increased penetration of marine air masses into the western coastal regions of West Antarctica in the 1940s.

Analysis of the output from the 20 climate models used in the 4th Assessment of the Intergovernmental Panel on Climate Change (2001) have been used to examine how the climate of the Antarctic will evolve in the 21st Century. The model fields were weighted according to their level of skill in reproducing the climate changes observed over the last few decades. The projections suggest that near surface temperatures in the sea ice zone will increase in winter by up to 0.6ºC/decade, resulting in a decrease of 25% in sea-ice cover; central Antarctica will warm at 0.4ºC/decade in all seasons; precipitation will increase by 3.3mm/decade on average over the continent, mostly around the edges; westerly winds will strengthen over the ocean, mostly in autumn, but coastal easterlies will decrease; katabatic winds will decrease slightly as polar plateau temperatures rise by several degrees.

AGCS has also been actively coordinating cross-disciplinary Antarctic science and the preparation of data sets and research tools. In April 2006 a workshop was held in Cambridge, UK to consider the strength and weaknesses of the high latitude elements of the atmospheric re-analysis data sets, which are proving a very powerful tool for the investigation of recent climate change. Means were also considered for the collection and digitisation of historical Antarctic meteorological observations for the next round of reanalyses that are to be produced. Several presentations on aspects of AGCS atmosphere, ocean and ice core science were made at the SCAR Open Science Conference (Hobart, July 2006), where an interdisciplinary AGCS/ACE/EBA workshop was held on "Atmospheric, Oceanic, Cryospheric and Biological Variability Over Decadal to Millennial Timescales".

2.1.1.2 Plans

The second workshop on Recent High Latitude Climate Changed will be held in October 2007 in Seattle, USA. This workshop, which is being organised in conjunction with WCRP's Climate and Cryosphere (CliC) programme and the International Arctic Science Committee (IASC), will consider atmospheric, oceanic and cryospheric changes that have taken place during the last 50 years in the Arctic and Antarctic. AGCS is also involved in the development of plans for key observing systems that will contribute to the Global Earth Observing System of Systems (GEOSS); they include a bipolar cryosphere observing system, and a Southern Ocean Observing System (SOOS).

2.1.2 Antarctic Climate Evolution (ACE)

The Antarctic ice sheet has existed since around the Eocene-Oligocene boundary 34 Ma ago. Its considerable fluctuations have been one of the major driving forces for changes in global sea level and climate to the present time. ACE is collecting and analysing geological data from selected time periods and integrating them with the results of advanced numerical models to establish the origin of the present configuration of the ice sheet and to assess the rates at which it grows and decays over time, as the basis for improving forecasts of the behaviour of the ice sheet, and hence sea-level, through time.

2.1.2.1 Progress

Through the efforts of ACE and its predecessor programme ANTOSTRAT, we now understand that the onset of glaciation was not simply a response to the thermal isolation of Antarctica by the opening of the Southern Ocean between Antarctica and adjacent continents. Recent numerical modelling suggests that declining atmospheric CO_2 was a more important factor in cooling Antarctica. Ice was, however, around before the mid-Cenozoic; marine sediments from Seymour Island provide indirect evidence, from what appear to be drop stones from icebergs, for extensive ice cover in Antarctic near the Cretaceous-Tertiary boundary 65 million years ago.

In the Lambert-Amery glacier-ice shelf region, the field evidence favours a much thinner ice sheet than models show for the last glacial maximum 20,000 years ago. Drilling through the Ross Sea ice shelf shows that the shelf has come and gone repeatedly over the past few hundred thousand years in response to climate change. Both Ross Sea drilling and Lambert Glacier studies confirm that the ice margin has advanced and retreated many times during late Cenozoic times and into the Quaternary, confirming suspicions that fluctuations in the ice sheet reflect changes in insulation driven by changes in the Earth's orbit. Careful examination of the timing of events associated with the Last Glacial Maximum 20,000 years ago now show that the ice sheet retreated rapidly over a period of around 800 years, apparently contributing to a global melt water pulse as well as to a rapid rise in sea-level.

In 2005/6, ACE members undertook a field campaign led by the British Antarctic Survey, to map, describe, sample and photograph glacial sedimentary sequences and associated fossils on James Ross Island. The rock and fossil samples will be analysed to create realistic environmental reconstructions and new data on environmental change, particularly Antarctic ice sheet history, over the past 7-10 million years, for input to climate models. ACE members also helped prepare the International Ocean Drilling Programme (IODP) Wilkes Land drilling proposal, which is now in the IODP drilling schedule for Austral summer 2008-2009. ACE also helped to develop the IODP Ancillary Program for obtaining a Holocene ultra-high resolution record of climate variability from the Adelie Drift (Wilkes Land).

ACE also influences progress by organising international workshops to highlight particular aspects of Antarctic climate evolution, and publish the papers as special issues of international journals. The third such issue was published in 2006 (Barrett, P., Florindo, F. and Cooper, A. (Editors) (2006). "Antarctic Climate Evolution - view from the margin", *Palaeogeography, Palaeoclimatology, Palaeoecology*, vol. 231, 1-252). It covers a wide range of techniques and timeframes concerning the evolution of the Antarctic continental margin, ranging from detailed sedimentary analyses of the Cape Roberts Project core to numerical modelling investigations of ice sheet growth and decay.

ACE organised two international meetings in 2006: (i) April 2006, EGU, Vienna: "Deep Time Perspectives on Climate Change: Marrying the Signal from Computer Models & Biological Proxies". This session discussed the relevance of pre-Quaternary data to scenarios for future climate change (ii) December 2006, fall AGU, San Francisco: "Post IPY geophysical exploration of Antarctica". This special session brought together experts from the area of radio-echo sounding, who spoke

about the development and use of this technique in the exploration of Antarctica over the last 50 years. The session also detailed news ways in which the technique can be developed, which is of central interested to ice sheet modellers as it provides the only feasible means by which sub-ice bed topography can be measured). ACE also contributed a keynote talk on ACE at the II Simposio Latinamericano Sobre Investigationes Antarcticas y VI Reunion Chilena de Investigacion Antartica, Concepcion, Chile, 16-18 August 2006. The ACE website is at *www.ace.scar.org*.

2.1.2.2 Plans

For 2007, ACE plans to: (i) publish a fourth special issue (in the Journal *Palaeogeography, Palaeoclimatology, Palaeoecology*) entitled "Antarctic Cryosphere and Southern Ocean Climate Evolution", with papers from the 2006 EGU ACE session (see above); (ii) support and encourage the ANDRILL programme (drilling in the Ross Sea); (iii) develop an international plan for the collection of airborne and ground-based geophysical data relating to the Antarctic ice sheet (i.e. ice thickness and bed elevation data) in current 'data free' zones and in regions of glaciological change; (iv) plan an ACE modelling workshop for Easter 2008, in which the Antarctic ice volume through the Cenozoic is evaluated; (v) contribute funds and numerous session activities at the International Symposium on Antarctic Earth Sciences (ISAES) meeting at Santa Barbara in August 2007; (vi) organise a session at the INQUA meeting in Cairns, July 2007 on "Climate and ice in Antarctica and the Southern Ocean since the LGM".

2.1.3 Evolution and Biodiversity in the Antarctic (EBA)

EBA's goals are to examine the evolution history of Antarctic organisms, the evolutionary adaptation of organisms to the Antarctic environment, the patterns of gene flow and consequences for population dynamics, the diversity of organisms, ecosystems and habitats in the Antarctic, and the impact of past, current and predicted future environments.

2.1.3.1 Progress

The work on which EBA is based has established that the terrestrial biota of the Antarctic Peninsula is very different from that of the rest of the continent - there is a striking biogeographical 'divide' between the two. This is one of several lines of evidence that suggest that the biota does not have a 'recent' origin. Studies of the evolution of Antarctic organisms imply that there must have been ice-free 'refugia' in which species survived the severe glacial conditions between the warmer interglacials like that we are experiencing today. In the marine realm it has become clear that diversity is high – much higher than expected, and dramatically higher than in the Arctic, with some phyla represented at levels above global averages (e.g. 17.5% of known pycnogonid species; 12.2% of polychaetes; and 8.3% of amphipods). Over the longer term, it can be shown that the evolution of organisms in Antarctica and the Southern Ocean has been influenced first by the creation of an ocean barrier between Antarctica and other continents around 10-15 million years ago, and second by the formation of the Antarctic Circumpolar Current and its associated frontal systems, especially the Polar Front between 50º and 60ºS. Colonisation has been quite different from that in the Arctic where warm conditions brought colonisers from warmer regions. Threats to Antarctic life now come from the invasion of non-indigenous species encouraged by a combination of warming (on the Antarctic Peninsula), the risks of accidental transport through human activity, and the effect of ocean warming on cold-adapted marine animals.

EBA grew out of two major SCAR programmes, RiSCC (Regional Sensitivity to Climate Change in Antarctic Terrestrial and Limnetic Ecosystems), and EVOLANTA (Evolutionary Biology of Antarctic Organisms), both of which ended in 2006. To mark the end of these prior efforts, the RiSCC team produced a synthesis volume (Bergstrom D, Convey P & Huiskes AHL eds., 2006, Trends in Antarctic

Terrestrial and Limnetic Ecosystems, Antarctica as a Global Indicator. Springer, Dordrecht, xii + 370 pp.), and the EVOLANTA team produced a number of publications to complement their 2004 special issue of Antarctic Science (volume 16). In addition, the Latitudinal Gradient Programme (LGP), which is linked to EBA, published a special issue of Antarctic Science (volume 18) in December 2006, and EBA members completed the publication of a synthesis volume from the final meeting of the EASIZ (Ecology of the Antarctic Sea Ice Zone) programme (Deep Sea Research II, volume 53, May 2006).

One major contributor to EBA is the Census of Antarctic Marine Life (CAML), a five-year project to investigate the distribution and abundance of Antarctica's marine biodiversity, how biodiversity is affected by environmental change, and how change will alter the nature of the ecosystem services provided to the planet by the Southern Ocean. Although the majority of CAML's fieldwork on around 14 separate ship or cruise activities will occur during the International Polar Year (2007-2008), the first cruise, aboard *Polarstern*, began around the Antarctic Peninsula in December 2006. The CAML Office (*www.caml.aq*) is hosted by the Australian Government Antarctic Division and funded by the Sloan Foundation.

In parallel with CAML, the IPY programme ICEFISH (International Collaborative Expedition to collect and study Fish Indigenous to Sub-Antarctic Habitats) (*www.icefish.neu.edu*) will study the dominant suborder Notothenioidei, to help understand the evolution, population dynamics, eco-physiology and eco-biochemistry of these sub-Antarctic fish and their Antarctic relatives. ICEFISH, which contributes to both EBA and CAML, started with a cruise in the South Atlantic sector in 2004 (a special issue of Polar Biology is in press), and will sample the Pacific sector in 2007.

A complementary IPY project "SYstem-Coupling" (SYSTCO) will take a vertical snapshot through the water column to examine atmospheric-pelagic-benthic coupling processes. EBA representatives organised an IPY-SYSTCO workshop at the Alfred Wegener Institute (Bremerhaven, Germany) in September 2006.

Two EBA-coordinated databases meet the needs of EBA and affiliated programmes. One is the RiSCC terrestrial/freshwater database held at the Australian Antarctic Division (*http://aadc-maps.aad.gov.au/aadc/biodiversity/*). The other is the Marine biodiversity portal (MarBIN, *http://www.scarmarbin.be/*), which, with generous help from the Belgian government and the Alfred P. Sloan Foundation, is established at the Royal Belgian Institute of Natural Sciences. Both link to the Global Biodiversity Information Facility (GBIF); MarBIN also links to the Ocean Biogeographical Information System (OBIS).

During 2006, EBA participated in (i) a number of sessions and workshops on EBA, LGP, CAML, RiSCC, EVOLANTA and ICEFISH as part of the SCAR Open Science Conference (Hobart, July 2006); (ii) a workshop on Antarctic terrestrial diversity, held jointly with the SCAR Antarctic Treaty System Committee and the SSG for Life Sciences (Stellenbosch, October 2006); (iii) the implementation workshop of the Dutch-led "TARANTELLA" IPY programme (Netherlands, October 2006); (iv) a SCAR-MarBIN workshop (Evolution of Marine Organisms of the Southern Ocean) on marine biodiversity (Leuven, December 2006); and (v) meetings of the Malaysian Antarctic Research Programme (Kuala Lumpur, August 2006) and the South American Antarctic Science community (Concepcion, August 2006). The EBA website is hosted at: *http://www.nioo.knaw.nl/projects/scarlsssg/eba/*.

2.1.3.2 Plans

EBA's plans for 2007 include: (i) a joint EBA-MERGE (IPY) session at the Cryosphere Resources Conference (Salekahan, West Siberia); (ii) a joint EBA-ACE session at Antarctic Earth Sciences Symposium (Santa Barbara); (iii) participation in the 3rd Malaysian Antarctic Science conference

(March 2007), to engage Asian Antarctic operators, and to advertise SCAR activities to currently non-participant countries; (iv) funding the collation of existing terrestrial biodiversity data and population of terrestrial biodiversity database (through University of Stellenbosch); (v) completing publication of papers from the IX SCAR Biology Symposium (Curitiba) as a special issue of Antarctic Science; and (vi) contributing to planning the 10th SCAR Biology Symposium (2009), and 3rd SCAR Open Science Conference (2008).

2.1.4 Subglacial Antarctic Lake Environments (SALE)

SCAR's SALE programme continues to promote, facilitate, and champion international cooperation and collaboration to explore and study sub glacial lakes and streams in Antarctica, following appropriate standards of environmental protection.

2.1.4.1 Progress

We now know that Antarctica has a complex, continental-scale hydrological system comprising interconnected sub glacial lakes and streams under thick ice sheets. A recent paper used satellite observations of changes in the height of flat-spots on the ice to deduce that one lake had discharged downstream into another. The existence of sub-ice water was confirmed when drilling to the base of the ice at the Kohnen Station in the EPICA project in January 2006 led to an injection of water into the base of the drill hole from the ice-rock interface – something also seen in Greenland drill holes.

Sub glacial water is central to many processes that have shaped the Antarctic continent and its ice sheets today and in the past. Wet sub glacial environments are isolated from the weather, the seasons, and celestially controlled climatic changes that establish fundamental constraints on the structure and functioning of most other Earth-bound environments. The processes that affect sub glacial environments are mediated by the flow of the overlying ice, by the flux of heat and possibly fluids from the underlying rocks, and by hydrological processes that deliver water, materials, and heat to and through sub glacial systems, dictating the residence times of water in lakes. This complex hydrological system constitutes one of Earth's last great unexplored frontiers and can be expected to contain clues to fundamental Earth and life processes. Its study will advance our understanding of how life, climate, and planetary history have combined to produce the Antarctic continent as we know it today.

Major scientific advances in the last year were summarized at the second SCAR SALE workshop (Grenoble, France, April 2006)(see *http://salepo.tamu.edu/saleworkshop2006*). The workshop laid out plans for future SALE exploration and study, calling for a continent-wide campaign at multiple locations to: 1) systematically map sub glacial lake systems and their environs, and 2) enter, instrument, and sample ice, water, sediments, and potential microbiological residents.

There were several SALE presentations and posters at the Open Science Conference in Hobart in July 2006. The SALE IPY program, SALE -UNITED (Unified International Team for Exploration and Discovery), continues to develop its plans. SALE was a featured programme at the Fall 2006 American Geophysical Union IPY session in December 2006, where SALE investigators also organized a session on sub-ice water. The SALE Programme Office at Texas A&M University (*http://salepo.tamu.edu/*) continues to be the focal point for all SALE related activities, programmes, projects and publications.

2.1.4.2 Plans

The report of the US National Academy's "Committee on Principles of Environmental and Scientific Stewardship for the Exploration and Study of Sub-glacial Lake Environments" will be released early in 2007, and will provide further guidance on the standards needed to responsibly explore

these environments. During 2007 there will be several SALE sessions at major meetings, including (i) one or more sub glacial environment sessions at the EGU Annual Meeting in Vienna, Austria; (ii) the third SCAR SALE meeting, in Montana, USA; and (iii) a SALE session at the AGU National meeting.

In terms of outreach and communication, SALE-UNITED will be featured in a number of IPY "kick-off" education and public outreach events. SALE is part of an application to US NASA to develop museum and science centre related exhibits and resources during the IPY. A chapter is in progress for a book on polar limnology (Priscu et al.). A SALE brochure is being developed by the SALE Programme Office and will be widely distributed. Finally a feature article is in press in EOS.

2.1.5 Inter-hemispheric Conjugacy Effects in Solar-Terrestrial and Aeronomy Research (ICESTAR)

ICESTAR will create an integrated, quantitative description of the upper atmosphere over Antarctica, and of its coupling to the global atmosphere and the geospace environment.

2.1.5.1 Progress

Highlights include the following: (i) conjugate studies of aurora showed that the onsets of simultaneous Arctic and Antarctic sub storms are not symmetric, which has implications for predicting space weather events that could have deleterious technological impacts; (ii) satellite observations suggest that the global rate of merging between interplanetary magnetic fields and Earth's magnetosphere drives near-Earth space weather, which implies that contrary to prevailing wisdom space weather cannot best be predicted by the behaviour of solar wind electric fields.

ICESTAR shares with the International Heliophysical Year (IHY) management of an approved IPY programme No 63 ("Heliosphere Impact on Geospace"). The scientific goals of the ICESTAR-IHY-IPY programme fall into three main themes:

- Coupling processes between the different atmospheric layers and their connection with the solar activity:
- Energy and mass exchange between the ionosphere and the magnetosphere:
- Inter-hemispheric similarities and asymmetries in geospace phenomena.

Each project in the combined proposal has a set of project-specific scientific objectives, but the interrelationships between the studied processes mean there is significant synergy between them. As a result the overall proposal will be able to address topics with far-reaching scientific impact that are important to society at large. One practical benefit will be improved prediction of space weather phenomena that adversely affect spacecraft operations, humans in space, and satellite-based positioning systems. On the scientific side, global-scale coordination of observing networks will allow us to study conjugate and multi-scale geospace phenomena in fundamentally new ways. Concrete work on linking the IHY, IPY and ICESTAR research activities took place in October 2006.

In the first ICESTAR workshop (Toulouse, July 2005) data sharing issues were discussed for the first time among a wider community including representatives of some of the most widely used existing geospace data servers. The group agreed to focus initially on three data servers: VGMO (magnetometer data), GAIA (auroral precipitation data), and Madrigal (Incoherent scatter radar data), and to build or upgrade these systems so that they have easily adoptable interfaces for both users and data providers. A more ambitious goal will be to make the systems communicate electronically.

The GAIA Virtual Observatory (VO) is presently being developed by research groups at the University of Calgary, Lancaster University, and the Finnish Meteorological Institute, and a prototype of the VO for optical data (browser for quick-look data) was released (see *http://gaia-vxo.org*).

Plans are being made for the final system. A prototype of the VO for magnetometer data, VGMO.NET, was released in 2005 - see the 2005 Annual Report, and also see A Virtual Global Magnetic Observatory: VGMO.NET, Papitashvili, V. O., A. B. Saxena, V. G. Petrov, C. R. Clauer, and N. E. Papitashvili, Earth, Planets and Space, 58, No 6, 765-774, 2006.

2.1.5.2 Plans

The kick-off meeting for the ICESTAR/IHY IPY programme on Heliosphere Impact on Geospace (Helsinki, February 5-9, 2007) will lead to publication in early 2008 of a special issue on this topic in the Journal of Atmospheric and Solar-Terrestrial Physics. During 2007/8 the multidisciplinary IPY project POLENET (meteorology, glaciology, volcanology, seismology) will build and maintain an extensive Antarctic network of dual-frequency GPS receivers. Data from this network will be invaluable for the ICESTAR-IPY community, which also maintains several GPS receiver stations in the Antarctic for ionospheric research. The POLENET and ICESTAR communities will collaborate on the development of GPS data sharing systems. A dedicated Working Group with POLENET, ICESTAR, and SSG-GS representatives will start the preparatory work in early 2007.

2.2 Specific Research Areas

2.2.1 Life Sciences Group

The Standing Scientific Group for the Life Sciences (SSG-LS) is responsible for a number of other activity areas aside from EBA. Among its activities for the year were:

- the start of planning for the 10th SCAR Biology Symposium, which will be held in Sapporo, Japan, in 2009; this will be the first SCAR Biology Symposium in Asia.
- the Expert Group on Birds continued to provide advice regarding the nomination of Specially Protected Species status to southern giant petrels. The Group continues to work with BirdLife International to define Important Bird Areas in the Southern Ocean region, and continues its assessment of the potential impact of flipper banding on penguins.
- the Expert Group on Seals completed the final report of the Antarctic Pack Ice Seals (APIS) project. A new research programme is being designed to understand the role(s) of top predators in the Southern Ocean. It will integrate long-term studies with new animal-borne instrument technologies for the study of water masses, behaviour and movement patterns.
- the Life Sciences SSG is considering the options for a potential merger of the Expert Groups in Birds and Seals to form a new Expert Group on Higher Predators, and will report on progress to the Executive Committee in July 2007.
- the Expert Group on Human Biology and Medicine has started having annual meetings with the Medical Network (MEDINET) group of COMNAP (Council of Managers of National Antarctic Programmes).
- in response to questions about Antarctic Conservation in the 21st Century, the Life Sciences SSG organised a workshop in Stellenbosch, South Africa. Following initial discussions it became clear that in order to address this issue adequately the scope of the effort should be expanded to include the World Conservation Union (IUCN).
- at the SCAR scientific meeting in Hobart (July 2006) the Life Sciences SSG established a new Action Group on Continuous Plankton Recorder (CPR) research, and endorsed the already existing CPR data set as a SCAR data set. Extensive CPR data will be collected during the IPY. The CPR-AG will work closely with CAML, EBA and SCAR-MARBIN.
- SCAR continued its co-sponsorship of both the Southern Ocean programme of the Global Ocean Ecosystems Dynamics (GLOBEC) project of the International Geosphere-

Biosphere Programme (IGBP), and of a new programme by the name of Integrated Climate and Ecosystems Dynamics (ICED), which is also part of IGBP. ICED set up a website (*http://www.antarctica.ac.uk/Resources/BSD/ICED/index.htm*) and circulated a draft science plan for comment.

2.2.2 Geosciences Group

The Standing Scientific Group for the Geosciences (SSG-GS) contains several Expert and Action Groups aside from ACE and SALE. Reports on the activities of selected Expert and Action Groups follow:

- The Marine Acoustics Action Group produced a new report on the impacts of acoustic technologies on cetaceans, which was presented to and well received by the 29th ATCM meeting in Edinburgh (June 2006). A new Action Group – on Sub-Ice Geological Exploration (SIGE), was formed to look into ways of developing a collective SCAR-wide pan-Antarctic approach to drilling into the rocks beneath the ice to improve our understanding of Antarctica's geological history.
- Planning has begun for the 10th International Symposium on Antarctic Earth Science (ISAES) (Santa Barbara, California, August 26 through September 1, 2007).
- High quality bathymetric maps are needed for safe navigation, as input for ocean modellers, to provide information on ecosystems, and as a clue to geological processes. The Expert Group on the International Bathymetric Chart of the Southern Ocean (IBCSO) aims to produce a high-resolution bathymetric map of the Southern Ocean as a contribution to the General Bathymetric Chart of the Oceans (GEBCO). The work is shared with the Intergovernmental Oceanographic Commission (IOC) and the International Hydrographic Office (IHO). It ramped up in mid-October 2006 with employment of an IBCSO scientific editor at the Alfred Wegener Institute (AWI). During the year, multi-beam bathymetric data were collected and processed on four *Polarstern* cruises in Antarctic waters, and submitted a bathymetry proposal (POBACE) to the IPY Project Office. During 2007, IBCSO will combine bathymetric data from the Weddell Sea, the Ross Sea and the Indian Ocean, including multi-beam data from ships and ETOPO2v2 data from satellite altimetry. Progress, plans and requirements will be discussed at an IBCSO session during the ISAES meeting in Santa Barbara (September 2007). See *www.awi-bremerhaven.de/GEO/* Bathymetry/ibcso/ , the IBCSO website, for further information.
- Both SCAR and the Scientific Committee on Oceanic Research (SCOR) strongly support efforts to gather and make available bathymetric data from sparsely surveyed areas of the Southern Ocean. At a meeting in London in December 2006, SCOR recommended (i) that Principal Investigators (PIs) should incorporate into their proposals requests to collect and process multi-beam bathymetric data, especially data that fills present gaps; (ii) that funding agencies should fund multi-beam bathymetry data acquisition and processing on all research vessels equipped with multi-beam echo-sounders, whether on transit or on location; and (iii) that PIs should submit their data to the appropriate World Data Centre (US National Geophysical Data Centre – NGDC).
- The Expert Group on Geodetic Infrastructure of Antarctica (GIANT) provides a common geodetic reference system for all Antarctic scientists and operators. It also contributes to global geodesy for studying the physical processes of the earth and the maintenance of the precise terrestrial reference frame, and provides information for monitoring the horizontal and vertical motion of Antarctica. Together with SCAR's Antarctic Neotectonics (ANTEC) Expert Group, GIANT is a leader in the bipolar IPY POLENET (Polar Earth Observing Network) project, to which GIANT will contribute the Antarctic GPS component. During

the year ANTEC organised an EGU symposium on short and long-term observations in the polar regions (April 2006) and GIANT organised a POLENET workshop (Dresden, October 2006). For more information see: *http://www.geoscience.scar.org/geodesy/giant.htm*.

- At the XXIX SCAR meeting in Hobart 2006, the Expert Group on Geographic Information (EGGI) was repositioned from within the Standing Scientific Group for the Geosciences to become the Standing Committee on Antarctic Geographic Information (SC-AGI). SC-AGI provides geographic information products and policies to support Antarctic science and operations; integrates and coordinates Antarctic mapping and Geographical Information System (GIS) programmes; promotes an open standards approach to support free and unrestricted data access; and promotes capacity building towards sound Antarctic geographic data management. Its work helps to provide geographic limits to Antarctic Specially Protected Areas (ASPAs) and Antarctic Specially Managed Areas (ASMAs), and geospatial web services that might be needed for scientific, logistic, or tourism-related applications. SC-AGI aims to create an Antarctic Spatial Data Infrastructure (AntSDI). During 2006, a SC-AGI workshop was held in Hobart in July (see *http://www.antsdi.scar.org/eggi/meetings/*).
- A range of SC-AGI geographic information products is available as follows:

  Place Names: The SCAR composite gazetteer (*http://www3.pnra.it/SCAR_GAZE*).

  SCAR Map Catalogue: (*http://aadc-maps.aad.gov.au/index.cfm*)

  Topographic Database: The Antarctic Digital Database (ADD) at: *http://www.add.scar.org/*.

  The SCAR King George Island Geographical Information System (KGIS): *http://www.kgis.scar.org/*

  The Cybercartographic Atlas of Antarctica: *http://www.carleton.ca/gerc/caap*.

  The SCAR Feature catalogue: *http://aadc-maps.aad.gov.au/aadc/ftc/index.cfm*.

- The Antarctic Digital Magnetic Anomaly Project (ADMAP) aims to map Antarctica's magnetic anomaly field to aid in understanding geological processes. It is managed jointly with IAGA (International Association of Geomagnetism and Aeronomy). ADMAP contributes data to the World Magnetic Anomaly Map (for details see: *http://www.geology.ohio-state.edu/geophys/admap*). During 2006, ADMAP developed a DVD of the compilation of data up to year 1999 for release to the World Data Centers; updated near-surface anomaly predictions; improved modelling of the Antarctic core field and its secular variations; compiled rock magnetic and other physical properties into a database to support geological applications; and developed and promoted regional and continental scale interpretation of the ADMAP data. In 2007, ADMAP will continue compiling all available terrestrial, marine, and satellite magnetic survey data collected since the IGY 1957-58 for the region south of 60°S, incorporating new magnetic surveys into the ADMAP digital database. SCAR will fund a workshop to formally release the database to the World Data Centers. ADMAP will continue developing and promoting regional and continental scale interpretation efforts and help identify areas for new collaborative magnetic surveys.
- The Expert Group on Antarctic Permafrost and Periglacial Environments (EGAPPE) provides coordination, communication and exchange of data amongst Antarctic permafrost researchers within SCAR and the International Permafrost Association (IPA). It works closely with the IPA working group on Antarctic Permafrost and Soils. The activities of both are described under the acronym, ANTPAS, the Antarctic Permafrost and Soils group (see *http://erth.waikato.ac.nz/antpas/*). During 2006 the ANTPAS submission to IPY was approved by the IPY Joint Committee. A network of data centres was identified for managing ANTPAS data; soil maps are being prepared for Antarctic dry valleys; and a set of latitudinal environmental gradients was identified for monitoring change. In July ANTPAS held its

second meeting in Hobart. The journal *Geoderma* approved production of a special issue entitled "Antarctic Soils and Soil-Forming Processes in a Changing Climate", to be edited by Jim Bockheim. During 2007, EGPPS will (i) obtain standardized permafrost temperature and active layer measurements across all permafrost regions; (ii) revise estimates of carbon pools in permafrost regions; (iii) establish a periglacial monitoring network; (iv) improve regional permafrost mapping; (v) and develop and promote permafrost information and educational activities.

2.2.3 Physical Sciences Group

The Standing Scientific Group for the Physical Sciences (SSG-PS) reported a number of highlights.

- The plateau astronomy group was dissolved, having achieved its objective in demonstrating that the Antarctic Plateau is the best place on Earth for surface-based astronomy – future plans call for possible installation of a terahertz telescope at Dome A, and a 2.4-metre optical/infra-red telescope at Dome C.
- The working group on katabatic winds held a workshop on the Antarctic wind field, which produced a report assessing our understanding of the near-surface flow across the continent. The katabatic winds group was absorbed into AGCS (see above).
- At its meeting in Hobart in July 2006, recognising that separating natural from human induced variability in the Antarctic is a major challenge that requires sustained observation of multiple parameters, the SSG created a new Action Group for a Pan-Antarctic Observations Network (PAntOS). Some aspects of sustained observations are already being addressed by ongoing ocean and cryosphere activities (see below), which can be coordinated by PAntOS.
- As another means of accessing information about climate change, the SSG endorsed SCAR's co-sponsorship of the International Partnership in Ice Core Science (IPICS), which deals with the science emerging from drilling long ice cores from the polar ice caps.
- The SSG endorsed plans to develop a review of 'Antarctic Climate Change and the Environment', which will be led by AGCS.
- The SSG agreed that the Antarctic Astronomy and Astrophysics Expert Group should develop plans for a Scientific Research Project on Astronomy and Astrophysics.
- The SCAR/SCOR Oceanography Expert Group (EG-OCEAN) continued its work to encourage an inter-disciplinary approach to Southern Ocean observations, modelling and research; to facilitate coordination between the physical oceanographic research groups currently active and those planning research in the Southern Ocean; to identify historical and reference data sets; and to encourage the exchange of information with operational agencies. EG-OCEAN held its second meeting, in Hobart (in July), and agreed to focus on developing plans for a Southern Ocean Observing System (SOOS). A workshop on that topic, organised by SCAR, CAML and the Partnership for Observations of the Global Ocean (POGO), took place on July 15 in Hobart, and led to the formation of a Scientific Organizing Committee for a SOOS workshop to be held in Bremen in October 2007.

  SCAR also co-sponsors with CLIVAR and CliC the Southern Ocean Implementation Panel (SOIP), which is devoted to establishing a Southern Ocean observing system, and the International Programme for Antarctic Buoys (IPAB), which deploys drifting buoys on the sea ice. The SOIP met in Buenos Aires on 14 -15 November to discuss progress and plans for Southern Ocean observations, and IPAB met in Hobart in July. These various groups are all involved in developing leading IPY projects.

- SCAR continued to work with WCRP to develop a Bipolar Cryosphere Observing System for the Integrated Global Observing System Partnership (IGOS-P). A blueprint has been developed of requirements for cryospheric observations from space and *in situ* that are needed to document cryospheric change (*http://stratus.ssec.wisc.edu/igos-cryo/*). Space agencies and others will implement the requirements as part of the Global Earth Observing System of Systems (GEOSS). SCAR will take responsibility for monitoring progress in implementing the system in Antarctica.
- The SCAR Expert Group on Ice Sheet Mass Balance and Sea Level (ISMASS) aims to revitalize approaches to assessing methods and uncertainties in estimating Antarctic Ice Sheet mass balance and its relation to sea level. Many recent events suggestive of rapid ice-sheet change cannot be reproduced by the current generation of whole ice-sheet models on which the predictions issued by the IPCC are primarily based. Developing the next generation of more realistic ice-sheet models requires a comprehensive and integrated approach based on targeted data collection and interpretation, and theoretical and numerical developments. ISMASS is developing plans to work on these issues with the NSF-supported Center for Remote Sensing of Ice Sheets (CReSIS), led by the University of Kansas, and the Center for Interglacial Climate at the Niels Bohr Institute at the University of Copenhagen.

  ISMASS plans to convene a town-hall meeting during the IUGG meeting in Perugia (July 2007) to assess progress and to develop plans for the next 5-10 years, and to organise a joint ITASE/ISMASS/AsPECT symposium for the SCAR meeting in St Petersburg (2008).

3. Data and Information Management

One of SCAR's goals is to facilitate free and unrestricted access to Antarctic scientific data and information in accordance with article III-1c of the Antarctic Treaty. This is the task of the Joint SCAR-COMNAP Committee on Antarctic Data Management (JCADM) (*http://www.jcadm.scar.org*).

During the reporting period:

- JCADM has succeeded in involving more National Antarctic Data Centres (NADCs), in training NADC operators, and in increasing the population of the Antarctic Master Directory (AMD) with metadata.
- The AMD now contains over 4000 data set descriptions, many of these directly linked to online data. 23 nations now contribute to the AMD, which is being accessed increasingly by the wider community.
- JCADM is now much more engaged with the scientific community, through attending meetings of the Chief Officers of the SSGs, by adding a JCADM representative to the Steering Committee of each Scientific Research Project (SRP), and by making presentations to and listening to the requirements of the SSGs and SRPs during their meetings in Hobart (July) and Rome (November).
- JCADM's performance was reviewed by a Standing Committee on Antarctic Data Management (STADM), and found very favourable.
- JCADM's Terms of Reference were revised and approved by the SCAR and COMNAP Delegates meeting in Hobart in July.
- JCADM is engaged in developing the IPY scheme for data management, and will develop a SCAR data and information strategy.

4. International Polar Year

SCAR is making a significant contribution to the proposed International Polar Year (IPY)(2007 – 2009). Both the new SCAR President and the SCAR Executive Director are members of the Joint ICSU/WMO Committee for the IPY, which also contains several scientists eminent in SCAR science programmes. During 2006, these people contributed to the writing of 'The Scope of IPY Science', which will be published early in 2007. They also contributed to the process for final approval of the 228 proposals covering the Arctic or Antarctic or both. SCAR is either leading or involved in 70% of the Bipolar or Antarctic natural science projects approved by the IPY Joint Committee. SCAR's 5 scientific research programmes lead project clusters for the IPY, and the Chief Officer of JCADM is contributing as co-chair of the IPY Data and Information Management Subcommittee. Principal Investigators are now applying to their national committees for funds. SCAR has begun considering the question of how to manage the IPY legacy once the IPY is over. Among other things, SCAR would expect to retain responsibility for IPY Antarctic data and information management, through JCADM, and to be responsible for specific observing systems, such as the Southern Ocean Observing System and the Antarctic part of the Cryosphere Observing System, both of which are being developed through the IPY. The first formal IPY conference will be the Joint SCAR/IASC Open Science Conference in St Petersburg (8-11 July 2008) on: Polar Research – Arctic and Antarctic Perspectives in the International Polar Year.

5. Scientific Advice to ATCM, CEP, CCAMLR and ACAP

Through its status as Observer, SCAR continues to be the primary source of independent scientific advice to the Antarctic Treaty Consultative Meeting (ATCM) and the Committee on Environmental Protection (CEP). SCAR participated in the XXIXth ATCM in Edinburgh (June 2006). The SCAR Lecture, on 'Climate Change – an Antarctic Perspective' by Valerie Masson-Delmotte (France), was very well received. SCAR presented 4 Working Papers and 6 Information Papers. The Working Paper on the delisting of fur seals was accepted; that on the listing of the giant petrel was returned at SCAR's request for further work. SCAR is proposing to provide up to 7 Working Papers and 5 Information Papers for the XXXth ATCM in Delhi in May 2007.

Following the Edinburgh ATCM, David Walton (UK), the chair of SCAR's Standing Committee on the Antarctic Treaty System (SC-ATS), retired to be replaced by Prof Steve Chown (RSA). Heinz Miller (Ger.) also joined the Committee.

SCAR is also an Observer to the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). Colin Summerhayes (SCAR) and Graham Hosie (Australia) - represented SCAR at the 25th annual CCAMLR meeting in Hobart (October 2006). Several of SCAR's marine biology programmes provide strong links to CCAMLR's interests, especially SCAR's Census of Antarctic Marine Life (CAML) programme, the SCAR Continuous Plankton Recorder (CPR) programme, EBA, and SCAR's Marine Biodiversity Information Network (MarBIN). The work of SCAR's Ocean Expert Group is also relevant to CCAMLR, as is that of our expert groups on birds and seals. SCAR is assisting CCAMLR in developing the concept of bioregionalisation of the Southern Ocean.

Recognising the expertise of the SCAR Bird Group, SCAR is an Observer at meetings of the Advisory Committee on Albatrosses and Petrels (ACAP), providing advice and data on the distribution, abundance, population trends and regional conservation status of southern giant petrels. SCAR was unable to attend the ACAP meeting in Brazil in June, but did submit an Information Paper on Marine Protected Areas.

6. Other Developments

The SCAR History Group is investigating the drivers for scientific research in the Antarctic. It met in Santiago, Chile (September 2006), to discuss "Multidimensional exploration of Antarctica around the 1950s". Holding the meeting in South America facilitated the participation of colleagues from the region and opened the discussion on the history of Antarctic research to scholars of countries neighbouring Antarctica. A follow-up meeting on "National and trans-national agendas in Antarctic Research from the 1950s and beyond" will be held at Byrd Polar Institute, Columbus, USA, in October 2007.

SCAR published in SCAR Report 28 its plans for a Capacity Building, Education and Training (CBET) programme, especially for the benefit of those SCAR Members and others with limited experience of working in the Antarctic region. As part of that programme, SCAR operates a Fellowship Programme (5 Fellows funded in 2006-2007). SCAR and its partner the International Polar Foundation succeeded with their bid for an IPY programme on capacity building in Antarctic research ('The 6th Continent Initiative'). Finally, SCAR became an Associate Member of the International Antarctic Institute, which is a "virtual" university comprising the Antarctic science courses of a number of universities and institutes around the world, led by the University of Tasmania.

In the Secretariat, Mrs Karen Smith was appointed as the new Administrative Assistant, operating part-time from the end of January 2006.

SCAR's communications continued to be focused through the SCAR website, especially the SCAR quarterly Newsletter. There were on average 83620 hits per month on the SCAR website for the 5 months after the Hobart conference, which is an 18% increase over the same period in 2005 (68820), and a 57% increase over the same period in 2004 (36020). In May, just before the conference, hits rose to 115300.

Appendix 1

Organizational Details

1. SCAR MEMBERS and Secretariat can be seen at: *http://www.scar.org/about/officers/*

2. OFFICERS of SCAR and its Main Subsidiary Bodies can be seen at: *http://www.scar.org/publications/bulletins/SCAR_officers2006.pdf*

3. MEMBERS of the Steering Committees of SCAR's Scientific Research programmes can be seen at: *http://www.scar.org/publications/bulletins/SRPs_officers2006.pdf*

4. THE SCAR ORGANIZATIONAL CHART can be seen at: *http://www.scar.org/about/introduction/organization/*

Appendix 2

List of Acronyms

ACAP	Advisory Committee on Albatrosses and Petrels
ACE	Antarctic Climate Evolution
ADD	Antarctic Digital Database
ADMAP	Antarctic Digital Magnetic Anomaly Project
AGCS	Antarctica in the Global Climate System
AGU	American Geophysical Union
AMD	Antarctic Master Directory
ANDRILL	Antarctic Geological Drilling Project
ANTEC	Antarctic Neotectonics
ANTOSTRAT	Antarctic Off-shore Stratigraphy Programme
ANTPAS	Antarctic Permafrost and Soils
AntSDI	Antarctic Spatial Data Infrastructure
APIS	Antarctic Pack-Ice Seals
AWI	Alfred Wegener Institute
BAS	British Antarctic Survey
CAPP	Carbon and Permafrost Programme
CBET	Capacity Building, Education and Training
CliC	Climate and Cryosphere Programme
CLIVAR	Climate Variability programme of WCRP
CPR	Continuous Plankton Recorder
CPR-AG	Continuous Plankton Recorder Action group
EBA	Evolution and Biodiversity in the Antarctic
EGGI	Expert Group on Geographical Information
EGAPPE	Expert Group on Antarctic Permafrost and Periglacial Environments
EG-OCEAN	SCAR/SCOR Oceanography Expert Group
EGU	European Geophysical Union
EPICA	European Programme for Ice Coring in Antarctica
ETOPO	Earth Topography Digital Dataset
EVOLANTA	Evolutionary Biology of Antarctic Organisms
GAIA	Global Auroral Imaging Access
GEBCO	General Bathymetric Chart of the Oceans
GEOSS	Global Earth Observing System of Systems
GBIF	Global Biodiversity Information Facility
GIANT	Geodetic Infrastructure for Antarctica
GIS	Geographic Information Systems
GLOBEC	Global Ocean Ecosystems Dynamics
GPS	Global Positioning System
IAGA	International Association of Geomagnetism and Aeronomy
iAnZoine	International (Coordination of Oceanographic Research within the) Antarctic Zone
IASC	International Arctic Science Committee
IBCSO	International Bathymetric Chart of the Southern Ocean
ICED	Integrated Climate and Ecosystem Dynamics in the Southern Ocean
ICEFISH	International Collaborative Expedition to collect and study Fish Indigenous to Sub-Antarctic Habitats
ICESTAR	Inter-hemispheric Conjugacy Effects in Solar-Terrestrial and Aeronomy Research
IGBP	International Geosphere-Biosphere Programme
IGOS	Integrated Global Observing Strategy
IGOS-P	Integrated Global Observing Strategy Partnership
IGY	International Geophysical Year

IHY	International Heliophysical Year
INQUA	International Union for Quaternary Research
IPA	International Permafrost Association
IPAB	International Programme of Antarctic Buoys
IPICS	International Partnership in Ice Core Science
IODP	Integrated Ocean Drilling Program
ISAES	International Symposium on Antarctic Earth Science
ISMASS	Ice Sheet Mass Balance and Sea Level
JCADM	Joint Committee on Antarctic Data Management
KGIS	King George Island Geographical Information System
LGM	Last Glacial Maximum
LGP	Latitudinal Gradient Project
MarBIN	Marine Biodiversity Information Network
MEDINET	Medical Network
NADC	National Antarctic Data Centre
NASA	National Aeronautics and Space Administration
NGDC	National Geophysical Data Centre
OBIS	Ocean Biodiversity Information System
PantOS	Pan Antarctic Observations Network
PI	Principal Investigator
POGO	Partnership for Observations of the Global Ocean
POLENET	Polar Earth Observing Network
RiSCC	Regional Sensitivity to Climate Change in Antarctic Terrestrial and Limnetic Ecosystems
SALE	Subglacial Antarctic Lake Environments
SAM	Southern hemisphere Annular Mode
SC-AGI	Standing Committee on Antarctic Geographic Information
SC-ATS	Standing Committee on the Antarctic Treaty System
SCOR	Scientific Committee on Oceanic Research
SIGE	Sub-Ice Geological Exploration
SOIP	Southern Ocean Implementation Panel
SOOS	Southern Ocean Observing System
SRP	Scientific Research Programme
SSG	Standing Scientific Group
SSG-GS	SSG on Geosciences
SSG-LS	SSG on Life Sciences
SSG-PS	SSG on Physical Sciences
STADM	Standing Committee on Antarctic Data Management
SYSTCO	SYstem-Coupling (IPY Programme)
TAG	Thematic Action Group
UN	United Nations
VGMO	Virtual Global Magnetic Observatory
VO	Virtual Observatory
WCRP	World Climate Research Programme

Report by the CCAMLR Observer at the Thirtieth Antarctic Treaty Consultative Meeting

Introduction

1. The Twenty-Fifth Meeting of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) was held in Hobart from 23 October to 3 November 2006. As in the past a number of routine matters were addressed along with some specific issues. The most notable of the latter included:
   - CCAMLR fisheries in 2005/06;
   - Illegal, unreported and unregulated (IUU) fishing;
   - Ecosystem monitoring and management;
   - By-catch in logline and trawl fisheries;
   - Marine Protected Areas, and
   - Co-operation with international organizations, particularly the ATCM.
2. The Meeting was particularly noteworthy as it was the twenty-fifth since the CAMLR Convention entered into force on 7 April 1982. A celebratory statement was issued by the Commission (Attachment 1) to celebrate this notable milestone in CCAMLR's history.
3. Information on CCAMLR's deliberation on the issues identified in paragraph (1), and others, is provided below. Emphasis is given to items that are particularly relevant to the ATCM XXX and CEP X agendas. An overall summary of important discussions and decisions from CCAMLR XXV is provided in Appendix I along with references to the meeting's report paragraphs.

CCAMLR Fisheries in 2005/06

4. Fisheries in the CAMLR Convention Area during 2005/06 (1 December 2005 to 31 November 2006) targeted Patagonian and Antarctic Toothfish (*Dissostichus eleginoides* and *D. mawsoni*), mackerel icefish (*Champsocephalus gunnari*) and krill (*Euphausia superba*). Catch information is available in the *CCAMLR Statistical Bulletin* (*http://www.ccamlr.org/pu/e/e_pubs/sb/vol19.htm*).
5. The reported catch of *Dissostichus* spp. in 2005/06 (to October 2006) was 13 704 tonnes, taken predominantly by longlining, and this compared to 16 250 tonnes in the previous season. It is estimated that, in addition to reported catches, some 3080 tonnes of *Dissostichus* spp. were taken as a result of IUU fishing in the Convention Area during 2005/06, compared with 2076 tonnes in 2004/05. The total global catch for Toothfish in 2005/06 was estimated at 25 967 tonnes, compared with 31 168 tonnes the pervious season. For further discussion on IUU fishing, please refer to paragraphs 11-15.
6. The reported krill catch in 2005/06 (to October 2006) was 105 084 tonnes compared with 127 035 tonnes in the previous season. This is a slight decrease in the relatively stable range of krill catches (80 000 to 1000 000 tonnes) since 1992/93. The projected krill catch for the 2006/07 season may be as high as 368 000 tonnes, an effective tripling of the 2005/06 level.
7. Once again, CCAMLR noted that the krill fishery's pattern of operation is changing and this emphasizes the need to obtain sufficient information from the current fishery to meet future management needs. This is vital should the fishery become concentrated in any particular region or sub area.

8. The Commission adopted conservation measures (CMs) for all fisheries being conducted in the 2006/07 season, as well as general measures for regulating fishing activities and reporting fisheries information from the Convention Area. A new CM providing general environmental protection during fishing was introduced in 2006/07 (CM 26-01). This CM applies to all fishing activities in the Convention Area. The measures are published in the *Schedule of Conservation Measures in Force 2006/07* available from the CCAMLR Secretariat or on website: *http://www.ccamlr.org/pu/e/e_pubs/cm/drt.htm*.

9. In addition to the Catch Documentation Scheme (CDS) for *Dissostichus* spp. and conservation measures to manage specific fisheries directly (e.g. the setting of catch limits and other conditions affecting fishing), other CCAMLR measures include:

   - The CCAMLR System of Inspection:
   - Scheme to Promote Compliance by both Contracting and Non-Contracting Party Vessels, including provisions for compiling a list of IUU vessels;
   - Licensing and Inspection Obligations of Contracting Parties with regard to their Flag Vessels Operating in the Convention Area;
   - Procedures for port inspections of vessels carrying Toothfish;
   - Marking of Fishing Vessels and Fishing Gear;
   - Automated Satellite-Linked Vessel Monitoring Systems (VMS); and
   - Various Resolutions – (a) "Banning Driftnet Fishing in the Convention Area", (b) "Harvesting Species Occurring Both within and Outside the Convention Area", (c) "Implementation of the CDS by Acceding States and Non-Contracting Parties", (d) "Use of Ports not Implementing the CDS", (e) "Application of VMS in the CDS", (f) "Use of VMS and Other Measures to Verify CDS Catch Data for Areas Outside the Convention Area, Especially FAO Statistical Area 51"; (g) "Harvesting of *D. eleginoides* in Areas Outside Coastal State Jurisdiction Adjacent to the Convention Area in FAO Statistical Areas 51 and 57", (h) "Vessels Flying Flags of Non-Compliance", (i) "Ice Strengthening Standards in High Latitude Fisheries" and (j) a "Non-Contracting Party Co-Operation Programme".

10. Three new CMs to be noted are those setting in place an interim prohibition on deep-sea gillnetting (CM 22-04), and interim restriction on bottom trawl gear in high-seas areas within the CCAMLR Area in 2006/07 and 2007/08 (CM 22-05), and a scheme (CM 10-08) to promote compliance with CCAMLR CMs by Contracting Party nationals.

Illegal, Unregulated and Unreported (IUU) Fishing

11. IUU fishing for *Dissostichus* spp. in the Convention Area has been a major issue for the Commission since 1997. CCAMLR gives high priority to eliminating such fishing and implements an integrated suite of administrative, political and enforcement-related measures to address the problem consistent with international best practice.

12. CCAMLR's efforts to combat IUU fishing continue to take place against a background of ongoing and vigorous action by individual CCAMLR Contracting Parties in areas under their national jurisdiction.

13. Nevertheless, CCAMLR has requested its Members to increase surveillance in the Convention Area, particularly in the Indian Ocean Statistical Divisions 58.4.1, 58.4.2 and 58.4.3b. It is also developing a probability matrix to be used to improve the determination of IUU catches.

14. To facilitate exchange of relevant information amongst its Members, CCAMLR maintains a database on vessels known to have fished in contravention of CCAMLR Conservation Measures. Such vessels are incorporated annually into an official "CCAMLR IUU Vessel List". CCAMLR also uses a centralized, satellite-based vessel monitoring system (c-VMS) in the CCAMLR Secretariat to monitor the movements of fishing vessels in the Convention Area. This system has allowed surveillance to be more efficiently deployed.

15. CCAMLR continues to interact with various other international and regional fisheries organisations, especially those with responsibility for waters adjacent to the Convention Area, in the exchange of information on issues such as IUU fishing, seabird incidental mortality and other matters relevant to CCAMLR.

Ecosystem Monitoring and Management

16. The *CCAMLR Ecosystem Monitoring Programme* (CEMP) collects long-term data on various Antarctic marine ecosystem components as well as the environment. These data are used to provide annual assessments of ecosystem status.

17. The CCAMLR scientific community continues to explore ways in which ecosystem advice can be formally incorporated into management decisions. In this respect, the Commission afforded high priority to:

    - On-going development of management procedures to allocate the precautionary krill catch limit in the Southwest Atlantic (Area 48) to Small Scale Management Units (SSMUs);
    - Workshops in 2007 on revising krill precautionary catch limits in Area 48 and in the Indian Ocean (Area 58) as well as on bioregionalisation (see paragraph 26 below) as the first step in developing objective definitions for marine protected areas based on bioregionalisation properties, and
    - Workshop in 2008 on providing abundance estimates of land-based predators.

By-Catch in Longline and Trawl Fisheries

18. CCAMLR leads the world in implementing measures to reduce seabird mortality during longline fishing. Many CCAMLR measures, particularly the provisions of Conservation Measure 25-03 (first adopted in 1992), have been incorporated into the *FAO International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries* (IPOA-Seabirds) adopted by the FAO *Committee on Fisheries* (COFI). A number of CCAMLR Members have developed and implemented national plans of action to address seabird by-catch issues. Such initiatives have thus resulted in the development of close ties between CCAMLR and ACAP (*Agreement on the Conservation of Albatrosses and Petrels*).

19. Compliance with CCAMLR seabird by-catch mitigation measures has improved to the extent that incidental catch levels in regulated fisheries in the Convention Area are extremely low. However, the levels attributable to IUU fishing remain a cause for concern. In addition, many bird species breeding in the Convention Area (particularly albatrosses and petrels) remain affected by high levels of mortality associated with longline fishing globally.

20. CCAMLR Resolution 22/XXIII remains as an important initiative in efforts to reduce incidental mortality of CAMLR Convention Area seabirds in adjacent areas.

21. CCAMLR continues to exchange information with other international fisheries and conservation organizations on the prevention of fisheries-induced seabird by-catch and the state of Antarctic seabird populations, as well as its experience with mitigation and associated conservation action. In particular, CCAMLR seeks advice from other regional fisheries

bodies (particularly those managing tuna, such as ICCAT, IOTC and CCSBT) in an effort to secure more global information on incidental by-catch of seabird species breeding in the Convention Area. It should be noted that, unlike CCAMLR, many of these organizations do not mandate the collection of seabird by-catch data.

22. CCAMLR also monitors the by-catch of marine mammals in both trawl and longline fisheries and remains concerned with the need to monitor fish by-catch in directed fisheries, particularly in respect of improving current knowledge and setting ecologically sustainable catch limits for the species being impacted. Various CCAMLR CMs have been agreed to address such concerns (please refer to the *Schedule of CCAMLR Conservation Measures 2006/07* at *http://www.ccamlr.org/pu/e/e_pubs/cm/drt.htm*.

Protected Areas (Including Marine Protected [MPAS])

23. CCAMLR re-affirmed the principle that, in accordance with ATCM Decision 9 (2005) and for the foreseeable future, all ATCM proposals for protected areas with marine components should continue to be reviewed by CCAMLR.

24. Following its *Workshop on Marine Protected Areas* in August 2006, CCAMLR has recognized the need for extensive dialogue with key elements of the Treaty system (CEP and the ATCM) as well as SCAR, SCOR and other inter-governmental and non-governmental organisations. In that regard:

- A Bioregionalisation Workshop is planned to held in Belgium in August 2007 as an important step in CCAMLR's activities to develop a representative network of MPAs;
- The CEP Chair has been actively cooperating with CCAMLR in the preparations for the CCAMLR Bioregionalisation Workshop;
- The results of an independent expert consultation held in Australia in September 2006 have been valuable to such preparations and in maintaining momentum in the CCAMLR work on bioregionalisation of the Convention Area;
- Considerable knowledge is now available concerning possible boundaries between areas in terms of ecological and biogenic processes attached thereto. Such knowledge is likely to prove useful for the Workshop, and
- Various examples illustrate the development, designation and management of local MPAs within the CCAMLR Area, particularly in respect of MPAs proclaimed by Australia, France and South Africa.

25. The results of the expert consultation (see paragraph 26 above) has demonstrated the feasibility of a broad-scale bioregionalisation analysis as an early step towards the identification of MPAs. Therefore, it should be noted that, from a scientific and technical perspective, the CCAMLR Bioregionalisation Workshop results might be expected to yield useful results in the short term.

26. In the above regard, CCAMLR has noted that MPAs should be effectively administered and that such a task requires attached policy direction/development.

Co-Operation with Non-Contracting Parties

27. In implementing its Catch Documentation Scheme (CDS), CCAMLR has done much to work with various NCPs considered to have an interest in CCAMLR's work or in the resources that it manages. Such encouragement has included inviting NCPs to attend and participate in CCAMLR meetings. CCAMLR is also actively engaged in improving dialogue with NCPs as a way to address their potential involvement in IUU fishing undermining CCAMLR's measures.

28. Participation by NCPs in CCAMLR's work does not only promote transparency, it has also enabled the Commission's membership and work to expand. A significant development at CCAMLR-XXV was an updating of *CCAMLR's Policy to Enhance Cooperation between CCAMLR and Non-Contracting Parties* aimed at improving the effectiveness of CCAMLR-NCP cooperation, including the submission of information on landing of Toothfish from NCP vessels and a cooperation enhancement program. The latter in particular provides a framework for CCAMLR Members to explore ways to improve, and prioritize, global implementation of the CAMLR Convention, to sponsor participation by relevant States and build capacity for such participation where necessary.

Co-Operation with Other International Organizations

29. CCAMLR continues to urge its Members to accept and ratify a number of relevant international agreements. It also co-operates closely with various RFMOs (CCSBT, IATTC, ICCAT, IOTC, IWC, NAFO, NEAFC, SEAFO and WCPFC) to further its work and co-ordinate its conservation efforts (particularly in relation to combating both IUU fishing and seabird by-catch during longlining). It also encourages all its Members to cooperate in developing a comprehensive and integrated international approach to such problems.

30. FAO is one of several international organizations explicitly referred to in CAMLR Convention Article XXIII as an organization with which CCAMLR should cooperate. Both the Commission and Scientific Committee enjoy a productive cooperative working relationship with FAO in general and with several FAO-sponsored activities such as the work of the *Coordinating Working Party on Fisheries Statistics* (CWP), the *Sub-Committee on Fish Trade*, the *Regional Fisheries Bodies Secretariat Network* and the *Fisheries Resources Monitoring System* (FIRMS) in particular.

31. The Twenty-Seventh Meeting of COFI (COFI-27) was scheduled for March 2006. It addressed a number of topics of interest to CCAMLR, particularly in terms of growing international interest for a review of *Regional Fisheries Management Organisations* (RFMOs). At this stage, CCAMLR stands alone as an accepted example of global best practice in addressing marine fisheries conservation issues.

32. CCAMLR will submit a report to the Fourteenth Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES COP-14) to be held in the Hague, 3-15 June 2007. The report is being submitted under CITES Resolution Conf. 12.4 on "*Cooperation between CITES and the Commission for the Conservation of Antarctic Marine Living Resources Regarding Trade in Toothfish*". In particular, CCAMLR has drawn COP-14's attention to the activities of Equatorial Guinea and Togo (the Flag States of IUU fishing vessels currently operating in the CCAMLR Convention Area). It has also noted the prevailing situation in respect of full implementation of the CCAMLR CDS by three other CITES parties (China - in respect of Hong Kong SAR, Indonesia and Singapore).

Co-Operation with the ATCM

33. Once again, CCAMLR expressed satisfaction with the growing co-operation between CCAMLR and the ATCM/CEP.

34. In particular, it noted a number of points from ATCM-XXIX as being directly relevant to its work. These included:

    - ATCM Resolution 1 (2006) on CCAMLR in the Antarctic Treaty System aimed at improving cooperation between the ATCM and CCAMLR;

- ATCM Measure 4 (2006) pertaining to delisting of fur seals as specially protected species, and ATCM Resolution 4 (2006) on conservation of southern giant petrels;
- ATCM Decision 2 (2006) and Resolution 3 (2006) regarding ballast water exchange in the Treaty Area as relating to fishing vessels;
- The Edinburgh Declaration as an adjunct to *CCAMLR-XXV Celebratory Statement* (Attachment 1);
- Possible spread of environmentally dangerous pathogens, such as avian influenza, to the Antarctic and how this could affect CCAMLR's work;
- Potential impact of marine technologies, especially acoustic technologies, on key marine species in the Convention Area;
- Need for the CEP and CCAMLR to maintain a dialogue on introduced marine species and the possible role that fishing vessels may play in that regard;
- ATCM request to SCAR to seek regular CCAMLR advice on seal incidental mortality, particularly in the krill fishery;
- Prevention of marine pollution and ensuring best practice(s) in terms of dealing with marine debris (see paragraph 35 below);
- Need to gather more information on the possible effects of acoustic noise from CCAMLR fisheries and research vessels on the Antarctic marine ecosystem, and
- Presence of the Antarctic Treaty Secretariat Executive Secretary at CCAMLR-XXV.

35. Following the points highlighted in paragraph 34 above, the ATCM's attention is drawn to the CCAMLR submission on the latter's monitoring of marine debris in the Convention Area. In addition, it should be noted that the possibility of a joint CEP-CCAMLR Scientific Committee meeting in the near future was also mooted at CCAMLR-XXV.

Appendix 1

CCAMLR-XXV CELEBRATION STATEMENT

Twenty-Fifth Anniversary of the entry into force of the Convention on the Conservation of Antarctic Marine Living Resources

On the occasion of its Twenty-fifth Meeting, the Commission,

Recalling that the Convention on the Conservation of Antarctic Marine Living Resources (the 'Convention') was established as an integral part of the Antarctic Treaty system,

Conscious of the primary responsibilities of the Antarctic Treaty Consultative Parties for the protection and preservation of the Antarctic environment and, in particular, their responsibilities under Article IX, paragraph 1(f) of the Antarctic Treaty in respect of the preservation and conservation of living resources in Antarctica,

Acknowledging that all Contracting Parties, whether or not they are Parties to the Antarctic Treaty, are bound by Articles IV and VI of the Antarctic Treaty in their relations with each other,

Further recalling that the objective of the Convention is the conservation of Antarctic marine living resources, which includes rational use,

Noting that that CCAMLR has during its twenty-five years gained a reputation for effective conservation and management, and that its efforts have provided an important example for other organisations,

Emphasising that the Convention is a key instrument in efforts to provide for a comprehensive and systematic protection of the Antarctic and sub-Antarctic environment,

Recognising the need under Convention Articles II and IX to base decisions on the best scientific information available and to apply conservation principles as provided in the Convention to ensure the long-term ecological sustainability of marine living resources stocks in the Convention Area,

Noting the Scientific Committee's pioneering advances over the past twenty-five years in developing precautionary and ecosystem-based approaches to managing Antarctic marine living resources through extensive scientific observation, innovative research, state-of-the-art assessments and ecosystem models addressing, *inter alia,* ecosystem monitoring, by-catch mitigation, incidental mortality of seabirds during longlining and development of exploratory fisheries,

Concerned about the devastating global consequences of Illegal, Unreported, and Unregulated (IUU) fishing on fisheries sustainability, conservation of marine living resources, and marine biodiversity,

Noting the Commission's sustained efforts to combat IUU fishing, particularly through implementation of integrated monitoring, control and surveillance (MCS) measures such as the Catch Documentation Scheme, Centralised Vessel Monitoring System, port inspections and cooperation with non-Contracting Parties,

Confirming its participation in efforts to ensure the global conservation of marine living resources and their sustainable management, as well as CCAMLR's efforts to eliminate IUU fishing through cooperation with other relevant regional and international organisations,

Noting particularly the designation of 2007 to 2008 by the International Council for Science and the World Meteorological Organisation as the International Polar Year (IPY) to run from March 2007 to March 2009,

hereby declares that it will:

Maintain the Commission's position as a world leader in the conservation of marine living resources for the benefit of present and future generations through application of the best scientific advice possible and integrated MCS.

1. Continue to facilitate scientific research into Antarctic marine living resources and the Antarctic marine ecosystem, including observational and experimental approaches, assessments, monitoring and modelling, with the aim of providing the best scientific advice possible.

2. Continue to develop innovative, proactive and flexible measures consistent with Convention Article II to eliminate threats to sustainable fisheries and the Antarctic marine ecosystem, such as IUU fishing and harmful fishing practices.

3. Strengthen practical cooperation with the Antarctic Treaty Consultative Parties and relevant intergovernmental and non-governmental organisations, in keeping with Article XXIII of the Convention.

Appendix 2

CCAMLR-XXV Report References for Topics & Decisions

The CCAMLR-XXV report is downloadable from:
(*http://www.ccamlr.org/pu/e/e_pubs/cr/06/toc.htm*).

Topics & Decisions		CCAMLR-XXV Paragraphs
1. General Fishery Matters		
1.1	Fisheries Catches in 2005/06	4.21, 4.45-4.46, 4.58
1.3	Fishery Regulation Measures 2005/06	12.3, 12.81-12.19, 12.37-12.74
1.3	New Krill Fishing Technique	4..40-4.44
1.4	Environment Protection Measures	12.29-12.36, 12.12, 12.19
1.5	Scheme International Scientific Observation	10.1-10.11
2. IUU fishing in Convention Area		
2.1	Current Levels	9.1-9.2
2.2	Development IUU Estimation Methods	9.3-9.10
2.3	IUU Vessel Lists	9.11-9.9.53, 12.11,12.13-12.14
3.4	Cooperation Non-Contracting Parties	7.1, 7.3-7.4, 7.1(i), 8.8-8.17, 12.14
3. General Compliance		
3.1	Compliance with Conservation Measures	7.3-7.20
3.2	Revised Compliance-Related measures	12.9-12.17
3.3	Development Compliance Evaluation Procedure	7.21-7.30
4. Ecosystem Approach to Fisheries Management		
4.1	Krill Ecosystem-Based Feedback Management	4.5-4.17, 4.27-4.39
4.2	Incidental Mortality Seabirds/Marine Mammals	5.5-5.29
4.3	Marine Debris Impact on biota	5.1-5.4
4.4	Joint CCAMLR-IWC Workshop	4.77
4.5	IPY Activities	20.1-20.12
5. Marine Protected Areas		
5.1	Objectives & Definitions	6.1-6.6
5.2	Preparation 2007 Workshop	6.2, 6.6
6. Cooperation Antarctic Treaty System		
6.1	ATCM	15.1-15.5
6.1	CEP	6.2.(ii), 15.6, 15.11
6.3	SCAR	15.16-15.18
7. Cooperation Other International Organisations		
7.1	UN/FAO	16.1-16.6
7.2	ACAP	16.7
7.3	General	16.8-26.46

COMNAP Report to ATCM XXX

COMNAP activities relevant to current ATS work and concerns

Section	*Topic*	*Agenda Items*	
		ATCM XXX	*CEP X*
3.1	Contingency planning and emergency response	9	11
3.2	Ship Position Reporting System and liaison with Rescue Coordination Centres	9,16	11
3.3	Extension of Ship Position Reporting System into a generalised Voyage Information System	9,11,14,16	
3.4	Hydrography	9	11,13
3.5	Automatic Identification System (AIS)	9	
3.6	Medical Facilities	9,16	
3.7	Accident, Incident and Near-Miss Reporting (AINMR)	9,16	11
3.8	Best practice for energy management	14	15
3.9	Fuel handling and storage guidelines	14	11
3.10	Training resources	14,16	
3.11	Use of inspection checklists as a management tool	12,16	10
3.12	Joint operations and stations; exchange of personnel between National Programs	14,16	
3.13	Wildlife awareness manuals	14	8
3.14	Alien species / quarantine	14	8
3.15	Waste management and clean-up	14	12
3.16	Marine acoustics	14	8
3.17	COMNAP Information Centre	14,16	
3.18	Exchange of information under Resolution 6 (2001); geo-referencing	16	
3.19	Collaboration with the Antarctic Treaty Secretariat	16	
3.20	Operational publications	14,9,16	
3.21	General information publications	16	
3.22	Facilitating and promoting the distribution and use of publications	16	
3.23	Support of the International Polar Year (IPY) 2007-2008	10	

1. Introduction

It is traditional in the Antarctic to work together and help each other, wherever you come from. In keeping with this tradition, COMNAP (the Council of Managers of National Antarctic Programs) brings together 29 National Antarctic Programs undertaking and supporting scientific and other work in Antarctica on behalf of their respective national governments.

COMNAP provides a forum for development of practical and technical solutions for dissemination among National Antarctic Programs. Safety, increased international collaboration, environmental protection and effective Antarctic governance are among our main concerns.

While supporting its members is its primary role, COMNAP also takes very seriously the privilege and responsibility of being a formally recognised member of the Antarctic Treaty system (ATS). It remains committed to contributing actively to the work of the ATS through provision of a range of practical, technical and non-political advice developed using members' pool of expertise.

This COMNAP Annual Report to the ATCM and the CEP provides an overview of COMNAP's current activities, with an added focus on their relevance to the ATS. Particular topics may also be complemented by a formal working or information paper.

2. Predominant focus

2.1 Objectives

In line with its mission, and the missions of its members, COMNAP's current predominant focus is on four often inter-related objectives:

- Safety
- Efficiency
- International collaboration
- Environmental management and protection

2.2 Support Systems

A significant part of COMNAP's work includes the development and maintenance of resources and communication infrastructure to support and sustain progress towards these objectives. This includes in particular the following support systems:

- Manuals, guidelines and other reference documents.
- Communication systems to support the various COMNAP work groups.
- Web-based "COMNAP Information Centre" to collect, manipulate and record a range of practical, dynamic information and facilitate discovery and exchange of this information.

3. COMNAP Activities relevant to current ATS work and concerns

This section provides brief status reports on a selection of COMNAP activities relevant to current ATS work and concerns. Whenever possible, references have been included to relevant documents, agenda items or Antarctic Treaty Resolutions, Decisions or Measures.

Naturally, each of these activities often contributes to progress towards several of these objectives concurrently and uses a combination of support systems.

3.1 Contingency planning and emergency response

Safety is a very important focus and priority for National Antarctic Programs, COMNAP and the ATCM. Emergency response and contingency planning are regular topics on the agenda of the ATCMs and of the meetings of CEP. In 2006 ATCM XXIX and CEP IX included a number of questions and discussions on that topic, in particular around Working Paper ATCM XIX-WP017.

COMNAP prepared an up-to-date overview on Contingency Planning and Emergency Response in the Antarctic, presented in Information Paper ATCM XXX-IP099.

IP099 confirms the value and effectiveness of the current systems based on good planning, sound use of risk management processes and effective contingency planning and on the collaboration between and with the five Rescue Coordination Centres (RCCs) which under international agreements cover the Antarctic region.

The paper also highlights the limited availability of assets for rescue of third parties, with the exception of the Joint Antarctic Naval Patrol (Patrulla Antártica Naval Combinada) of the Argentine and Chilean Navies in the Antarctic Peninsula region.

For further information: ATCMXXX-IP099 *Contingency Planning and Emergency Response*

3.2 Ship Position Reporting System and liaison with Rescue Coordination Centres

The COMNAP Ship Position Reporting System (SPRS) has been operational since 2001. It is an optional, voluntary system for exchange of information about National Program ship operations and capabilities. Its primary purpose is to facilitate collaboration between National Programs.

The SPRS cannot, and does not, constitute an operational alert and rescue system on which vessels should count in case of emergency. However it can make a very useful contribution to safety with all SPRS information made available to the 5 Rescue Coordination Centres (RCCs) which cover the Antarctic region, as an additional source of information complementing all other national and international systems in place.

The SPRS has been the subject of a significant overhaul in early 2007 and a range of new SPRS information products will be automatically pushed out to the 5 RCCs from the 2007/2008 Antarctic season.

3.3 Extension of Ship Position Reporting System into a generalised Voyage Information System

The Ship Position Reporting System (SPRS) is currently being extended into a generalised Voyage Information System (VIS). The VIS will cover all kinds of voyages – sea but also air and land voyages. It will include advance information on future schedules and will be dynamically linked to information on the capability of relevant vessels, aircraft or tractor trains. It will also include a mapping interface and the capability to create reports.

An interface will be developed to exchange information between the COMNAP VIS and the IAATO schedule and position systems so that both groups can integrate each other information.

The VIS will be an integral part of the new COMNAP Information Centre and, as such, will be able to exchange data as appropriate with the Antarctic Treaty Secretariat's Electronic Information Exchange Systems (EIES). This means for example that any advance vessel, aircraft or traverse schedules entered on the VIS will not need to be re-entered on the Treaty's EIES in the pre-season section - it will be possible to just fetch that information from the COMNAP VIS.

The VIS will also become proactive and interactive. Instead of just receiving and storing information, it will send back a range of information to participating Programs, including tailored products (e.g.

list of maps and contact details of RCCs covering the zone a vessel is scheduled to navigate through) and will also respond to requests for information (e.g. email back on request an up-to-date list of contact details or a list of all schedules available).

This will increase the potential for collaboration between National Programs but will also greatly enhance the quantity and quality of additional information that can be pushed out to the 5 RCCS for increased safety.

The VIS is being designed to provide significant value-added services and become a very valuable asset to participants. It is worth noting that once this becomes a reality, offering use of the system to any non-governmental expedition could provide an effective means of obtaining information about these expeditions and knowing where they intend to travel and where they are - this could contribute to safety and promote and facilitate compliance.

3.4 Hydrography

Hydrography is essential to safety - safety of life at sea and protection of the marine environment. For the Antarctic it is coordinated by the International Hydrographic Organisation (IHO) Hydrographic Committee on Antarctica (HCA), to which COMNAP contributes actively as an observer. COMNAP has prepared Information Paper ATCMXXX-IP050 *International Coordination of Hydrography in Antarctica: Significance to Safety of Antarctic Ship Operations*.

This paper highlights the need for more, and better coordinated, hydrographic and charting work in the Antarctic region.

A large proportion of Antarctic waters still remain to be adequately surveyed to meet the needs of contemporary shipping entering Antarctic waters. Whilst there have been relatively few accidents in the region, there is an increase in the number and size of vessels deploying into the region and pushing into seas where hydrographic surveys and charting are inadequate to support their safe operation.

Hydrographic activity is expensive and assets are scarce. Coordination of international effort is of the utmost importance. There is an urgent need to uphold, and where necessary clarify, responsibilities of both government and private sector operators.

For further information: ATCMXXX-IP050 *International Coordination of Hydrography in Antarctica: Significance to Safety of Antarctic Ship Operations.*

3.5 Automatic Identification System (AIS)

The Automatic Identification System (AIS) is a standard, international system developed for short range automatic identification of vessels. Information transmitted includes ship name, type, course, speed and other relevant safety information. The AIS has potential applications in Antarctica for crafts and other vehicles, in particular in areas where several nations operate, for increased safety.

Uruguay reported at ATCM XXIX in Working Paper ATCMXXIX-WP006 on initial trials by the Uruguayan Antarctic Program of the use of AIS to track crafts and vehicles around its station. COMNAP agreed to work with Uruguay to build upon this work.

The COMNAP Safety Working Group has been working with Uruguay to analyse the potential, advantages and disadvantages of the system and discuss potential applications. Four National Programs have indicated an interest in participating in trials or in coordinated AIS networks.

This is a work in progress on which the ATCM will be kept informed.

3.6 Medical Facilities

The COMNAP Antarctic Medical Officers Network (MEDINET) has been working on the establishment of a database of National Program Medical Capabilities, including details of facilities, equipment and staffing available.

This will facilitate access to information on medical capabilities available, as an additional layer of information available to doctors in case of emergency, for increased safety.

This is in the final stages of development and will be integrated into the COMNAP Information Centre. As such it will be also connected to the new Voyage Information System (for better access to relevant medical and medical evacuation information) and to the Antarctic Treaty's EIES (to export medical information components of Treaty information exchange requirements).

3.7 Accident, Incident and Near-Miss Reporting (AINMR)

The COMNAP Environmental Incident Reporting System (EIRS) is in the process of being extended into a general Accident, Incident and Near-Miss Reporting system (AINMR) that will integrate with the new COMNAP Information Centre. Requirements and objectives of the system were outlined in COMNAP's report to ATCM XXIX.

The design of the AINMR and its integration into the COMNAP Information Centre are being finalised.

For further information: COMNAP Report to ATCM XXIX, section 3.9.

3.8 Best practice for energy management

COMNAP has had for many years a work group focused on energy management that continually looks at ways of recording and reducing the use of energy to support activities in Antarctica. This group has over the years developed a number of energy management principles that are generally adopted by national operators. There is a significant recognition amongst operators that energy saving is essential to reduce environmental impact and the cost of purchasing fuel.

COMNAP is presenting these energy management guiding principles to CEPX in Working Paper ATCMXXX-WP035. The paper invites the CEP to consider recognising, endorsing and adopting these guiding principles.

For further information: ATCMXXX-WP035 *Best practice for energy management: guidance and recommendations*.

3.9 Fuel handling and storage guidelines

Following discussions at CEP VIII, COMNAP reviewed in 2005/2006 its set of fuel handling and storage guidelines.

It was agreed that while the text of the guidelines required only relatively minor amendments there was a need to rejuvenate the guidelines with graphics, actual examples, associated brochures and posters and give them a higher profile.

A way forward has been formulated and a revised text drafted. Production of a new, comprehensive Fuel Manual is scheduled for 2007/2008.

For further information: COMNAP Report to ATCM XXIX, section 3.7.

3.10 Training resources

The COMNAP Training Officers Network (TRAINET) is the COMNAP work group dealing with the training of National Program staff for deployment to Antarctica. TRAINET convened in July 2006 in Hobart and identified a number of needs for exchange and availability of training resources.

Work is under way on two main tasks:

- Development of an archive/database of training related material used by member Programs - this will cover a range of material from course syllabus, standard operating procedures and training regulations and policies, in various languages.
- Development of a glossary of terms commonly used in training Antarctic personnel - to facilitate understanding, use and reuse of training material and to facilitate participation of personnel in joint training initiatives.

Discussions are also under way on the value and possibility of producing model elements for a field manual, to assist individual Programs with development of their own Program-specific manuals.

3.11 Use of inspection checklists as a management tool

The new COMNAP Information Centre under development will integrate operational information listed in inspection checklists. A management tool based around inspection checklists will then be implemented as indicated in COMNAP's report to ATCM XXIX:

The system will include specific functionality to support the use of inspection checklists as a management tool. It will facilitate the process of conducting audits, building audit reports and analysing these reports. The system will allow generation of actual checklist forms with tick-boxes and with boxes for text comment against individual portions of the information. Initially this may be restricted to static forms that one can print and take away on an audit or formal inspection. Later this will include forms that can be filled online, with the capability to attach external information such as images or documents. It will be possible to aggregate into one report a number of separate audits of the same facility that one has access to. The user filling the form will have the prerogative to decide who can later view the audit report – clear understanding and control of who can view reports being essential to supporting use of the system as an effective management tool at different levels, from internal audits to joint National Programs audits to formal Treaty inspections.

The ATS will be kept informed on progress, and close collaboration will be maintained with the Antarctic Treaty Secretariat to avoid duplication and ensure that the same information does not have to be entered twice in two different systems.

For further information: COMNAP Report to ATCM XXIX, section 3.11.

3.12 Joint operations and stations; exchange of personnel between National Programs

COMNAP remains committed to facilitating and promoting collaboration between National Programs and joint activities when possible. This is one of COMNAP's main missions.

The new COMNAP Information Centre will not only facilitate collaboration and joint operations (for example by improving exchange and discovery about advance plans and schedules) it will also facilitate the identification of reporting of collaborations and joint operations and stations.

Two other 'routine' projects which support the development of joint operations can be noted:

- the ongoing work by the COMNAP Medical Officers Network (MEDINET) on common standards for medical screening for the interchange of personnel between National Antarctic Programs; and

- the current work by the COMNAP Training Officers Network (TRAINET) on Joint Training Initiatives, the objectives of which include increasing the potential for, and facilitating, the exchange of personnel between National Programs and the development of joint or coordinated operations.

For further information: COMNAP Report to ATCM XXIX, section 3.12.

3.13 Wildlife awareness manuals

The UK presented to CEP IX through ATCMXXIX-WP003 the excellent "Wildlife Awareness Manual" it had prepared. The manual provides practical information on breeding wildlife colony locations for those operating aircraft within the Antarctic Peninsula. The CEP *requested COMNAP to consider:*

- options for providing readily accessible information about the location of wildlife concentrations for all areas of Antarctica in which aircraft operations may take place;
- options for how such information could be best presented to aircrew for both fixed and rotating wing aircraft; and
- the practicalities of how such a product might be best developed and updated.

The COMNAP environmental group has started addressing this. It has identified and acknowledged a number of similar guidelines produced by other nations for other areas. COMNAP is in the process of ascertaining what other wildlife awareness manuals exist around the continent and will encourage National Programs to develop partnerships to fill gaps in the coverage of the continent.

3.14 Alien species / quarantine

COMNAP discussed at its 2006 meeting how it could respond to the emerging issues of quarantine and non-native species. It was noted that prevention was better than cure and that the current key issue was to raise awareness and reduce risk of introductions.

The COMNAP Antarctic Environmental Officers Network (AEON) is undertaking a survey on National Programs procedures concerning introduction of non-native species and will report its finding at the July 2007 COMNAP meeting. AEON is also liaising with the organisers of "Aliens in Antarctica", a project to research ship based vectors of seeds and spores carried on clothing of visitors to Antarctica, to facilitate collaboration with, and support of, the project by individual National Programs.

COMNAP will also be participating in the development of codes of conducts for scientific field work in Antarctica.

A special session of the 2007 COMNAP Annual General Meeting will be dedicated to the topic of alien species and quarantine.

3.15 Waste management and clean-up

The COMNAP Antarctic Environment Officers Network (AEON) conducted, in conjunction with the 2006 COMNAP Annual General Meeting, a Workshop: *Waste Management in Antarctica*. The outcomes of the workshop are presented to CEP X in Information Paper ATCMXXX-IP098.

The focus of the two day workshop was to share practical information on waste management in Antarctica, and more specifically on current waste management practices and clean up of old waste.

This was the first time since the Madrid Protocol was signed in 1991 that the issue of waste management in Antarctica had been specifically tackled at international level. The workshop therefore provided a welcome opportunity to exchange practical experience on a wide range of environmental, operational and cultural issues concerned with waste management in Antarctica.

AEON and COMNAP recognise the importance of implementing sound waste management procedures and this workshop constituted a significant step up in the ongoing flow of information on these issues among National Antarctic Programs.

The workshop offered an invaluable opportunity to bring waste management officers together, and will encourage the implementation of alternative, creative and/or likely joint initiatives among National Antarctic Programs on these matters.

The Proceedings of the workshop have been published and copies will be made available at CEP X.

COMNAP agreed to plan for another AEON workshop on a practical environmental issue as part of COMNAP XX in 2008, on a topic to be defined in 2007 at COMNAP XIX.

The results of this workshop and flow-on actions will gradually favour new standards, conditions, techniques and/or procedures and scenarios for waste management on the continent, and make a significant contribution towards the enhancement of the Antarctic environment for the future.

For further information: ATCMXXX-IP098 *COMNAP's 2006 Workshop on Waste Management in Antarctica.*

3.16 Marine acoustics

CEP X discussed Working Paper ATCMXXIX-WP041 *SCAR Report on Marine Acoustics and the Southern Ocean* which included seven recommendations. Aspects of some of these recommendations correspond to work COMNAP can help with and COMNAP agreed to do so over time. These aspects include the need to describe the background noise in the Southern Ocean, construct a noise map from ships tracks and marine geophysics data, and better coordination to reduce duplication.

As outlined in various sections of this report, work is underway on a number of initiatives that will support progress on these recommendations. In particular, the Voyage Information System (VIS) and its integration with the COMNAP Information Centre and associated links to ship capability information will support the collection of ship tracks, of information collected from ships and further improve coordination between Programs to further reduce duplication.

3.17 COMNAP Information Centre

A new web-based "COMNAP Information Centre" is under development.

It will include a repository of documents such as reports, guidelines or manuals and a range of dynamic information on National Program capabilities and activities: facilities, operational and research support capabilities, voyage schedule and tracking, incident reports and lessons learned, etc..

Importantly, it will provide a framework to collect, manage, manipulate and explore this information. The primary objective is to facilitate exchange of relevant information between National Programs with a view to facilitating partnerships, increasing efficiencies and, very importantly, increase our capability to support new or smaller Programs.

An important requirement and characteristics of the COMNAP Information Centre will be its capabilities to exchange information with other systems as appropriate. In particular it will allow export to the Antarctic Treaty's Electronic Information Exchange System (EIES) of those portions of information included in Treaty information exchange requirements.

In practice, it should mean that any information entered by a National Program into the COMNAP Information Centre should NEVER need to be manually re-entered in the Antarctic Treaty systems or in the systems used by that National Program;

3.18 Exchange of information under Resolution 6 (2001); geo-referencing

Under instructions from the ATCM, the Antarctic Treaty Secretariat is developing an electronic information exchange system. This system is intended to support exchange of information under current Treaty requirements, corresponding chiefly to those requirements spelled out in Resolution 6 (2001).

While the information exchanged within COMNAP is more directly connected with program requirements in the fields of logistics, transportation, communications, safety and health, it does proceed from the same basic data reported under the Treaty system. The Electronic Information Exchange Systems developed and maintained respectively by the Antarctic Treaty and by COMNAP, while serving very different functions, do overlap to a considerable extent.

These systems should be coordinated wherever possible, so that they will be able to exchange information between each other as appropriate, in particular to avoid duplication of data entry and to ensure consistency of information across systems. COMNAP and the Antarctic Treaty Secretariat continue to work closely together towards this.

This does however require effective, unambiguous and consistent geo-referencing of the information, and we are now at a stage of development where we need to confirm how we will achieve this.

COMNAP has prepared ATCMXXX-WP042 *Antarctic Information Exchange: Importance of Unambiguous and Consistent Geo-referencing.* It argues that this geo-referencing is best achieved through associating information directly with relevant Antarctic geographic and administrative features whenever applicable, and by identifying each feature with a persistent, unique Antarctic identifier (AQ-UID). This is essential for any geographic information system if countries are to share data.

This requires the use of two non-overlapping lists, one master list of administrative features (e.g. stations, refuges, airfields, visitor sites or ASPAs) and one master list of geographic features (e.g. islands, capes, coves, mountains or lands).

The list of administrative features would be an ATS master list maintained as appropriate by the Antarctic Treaty Secretariat and Parties.

The list of geographic features would need to be based on the existing Feature Catalogue and Composite Gazetteer of Antarctica, compiled exclusively from official national gazetteers over the last 15 years by successive SCAR geographic information groups to provide a sound basis for a master list of geographic features.

A clear, appropriate process would be put in place to manage the combined lists and allow Parties to view, check and provide corrections for those names assigned by their own national naming authorities.

This would provide for a more effective exchange of Antarctic information and better input into management decision processes – with benefits in many areas including safety of life, international collaboration or environmental management.

WP042 recommends that the ATCM recognise the need for an unambiguous and consistent geo-referencing of Antarctic Exchange Information and support implementation of the preferred method: identifying each Antarctic administrative or geographic feature by a persistent, unique Antarctic identifier (AQ-UID).

For further information: ATCMXXX-WP042 *Antarctic Information Exchange: Importance of Unambiguous and Consistent Geo-referencing.*

3.19 Collaboration with the Antarctic Treaty Secretariat

COMNAP has established through its secretariat a good working relationship with the Antarctic Treaty Secretariat and a number of ad-hoc meetings and informal workshops have been held between members of the two secretariats in the last three years.

COMNAP looks forward to its secretariat maintaining a long-standing, productive relationship with the Treaty Secretariat, when and as appropriate, to better support their respective memberships and the Antarctic Treaty system.

3.20 Operational publications

COMNAP publishes a number of operational publications in support of Antarctic operations, in particular in support of safety and best environmental practice. This includes a number of operational guidelines and workshop reports.

COMNAP publishes and regularly updates the *Antarctic Flight Information Manual (AFIM)* as a tool towards safe air operations in Antarctica as per ATCM Recommendation XV-20. It contains exhaustive information on Antarctic airfields and on procedures to contact and access these airfields. Migration to the AFIM to an online publication is under consideration.

A comprehensive fuel handling and storage manual is in preparation, and development of model elements for a field manual is under consideration.

3.21 General information publications

COMNAP is also publishing some general interest information about COMNAP's activities and National Programs' installations and logistics.

It includes a number of mapping products, in both printed and online form. Some 'layers' of information for overlaying on maps and satellite imagery are also under trial.

The commissioning of the new COMNAP Information Centre will allow provision of richer and more dynamic information products.

For further information: COMNAP Report to ATCM XXIX, section 3.18.

3.22 Facilitating and promoting the distribution and use of publications

COMNAP continues, as reported in previous years, to research and test ways of facilitating and promoting the distribution and use of its publications and information. In particular, it includes considerations of alternative licences such as the Creative Commons Attribution Share-Alike licence which promotes the distribution and re-use of work while protecting the rights of all contributors.

3.23 Support of the International Polar Year (IPY) 2007-2008

COMNAP member National Antarctic Programs provide a significant contribution to the support of National and International IPY projects in the Antarctic, in particular through their national IPY committees. The normal processes in place whereby scientists deal with their respective National Program, and National Programs work with each other as appropriate, continue to work well, including for multinational IPY projects.

COMNAP is clearly contributing to that success through the provision of a forum in which National Program managers can coordinate their support of international projects as required.

COMNAP however continues to stand ready to help facilitate support solutions between national operators, when that cannot be achieved through the normal collaboration processes in place.

4. COMNAP general activities and organisation

4.1 COMNAP meetings and events

COMNAP XVIII, the 2006 Annual General Meeting (AGM), was held from 09 to 14 July 2006 in Hobart, Tasmania, Australia, where COMNAP had been formally founded 18 years earlier and where its secretariat has been based since 1997. It was hosted by the COMNAP member for Australia, the Australian Antarctic Division and included:

- one and a half days of plenary sessions;
- one and a half days of parallel meetings of COMNAP's various work groups - committees, working groups, coordinating groups and networks;
- a one-day workshop of the COMNAP Training Officers Network (TRAINET), focused on Joint Training Initiatives;
- a two-day workshop of the COMNAP Antarctic Environmental Officers Network (AEON), focused on waste management and on clean up of old waste;
- a very successful and well attended one-day Symposium on Antarctic Logistics and Operations.

The Symposium, titled "Going forward together, safely and efficiently" focused on safety and on new technologies and directions for stations, vessels and other infrastructures and for energy reduction. It included two successful and constructive keynote addresses – one on crisis management and one on the peak oil theory and potential implications for National Programs.

Three group officers ended their term at the meeting after several years of valuable service to COMNAP:

- Jorge Berguño of the Chilean National Program on the COMNAP Executive Committee;
- Lou Sanson of the New Zealand Program as Chair of the COMNAP Environmental Coordinating Group (ECG); and
- Jan Stel of the Netherlands Program as coordinator of the COMNAP Information Officers Network (INFONET).

and were succeeded by:

- Christo Pimpirev of the Bulgarian Program, elected on the COMNAP Executive Committee;
- Yves Frenot of the French Program, new Chair of the COMNAP Environmental Coordinating Group (ECG); and
- Emma Reid of the New Zealand Program, new coordinator of the COMNAP Information Officers Network (INFONET).

In addition, José Retamales of the Chilean Program was elected next Chair of COMNAP and will succeed to current Chair Gérard Jugie this July 2007.

A number of intersessional meetings were held, including:

- a meeting of those COMNAP members attending the 2006 ATCM in Edinburgh, UK, in June 2006; and
- a two-day meeting of the COMNAP Executive Committee near Pretoria, South Africa, in October 2006 to finalise the conclusions and results of the 2006 Annual General Meeting and the work plan for 2006/2007.

The 2007 AGM, COMNAP XIX, will be held from 09 to 13 July 2007 in Washington DC, USA. The meeting will be hosted by the COMNAP member for the USA, the US National Science Foundation's Office of Polar Programs. It will include:

- one and a half days of plenary sessions;
- two days of parallel meetings of the various COMNAP work groups;
- a number of special sessions on topical issues.

4.2 COMNAP IT support infrastructure

COMNAP has continued to progress the re-development of its IT support infrastructure, following the principles and directions outlined last year in COMNAP's report to ATCM XXIX (section 4.2).

Most of these developments are described in several previous sections of this report. As shown, these have a strong focus on supporting safety, facilitating collaboration between Programs and on reducing duplication by interfacing as appropriate with the Antarctic Treaty's Electronic Information Exchange System (EIES).

4.3 COMNAP Secretariat operation

The COMNAP Secretariat operates from an office located in Hobart, Tasmania, Australia. It is provided at no charge by the secretariat's supporting organisation, the Tasmanian State Government through its office of Antarctic affairs 'Antarctic Tasmania'. This invaluable support has now been provided since 1997 and the current support agreement runs until September 2009. The free support provided by Antarctic Tasmania includes a range of office equipment and administrative support, notably through accounting and auditing services. Another new and extremely valuable support provided is the employment of the COMNAP Executive Secretary by the State of Tasmania on a cost recovery basis. While the COMNAP Executive Secretary still reports directly and exclusively to the COMNAP Chair, he his technically an employee of the Tasmanian State Service, with all the additional protection and support it does entail.

COMNAP is very thankful to the Tasmanian State Government for its continued and increased support which allow its secretariat to operate very efficiently and in a quality, supportive environment.

4.4 Member participation, capacity building and secondments

Starting in Sofia, Bulgaria in July 2005 at COMNAP XVII, COMNAP has rolled out a number of procedures to facilitate member participation in meetings and intersessional group work, especially for members that do not routinely use English as a working language. COMNAP cannot properly achieve its goals if a number of members cannot adequately participate to the debates and contribute their valuable skills, experience and views. Significant progress has been made and the successful procedures are being fine-tuned and incorporated in updated COMNAP work processes.

Capacity building between National Programs is already implicit within COMNAP objectives and terms of reference and is embedded in the structure and procedures of the organisation. Increased member participation as described above will also contribute to improve capacity building, as will the new IT support infrastructure.

Another new initiative is the secondment of member Program staff to the COMNAP Secretariat to work on projects beneficial to COMNAP and the National Program community. The focus will be on allowing significant progress on specific COMNAP projects while providing beneficial training and capacity building opportunities to member staff.

5. Conclusion

COMNAP remains committed to supporting the Antarctic Treaty system.

COMNAP and its members continue to work together and help each other to place all National Antarctic Programs in the best possible position to undertake and support scientific and other work in Antarctica on behalf of their respective national governments – safely, efficiently and in the most environmentally responsible manner.

Appendices

Appendix 1:

Main Antarctic facilities operated by the National Antarctic Programs in 2007 in the Antarctic Treaty Area (south of 60 degrees latitude South).

Appendix 2:

COMNAP work groups 2006/2007

Appendix 1

Main Antarctic facilities operated by the National Antarctic Programs in 2007 in the Antarctic Treaty Area (south of 60 degrees latitude South)

This outlined information contains a selection of the facilities operated by National Antarctic Programs. It is extracted from list of facilities, GoogleMap/GoogleEarth layers and maps produced by COMNAP. For more information and updates, see *http://www.comnap.aq/facilities* and *http://www.comnap.aq/publications/maps*.

This document contains:

- Details of Antarctic facilities, in tabular form
- Maps showing location of facilities
  - zoom on Antarctic continent
  - zoom on Bransfield Strait
  - zoom on King George Island
  - zoom on Larsemann Hills

Details of Antarctic facilities, in tabular form

This information can also be viewed in GoogleEarth using *http://www.comnap.aq/kml/facilities.kmz*

Important Information:

- The publication of details of these facilities does not imply any right of use. The facilities are established and maintained by National Antarctic Programs strictly for their own use â•" they are not designed or provided for use by others. Prior agreement must be obtained to use facilities maintained by another operator. In particular, requests for access to airfields must comply with the procedures for coordination, approval and information described in the Antarctic Flight Information Manual published by COMNAP. For more information, contact the COMNAP Secretariat (*www.comnap.aq*).
- Furthermore, the relevant legal instruments and authorisation procedures adopted by the states party to the Antarctic Treaty regulating access to the Antarctic Treaty Area, that is to all areas between 60 and 90 degrees of latitude South, have to be complied with. For more information, contact the Antarctic Treaty Secretariat (*www.ats.aq*).

Name	Operated by NAP(s) from	Opened	Status	Population		Latitude	Longitude	Altitude	Airfield (5)	
				winter	peak				Length Longest Runway	Landing Gear Suitability
Aboa	Finland	1989	Seasonal		20	73°03'S	013°25'W	400 m		
Amundsen-Scott	USA	1956	Year-round	75	250	89°59.85'S	139°16.37'E	2 830 m	3660 m	ski
Arctowski	Poland	1977	Year-round	12	40	62°09.57'S	058°28.25'W	2 m		
Artigas	Uruguay	1984	Year-round	9	60	62°11.07'S	058°54.15'W	17 m		
Arturo Parodi	Chile					80°19.10'S	081°18.48'W	880 m	2500 m	wheel/ski
Arturo Prat	Chile	1947	Seasonal		27	62°30'S	059°41'W	~ 10 m		
Belgrano II (1)	Argentina	1955	Year-round	12	12	77°52.48'S	034°37.62'W	50 m		
Bellingshausen	Russia	1968	Year-round	25	38	62°11.78'S	058°57.65'W	16 m		
Browning Pass	Italy					74°37.37'S	163°54.82'E	170 m	915 m	ski
Casey	Australia	1969	Year-round	20	70	66°17.00'S	110°31.18'E	30 m	variable	ski
Comandante Ferraz	Brazil	1984	Year-round	12	40	62°05.00'S	058°23.47'W	8 m		
Concordia (2)	France & Italy	1997	Year-round	13	45	75°06.12'S	123°23.72'E	3220 m	1500 m	ski
D10 skiway	France					66°40.08'S	139°49.18'E	~ 100 m	variable	ski
D85 skiway	France					70°25.50'S	134°08.75'E	2850 m	variable	ski
Davis	Australia	1957	Year-round	22	70	68°34.63'S	077°58.35'E	15 m	variable	ski
Dome Fuji	Japan	1995	Seasonal		15	77°19.02'S	039°42.20'E	3810 m	variable	ski
Druzhnaya 4	Russia	1987	Seasonal		50	69°44'S	073°42'E	20 m		
Dumont d'Urville	France	1956	Year-round	26	100	66°39.77'S	140°00.08'E	42 m		
Enigma Lake	Italy					74°42.81'S	164°02.49'E	170 m	730 m	ski
Escudero	Chile	1994	Year-round	2	33	62°12.07'S	058°57.75'W	10 m		
Esperanza	Argentina	1952	Year-round	55	90	63°23.70'S	056°59.77'W	25 m		

Name	Operated by NAP(s) from	Opened	Status	Population		Latitude	Longitude	Altitude	Airfield (5)	
				winter	peak				Length Longest Runway	Landing Gear Suitability
Fossil Bluff	United Kingdom					71°19.76'S	068°16.02'W	92 m	1200 m	ski
Frei	Chile	1969	Year-round	70	120	62°12.00'S	058°57.85'W	10 m	1300 m	wheel
Gabriel de Castilla	Spain	1990	Seasonal		14	62°59'S	060°41'W	15 m		
Great Wall	China	1985	Year-round	14	40	62°12.98'S	058°57.73'W	10 m		
Gregor Mendel	Czech Republic	2006	Seasonal		20	63°48.04'S	057°52.95'W	~ 10 m		
Halley	United Kingdom	1956	Year-round	15	65	75°34.90'S	026°32.47'W	37 m	1200 m	ski
Juan Carlos Primero	Spain	1989	Seasonal		14	62°39'S	060°23'W	12 m		
Jubany	Argentina	1982	Year-round	20	100	62°14.27'S	058°39.87'W	10 m		
King Sejong	Korea	1988	Year-round	18	70	62°13.40'S	058°47.35'W	10 m		
Kohnen	Germany	2001	Seasonal		28	75°00'S	000°04'E	2900 m	900 m	ski
Law – Racovita	Romania	1987	Seasonal		13	69°23'S	076°23'E	65 m		
Macchu Picchu	Peru	1989	Seasonal		28	62°05.49'S	058°28.27'W	10 m		
Maitri	India	1989	Year-round	25	65	70°45.95'S	011°44.15'E	130 m		
Maldonado	Ecuador	1990	Seasonal		22	62°26.96'S	059°44.54'W	~ 10 m		
Marambio	Argentina	1969	Year-round	55	150	64°14.70'S	056°39.42'W	200 m	1200 m	wheel
Mario Zucchelli	Italy	1986	Seasonal		90	74°41'S	164°07'E	15 m	3000 m	wheel/ski
Mawson	Australia	1954	Year-round	20	60	67°36.28'S	062°52.25'E	5 m	variable	ski
McMurdo	USA	1955	Year-round	250	1000	77°50.88'S	166°40.10'E	~ 10 m	3000 m	wheel/ski
Mid Point	Italy					75°32.44'S	145°49.12'E	2520 m	1200 m	ski
Mirny	Russia	1956	Year-round	60	169	66°33.12'S	093°00.88'E	40 m		
Molodezhnaya	Russia					67°40.97'S	046°08.08'E	225 m	2560 m	wheel/ski
Neumayer	Germany	1981	Year-round	9	50	70°38.00'S	008°15.80'W	40 m	1000 m	ski
Novolazarevskaya	Russia	1961	Year-round	30	70	70°46.43'S	011°51.90'E	102 m	3000 m	wheel/ski
O'Higgins	Chile	1948	Year-round	16	44	63°19.25'S	057°54.02'W	12 m	800 m	ski
Odell Glacier	USA					76°39'S	159°58'E	1600 m	1800 m	wheel
Ohridiski	Bulgaria	1988	Seasonal		15	62°38.48'S	060°21.88'W	~ 10 m		
Orcadas	Argentina	1904	Year-round	14	45	60°44.33'S	044°44.28'W	4 m		
Palmer	USA	1965	Year-round	12	43	64°46.50'S	064°03.07'W	~ 10 m		
Progress 2	Russia	1989	Year-round	20	77	69°23'S	076°23'E	15 m		
Refugio Ecuador (6)	Ecuador	1990	Refuge		4	62°08'S	058°22'W	~ 10 m		
Rothera	United Kingdom	1976	Year-round	22	130	67°34.17'S	068°07.20'W	16 m	2500 m	wheel/ski

Name	Operated by NAP(s) from	Opened	Status	Population		Latitude	Longitude	Altitude	Airfield (5)	
				winter	peak				Length Longest Runway	Landing Gear Suitability
S17	Japan					69°01.50'S	040°06.50'E	620 m	1200 m	ski
San Martín	Argentina	1951	Year-round	20	20	68°07.78'S	067°06.20'W	5 m		
SANAE IV (3)	South Africa	1962	Year-round	10	80	71°40.42'S	002°49.73'W	850 m	1000 m	ski
Scott Base	New Zealand	1957	Year-round	10	85	77°51.00'S	166°45.77'E	10 m		
Signy	United Kingdom	1947	Seasonal		10	60°43'S	045°36'W	5 m		
Sitry	Italy					71°39.32'S	148°39.15'E	1600 m	1000 m	ski
Sky Blu	United Kingdom					74°51.38'S	071°34.16'W	1500 m	variable	wheel
Syowa	Japan	1957	Year-round	40	110	69°00.37'S	039°35.40'E	29 m	1000 m	ski
Tor	Norway	1985	Seasonal		4	71°53'S	005°09'E	1625 m		
Troll (4)	Norway	1990	Year-round	7	40	72°00.12'S	002°32.03'E	1300 m	3000 m	wheel
Vernadsky	Ukraine	1996	Year-round	12	24	65°14.72'S	064°15.40'W	7 m		
Vostok	Russia	1957	Year-round	13	25	78°28.00'S	106°48.00'E	3500 m	3000 m	ski
Wasa	Sweden	1989	Seasonal		20	73°03'S	013°25'W	~ 400m		
Zhongshan	China	1989	Year-round	15	30	69°22.27'S	076°23.22'E	~ 10 m		
			Totals:	1080	3954					

Notes:

(1) Original Belgrano Station opened 1955. Replaced by Belgrano II 1979.

(2) Concordia Station opened Dec 1997 for summer-only operation. Opened for year-round operation Feb 2005.

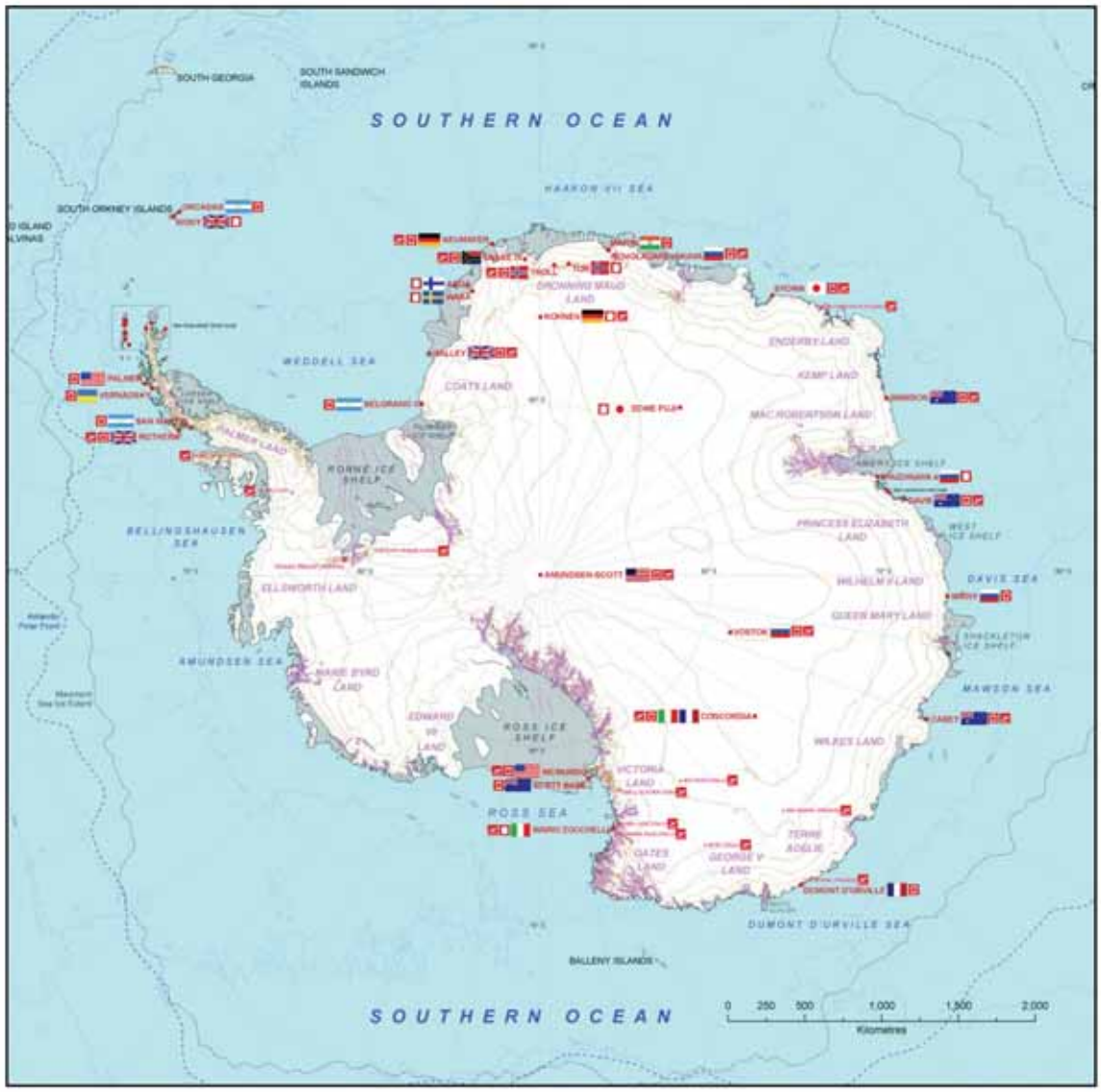
(3) Original SANAE Station opened 1962. SANAE IV opened 1997 at a new location, 200km South of SANAE I to III.

(4) Troll Station opened Feb 1990 for summer-only operation. Opened for year-round operation Feb 2005.

(5) Skiways are generally not maintained all year-round. Detailed information on airfields is available in the Antarctic Flight Information Manual (AFIM). Copies can be purchased from COMNAP. See *http://www.comnap.aq/publications/afim.*

(6) Refugio Ecuador (full name "Refugio Republic del Ecuador") was previously known as "Vicente".

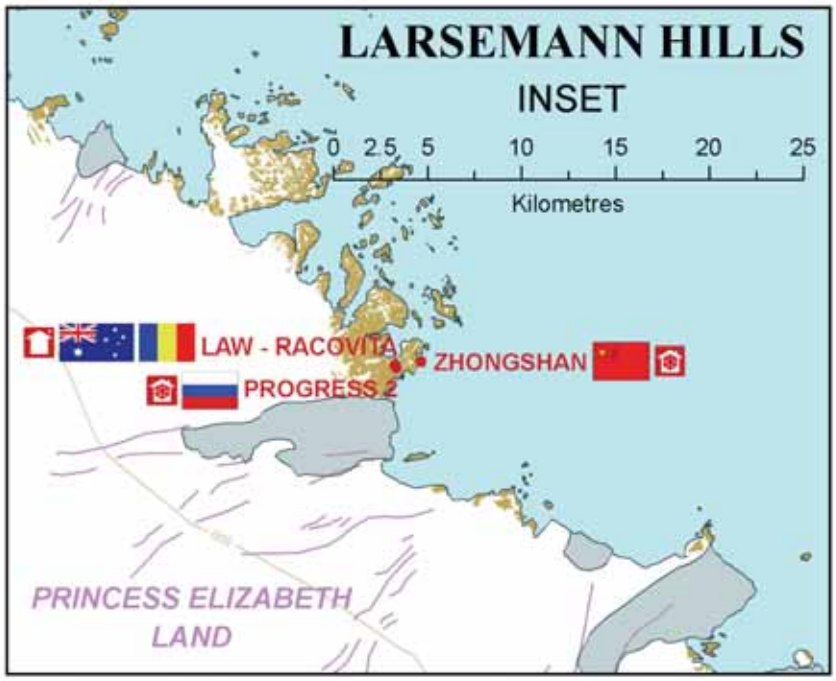
Map showing location of facilities - zoom on Antarctic continent



Map showing location of facilities - zoom on Bransfield Strait

Map showing location of facilities - zoom on King George Island

Map showing location of facilities - zoom on Larsemann Hills



Appendix 2

The Council of Managers of National Antarctic Programs (COMNAP)

COMNAP Work Groups 2006-2007

COMNAP works primarily through a number of work groups focused on various areas of expertise such as ship and air operations, environmental management or training. Each group has two main functions in its domain of expertise:

- Continually exchange practical, operational information to help identify practical solutions in the support of Antarctic Programs and facilitate relevant cooperation and collaboration;
- Respond to requests from COMNAP for specialist advice on specific issues and for developing common solutions or guidelines as the need arises.

1. Overview – Group names, acronyms and brief descriptions

Governance and Support

- *COUNCIL – COMNAP Council*
- *EXCOM – COMNAP Executive committee*
- *SECRETARIAT – COMNAP Secretariat*

Antarctic Logistics and Operations - general

- *SCALOP – COMNAP Standing Committee on Antarctic Logistics and Operations*
- *SYMP – COMNAP Symposium Working Group (organises biennial Logistics and Operations Symposium)*
- *SAFETY – COMNAP Safety Working Group*

Shipping and Air Operations

- *AIROPS – COMNAP Air Operations Working Group*
- *SHIPOPS – COMNAP Ship Operations Working Group*

Environmental Management and protection

- *AEON – COMNAP Antarctic Environmental Officers Network* (overseen by ECG – COMNAP Environmental Coordinating Group)

Energy Management

- *ENMANET – COMNAP Energy Management Officers Network* (overseen by CENMAN – COMNAP Energy Management Coordinating Group)

Medical Support

- *MEDINET – COMNAP Medical Officers Network* (overseen by COMED – COMNAP Medical Coordinating Group)

Training and Information

- *TRAINET – COMNAP Training Officers Network; and*
- *INFONET – COMNAP Information Officers Network*

(both overseen by CEDAT – COMNAP Coordinating Group on Education and Training)

Interaction with Other Operators

- *TANGO – COMNAP Working Group on Tourism and Non-Government Operations in Antarctica*

International Polar Year 2007-2009

- *IPYCG – COMNAP International Polar Year Coordinating Group*

2. Group Officers, Terms of Reference, Tasks and Actions for 2006-2007

Notes:

- Tasks indicated are tasks for the period July-2006 to June-2007, that is between the 2006 annual meeting COMNAP XVIII (Hobart) and the 2007 annual meeting COMNAP XIX (Washington). These tasks exclude specific "COMNAP XVIII Actions".
- The origin shown is the 2-letter ISO 3166-1-alpha-2 country code of the National Antarctic Program that person is affiliated with.

GOVERNANCE AND SUPPORT

COUNCIL – COMNAP Council
Chair ***Gérard Jugie (FR) 08-2004 to 07-2007 then José Retamales (CL) 08-2007 to 07-2010 (elected 07-2006)*** *Membership* One representative for each member National Program, the National Program 'Manager', assisted by his/her representative on the COMNAP Standing Committee on Antarctic Logistics and Operations (SCALOP).

EXCOM – COMNAP Executive Committee

Membership

- ***Chair: Gérard Jugie (FR) 08-2004 to 07-2007***
- ***Chair-Elect: José Retamales (CL) elected 07-2006 – Chair 08-2007 to 07-2010***
- ***COMNAP Representatives: Christo Pimpirev (BG) 08-2006 to 07-2009; Yeadong Kim (KR) 08-2004 to 07-2007; Henry Valentine(ZA) 08-2004 to 07-2007***

plus 2 ex-officio members:

- ***SCALOP Chair: John Pye (UK) 08-2005 to 07-2008***
- ***COMNAP Executive Secretary: Antoine Guichard – 10-2003 to 09-2009 (non-voting member)***

TORs

- Develop policy and directions submitted to the COMNAP Council for discussion, adjustment and approval
- Maintain an appropriate, mutually beneficial relationship with the Executive of SCAR
- Implement decisions taken by the COMNAP Council, in particular through developing annual work programs and guiding the work of COMNAP groups between Annual General Meetings
- Take responsibility for COMNAP matters between full meetings of the COMNAP Council
- Guide and review the operation of the COMNAP Secretariat

SECRETARIAT – COMNAP Secretariat

Executive Secretary ***Antoine Guichard – 10-2003 to 09-2009***

TORs

- Support the work of COMNAP and its various groups and maintain communication and understanding between members
- Maintain communication with other members of the Antarctic Treaty system and relevant international, regional or specialist organisations
- Represent COMNAP at meetings of the Antarctic Treaty system in conjunction with and under the guidance of the COMNAP Chair
- Identify and monitor current and upcoming issues of relevance to COMNAP and its members
- Represent and promote COMNAP as needed, in particular in the secretariat host country
- Develop and maintain COMNAP business and support systems and administer COMNAP finances
- Develop and maintain COMNAP publications and archives

ANTARCTIC LOGISTICS AND OPERATIONS - GENERAL

SCALOP – COMNAP Standing Committee on Antarctic Logistics and Operations

Chair: ***John Pye (UK) 08-2005 to 07-2008***

TORs

The Committee consists of the national SCALOP representatives working with and for COMNAP. The purpose of SCALOP is to contribute to the objectives of COMNAP by:

- Investigating and, where necessary, arranging for the provision of technical advice on operational topics identified by COMNAP and its groups
- Providing support to COMNAP groups dealing with technical advice on Antarctic logistics and operations, particularly for ship, air and safety activity
- Sharing knowledge, lessons learned and best practice about logistic and operational matters of mutual interest to national operators
- Guiding the activities of the Symposium Working Group

Tasks

- Conduct intersessional survey of SCALOP reporting needs
- Assist the SAFETY Working group in preparing an ATCM Information Paper for EXCOM on Contingency Planning and Emergency Response
- Conduct an intersessional survey on collaboration at research stations and in the field, and draft an ATCM Information Paper for EXCOM.

SYMP - COMNAP Symposium Working Group

Chair: ***Valery Klokov (RU) 08-2006 to 07-2008***

TORs

- Review the previous Symposium on Antarctic Logistics and Operations and develop plans for the next event

Tasks

- Promote discussion and consideration of possible themes and topics for the 2008 symposium due to be held in Russia
- Australian Program to brief Russian Program on lessons learned from 2006 Symposium

SAFETY – COMNAP Safety Working Group

Chair: ***Kim Pitt (AU) 08-2006 to 07-2009***

TORs

- Share and review safety, contingency planning and emergency policies and practices used in Antarctica
- Improve and monitor the COMNAP Accident, Incident and Near Miss Reporting (AINMR) system
- Work with SHIPOPS, AIROPS, TRAINET and other work groups on common safety issues
- Consider safety initiatives that would benefit National Programs

Tasks

- Consider and develop an AINMR system for COMNAP and promote its use
- Consider the Proposal from Uruguay for extended use of AIS
- Work with Chairs of SCALOP, SHIPOPS and AIROPS, to survey national approaches to Contingency Planning and Emergency Response. Propose, in consultation with ECG, a report for the next ATCM and CEP meetings
- Develop a list of contacts (environment, safety & health specialists) as well as others that have expertise in specialist fields of safety and make that list available to members as a potential source of information; a compendium of positions not names!

SHIPPING AND AIR OPERATIONS

AIROPS - COMNAP Working Group on Air Operations

Chair: ***Valery Klokov (RU) 08-2004 to 07-2007***

TORs

- Continue implementation of ATCM Recommendation XV-20 of 1989 on *Air Safety in Antarctica*
- Maintain the Antarctic Flight Information Manual (AFIM) with timely distribution of amendments
- Share and discuss operational experience and information on new technology related to Antarctic air operations and associated communication, navigation, the avoidance of mutual interference, and contingency response
- Review the air transport aspects of international cooperation in Antarctic science and support
- Continue to review developments in the use of existing or additional air links, and the use of blue ice or compacted snow landing sites

Tasks

- Investigate member policies on airfield access
- Identify operators' practices and AFIM usage by managers and pilots and consider changes to format to improve the value of AFIM
- Work together with SCALOP and SAFETY on development of principles for SAR cooperation between operators
- Assist the COMNAP Medical Officers Network (MEDINET) in its work on developing formats for medical information for use in medical evacuations

SHIPOPS - COMNAP Working Group on Ship Operations

Chair: ***Manuel Catalan (ES) 08-2004 to 07-2007***

TORs

- Give consideration to, and make recommendations on, further developments as well as promote the introduction of appropriate information on shipping in Antarctic waters
- Assess and evaluate relevant recommendations and measures of maritime and other organisations as well as provide input and, if necessary, take part at relevant meetings, for example the meetings of the Hydrographic Committee on Antarctica (HCA)
- Share and discuss, with other related COMNAP groups, operational experiences and information related to Antarctic ship operations and associated communication, navigation and contingency response

Tasks

- Together with the Hydrographic Committee on Antarctica (HCA), write an Information Paper on Antarctic hydrography, including describing what would be required of National Program vessels to be effective ships of opportunity
- Maintain a productive relationship with HCA, contribute to its work and identify the ways by which National Programs could further support the work of the HCA
- Complete the survey on National Program ships to collect information on the type of acoustic equipment present on board for research and for navigation; Pass the information to COMNAP

Actions

- SHIPOPS Chair to liaise with SHIPOPS members to see if one technical person from a National Program will or could attend the workshop on marine acoustics in Antarctic waters scheduled for 06-08 September 2006 in Germany
- COMNAP/SHIPOPS to participate as an observer in the 6th meeting of the Hydrographic Committee on Antarctica (HCA) and report back to EXCOM and COMNAP

ENVIRONMENTAL MANAGEMENT AND PROTECTION

ECG - COMNAP Environmental Coordinating Group

Membership: ***Yves Frenot (FR - Chair 08-2006 to 07-2009), Maaike Vancauwenberghe (BE), Lou Sanson (NZ), Henry Valentine (ZA)***

TORs

- Provide liaison between the COMNAP Council and the Antarctic Environmental Officers Network (AEON)
- Direct the development and preparation of responses to COMNAP requests with copies of all charges to AEON to be sent electronically to the COMNAP Council
- Report to COMNAP on the activities of the network at the COMNAP annual general meeting, and inter-sessionally, as issues arise
- Develop methods for coordination of monitoring activities to avoid wasteful duplication and ensure effective use of resources

Tasks

- Finalise and publish COMNAP fuel handling and storage guidelines
- Provide report on AEON waste management workshop for inclusion in COMNAP's annual report to the ATCM and CEP
- Ascertain current coverage of aircraft wildlife awareness guidelines by National Programs

AEON - COMNAP Antarctic Environment Officers Network

Coordinator : ***Rodolfo Sánchez (AR) 01-2006 to 07-2009***

TORs

- Exchange information and ideas about practical and technical environmental issues on Antarctica
- Promote mutual understanding among Network members on the practical application of the Environmental Protocol to national programs
- Respond to requests from COMNAP for advice on environmental issues

Tasks

- Encourage uptake of best practices for monitoring
- Engage with the COMNAP Secretary to improve functionality of AEON Workspace on the COMNAP website and exchange of information by email between AEON Members (AEON Coordinator) – including options for creating an AEON newsletter or contributing to a COMNAP newsletter
- Undertake a survey of AEON Members to ascertain current procedures on introduction of non native species in Antarctica and report further to ECG and COMNAP (AEON Coordinator / All AEON Members)
- Provide information on basic operational monitoring parameters currently measured in Antarctic stations, as part of environmental monitoring programs in place (All AEON Members) – recognising that COMNAP had already invested a lot in this domain
- Plan for a workshop on a practical environmental issue as part on COMNAP XX in 2008 (AEON Coordinator, ECG Chairs and COMNAP Secretary) – topic yet to be defined

ENERGY MANAGEMENT

CENMAN - COMNAP Coordinating Group on Energy Management

Membership: ***Jan-Gunnar Winther (NO - Chair 08-2006 to 07-2009), Patrice Godon (FR), Erick Chiang (US)***

TORs

- Develop goals and provide guidance on the development of energy management practices with a view to reducing environmental impacts and reliance on fossil fuels
- Monitor and identify emerging technologies that may have an impact on activity in Antarctica and report to COMNAP at the annual meeting
- Monitor the progress of the Energy Management Network (ENMANET) and report to COMNAP on the activities of the network at its annual meeting, and inter-sessionally should the need arise
- Review the terms of reference and tasks each year

ENMANET - COMNAP Antarctic Energy Management Officers Network

Coordinator : ***David Blake (UK) 08-2006 to 07-2009***

TORs

- Determine the extent to which national Antarctic programs effectively utilise energy management and conservation processes. This includes the employment of both conventional and alternative energy technologies. Specifically the working group shall examine:
  1. the type of systems employed
  2. the maximum and average power output of the systems
  3. the capital and operating costs
  4. problems encountered in operation, if any
- Facilitate the exchange of operating experience and encourage cooperative projects in alternative energy and emerging technologies

Tasks

- Produce Working Paper for CEP on best practice to reduce energy demand
- Update energy database and transfer to new web site
- Exchange information on best practice and technologies

MEDICAL SUPPORT

COMED - COMNAP Medical Coordinating Group

Membership: ***Mariano Memolli (AR - Chair 08-2005 to 07-2008), Kim Pitt (AU), Erick Chiang (US)***

TORs

- Task and oversee the work of the COMNAP Medical Officers Network (MEDINET), in particular to:
  1. exchange information on medical capabilities between COMNAP members
  2. guide about basic process for personnel selection
  3. develop standards for medical responses in emergencies and evacuations in liaison with other groups and networks
  4. exchange information about medical problems in Antarctica
- Report to COMNAP at its annual meeting on the activities of MEDINET
- Review terms of reference and tasks each year

MEDINET - COMNAP Antarctic Medical Officers Network

Coordinator : ***Claude Bachelard (FR) 08-2003 to 07-2007***

TORs

- Exchange information and experience on medical support in national Antarctic programs
- Promote initiatives between national Antarctic programs in order to develop and facilitate closer cooperation
- Respond to requests from COMNAP for advice on medical issues
- Support and advise COMNAP on occupational health and medical issues

Tasks

- Prepare and disseminate a common format for the presentation of summer medical standards and medical information (This will include the categorisation of medical standards, for example by location, type of activity undertaken, duration, age of personnel)
- Establish common standards for medical screening for the interchange of personnel between national programs
- Establish a database of current national program medical capabilities, including facilities, equipment and staffing
- Establish an agreed format for medical information for use in medical evacuation within and from the Antarctic continent
- Consider how National Programs could respond to the threat of infectious disease in the Antarctic
- Establish an anonymised database of medical events
- Share medical aspects of "Major Incident Plans"
- Develop guidelines for management of altitude sickness prevention and treatment in Antarctica

TRAINING AND INFORMATION

CEDAT - COMNAP Coordinating Group on Education and Training

Membership: ***Lou Sanson (NZ - Chair 08-2005 to 07-2008), Karl Erb (US), Hosung Chung (KR), Jan Stel (NL)***

TORs

- Guide and coordinate the progress of the Information and Training networks and report to COMNAP on the activities of the networks at its annual meeting, and inter-sessionally should the need arise
- Guide and support, as needed, the development of the networks and review the terms of reference each year

TRAINET - COMNAP Antarctic Training Officers Network

Coordinator : ***Patricio Eberhard (CL) 08-2004 to 07-2007***

TORs

- Exchange information and experience on training programs including manuals, techniques, procedures and training aids
- Promote initiatives between national programs in order to develop and facilitate closer cooperation
- Facilitate the exchange of personnel between NAPs to participate in training programs and encourage the development of joint training initiatives between NAPs where practical

Tasks

- Collate information from NAPs on training courses syllabus and list Standard Operating Procedures (SOPs) and policy documentation relevant to training and post to the COMNAP web site
- Collate information on oil spill prevention and clean-up training syllabus and list equipment used by NAPs for responding to clean-up operations and post to the COMNAP website
- Develop a "Users Guide" in English of commonly used Antarctic terminology and post to COMNAP website
- Maintain the TRAINET network (promote the benefits of TRAINET and increase member participation in the network)
- Promote the exchange between NAPs of personnel to participate in training programs
- Review the voluntary Training Checklist

INFONET - COMNAP Antarctic Information Officers Network

Coordinator : ***Emma Reid (NZ) 08-2006 to 07-2009***

TORs

- Exchange information, views and ideas about education, outreach and communication (EOC) within COMNAP and on behalf of COMNAP
- Promote mutual understanding on EOC activities and facilitate partnerships
- Respond to requests from comnap on EOC issues
- Work with relevant organisations in developing activities of mutual interest

Tasks

- Write INFONET strategic plan with action plan for approval by CEDAT/COMNAP
- Enhance the content of the Members area of the COMNAP web site by sharing publications, policies, procedures and best practice
- Identify like-minded regions or project based groups to develop specific technical and/or regional projects
- Identify opportunity that national programmes can leverage from international high profile Antarctic EOC activity
- Contribute to the UK-led work on preparation of an Antarctic Treaty information paper on EOC activity

INTERACTION WITH OTHER OPERATORS

TANGO - COMNAP Working Group on Tourism and Non-Government Operators

Chair: ***José Retamales (CL) 08-2005 to 07-2008***

TORs

- Review non-NAP activities of common concern to National Antarctic Programs (NAPs), including non-IAATO operations and adventure tourism activities
- Share advance information where available on "small/adventure" tourism activities to try to anticipate problems.

Tasks

- Survey members to gather statistics and other information on the interaction between National Antarctic Program (NAP) operations and other (non-NAP) operations, looking at both negative and positive impacts of such interactions
- Consult with National Programs from countries having a major point of departure to Antarctica to check if appropriate port-airport authorities can provide the advance information needed on "small/adventure" tourism activities to try to anticipate problems

INTERNATIONAL POLAR YEAR 2007-2009

IPYCG - COMNAP IPY Coordinating Group

Membership: ***Anders Karlqvist (SE) Chair 08-2004 to 07-2007, Patricio Eberhard (CL), Yaedong Kim (KR), Valery Lukin (RU), Henry Valentine (ZA)***

TORs

- Encourage multi-national logistical partnerships and the integration of technological developments to advance the scientific goals established for IPY
- Track progress by the virtual IPY Network (IPYNET), consisting of all members of the AMEN list, in developing new or strengthening existing partnerships or in advancing technological developments in furtherance of IPY goals
- Review the IPYCG terms of reference at each annual meeting

Tasks

- Respond to specific requests from the science community for assistance, as agreed at ATCM XXIX
- Update the IPY ship survey
- Consider maintaining information on logistics support provided to IPY projects as a contribution to the IPY legacy record

ANNEX G

Reports pursuant to Article III-2 of the Antarctic Treaty

Report by the International Hydrographic Organization (IHO) on "Cooperation in Hydrographic Surveying and Charting of Antarctic Waters"

Introduction

The International Hydrographic Organization (IHO) takes this opportunity to thank once again the Antarctic Treaty system (ATS) for having invited our Organization to report to the XXX Antarctic Treaty Consultative Meeting (ATCM), on the progress made in the Cooperation in Hydrographic Surveying and Charting of Antarctic Waters. This report covers the period between the XXIX and XXX ATCMs.

The IHO in conjunction with several other international organizations has been working hard to raise awareness on the importance of improving the priority assigned to conduct hydrographic surveys in Antarctica. We do believe that by doing so we strongly contribute to safety of life at sea, safety of navigation, the protection of the marine environment and the progress on marine scientific research in Antarctica. The status of the progress so far reached is the direct reflect of the activities of the Hydrographic Offices with responsibilities in the Antarctica. The IHO Hydrographic Committee on Antarctica provides the opportunity for coordination and cooperation among participating actors, aiming teamwork to favour effectiveness and best practice in the use of the limited resources allocated by national and international authorities.

The IHO Hydrographic Committee on Antarctica

The 6th Meeting of the IHO Hydrographic Committee on Antarctica (HCA) took place at the Chilean Antarctic Institute (INACH), Punta Arenas, Chile, 06-08 November 2006, jointly organized by the Hydrographic and Oceanographic Service of the Chilean Navy (SHOA) and INACH. Unfortunately, due to previous commitments, the Executive Secretary of the Antarctic Treaty Secretariat could not make it this time.

The Chairman, Capt GORZIGLIA (IHB Director) opened the meeting welcoming the 11 HCA Member States present (Argentina, Australia, Brazil, Chile, China, Ecuador, India, Italy, Norway, South Africa and United Kingdom) and 3 representatives of international organizations (COMNAP, SCALOP and IAATO) that participated actively in the event. It has to be highlighted that since the last ATCM, Brazil and Ecuador have signed the Statutes of the HCA and therefore has become full members of the Committee.

The Committee discussed about membership; reviewed the status of the action list agreed at the last meeting; the progress made by the HCA Hydrographic Survey Work Program Working Group; reviewed the 5 year report to be submitted to the XVIIth International hydrographic Conference (May 2007) and the main activities to be considered by the IHO 5 Years Work program 2008/2012 for the HCA.

1. HCA Membership

The Committee after reviewing the situation as regard to membership tasked once again its Chairman to contact the countries that have not yet signed the HCA Statutes, to do so. The Chairman took action and invited the IHO representatives of Japan, Rep. of Korea, Peru, Poland, Ukraine, USA and Uruguay, to consider signing the statutes and participating in HCA activities. Replies are awaited. (See Annex A for details).

2. Status of Actions Agreed

The Committee reviewed the status of the actions agreed at the last meeting and confirmed that almost all actions had been completed.

a) Hydrographic surveys conducted

After examining the National reports submitted to the HCA, the Committee expressed its concern for the extremely low hydrographic survey activity conducted by HCA member countries. Seven out of the fourteen reports indicated that no activity at all has been executed in the last year. This situation is in no way in line with the existing and increasing requirements of hydrographic products.

Note: Examples of notes included in Reports:

- Due to presently lack of resources we are not carrying out any surveying and charting activity in Antarctica.
- The production of the INT charts of our responsibility has been repeatedly delayed because of lack of funding.
- Similar to the 2004/2005 summer period, no further survey work was conducted during the 2005/2006 summer season due to research cruise non-availability.

The Committee has been discussing SOLAS V Regulation 9 requiring contracting governments to arrange for the provision of hydrographic services and its applicability in the Antarctic Treaty area. In brief, the Committee would like to know the ATS position as regard to who assumes the obligation/ responsibility for the provision of hydrographic services in Antarctica. The Committee is also requesting IMO's views in this regard.

b) INT Chart Production

The INT Chart production continues to show progress. Out of 99 INT charts contained in the cartographic scheme for the Region M, 53 have already been published. The production of ENC also has shown an increase, and 5 ENC Charts are available. The completion of the INT chart scheme for Region 'M' remains the high priority objective for HCA. An ENC scheme for Region 'M', is under preparation at the IHB. (See Annex B for present production status).

c) IHO Publication S-55

The HCA has been working closely with the IHB to develop a prototype GIS data base of the S-55, -Worldwide Status of Hydrographic Surveys and Nautical Charting - having a chart background base with different layers, such as INT charts scheme, ENCs scheme and RNCs (as applicable). This database is in progress and will be made available as soon as finalized, as it would be useful to all Regional Hydrographic Commissions. In the case of Antarctica a layer on hydrographic surveys, based on the present data as in S-59 Part II is considered as a provisional measure, to be refined when all States with survey and charting programmes in the region provide updated information.

For the time being, Antarctica is a gap in the IHO S-55 database. HCA Members, which have not submitted data to be considered in S-55, have been requested to do so in order to advance in its preparation.

d) Relation with other International Organizations.

The HCA has continued a very fruitful relationship with several international organizations such as IMO, IOC, IAATO, COMNAP, and the proper ATS. Joint efforts have been made mainly with

COMNAP and IAATO aiming to raise awareness on the importance to improve the priority for hydrographic surveys in Antarctica.

3. Progress made by the Hydrographic Survey Programme Working Group

One of the most relevant discussions took place following the report of the Chairman of the HCA Hydrographic Survey Work Program Working Group, successfully chaired by Mr Andy Willett (UK). As a result of an interesting exchange of views, several actions were identified, all aiming at improving the safety of navigation as quickly as possible. Some of these actions nowadays in progress are:

1. To establish a hydrographic survey program based on national programs, improving the exchange of data and avoiding as much as possible, duplication of surveys.
2. To identify producer nations for new INT Charts included in the Region M scheme.
3. To seek the status/progress of INT Charts in the region for which there is no information from Producer Nations on their production.

4. Report to the XVII IHC

The HCA reviewed and endorsed the HCA Report (2002/2007) to the XVIIth IHC prepared by the Chairman and Vice Chairman (Captain Nairn Australia).

In brief, the report concludes that during the five years period the Committee has:

1. Successfully coordinated its activities among HCA Member and with related international organizations.
2. Kept up dated the INT Chart scheme for region M based on new requirements and monitored chart production.
3. Confirmed that INT Chart implementation depends on the hydrographic survey effort made and therefore the "short list of high priority surveys" defined provides a thoughtful guide to improve effectiveness.

The report offers a set of proposal that can be summarized as follow:

4. To invite IHO Member State to increase their hydrographic activity in Antarctica taking advantage of the IPY, aiming to complete the present INT Chart scheme as soon as possible
5. To request HCA to continue improving the relationship with relevant international organizations, aiming to develop joint projects of common interest, especially ATS, IMO, IOC, COMNAP, SCAR and IAATO.
6. To thank IAATO for making available its ships to be used as "ships of opportunity" for hydrographic surveyors as well as for volunteering to collect hydrographic data.

5. HCA 2008/2012 WP

The IHO 5 years Work Program that shall be discussed and finally approved at the IHC in May 2007, includes several actions proposed by the HCA to be executed in the period 2008/2012. The initiatives include:

1. *Annual meeting of the HCA:* to assess hydrographic surveys and INT Charts and ENC production progress; to keep INT Chart and ENC's scheme updated and to define actions to foster surveys and chart production in coordination with relevant international organizations. (Yearly)
2. *Relationship with International Organizations:* The HCA to deliver special presentations in the form of Seminar aiming to raise awareness on the importance of hydrographic activity in the Antarctica, seeking to encourage cooperation in data collection and sharing in order to improve the quality of hydrographic data available for operational users and ameliorate risks to navigation. It is anticipated the organization of these at normal ATCM, COMNAP and IAATO meetings, in 2008, 2009 and 2010, respectively, to be coordinated.
3. *HCA Public Relations and Information Management:* The HCA will develop its corresponding component of the IHO web site, aiming for the on-going provision of relevant and updated hydrographic, cartographic and MSI information useful for planning and operation in Antarctic waters, contributing to safety of navigation and protection of marine environment and other applications. (2011 or before)
4. *HCA Capacity Building:* The HCA will organize a two days Workshop on Hydrographic Surveys in Antarctic Techniques and Experiences, aiming to concentrate the IHO´s and others´ experience in running hydrographic surveys in Antarctic and identify best practice to improve this activity. This activity will be organized in conjunction with the 2011 HCA Meeting, to facilitate coordination, assistance and best use of resources.

6. Next HCA Meeting

Following the kind invitation from the Servicio de Hidrografia Naval de la Armada Argentina, the Committee decided to accept the invitation and agreed to have the 7th HCA meeting in Buenos Aires, Argentina, 03-05 October 2007. We take this opportunity to invite the Executive Secretary of the Antarctic Treaty Secretariat to attend the HCA Meeting.

Conclusions

1. The coordination and cooperation between the IHO HCA Members and other international organizations interested in the Antarctica are in its best moment. The ATS should take advantage of this situation and urge its Members to assign a much higher priority to hydrographic survey activities. If this is not improved, then the structure in place and all joint efforts are useless.
2. The availability of INT Charts is increasing slowly due to the lack of new hydrographic data and low priority given to Antarctic hydrographic and cartographic activities at a national level. The ATS high concern on the protection of the Antarctic ecosystem does not match with the low priority given to hydro-cartographic activities aiming to improve safety to navigation and protection of the marine environment.
3. The ATS might wish to consider the IHO proposal to have the HCA organizing jointly with the ATS Secretariat a set of special presentations in the form of Seminar, during the XXXI ATCM, aiming to raise awareness on the importance of hydrographic activity in the Antarctica.

Recommendations

It is recommended that the XXX ATCM:

1. To take note of the IHO Report.
2. To take action as regard to the conclusions in the report.

Monaco, March 2007.

Annexes:

A: HCA Membership Situation
B: INT Chart Present Production Status

ANNEX A

HCA MEMBERSHIP SITUATION

MEMBERS:

Argentina
Australia
Brazil
Chile
China
Ecuador
France
Germany
Greece
India
Italy
New Zealand
Norway
Russian Federation
South Africa
Spain
United Kingdom

PENDING CONFIRMATION OF MEMBERSHIP:

Japan
Korea (Rep. of)
Peru
Poland
Ukraine
Uruguay
USA

OBSERVER ORGANIZATIONS:

Antarctic Treaty Secretariat (ATS)
Council of Managers of National Antarctic Programmes (COMNAP)
Standing Committee on Antarctic Logistics and Operations (SCALOP)
International Association of Antarctic Tour Operators (IAATO)
Scientific Committee on Antarctic Research (SCAR)
International Maritime Organization (IMO)
Intergovernmental Oceanographic Commission (IOC)
General Bathymetric Chart of the Oceans (GEBCO)
International Bathymetric Chart of the Southern Ocean (IBCSO)
IHO Data Center for Digital Bathymetry (DCDB)
Australian Antarctic Division
Antarctica New Zealand

ANNEX B

INT Chart Present Production Status

No.	INT No.	Name of the INT Charts	Scale	Producer	Status	
					Publication	N. Edition
1	900	Ross Sea	2 000 000	NZ	1998	
2	901	De Cape Goodenough à Cape Adare	2 000 000	FR	2006	
3	902	Mawson Sea and Davis Sea	2 000 000	RU	2000	
4	903	Sodruzhestva Sea	2 000 000	RU	2001	
5	904	Dronning Maud Land	2 000 000	NO	2002	
6	905	South Sandwich Islands	2 000 000	DE		
7	906	Weddell Sea	2 000 000	GB	2005	
8	907	Antarctic Peninsula	2 000 000	GB	2000	
9	908	Bryan Coast to Martin Peninsula	2 000 000	GB		
10	909	Martin Peninsula, Cape Colbeck	2 000 000	???		
11	9000	Terra Nova Bay to Moubray Bay	500 000	IT		
12	9001	Cape Royds to Pram Point	60 000	NZ	Proj. June 2007	
13	9002	Scientific Stations McMurdo and Scott	5 000	NZ	Proj. June 2007	
14	9004	To be determined	250 000	IT	Proj. 2007	
15	9005	Da Capo Russell a Campbell Glacier Tongue	50 000	IT	2000	
16	9006	Cape Adare and Cape Hallett	50 000	NZ	2003	2006
		Plan A – Cape Adare	50 000			
		Plan B – Cape Hallett	50 000			
		Plan C – Ridley Beach	15 000			
		Plan D – Seabee Hook	15 000			
17	9007	Possession Islands	60 000	NZ	2003	2006
18	9008	Cape Adare to Cape Daniell	200 000	NZ	2003	2006
19	9009	Cape Hooker to Coulman Island	500 000	NZ	2004	
20	9010	Matusevich Glacier to Ob' Bay	500 000	RU	2000	
21	9011	Mys Belousova to Terra Nova Island	200 000	RU	2000	
		Plan A – Leningradskaya Station	1 000			
22	9012	Balleny Islands	300 000	NZ	2006	
		Continuation: Balleny Seamount	300 000			
23	9014	Approaches to Commonwealth Bay	25 000	AU	2002	
		Plan A – Boat Harbour	5000			
24	9015	(Mer Dumont d'Urville, Terre Adélie) Du Glacier Dibble au Glacier Mertz	500 000	FR	2004	
25	9016	De la Pointe Ebba au Cap de la Découverte	100 000	FR	2004	
		Plan A – Archipel Max Douguet - Port-Martin	10 000			
		Plan B – Archipel Max Douguet	30 000			
26	9017	De l'Ile Hélène au Rocher du Débarquement - Archipel de Pointe Géologie	20 000	FR	2002	
		Plan A – Archipel de Pointe Géologie	7500			
27	9020	Mill Island to Cape Poinsett	500 000	AU	1998	
28	9021	Approaches to Casey	50 000	AU	1999	Proj. 2006
		Plan A – Newcomb Bay	12 500			

No.	INT No.	Name of the INT Charts	Scale	Producer	Status	
					Publication	N. Edition
29	9025	Davis Sea	500 000	RU	1999	
30	9026	Approaches to Polar Station Mirny	200 000	RU	1999	
31	9027	Road Mirny	10 000	RU	1999	
32	9030	Sandefjord Bay to Cape Rundingen	500 000	AU	1992	
33	9031	Cape Rundingen to Cape Filchner	500 000	AU	2002	
34	9032	Approaches to Davis Anchorage	12 500	AU	2003	
35	9033	Cape Rouse to Sandefjord Bay	500 000	AU	1991	Proj. 07/08
36	9035	Magnet Bay to Cape Rouse	500 000	AU	1993	Proj. 07/08
37	9036	Approaches to Mawson	25 000	AU	2007	
		Plan A - Horseshoe harbour	5000			
38	9037	Gibbney Island to Kista Strait	25 000	AU	Proj. May 2007	
39	9040	Alasheyev Bight to Cape Ann	500 000	RU	2000	
40	9041	Alasheyev Bight	100 000	RU	1999	
41	9042	Approaches to Molodezhnaya Station	12 500	RU	1999	
42	9045	Vestvika Bay	500 000	JP		
43	9046	Eastern Part of Ongul	100 000	JP		
44	9047	Western Part of Ongul	10 000	JP		
45	9050	Sergei Kamenev Gulf to Neupokojevabukta	500 000	RU	1999	
46	9051	Approaches to Leningradbukta	200 000	RU	1998	
47	9055	Muskegbukta Bay to Atka Gulf	500 000	DE		
48	9056	Approaches to Dronning Maud Land	300 000	ZA	2005	
49	9057	To be determined	200 000	DE		
50	9060	Cape Roule to Farell Bay	500 000	RU	2000	
51	9061	Approaches to Halley Base	200 000	GB	2005	
52	9062	To be determined	200 000	???		
53	9100	Isla Marambio	25 000	AR		
		Plan A – Base aérea Marambio	5000			
54	9101	Peninsula Trinidad	10 000	AR		
		Plan A – Base Esperanza, Caleta Choza	5000			
55	9102	Estrecho Bransfield, Rada Covadonga y Accesos	10 000	CL	2003	
56	9103	Gerlache Strait	50 000	CL		
57	9104	Gerlache Strait	50 000	CL		
58	9105	Bismarck strait, Approaches to Arthur Harbour	25 000	???		
		Plan A – Arthur Harbour	10 000			
59	9106	Argentine Islands and Approaches	60 000	GB	1996	
		Plan A – Argentine Islands	15 000			
60	9107	Pendleton Strait etc.	50 000	GB		
61	9108	Hanusse Bay to Wyatt Island	50 000	CL		
62	9109	British Antarctic Survey Base Rothera	25 000	GB	1999	
63	9110	Adelaide Island, South Western Approaches	30 000	CL		
64	9111	Bahía Margarita	25 000	AR		

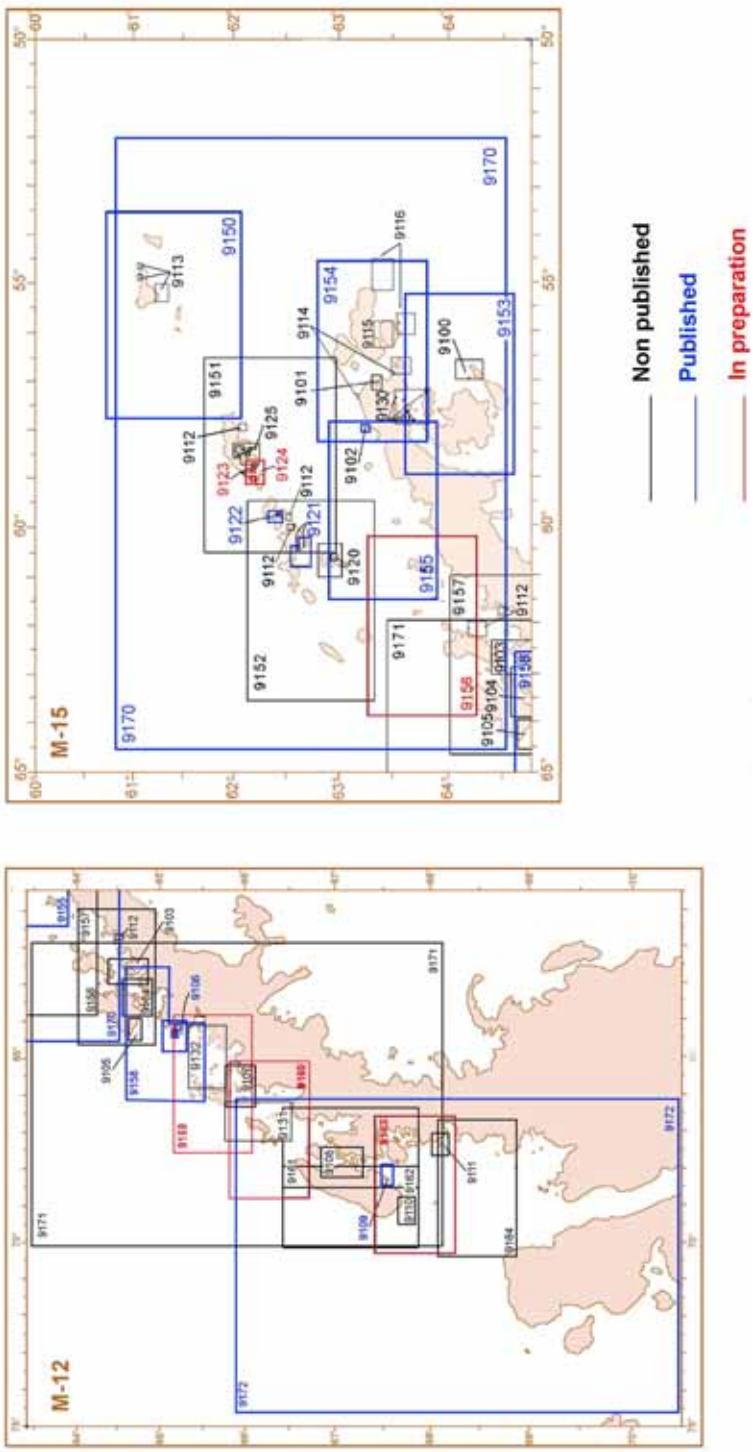
No.	INT No.	Name of the INT Charts	Scale	Producer	Status	
					Publication	N. Edition
65	9112	Plans in Bransfield Strait		GB		
		Plan A – Yankee Harbour	12 500			
		Plan B – Freud (Pampa) Passage	50 000			
		Plan C – Portal Point	25 000			
		Plan D – Penguin Island	20 000			
		Plan E – Hydrurga Rocks	10 000			
66	9113	Plans in Elephant Island		GB		
		Plan A – Cape Lookout	50 000			
		Plan B – Cape Valentine	10 000			
		Plan C – Point Wild	10 000			
67	9114	Antarctic Sound		???		
		Plan A – Fridtjof Sound	50 000			
		Plan B – Brown Bluff	10 000			
		Plan C – Gourdin Island	15 000			
68	9115	Active Sound	50 000	AR		
69	9116	Plans in Paulet and Danger Islands		GB ?		
		Plan A – Paulet Island	50 000			
		Plan B – Danger Islands	50 000			
70	9120	Isla Decepción	50 000	AR	2004	2006
		Plan A - Fuelles de Neptuno	12 500			
71	9121	Isla Livingston, de Punta Band a la Bahía Brunow	35 000	ES	1998	
		Plan A – Isla de la Media Luna	25 000			
		Plan B – Base Juan Carlos I	5 000			
72	9122	Bahía Chile, Puerto Soberanía y Ensenadas Rojes e Iquique		CL	1998	
		Plan A - Bahía Chile	20 000			
		Plan B - Puerto Soberanía y Ensenadas Rojas e Iquique	5000			
73	9123	Caletas en Bahía Fildes		CL	Proj. May 2007	
		Plan A – Caleta Potter	10 000			
		Plan B – Caleta Ardley	10 000			
		Plan C – Caleta Marian	10 000			
74	9124	Bahia Fildes	30 000	CL	Proj. May 2007	
75	9125	Baia do Almirantado	40 000	BR & PE		
		Plan A – Ensenada Martel	20 000			
		Plan B – Estação Arctowski	10 000			
		Plan C – Ensenada Mackellar	15 000			

No.	INT No.	Name of the INT Charts	Scale	Producer	Status	
					Publication	N. Edition
76	9130	Crystal Hill to Devil Island	75 000	GB ?		
		Plan A - Bald Head	10 000			
		Plan B - View Point	10 000			
		Plan C - Matts Head	10 000			
		Plan D - Crystal Hill	10 000			
		Plan E - Camp Point	10 000			
		Plan F - Devil Island	10 000			
77	9131	Crystal Sound	75 000	GB ?		75 000
78	9132	Grandidier Channel	75 000	GB ?		75 000
79	9140	Islas Orcadas del Sur	150 000	AR		
80	9141	Approaches to Signy Island	50 000	GB	2006	
		Plan A – Borge Bay and Approaches	10 000			
81	9142	Bahía Scotia	10 000	AR	2006	
82	9150	Islas Elefante y Clarence	200 000	BR	1999	
83	9151	De Isla De Jorge a Isla Livingston	200 000	CL		
84	9152	De Isla Livingston a Isla Low	200 000	CL		
85	9153	Church Point to Cape Longing including James Ross Island	150 000	GB & AR	1999	2004
86	9154	Joinville Island to Cape Ducorps and Church Point	150 000	GB & AR	1996	2002
87	9155	Estrecho Bransfield - Rada Covadonga a Isla Trinidad	150 000	CL	2003	
88	9156	Archipélago de Palmer, de Isla Trinidad a Isla Amberes	150 000	AR	Proj. Nov 2007	
89	9157	Gerlache Strait	150 000	CL		
90	9158	Anvers Island to Renaud Island	150 000	GB	2001	2003
		Plan A – Port Lockroy	12 500			
91	9159	Pendleton Strait & Grandidier Channel	150 000	GB	Proj. 2008	
92	9160	Crystal Sound	150 000	GB	Proj. 2008	
93	9161	Matha Strait to Pourquoi Pas Island	150 000	CL		
94	9162	Adelaide Island	150 000	CL		
95	9163	Marguerite Bay; Rothera	150 000	GB	Proj. 2007	
96	9164	Margarita Bay	150 000	CL		
97	9170	Islas Shetland y Mar de la Flota	500 000	AR	1997	
98	9171	Brabant Island to Adelaide Island	500 000	GB		
99	9172	Matha Strait to Rothschild Island	500 000	RU	1999	

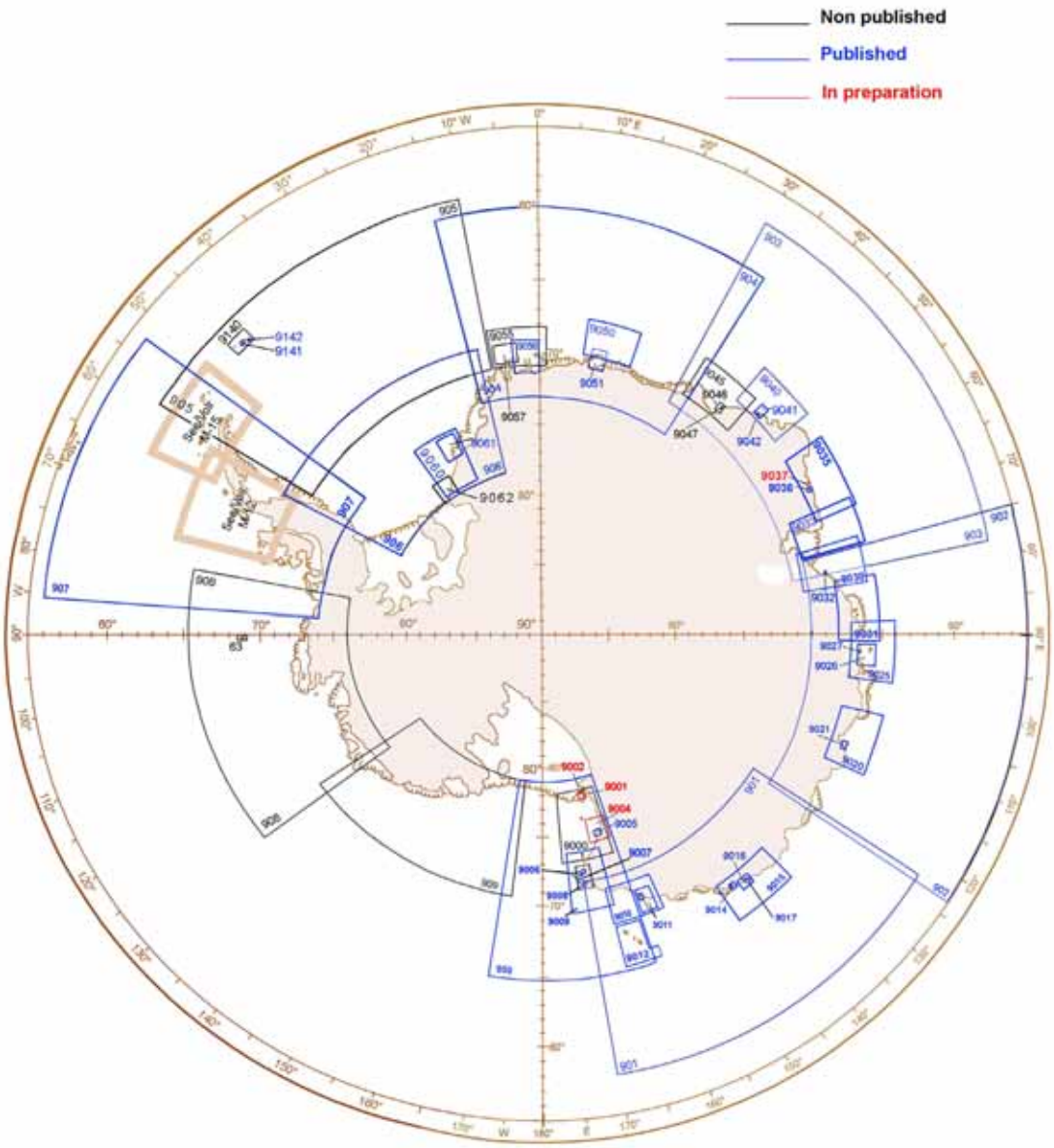
Resume: 53 out of 99 INT Charts have been produced, equivalent to the 53 %.

ANNEX C

Status of INT Chart Production in Antarctica (March 07)



Status of INT Chart Production in Antarctica (March 07)



Report of the International Association of Antarctica Tour Operators 2006-2007

Introduction

The International Association of Antarctica Tour Operators (IAATO) is pleased to present a report of its activities to ATCM XXX, New Delhi, India, 30 April – 11 May 2007, in relation to Article III (2) of the Antarctic Treaty.

IAATO is a member organization founded by seven companies in 1991 to advocate, promote and practice safe and environmentally responsible private-sector travel to the Antarctic.

During the current 2006-2007 operating year, IAATO has 83 Members. At least 9 new applications are currently in progress for Full, Provisional and Associate Membership for the 2007-2008 season and will be voted on at the 18th General Meeting in June 2007. An Membership Directory, regularly updated, is on line at *www.iaato.org*. Despite two vessel incidents (MV *Orlova*, MV *Nordkapp*), and the increase in tourists, numbers of vessels and aircraft operations, the Antarctic season operated smoothly. IAATO Members continued to support established practices that have proved to be effective and assures long term protection to the areas visited.

IAATO successfully manages Antarctic tourism through a diverse collection of self regulatory procedures.

IAATO prides itself in the cooperation amongst its Members - all of which are business competitors of one another. As a member organization, IAATO seeks to raise the operational standards of all its Members and the industry as a whole. To do so requires an infrastructure, a forum, in house resources, time and an economic commitment by each company.

IAATO continues to focus its activities in several key areas. The following is a brief synopsis of organizational activities:

1. Update of all seasonal instructions to operators to order to provide for a comprehensive resource of materials and guidelines adopted by both IAATO and numerous ATCM's. These documents are mainly held in the Members Only section of the web site *(www.iaato.org)*. These IAATO-wide operational procedures effectively manage Antarctic tourism;

   Further refinement of the web-based IAATO Ship Scheduler program in order to pre-schedule site visits prior to the season, assure the presence of not more than one ship at one site at one time, take into account the 32 IAATO Site Guidelines and the 12 ATCM adopted Site Guidelines requirements. Further programming enhancement allowed for a much simpler input procedures to allow easier access to Members. The Ship Scheduler is a computerized program which enables all companies to input their preferred day-to-day ship schedules, expedition leader names and departure dates into a single database. A hard copy master schedule is then issued prior to the season. This program was very successful during the 2006-2007 season as a preplanning tool. Small adjustments are currently being made for the 2007-2008 season. Members will input their schedules for the 2007-2008 season in early June, 2008. Scheduler access to the 2006-2007 season was also granted to COMNAP and national programs that interact with IAATO on a regular basis. The final print out of the seasons schedule for all known vessels was circulated to numerous parties at the beginning of the Antarctic season. This enables ease in scheduling, transport of scientists,

and coordination of logistics and contingency planning. The Ship Scheduler allowed for effective exchange of information, ship itineraries, compliance with requirements under adopted Site Guidelines and allowed IAATO members — in their planning — to avoid the possibility of potential cumulative environmental impacts at the various landing sites. The tool has proven to work extremely well. Some non-members were also included in the master schedule where information was provided in a timely fashion.

Members also input the names of their Expedition Leaders. At the onset of the season a comprehensive list of the names and contact information for vessels is issued for improved communication strategies.

2. IAATO's Vessel Database is a comprehensive web-based data program that keeps statistics on all Member-operated vessels and companies who operate them. Each IAATO member is responsible for uploading all detailed vessel and company information. The primary reason for creating this on-line program is for effective management of the IAATO Emergency Contingency Plan and to maintain a database on company and vessel specifications;
3. The computerized IAATO Database for loading Post Visit Reports into a single electronic database works effectively and provides a record of activities coordinated by IAATO since the database began in 2003. Tourism statistics, however, dating back to 1989 can be found on the IAATO website at *www.iaato.org*. Data analysis has shown that ship staff occasionally input minor errors on forms, so each form is closely inspected before they are downloaded. Efforts are being made to have the forms reject incorrect data. The occasional, minor duplication that has occurred in past years has been corrected to avoid future discrepancies. The database has the capability to compile all company, visitor, vessel, and activity information as a means of tracking IAATO Member's activities. IAATO has posted over 48 different data reports on tourism statistics on its website as a matter of interest to the general public. The 2006-2007 data is estimated to be available in July 2007;
4. Minor improvements were made to the Standard Post Visit Report Form that had been formerly updated for the third time and approved at ATCM XXVIII Resolution 6 (2005) *Antarctic Post Visit Report Form* to include additional landing sites. Added enhancements were completed for companies using MAC computers in addition to the original used for standard personal computers. Duplication of a small number of sites required amendments to be made to the forms prior to the start of the 2006-2007 season. Analysis of the forms indicates that mainly only IAATO Members and associated companies use the forms, despite the adoption of ATCM XXVIII Resolution 6 (2005). The updated versions were sent to the Antarctic Treaty Secretariat in October 2006 as well as distributed amongst Parties who issue permits or authorization to tour operators that are outside IAATO. IAATO maintains all the latest versions of the Post Visit Site Reports available on open pages at *www.iaato.org*, under "Operational Procedures."
5. Interviews were conducted during the season with nearly all Member companies operating in the Antarctic Peninsula to assess the effectiveness of both the ATCM endorsed Site Guidelines as well as the IAATO Site Guidelines.
6. IAATO continued to promote its Vessel and Aircraft Coordination by using an all inclusive ship schedule, vessel call data and emergency response list;
7. Continued use was made of the IAATO Member Emergency Medical Evacuation Response (EMER) action plan. Five IAATO medivacs were required during the 2006-2007 season.
8. Updated the operational procedures to continue to support all methods necessary to eliminate the potential spreading of Antarctic diseases and translocation of non-native species;
9. Provided coordination with all Provisional Members in their start-up operations and offered support to companies who have employees new to the business;

10. Implemented a one-off Yacht Package for sale to non-Members of IAATO;
11. Furthered work on the proposed IAATO Accreditation Scheme;
12. Participated in international meetings and liaising with National Antarctic Programs, government agencies of the sub-Antarctic island groups, and scientific and environmental organizations as needed;

1 IAATO Membership and Activities

1.1 Founded by seven private tour operators in 1991, the International Association of Antarctica Tour Operators had 83 Members from 13 countries during the 2006-2007 season from Argentina, Australia, Belgium, Canada, Chile, Falkland Islands/Islas Malvinas, France, Germany, Italy, Netherlands, New Zealand, Norway, Sweden, United Kingdom, and the United States. A Membership Directory can be found on the IAATO web site at *www.iaato.org*. IAATO's fiscal year runs from July 1 to June 30 of the next year, which is also consistent with the Antarctic operating season.

1.2 Member List During the 2006-2007 Operational Year

35 Full Members: Abercrombie and Kent, Inc./Atholl Shipping Corporation; Adventure Associates; Adventure Network International/Antarctic Logistics & Expeditions; Antarctic Shipping; Antarctica XXI; Antarpply Expeditions; Aurora Expeditions; Cheesemans' Ecology Safaris; Clipper Cruise Line/New World Ship Management Company LLC; Compagnie Des Iles Du Ponant; Crystal Cruises, Inc., Elegant Cruises; Fathom Expeditions; G.A.P Adventures; Golden Fleece Expeditions Ltd.; Hapag Lloyd Kreuzfahrten; Heritage Expeditions; Holland America Line; Hurtigruten Group ASA; Lindblad Expeditions; Oceanwide Expeditions; Orion Expedition Cruises, Pelagic Expeditions; Peregrine Shipping; Plantours and Partner GmbH; Polar Cruises/Expeditions Inc., Polar Star Expeditions; Princess Cruises; Quark Expeditions; Rederij Bark Europa; ResidenSea; Saga Shipping Company Ltd; Thika Travel; Travel Dynamics International; and Zegrahm Expeditions Inc.

Full Members include one land-based operator, ship operators, companies that charter ships and/or organize groups to Antarctica and companies that reserve space from other ship operators.

10 Provisional Members: Aerovias DAP-Antarctica; Hansa Kreuzfahrten GmbH; Kotick Charters Ltd.; Latitude Oceané; Le Sourire; Ocean Expeditions; Peter Deilmann Reederei GmbH & Co.; Sea & Ice & Mountain Expeditions; Sterna Corporation; Tooluka Ltd.

Provisional Members include a land/sea-based operator, ship operators, small vessel/yacht operators, a company that charters vessels from existing Members and a land-based operator.

38 Associate Members: Adventure Life Journeys; Amazing Cruises and Travel, Inc.; Antarctic Horizons; Antarctica Tasmania, Inc.; Antarctica Expeditions; Asteria Expeditions; Beluga Expeditions & Adventures BV; C&O Tours S.A.; Croydon Travel; Cruceros Australis; ExpeditionTrips.com; Falkland Islands Tourism Board; Falkland Conservation; The Falkland Islands Company Ltd Shipping Agency; Galapagos Travel; Grand Nord-Grand Large; Helicopters New Zealand Ltd; Journey Latin America; LAN Airlines; Mountain Travel-Sobek; Navalia s.r.l. Port Agents and Ship Suppliers; Patagonia World; PolarQuest; Regent Seven Seas Cruises; Ship to Shore Inc./shopAntarctica.com; Sintec Tur; Students On Ice; Sulivan Shipping Services Limited; TAMIC S.A.; Tauck World Discovery; TravelWild

Expeditions LLC; Tucan Travel Pty Ltd.; Victor Emanuel Nature Tours; United Kingdom Heritage.

Trust; West Point Island; Falkland Islands; WildWings/WildOceans; World Expeditions; and Wouk Logistic and Service S.A.

Associate Members include travel companies, government offices, conservation groups and ship agencies that reserve space on Full and Provisional Member vessels and/or aircraft or offer support services to the tour operators, or are involved in conservation work. IAATO also had one private yacht as an Associate member. The owners found it useful to use IAATO's resources when planning their Antarctic trip, filing Advance Notification and their Initial Environmental Evaluation.

1.3 Membership Categories

During the 2006-2007 season, IAATO Members were grouped in each of the following Membership categories:

Organizers of expedition ships that carry less than 200 passengers or small sailing vessels that carry less than 12 passengers. The limit of 100 passengers ashore at one site at one time applies. (29 Members)

Organizers of vessels carrying 200-500 passengers who are making passenger landings. Stringent restrictions on landing activities of time and place apply. The limit of 100 passengers on shore at one site at one time also applies. (5 Members)

Organizers of cruise ships making no landings (cruise only). Cruise ships carrying more than 500 passengers are not permitted to make any landings. (4 Members)

Organizers of land-based operations. (2 Members)

Organizers of air operations with over-flights only. (2 Members)

Organizers of air/cruise operations. (1 Member)

Companies in support of Antarctic tourism. (40 Members)

*Note: Full, Provisional, and Probational status occurs within categories 1-7.

1.4 Bylaws Changes

There were minimal Bylaws Changes during 2006-2007. IAATO Bylaws and Objectives can be found on line at *www.iaato.org*. The latest update is May 9, 2006.

2 2006-2007 Statistics

2.1 Overview of Tourist Numbers

IAATO attempts to capture all tourist numbers where the information is readily available and verifiable. From October 2006 to March 2007, a total of 28,448 passengers/tourists landed in the Antarctic on at least 48 commercially organized expedition vessels and land-based operator programs, 174 passengers/tourists participated in a fly cruise program and 908 land-based tourists flew, skied, climbed, camped or simply participated in multi-day or overnight trips to Antarctica. Large cruise-only vessels, 4,152 tourists traveled and landed

on 4 non-IAATO large cruise-only vessels, and 1,046 passengers/tourists participated in air over-flights to Antarctica.

For detailed information and overview of the Antarctic tourism industry see the ATCM XXX IP 121 IAATO Overview of Antarctic Tourism 2006-2007 Antarctic Season.

3 Participation in Organized Meetings during 2006-2007 and IAATO 18th General Meeting

3.1 IAATO will hold its 18th General Meeting in Hobart, Tasmania, June 25-29, 2007. Government and National Program representatives and prospective IAATO Members are encouraged to participate in open sessions of IAATO's General Meeting where IAATO Bylaws, operating procedures and policies are developed, as well as where obligations set forth by the Antarctic Treaty system are discussed. The meeting will take place in the CCAMLR building. Information can be found on *www.iaato.org* under Information Papers, 18th General Meeting. Interested parties that would like to attend or participate should contact IAATO at *iaato@iaato.org*.

IAATO appreciates the participation by respective governments and non-governmental organizations. The following governments sent representatives to IAATO's 17th General Meeting (Washington, D.C., April, 2006) and we encourage participation by those interested in tourism issues to join us in Hobart. Attending in 2006 were representatives from the Antarctic Institute of Uruguay, Foreign Ministry of France, Umweltbundesamt (Federal Environmental Agency-Germany), Australian Antarctic Division, United Kingdom Foreign and Commonwealth Office, British Antarctic Survey, United States Office of Polar Programs (National Science Foundation), and Raytheon Polar Services, United States Environmental Protection Agency, United States Department of State.

The agenda for the 18th General Meeting will be finalized after ATCM XXX. Included in the 2006 agenda were discussions on Site Guidelines (station visits and guidelines, web-based ship scheduler, post visit reports, active management strategies, review of 100 passengers ashore policy, station visits and guidelines, vessel database, work of the Hydrographic Committee on Antarctica, emergency contingency planning (EMER), ballast water, communications safety and navigation, communications software and new technology, boot washing stations, Zodiac operations and safety, IPY, Membership updates and issues, accreditation, field staff reviews and reports, information management, land-based tourism, liability annex, operational updates from various Sub Antarctic Islands, Heritage Trusts and government concerns about tourism. Committees active during the year included Executive, Finance, Marine Committee, Accreditation, Bylaws, Site Guidelines, and Membership.

3.2 IAATO had four representatives at the COMNAP meeting in Hobart 2006. IAATO appreciates the opportunity to work cooperatively with COMNAP where mutual interests lie in both Air Operations and Ship Operations. IAATO supports further cooperation between operators to ensure there is little or no disruption to science or station activities.

3.3 IAATO held a 3-day meeting in London, England in July, 2006 for its Executive, Finance, Membership, Bylaws and Accreditation committee members. Excellent progress was made on looking at how to address the needs of a growing industry as well as what mechanisms IAATO needs to further develop its Accreditation process.

3.4 IAATO was very pleased to send a participant to the IHO/HCA Meeting in Punta Arenas, Chile in November 2006. IAATO supports and encourages the work of the HCA. Safety

and navigation are extremely important concerns to vessel operators and the productive work by this group is invaluable for all ship operators.

3.5 In early February, IAATO's committee representatives met in Ushuaia, Argentina for four days. Inspections of various vessels occurred as well as intensive and fruitful discussions carrying on from the London/July meeting.

3.6 For the first time, IAATO worked closely in conjunction with In.Fue.Tur in Argentina to sponsor an IAATO- and Ushuaia-wide meeting to address both the interests of IAATO Members and the needs of the Port and various businesses of Ushuaia and consider the sustainability of Antarctic tourism relative to the needs of the community. It was a very fruitful and interesting meeting and the first of its kind for both IAATO and the community of Ushuaia.

3.7 IAATO attended the Fildes Peninsula Workshop, in Punta Arenas, Chile sponsored by INACH in late March. Numerous interesting presentations highlighted the need for consideration of possible management strategies. It was clear that there are complex challenges due to the diversification of interests and activities. IAATO appreciated having the opportunity to exchange ideas and find that this type of workshop is fruitful and productive.

3.8 Numerous other meetings took place between IAATO Members, IAATO Committees and their representative governments throughout the year. IAATO values a cooperative working relationship with respective governments on tourism issues and encourages such meetings. We can be available to meet with Parties worldwide should there be interest in further discussions.

4 Field Coordination

4.1 IAATO compiles seasonal documents including vessel call data, a comprehensive ship schedule, emergency contact information, expedition leader schedules, and important instructional procedures for responsible operations. In addition there are over 100 files hosted on the IAATO website per season providing Members with appropriate guidelines and standard operating procedures. Many of these documents have evolved from decisions made at ATCM's relevant to tourism but are not found elsewhere.

4.2 IAATO's comprehensive directory of Vessel Call Data and the Master Ship Schedules are shared with COMNAP and other government offices to encourage improved communication and operational coordination. COMNAP's MINIATOM is an extremely useful tool for tour operators trying to contact stations or government vessels. As IAATO vessels transport numerous scientists and support personnel to Antarctica each year, in addition to requesting tourist visits to stations, it is helpful when station contact information is up-to-date for communication, planning and emergency purposes.

4.3 Expedition leaders and ship's officers on Member vessels circulate advance day-to-day itineraries and maintain regular contact throughout the season to coordinate site visits and exchange general information such as ice conditions, weather, landing recommendations, and concern about potential environmental impacts, etc. At 1930 hrs expedition staff monitor agreed-radio frequencies to change itineraries if needed or report on ice conditions, weather or wildlife sensitivities.

4.4 Details on IAATO's Emergency Medical Evacuation Response plan (EMER) have been presented at previous ATCMs. IAATO has always had a plan in place which continues to be effective.

5 Environmental Impact Assessment

5.1 All IAATO members have submitted either Environmental Impact Assessments (EIA's) or operational documents that substitute for EIA's to their national authorities. Not all governments require EIA's or yearly updates. IAATO is aware of non-IAATO operators this year that have either not submitted Environmental Impact Assessments, filed Advance Notification or Post Visit Reports.

5.2 A comparison of the various EIA's and the level of EIA's that individual operators submit to their respective governments reflect some notable inconsistencies amongst documents and requirements. IAATO, however, has bridged gaps in documentation for ship-based Members in particular to assure there are mitigation measures and procedures in place to avoid environmental impacts. We understand the "Competent Authority" workshop in November, 2006 was restricted to Parties however it could be useful — in the future — to engage IAATO in a discussion about the gaps that occur between domestic requirements and what actually takes place in the field.

5.3 As noted in all our previous reports to the ATCM's, IAATO remains very concerned about non-IAATO operator activities. The Association urges Contracting Parties to ensure that obligations of the Environmental Protocol are being met and that Environmental Impact Assessments are being submitted and that detailed mitigation measures are included. IAATO is concerned that once the paperwork process is completed by non-IAATO Members to their respective governments (if at all), there is no supervision of management or follow-up to ensure that non-Members are following the requirements of activities.

5.4 In some non-IAATO operators Environmental Impact Assessments, IAATO's documents are frequently referenced. IAATO encourages Parties to contact IAATO for verification. It is not possible for non-IAATO operators to have the breadth or understanding of the numerous operating strategies IAATO has developed over the years. Parties authorizing or permitting non IAATO operators would most likely need to have comprehensive briefing sessions and follow up with each individual operator to assure compliance with Decisions, Measures, and Resolutions agreed at ATCM's. IAATO provides this service for its Members.

6 Procedures to Prevent the Introduction of Alien Organisms

6.1 For the past nine seasons, IAATO's Boot and Clothing Decontamination Recommended Guidelines and Translocation of Diseases Protocol have proven to be effective. These guidelines unofficially have been operative for at least the last twelve years by Members. Past ATCM papers have included information on these important guidelines. Both the above-mentioned guidelines have been tabled previously as attachments at SATCM XII, ATCM XXIV, ATCM XXV and XXVII in IAATO's Annual Reports. A separate paper on the subject was tabled in Stockholm at ATCM XXVIII as IP 97 and is also included as a separate paper for ATCM XXX in IP 116 *IAATO Information Outreach to Private One-off Non-Member Expeditions.* IAATO is acutely aware of the lack of operational procedures included in non-Member requests for permit or authority to visit Antarctica and have filled the gaps in procedures to at least raise the standards of one-off operators and expeditions.

7 Reporting of Tourism and Non-governmental Activities and Data Base

7.1 As noted previously in this paper, IAATO requires its Members to submit the ATCM's approved Post Visit Report Form on conclusion of their activities.

7.2 IAATO continues to support the use of this single form, which reduces the burden of paperwork and facilitates the study of the scope, frequency and intensity of tourist activities. IAATO would like to encourage Parties to send IAATO a copy of any forms received from non-IAATO operators in order for the data to be incorporated into IAATO's "Overview of Tourism" and the IAATO tourism database. This will provide for greater transparency of all tourist activities and will further the ability to address cumulative impact issues. IAATO's database will be able to access information from these forms and analyze, if necessary, statistics on site use and visitation.

8 Implementation of Recommendation XVIII-1 (Guidance for Those Organising and Conducting Tourism and Non-governmental Activities in the Antarctic and Guidance for Visitors to the Antarctic) and Other Guidelines

Recommendation XVIII-1, "Guidance for Those Organising and Conducting Tourism and Non-governmental Activities in the Antarctic", is provided to all Members in order to inform them of key obligations and procedures to be followed.

IAATO urges Parties to consider formally adopting Recommendation XVIII-1 for both Visitors and Tour Organizers.

8.1 IAATO is very concerned about tourists travelling on non-IAATO Member operated vessels visiting the Antarctic who may not be aware of the Environmental Protocol and its obligations. As tourism increases, especially in the Antarctic Peninsula region, every visitor and operator will need to be responsible for even greater care of the landing sites and the marine environment.

8.2 IAATO's standard operating procedures for implementing Recommendation XVIII-1 include the following:

- Mandatory briefings on each tour ship prior to arrival in the Antarctic. This presentation consists of the IAATO slide or PowerPoint presentation. This presentation can be viewed on line at *www.iaato.org* under "Guidance for Visitors" on the home page. Most expedition leaders will, however, enhance the presentation with additional slides and commentary.
- Passengers, ships' command, crew and expedition staff receives paper copies of Recommendation XVIII-1 "Guidance for Visitors to the Antarctic." Some companies distribute this document in pre-season materials in advance of departure, some on board the ship. In addition to receiving copies of the Recommendation, all passengers and ship's personnel are required to attend the briefing.
- Guidelines are available on the open pages on the IAATO website in English, Chinese (Mandarin), Dutch, French, German, Italian, Japanese, Russian and Spanish.
- Guidelines are currently being redesigned in a more attractive modern style. See ATCM XXX IP 116 *IAATO Information Outreach to Private One-off Non Member Expeditions*. Eventually, translations will be updated in all the above-mentioned languages and, where possible, posters and information leaflets will be available in a variety of languages.

8.3 In addition, IAATO Members continue to use IAATO and/or company adopted guidelines which include: marine wildlife watching, site specific information, assessment checklist for visiting 'new' sites, kayak, mountain climbing, camping, scuba, helicopter, Zodiac, Remote Operated Vehicle (ROV), and boot and clothing decontamination and disease protocols.

8.4 IAATO has reviewed and updated the Marine Wildlife Watching Guidelines, receiving endorsement of the guidelines from the UK Sea Mammal Research Unit and have redesigned the overall Guideline on one booklet form and also separated it out into two parts for future poster use. All will be included in the IAATO website.

9 Emergency Response Action and Contingency Planning

9.1 At IAATO's 17th General Meeting (Washington, D.C., 2006) the IAATO Emergency Contingency Plan was reviewed. No changes were made as the plan still proved to be effective for the 2006-2007 season.

9.2 The IAATO EMER plan has been in place for at least the past ten seasons in order to reduce the need to impact scientific stations in the Antarctic Peninsula with tourism-related medical problems. A standard medical information checklist is available for Members and new Members in order to ensure adequate medical supplies are available on board vessels.

9.3 In the case of the MV *Nordkapp* and MV *Orlova* incidents this season, the Contingency Planning process worked according to plan. Like all incidents, lessons have been learned and discussions will take place in Hobart to improve communication. As several papers have been written on these incidents IAATO has chosen not to submit a further paper in order to avoid redundancy. However, as an organization we have suggested improvements to the papers based on factual information received from the vessels.

10 Scientific and Information Support

Members continue to provide logistic and scientific support to National Antarctic Programs and to the sub-Antarctic Islands facilities providing a cost-effective resource for the scientific community. During the 2006-2007 season, scientists, support personnel and gear from various National Antarctic and sub-Antarctic Programs were provided transport to and from stations, field sites and gateway ports. A partial list of scientific support is included as Appendix B. Further descriptions are noted below.

Specific requests for logistic or other support should be made to Members or the IAATO Secretariat. For a complete Membership directory, please refer to the IAATO web site at *www.iaato.org*.

11 Conservation Research, Academic and Scientific Support

Members and their passengers continued the tradition of direct financial contributions to many organizations active in Antarctica. Appendix A provides a partial list of donations received thus far. The total sum reported to date is USD $180,361.70, €11850 and £7690 GBP, however at the time of this submission we are currently still receiving updates.

IAATO members again provided scientific logistics and support for various Universities, Research Institutions and National Programmes. A partial list is given in Appendix B.

12 Observers On Board Member Vessels

IAATO requires Provisional and Probational Members to carry an observer before they are eligible to apply for Full Membership. During the 2006-2007 season IAATO appointed two observers to sail on Provisional Member-operated vessels. There were no Probational Members during the past season. IAATO considers using a qualified National Program observer from the country in which the company is registered. When not available, IAATO will appoint an appropriate person with broad experience in Antarctic and/or related matters. IAATO updated the "Checklist for Observers" form (version October 2006) for use this season. In addition, ATCM XIX Resolution 5 (1995), Antarctic Treaty Inspection Checklists, is also provided to the appointed observer. IAATO-operated vessels have been carrying observers since 1991. IAATO believes that checklists provide consistency with regard to reporting procedures and that the checklists are also important in that the operator knows what is being inspected.

13 Discoveries and Adventure

During the 2006-07 season there were no new noticeable changes in islands or landmasses exposed in areas that IAATO Member vessels cruise.

14 With Thanks — Cooperation with National Programs

The following provided assistance and operational guidelines to IAATO during the 2006-2007 season for which Members are grateful:

- To all Stations in the Antarctic and Sub Antarctic who welcomed tourists and broadened their views on the value of science and provided a friendly, educational and rewarding experiences for tourists.
- United Kingdom: United Kingdom Foreign and Commonwealth Office, British Antarctic Survey, U.K. Antarctic Heritage Trust, Port Lockroy staff, sub-Antarctic Islands' personnel and others for making visits an extremely educational and enjoyable experience and for providing Members with comprehensive guidelines for visits to BAS stations and their process for arranging visit applications.
- Chile and Russia: For the use of the runway at Marsh/Frei for medical emergencies in conjunction with Member Aerovias DAP and to Bellingshausen Station for accommodation, dating last minute requests during medivacs and for receipt of a medical diagnosis for a Russian crew member. There were 5 IAATO medevacs this season.
- United States: Palmer, McMurdo and South Pole Station personnel for hosting organized visits throughout the season and providing operational guidelines to operators in advance of the season, as well as for assistance with a medevac from McMurdo.
- New Zealand: For assistance involving a medevac from Enderby Island, sub-Antarctic.

- United Kingdom and Chile for the assistance of the HMS *Endurance* for assisting on the *Nordkapp* incident.
- Spain for the assistance by the vessel *Las Palmas* with the M/V *Orlova* at Whalers Bay.

Appendices

A. Partial list of Donations for 2006-07

B. Partial List of Science Support and Transport by IAATO Vessels in 2006-07

Appendix A

2006-2007 Partial List of Donations

The following chart is a partial list of donations that were given by Members or raised by expedition staff and passengers on board vessels during the season. It is known that passengers make individual contributions to various organizations independent of organized campaigns. Various companies have reported funds raised but are in the process of allocating monies or prefer not to be listed here. Due to the early ATCM, we are still receiving updates on funds raised and transport.

IAATO Member	Birdlife International-Albatross	Save the Albatross-Australia	Antarctic Heritage Trust and Donation to Ross Sea Huts	Other
Abercrombie & Kent/Atholl Shipping		$11,056 USD		$4,305 USD Allied Whale at College of the Atlantic
Elegant Cruises		$13,431 USD		
Hapag Lloyd Kreuzfahrten		€ 6,500	€2,400	€600 for Heinz Sielmann Stiftung, €2,350 Antarctic Research Trust
Lindblad Expeditions				$114 USD was raised on board for Oceanites
G.A.P Adventures		$54,478 USD (via G.A.P.s own Planeterra Foundation		
Heritage Expeditions				To be advised
Hurtigruten ASA		*see note		A total $50,751.65 USD was raised to be divided between Save the Albatross, South Georgia Heritage Trust, and Orca Project.
Cheesemans' Ecology Safaris		*see note		*$2439 USD split between Birds Australia and the American Bird Conservancy. 42 of 75 passengers participated in a carbon offset offer where they split the cost of carbon offsets with the Cheesemans' Ecology Safaris via carbondfund.org for their full carbon footprint. This cost of $25 per person for passengers matched with $25 per person from Cheesemans' for a total of $2100 USD for donations.
Peregrine Shipping				To be advised.
Quark Expeditions		$23,378.50 USD	$13,360 USD	$1087.50 USD Birdlife South Africa, $1,935 USD Sea Bird Conservancy
Polar Star Expeditions		$2,040 USD		
Rederij Bark Europa				Heavily promoted "Save the Albatross, funds sent directly by passengers to instead of gathered on ship.
Saga Shipping Company				£7,696 UK Antarctic Heritage Trust. World Cruise Charities - all monies raised from onboard charity events during the world cruise are to be donated to Joyland, Kenya and the World Hope Creche. Total funds to be determined.

The amounts do not include all vessels or private donations that tourists have made once at home. Many ships provide their passengers with a list of organizations of whom to donate to. In addition other organizations benefit indirectly from passengers donations. The information included above is based on what was provided to the IAATO Secretariat.

Total Amount Raised as Reported to Date: $180,361.70 USD, 11850€ and £7690 GB.

Appendix B

Partial list of Science Support and Transport by IAATO Operators in 2006-2007

The following is a partial list of support. As always there is in kind support that is unreported but is an important part of cooperation between the tourist industry and the National Programs and Sub Antarctic Islands facilities.

Member	Program or Personnel Assisted
Abercrombie & Kent/Atholl Shipping Corp.	Provided in kind service to 10 persons for U.S. television 60 Minutes/CBS News for transport to and from Antarctica for a news brief on global warming. 11 Polish research personnel "out" from Arctowski Base, King George Island. Two persons were transported "out" from the U.S. Field camp, Copacabana, Admiralty Bay, King George Island. Three persons transport from Ushuaia to Stanley. Hosted the U.S. Inspection team and transported them from Whalers Bay to Pendulum Cove, Deception Island.
Adventure Network International/Antarctic Logistics and Expeditions	See Below.
G.A.P. Adventures	Transported staff on behalf of the USA and Canadian coastalwildlife.com project and the U.K. Antarctic Heritage Trust/Austria
Hapag Lloyd Kreuzfahrten	Transported six persons from British Antarctic Survey, University of Jena and U.K. Antarctic Heritage Trust.
Heritage Expeditions	To be advised.
Lindblad Expeditions	Oceanites scientists are funded, assisted, and transported on all departures in the Antarctic. Ten persons in total were moved during the season. Hosted the U.S. Inspection Team.
Hurtigruten ASA	38 (Polish, U.K, Canadian) scientists and representatives were transported to or from Antarctica.
Peregrine Shipping	Transported three individuals from Canadian-based Coastalwildlife.com project (permitted by Canada and the USA apparently) including fuel, Zodiac, diving compressors to Vernadskiy on behalf of Australian yacht *Spirit of Sydney*. Transported two persons from Stanley to South Georgia.
Polar Star Expeditions	Transported three scientists for Oceanites from Antarctica.
Quark Expeditions	Eight scientists/personnel were transported. Transported the team and supplies to/from Port Lockroy on behalf of the United Kingdom Heritage Trust. Hosted the US Inspection Team. Transported various Oceanites staff, U.K. sculptor planning on building a memorial to BAS staff who have lost their lives in Antarctica. Assisted non-IAATO Australian Operator Spirit of Sydney which ran aground off Gonzales Videla and needed removal assistance.
Residensea	Two scientists were transported from South Georgia to Ushuaia

Detail Of Antarctic Logistics And Expeditions Support For Governments And Other Scientific Activity

Organization	Date from	Date to	No. Aircraft	No. Personnel	Notes
BAS	8-Jan-07	9-Jan-07	1	2	Fuel and accommodation
BAS	9-Jan-07	9-Jan-07	1	2	Fuel and food
KORDI				6	Meteorite survey of Pirrit and Martin Hills, and Molton Escarpment
FACH (Chile Air force)	20-Nov-06	20-Nov-06		2	Visit to Parodi Base
Ejercito de Chile (Chilean Army)	16-Dec-06	18-Dec-06		4	Repair Army vehicles
Russian Federation	3-Jan-07	7-Jan-07	2	9	Russian Mi-8 for IPY
Russian Federation	6-Jan-07	7-Jan-07	1	25	Chilingarov and South Pole
Total			**5**	**50**	

Report of the Antarctic and Southern Ocean Coalition (ASOC)

I. Introduction

ASOC extends its formal thanks to the Government and people of the Republic of India for hosting this ATCM and looks forward to a fruitful meeting, with substantive results across a range of subjects that are important for Antarctica and the earth. We discuss some of these below.

Although the scope of environmental protection under the Protocol and its Annexes is gradually being extended, the Antarctic region faces a range of environmental challenges. This includes the cumulative effects of many recent and new infrastructure projects, some associated with the International Polar Year 2007-08, as well as ongoing and emerging commercial activities both on land and at sea. In addition, the Antarctic is experiencing the effects of climate change. These pressing issues require action by Antarctic Treaty states.

II. ASOC Worldwide

ASOC maintains a Secretariat in Washington DC, USA, and a global website (*http://www.asoc.org*), which contains ASOC papers produced for meetings in recent years and a list of staff, representatives and member groups. There are ASOC member groups located in most Antarctic Treaty Consultative Party (ATCP) states.

ASOC campaigns are coordinated by a team of specialised representatives located in: Argentina, Australia, Brazil, Chile, France, Japan, The Netherlands, New Zealand, Norway, Poland, South Korea, South Africa, Spain, Russia, Ukraine, and USA.

III. Information Papers for XXX ATCM

In addition to this report, ASOC is tabling nine Information Papers, which reflect key priorities for Antarctic environmental protection:

- IP 79: The Case Against Tourism Landings From Ships Carrying More Than 500 Passengers
- IP 80: Taking Action on Marine Noise in the Southern Ocean
- IP 81: Amendment or Modification of Annex II
- IP 82 rev 1: The Antarctic and Climate Change
- IP 83: A Commentary on Policy Issues Arising from On-Site Review of Guidelines for Visitor Sites in the Antarctic Peninsula
- IP 84: Strengthening the CEE Process
- IP 85: Tourism and the Duty for ATCP Action
- IP 86: The Human Footprint of the IPY 2007-2008 in Antarctica
- IP 87: Marine Protected Areas - Steps Forward for the ATCM
- IP 136: Implementing the Madrid Protocol: A case study of Fildes Peninsula, King George Island

Some of the main recommendations of these Information Papers are discussed below.

IV. Key Issues for XXX ATCM

A. Towards a Greener International Polar Year

The International Polar Year (IPY) 2007-8 is an ambitious international scientific initiative. It provides a unique opportunity to promote international collaboration and sharing of logistics. However, in view of the ensemble of the 350 research activities that have been endorsed, the IPY is likely to lead to an increase in infrastructure and human activity in Antarctica, an increased pressure on Antarctica's wilderness values, and an increased level of interest in Antarctica. This latter can indirectly generate more activities other than scientific research, adding to the current trend of rapid growth and diversification of Antarctic tourism.

To this end, ASOC has initiated a project to evaluate the cumulative environmental impacts of the IPY and to increase the awareness of those working or visiting Antarctica. IPY activity number 454 "Enhancing the environmental legacy of the IPY in Antarctica" is one of 459 projects that have received endorsement from the IPY Joint Committee.

As part of this project, IP 86 highlights how research activities are likely to intensify as well as spread out in Antarctica during the IPY. It demonstrates that the IPY is only part of the current trend of the expansion of the human footprint in Antarctica and draws attention to the need for long-term, large-scale, strategic-level planning of all Antarctic activities.

B. Implementing the Protocol on Environmental Protection to the Antarctic Treaty

Since 1999 ASOC has been promoting the legal and practical implementation of the Protocol on Environmental Protection to the Antarctic Treaty. To this end it has conducted a broad range of activities in most Antarctic Treaty capitals and Antarctica itself.

Since XXIX ATCM in June 2006 ASOC has been monitoring various aspects of the implementation of the Madrid Protocol and participated actively in intersessional work.

ASOC attended part of the International Workshop of Antarctic Competent Authorities organised at the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety in Berlin, 27-28 November 2006. In this regard, an informal network of competent authorities may have a role to play to make implementation standards compatible across Antarctic Treaty states. This role would be distinct from that of formal ATS entities dealing with environmental, scientific and operational matters.

The current status of the implementation of the Madrid Protocol is characterized by widely differing environmental standards in different Antarctic states. Since Parties have been working on the implementation of the Madrid Protocol since 1991, it is about time these differences were narrowed.

Nevertheless, ASOC is encouraged by the progress made on the five-year plan for the CEP, and by the growing experience among Antarctic Treaty states on the application of the ASMA instrument, both of which encourage broader perspectives in analysing and addressing environmental issues.

Annex I

IP 84 examines the case history of Comprehensive Environmental Evaluation (CEE) and argues that significant limitations are evident, not least that no CEE has ever resulted in a decision not to proceed with the proposed activity despite this possibility being mandated in the CEE process. It argues that the CEE process requires strengthening, and that this should be done during the Annex I review by ensuring earlier notice of intention to conduct a CEE, earlier engagement of the CEP, broadening the activity classes to which CEE ordinarily attaches, strengthening the CEP's advisory function, and adding Strategic Environmental Assessment (SEA) to Annex I obligations.

Annex II

IP 81 examines the various components of Annex II's revision: the protracted, unsatisfactory and unresolved process of review of the Annex, the decision to remove fur seals from the Appendix A list of Specially Protected Species, and the case for adding southern giant petrels and macaroni penguins to that list. The paper argues that it is sensible to view these elements as part of a package to be resolved at XXX ATCM so that the requisite legal and administrative changes in national jurisdictions may proceed expeditiously and rationally.

Annex IV

ASOC is concerned at the number of incidents of maritime misadventure involving Antarctic shipping, in Antarctic and nearby waters, since the last ATCM. These incidents include: the sinking of the Chilean tourism vessel *DAP Mares* off Punta Arenas, Chile, in September 2006; the grounding of the Norwegian cruise vessel *Nordkapp* at Deception Island in February 2007; the fire on board the Japanese whaling factory vessel *Nisshin Maru* in the northern Ross Sea in February 2007, which tragically resulted in the death of a crew member; and the fire on board the Argentine ice breaker ARA *Almirante Irízar* 140 nautical miles off Puerto Madryn, Argentina in April 2007. Aside from concerns about human life and the ongoing operation of National Antarctic Programs, these incidents illuminate the potential environmental risks of operating in the Antarctic.

Annex V

IP136 presents a case study on the implementation of the Madrid Protocol at Fildes Peninsula, King George Island. The area has been severely impacted by human activities since 1975. To date, the implementation of the Protocol has resulted in progress on a range of environmental issues on matters that are within the direct control of individual states, such as solid waste management. However, progress is still needed on matters such as infrastructure expansion, tourism, and overall cumulative impacts. This suggests that there is a role to play for greater international environmental management of the Fildes Peninsula - for instance, through an ASMA. This action would be a natural consequence of the Parties' commitment to the principles and objectives of the Protocol, and growing experience in its implementation at both the national and international levels. ASOC contends that Antarctic areas with a high concentration of facilities should be internationally managed as a matter of routine, using the area protection and management tools available under the Protocol such as ASPAs and ASMAs.

IP 87 explains the various considerations involved in selecting sites for Marine Protected Areas (MPA) and the values and characteristics to be protected within these sites. Specific attention is given to consideration required in enfolding marine areas into the existing frameworks for ASMAs and ASPAs. ASOC applauds the Antarctic Treaty Parties for its consideration of the Marine Protected Area issue to date and its commitment to elaborating the systematic environmental-geographic framework mandated by Annex V to the Environmental Protocol. IP 87 encourages using the opportunity of IPY to create a positive legacy from this event, to strategically plan for ASMAs and ASPAs to ensure ecological coherence, to fully integrate MPAs into the AMSA and ASPA system, and to continue to strengthen cooperation with CCAMLR on this matter.

Annex VI

XXIX ATCM revealed that only Sweden has completed the domestic legal steps to enable it to implement Annex VI on Liability Arising from Environmental Emergencies. A year on, ASOC understands that no other Party has yet reached a similar position, that many appear to be years away from completing domestic implementation, and that some Parties still not even having initiated the implementation process. Sadly, the past operating season has seen several incidents of maritime

misadventure within the Antarctic Treaty Area, or outside it soon after return. Parties can therefore not be under any illusion about the reality of environmental emergencies of the sort to which this Annex is directed.

It should be a matter of urgency for Consultative Parties to bring Annex VI into force. This requires that the matter is given much higher priority within national jurisdictions than has been evident so far. It would be a significant indictment of the Antarctic Treaty system if, after a decade long negotiation of the Annex, an environmental emergency arose in the Antarctic Treaty area to which no liability attached because Parties had given no urgency to bringing Annex VI into force. This should be the subject of a Resolution of the ATCM stating an objective for bringing the Annex into force by 2009.

C. Addressing Acoustic Impacts

This subject continues to receive strong scientific interest around the world, and more information is coming forward every year. ASOC is pleased that SCAR and COMNAP are actively engaged in work related to acoustic impacts. IP 80 provides an overview of the latest scientific and legal developments around the world, and makes a number of recommendations to the CEP and the ATCM.

In our view, the ATCM should (1) take steps to require assessment of potentially significant marine acoustic impacts in any IEE and CEE relating to marine activities; (2) agree on appropriate seismic guidelines to mitigate harm for all vessels in the Antarctic that are conducting active seismic research; (3) require that reports on utilization of such measures and guidelines are reported to the CEP each year; and (4) establish a small working group of people with relevant expertise on acoustic impacts from various countries and disciplines to share information, advance sound impact research, and develop appropriate tools for mitigating harm from intense sound emissions in the Antarctic.

D. Regulating Commercial Tourism

ASOC began to monitor commercial tourism in Antarctica in the early 1990s, and has been actively promoting the regulation of Antarctic tourism by Antarctic Treaty states since 2000. To this end ASOC has run an international campaign that cozmbines a broad range of activities, including attendance at international/expert meetings, participation in ASMA processes, targeted intersessional work, and publications in the academic press.

For XXX ATCM, ASOC has submitted three information papers that cover key generic and specific aspects of Antarctic tourism. IPs 79 and 83 follow up on discussions at XXIX ATCM and CEP IX regarding the proposal to prevent ships carrying more than 500 passengers from landing in Antarctica, and site-specific guidelines.

IP 79 briefly reviews some of the key arguments for prohibiting landings from ships carrying more than 500 passengers. The trend is now towards larger, general-purpose cruise ships that are not ice-class, and this is in turn changing the type of tourism activities away from its traditional focus on the Antarctic natural and cultural heritage. Barring a prohibition on the use of very large vessels, the Antarctic tourism fleet will continue to increase in average size, further driving the growth of the industry. Overall, there seems to be a broader argument to limit the overall scale of Antarctic activities to a relatively modest size, on account of safety, logistic and environmental considerations as well as compelling Antarctic purpose.

IP 83 comments on XXIX ATCM/WP02, which outlined policy issues resulting from the adoption of site specific guidelines. Overall, ASOC contends that Parties should consider how Antarctic tourism as a whole could and should develop, and how it should be most effectively managed before investing too much effort in the development of Site Guidelines. A strategic debate on tourism is necessary, and that debate should be driven by the demands to protect the core values of the

Protocol rather than by the *de facto* turn of events on the ground. Site Guidelines have a role to play in the local management of Antarctic tourism, but they cannot (and should not, in ASOC´s view) be the main mechanism for tourism management in the Antarctic.

Beyond specific aspects of tourism management, ASOC has broader concerns about regulation of commercial tourism in Antarctica. IP 85 argues that ATCPs have a duty to act to ensure appropriate regulation of Antarctic tourism, and identifies three key areas for action: ending the use of very large cruise liners in the AT Area, preventing the establishment of tourism infrastructure ashore, and constraining its absolute scale. It urges the adoption of a Resolution at XXX ATCM stating that Parties do not see unending growth of tourism as desirable or necessary, and the initiation of discussions so that XXXI ATCM may adopt Measures prohibiting very large vessels and establishment of tourism infrastructure ashore.

ASOC is encouraged by the progress in the quality of debate at ATCMs regarding commercial tourism, while noting that there has still not been a strategic discussion of tourism developments, and that no overall tourism policy has yet been put in place by Antarctic Treaty States. ASOC contends that the modalities in which commercial tourism takes place should be adapted to, rather than drive, strategic decisions on the management of Antarctic tourism.

E. Monitoring Biological Prospecting

ASOC urges Parties to positively respond to recommendation 2 of Resolution 7 (2005) and annually provide information on the nature and extent of their biological prospecting activities in the Antarctic Treaty area. This will provide the necessary case history to allow informed discussion about whether, and if so what, particular regulatory arrangements are most desirable to regulate this commercial activity. Unless the ATCM engages with biological prospecting, substantive policy debate on this important Antarctic issue will largely occur outside the Antarctic Treaty system.

V. Other Important Antarctic Issues

A. Managing Krill Fisheries

ASOC is collaborating closely with The Pew Charitable Trusts (PCT-USA) in managing the Antarctic Krill Conservation Project (*www.krillcount.org*), which was initiated in April 2006 and introduced to the 2006 ATCM in ASOC Information Paper 108. The core goal is for CCAMLR to adopt, by 2009:

> *a highly precautionary, effective and integrated ecosystem-based package for Antarctic krill management which ensures that functional relationships in the Antarctic ecosystem are maintained and that krill abundance and availability for predators are not compromised, taking full account of climate change and other relevant environmental factors.*

While the primary body responsible for managing the Antarctic krill fishery is CCAMLR, there also are opportunities and responsibilities at the broader Antarctic Treaty system in relation to krill fishery management. In this context, ASOC urges the ATCM and CEP to take note of the combination of forces that are degrading Antarctic marine ecosystems, and to find appropriate ways to articulate its concerns in this respect. As one example, it would be appropriate for the CEP, whose recent ICG on its 5-year plan agreed that "marine protection" is one of the issues on which it will focus, to consider steps it can take both on its own and in concert with CCAMLR to protect the base of the Southern Ocean food chain.

In addition to issue-specific initiatives, ASOC urges this and future ATCMs to consider appropriate actions to address their collective concerns about the emerging threats facing Antarctica and the Southern Ocean, and the need to utilize the precautionary principle and a broad range of other tools at their disposal to address concerns regarding krill conservation, *inter alia*. This would be particularly appropriate as part of the IPY, contributing to improved understanding and actions needed with respect to the global environmental threats posed by climate change, the benefits of krill's daily transport and sequestration of carbon into the deep sea, and the overall health of the base of the Southern Ocean food chain.

B. Addressing Climate Change

IP 82 rev 1 provides an overview of recent research in the Antarctic about various aspects of climate change in order to inform ATCM delegates, the public and decision-makers around the world about the importance of these research findings, and makes a number of recommendations to the ATCM.

In ASOC's view, no Antarctic Treaty member state can afford to ignore the realities revealed by the climate-related research being carried on in Antarctica. All Parties should, as a matter of urgency, use this information to take tangible steps both domestically and through international treaties to address the threats posed by the rapidly growing levels of CO_2 and other greenhouse gases globally. It is especially appropriate for Antarctic Treaty member states to make use of the unique information resulting from their own scientific programs in the region to take actions at national and global levels that will help avoid dangerous climate change.

ASOC urges this ATCM to take immediate steps to develop a plan for human activity in Antarctica ultimately to be carbon neutral. Such steps could include (1) setting significant targets to reduce use of fossil fuels; (2) more actively exploring solar and wind alternatives; (3) setting up an emissions inventory of all greenhouse gas sources in the region – including vessels and aircraft (both commercial and governmental); (4) establishing a program to offset irreducible emissions from stations, vessels and aircraft of all types and provenance coming to and utilizing the Antarctic; and (5) urging CCAMLR to ensure that exploitation of krill and other living marine resources of the Southern Ocean does not adversely impact the capacity of the region to serve as a carbon sink. In addition, the Parties could issue a call, based upon their duty of care for the Antarctic and their knowledge of Antarctic science and environment, to those working in other international fora to act with urgency in seeking reductions in greenhouse gas emissions to a "safe" level.

Climate change should be a dedicated Agenda Item at ATCMs, and the ATCM should direct the CEP to focus more attention on the implications for the Antarctic environment and to provide advice to it on appropriate responses. Looking ahead, the Parties should consider capping and reducing fossil-fuel derived energy use in the Antarctic Treaty Area.

VI. Concluding Remarks

The Antarctic is facing extreme pressures from global climate change. Without effort by all ATCPs at both national and global levels, the wilderness, scientific and biodiversity values of the region are likely to deteriorate rapidly. At the same time, the seemingly ever-increasing human footprint from the unplanned and uncoordinated growth of human activities in the Antarctic needs strategic analysis and action at regional and local levels.

New Delhi presents an opportunity to demonstrate to the world community that the ATCPs and other Treaty participants will take steps to deepen our common efforts to leave the Antarctic as a place of wonder and immense value for future generations of humans and wildlife.

Report Submitted to the XXX ATCM by IUCN

The World Conservation Union

IUCN extends its formal thanks to the Government of India for hosting this Antarctic Treaty Consultative Meeting (ATCM).

Created in 1948, the World Conservation Union (IUCN) brings together 83 States, 110 government agencies, 800 plus NGOs, and some 10,000 scientists and experts from 181 countries in a unique worldwide partnership. The Union's mission is to "influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable". The Union is the world's largest environmental knowledge network and has helped over 75 countries to prepare and implement national conservation and biodiversity strategies. The Union is a multicultural, multilingual organization with 1,000 staff located in 62 countries. Its headquarters are in Gland, Switzerland.

IUCN has a long standing interest in Antarctic Conservation and welcomes the opportunity to assist Parties in their deliberations at the 30th ATCM. In this submission, IUCN has focussed on a few areas of importance with respect to the conservation of the Antarctic environment.

(1) Tourism

The number of visits by tourists has grown substantially in recent years, with the number of tourist landings almost tripling since the beginning of the decade. For this reason, IUCN shares the view that it is timely now to review the impacts of tourism. Whereas the impacts of small numbers of tourists may have been minor or transitory, it is time to consider whether growing numbers of tourists may have impacts that are more than minor or transitory at certain sites or through certain activities, and if so, how such impacts should be avoided or minimised and monitored.

By its very nature, the construction of any building or permanent infrastructure in Antarctica would by definition likely have an impact that is more than minor or transitory and thus would require a Comprehensive Environmental Evaluation. While such impacts may be justified to advance peace or science — the core values supported by the Antarctic Treaty – such would not necessarily be the case in support of tourism activities. Parties may wish to consider measures to ensure that the impacts of tourism on Antarctica remain less than minor or transitory.

It has been noted that as the size of vessels increases, so does the impact, both potential and actual, on scientific programmes in the areas through which the vessels travel, and on the environment. IUCN believes that it is time now to examine these impacts and to develop regulations to manage them. Various proposals have been made, from banning large vessels to requiring pairing of vessels by size. IUCN is of the view that it is time now to review the Code of Arctic Shipping and to draw from it elements that also apply to the Antarctic to further develop a Code of Antarctic Shipping that would be approved through the International Maritime Organization. Though the existing Code for the Arctic is voluntary, Parties could adopt through a Measure a Code for the Antarctic. It would be important to give careful consideration to ice classification requirements and the need to require suitably ice-strengthened hulls for passenger vessels travelling in the Antarctic Treaty Area. As large ships are inter alia less manoeuvrable than smaller ships, consideration should be given to requiring standards based on size and concomitant risk of damage to the hull of the vessel. However,

smaller vessels may pose a greater threat of introduction of non-native species through biofouling due to less stringent hull maintenance regimes.

Each Party should ensure that it notifies "all expeditions to and within Antarctica, on the part of its ships or nationals, and all expeditions to Antarctica organized in or proceeding from its territory" as required under Article VII(5)(a) of the Antarctic Treaty. Following on that obligation, Parties should ensure that all vessels so subject to notification are fully able to conform with Protocol obligations. For example, the discharge into the sea of noxious liquid substances that are harmful to the marine environment is prohibited. Vessels should have to show that they have the storage capacity, and will use it, to ensure that such substances, which may include by example liquids to develop photographs, are not discharged into Antarctic Treaty Area waters. With respect to the discharge of sewage, Parties should ensure that vessels certified to carry more than 10 persons are capable of holding all sewage such that no discharges occur within 12 nautical miles of any land or ice shelves and that beyond such distances, sewage is discharged at a moderate rate and only when the ship is en route at a speed of 4 knots or more. Parties should examine logs and records of each vessel flagged to them to determine that such measures were taken. Parties should ensure that organizers chartering vessels are able to meet these obligations and include such information in environmental impact assessment documents that they submit to their appropriate home authorities. If vessels do not have the capacity to comply with these obligations, both tour operators and flag states should ensure that such vessels do not travel to Antarctica.

Any review of the impact of shipping, and especially of large vessels, would necessarily reflect the obligations of Parties under Annex IV of the Protocol on Environmental Protection to the Antarctic Treaty. Parties should undertake a review of the requirements incorporated in Annex IV in order to ensure themselves that they are sufficient to protect the Antarctica, including its dependent and associated ecosystems. The review should inter alia examine whether the impacts of discharge of sewage, garbage and other substances is harmful even beyond 12 nautical miles from land or ice shelves and whether vessels travelling to Antarctica should discharge into the sea any food wastes whatsoever within the Antarctic Treaty Area.

As a conservation organization, IUCN has focussed its comments on conservation aspects of tourism. Nevertheless, IUCN is mindful that expeditions, and in particular those on large vessels that carry many passengers and crew, in the event of an accident may require support for search and rescue operations. Such operations would likely have an effect, perhaps severe, on national programmes in the affected region, thus hindering programmes from carrying out their activities in support of peace and science, the values that were to be protected by the Antarctic Treaty. As such, Parties may consider steps to restrict the activities of large vessels in Antarctica in order also to protect human life, to safeguard the unique environment of Antarctica and to promote the values of the Antarctic Treaty system.

(2) Antarctic and Southern Ocean Marine Protected Areas

IUCN welcomes steps taken at recent meetings under the Antarctic Treaty system with respect to protected areas in general and Marine Protected Areas in particular. This important work promotes an obligation under Article 3(2)(b) of the Protocol that Parties seek to identify and to include in a series of Antarctic Specially Protected Areas within a systematic environmental-geographical framework, representative examples of major terrestrial and marine ecosystems. For this reason, IUCN welcomes the Bioregionalisation Workshop to be hosted by Belgian authorities and looks forward to consideration of the results of this meeting. This Workshop will be of a technical nature to gather and share data with respect to bioregions and as the next immediate step towards the

establishment of a system of MPAs for the protection of the Antarctic marine environment. IUCN will welcome work, following the conclusion of this Workshop, on identification and selection of Marine Protected Areas to ensure protection of major examples of marine ecosystems. This would promote representative areas and areas reserved for scientific study and the latter would also allow for comparison between undisturbed sites and sites subject to human activities. There would then follow the development of Management Plans for these Areas that would be provided to both the Commission for the Conservation of Marine Living Resources (CCAMLR) and the ATCM for review and adoption. IUCN urges close and continued cooperation between ATCM-related and CCAMLR-related authorities so that this work may proceed as quickly as possible.

(3) Bioprospecting

The issue of bioprospecting rightly remains on the agenda of the ATCM. As with any other activity, bioprospecting is subject to the obligations that Parties have accepted under the Treaty and related instruments, including the Protocol on Environmental Protection. Thus, advance notification is required, as provided for under Article VII of the Treaty. Flowing from this, an environmental impact assessment procedure must be undertaken, in accordance with Article 8 of the Protocol and Annex I. In accordance with Article III of the Treaty scientific observations and results from Antarctica should be exchanged and made freely available to the greatest extent feasible and practicable. In our view, a desire for commercialization does not overcome this obligation to make the observations and results freely available as it does not affect feasibility or practicability. Furthermore, as bioprospecting involves the collection of living samples, this should be done consistent with obligations under Annex II of the Protocol to Conserve Antarctic Fauna and Flora, as appropriate. In keeping with the spirit of the Antarctic Treaty and related instruments, Parties should adopt a Measure to ensure the protection of all native biota, including microbes, such that any collection would not be in such quantities to affect significantly their local distribution or abundance. Finally, Parties may wish to consider ways to ensure fair rules for a sharing of benefits resulting from the commercialization of products derived from Antarctic biota.

(4) Introduction of Non-native Species, Parasites and Diseases

The International Polar Year project planned on non-native species will increase knowledge on pathways and potential species introductions into Antarctic terrestrial environments and enhance the opportunity for preventive measures to be put into place. A crucial question is how to predict which alien species would become problems if they were introduced. A match of climate and habitat may help with such risk assessment, but many species are known to expand to other habitat types and different temperature ranges once outside their native range. The factor that has a consistently high correlation with risk for invasiveness is whether or not the species has been invasive anywhere else. The Invasive Species Specialist Group (ISSG) of the Species Survival Commission of IUCN (the World Conservation Union) is managing and developing several "vehicles" for global exchange of expertise and information on invasiveness which will be able to assist with risk assessment and management in the Antarctic and Sub Antarctic (see more detail in CEP information paper).

As the number of persons travelling to Antarctica has increased, the potential for the introduction of non-native species has grown. Parties should take immediate steps to address such introductions, including through consideration of stronger measures to avoid operational waste discharge from ships. The introduction of non-native species in the marine environment is a serious threat that has been overlooked until recently. With the increase in the number of ships visiting Antarctica, and the

predicted impact of climate change which may increase the chance of survival and reproduction of non-native species in the Southern Ocean, it becomes urgent for Parties to take effective measures to reduce such risks by effectively managing the main introduction vectors and pathways: fouling of vessel hulls, and ballast water, including from fishing activities.

A proposal that the Marine Environment Protection Sub-Committee on Bulk Liquids and Gases of the International Maritime Organization accept as a high priority item of its work programme the development of measures for minimising the translocation of invasive aquatic species through biofouling of ships is being put forward for consideration at the 56th Session of the Marine Environment Protection Committee in July 2007. The proposed work program would also include the investigation of measures with respect to niche areas on vessels. It is expected that the Committee, in developing measures, would emphasize practical and cost-effective solutions that would minimise the burden and costs to industry. Parties may wish to support such work within the IMO Marine Environment Protection Committee because it is a suitable global venue to develop best practices with respect to minimising risk to invasion of aquatic species through the biofouling of ships. Parties could provide input into this process where appropriate to ensure that issues pertaining to the Antarctic environment are fully taken into account.

PART IV

ADDITIONAL DOCUMENTS FROM XXX ATCM

ANNEX H

Additional Documents

Letter to the Government of Cyprus

11 May 2007

H.E. The Foreign Minister
Nicosia
Republic of Cyprus

Dear Foreign Minister

The XXX Antarctic Treaty Consultative Meeting, assembled in New Delhi, two weeks ago has been advised of a proposal by a Cypriot-based company, Louise Cruise Lines, to conduct an Antarctic tourism expedition in the 2007/08 austral summer.

This proposed expedition reportedly involves the use of a very large tourist vessel with the capacity to carry approximately 1200 passengers. Further, it is reported that the expedition intends to disembark passengers onto land. If so, this would be the first occasion on which such a very large cruise liner has sought to do this within the Antarctic Treaty area (area south of 60 South Latitude, as described under Article 6 of the 1959 Antarctic Treaty).

The Antarctic Treaty Consultative Parties are currently discussing concerns about the potential environmental, safety, search and rescue and other implications of the use of large tourist ships in the Antarctic Treaty area. Delegations from over 40 nations attended and participated in the most recent Antarctic Treaty Consultative Meeting, and have adopted a Resolution discouraging the landing of passengers from vessels carrying more than 500 passengers. Current Antarctic tourism industry standards also discourage landings from large ships in order to limit adverse impacts on the Antarctic environment and to safeguard life at sea.

In view of this, the Meeting wished to inform you that Antarctic Treaty Consultative Parties have, since 1991, developed a legal framework and policy guidelines in relation to Antarctic tourism activities, including:

- The 1991 Protocol on Environmental Protection to the Antarctic Treaty;
- The guidelines attached to Recommendation XVIII-1 (1994);
- Measure 4 (2004);
- Resolution 4 (2004); and
- Resolution 4 (2007) Ship-based Tourism in the Antarctic Treaty Area.

These materials are attached for your consideration.

Accordingly, consistent with our obligations under Article X of the *Antarctic Treaty* and Article 13 paragraphs 2 and 5 of its Protocol on Environmental Protection, the Parties respectfully request that you consider taking whatever measures are within your competence to discourage activities that may be inconsistent with the above legal framework and policy guidelines.

Should you wish to discuss these matters or obtain any further information about the Antarctic Treaty, which is open to accession by all States, representatives of the Consultative Parties will be pleased to put themselves at you disposal. A list of the Consultative Parties and their national contact

points is enclosed. Further information about the Antarctic Treaty is also available on the Antarctic Treaty Secretariat website *(www.ats.aq)*.

Yours faithfully

(signed)

Dr U.R. Rao
Chairman XXX Antarctic Treaty Consultative Meeting

Cc: National Contact Points
ATCPs
NCPs
Antarctic Treaty Secretariat

The SCAR Lecture

Climate Change and the Antarctic: What Next?

Chris Rapley, President of SCAR, gave the SCAR Lecture. Earth's atmosphere, ocean, ice, biosphere, humans and solid earth interact through multiple interconnections, some highly nonlinear, and operate at a vast spread of spatial and temporal scales. Thus, understanding Earth processes poses a considerable scientific challenge. We have to take a "systems" view and consider the planet as a whole. International cooperation and coordination are essential.

Humans now constitute a force at the global scale. The product of burning fossil fuels is an increased loading of carbon in the atmosphere as the "greenhouse gas" carbon dioxide. The increase is dramatic. Annual human emissions of carbon rose from a few million metric tons in 1850 to 7 Gigatons (GtC) today (the CO_2 tonnage is 3.67 times greater), with total of 500GtC of carbon emitted. There is more carbon dioxide in the atmosphere than at any time over the past 860k years. It enhances the natural "Greenhouse Effect", which keeps the planet warmer than it would otherwise be by around 30°C. As a result the land surface has warmed by 0.7°C since 1900. The polar regions have warmed by up to 5 times the average because melting snow and ice expose rock and water, which absorb radiation and so amplify warming.

Warming of the Antarctic Peninsula over the last 40 years has pushed nearly 90% of the glaciers into retreat. Surface melting on ice shelves has caused water to pour down through cracks, damaging their structure and making them collapse. Collapsing ice shelves free formerly dammed glaciers, which now flow faster. A warming ocean is making the grounding line retreat in West Antarctica, which may result in a complete discharge of ice there. "How Much?" and "How Quickly?" The answer depends on knowing how water at the glacier bed will affect glacier flows. Current numerical models of ice sheets are inadequate to predict the speed or nature of such discharges.

Ice cores show that when the world was warmer, sea levels rose. The potential sea level rise from the ice sheets on Greenland is 7m and on West Antarctica is 5-6m. The rate of sealevel rise increased from 20cm/century to 30cm/century in the last decade. During the past 10,000 years it reached 1m/century; sometimes faster. This, plus evidence for higher sealevels in the last interglacial, suggests what might be possible in a warmer world. The IPY will address the contribution to sea level rise of the major ice sheets. Future sea level rise may affect the lives of millions and massively damage infrastructure.

Many scientists think we should stabilise the CO_2 concentration of the atmosphere at 450ppm by adopting technological solutions like carbon sequestration and by adding no more CO_2. Leaving this later rather than sooner makes it harder and potentially much more costly. "Business As Usual" will not do. The challenge is unprecedented. Leadership is required. The Antarctic Treaty system arguably provides an excellent starting point and example of intelligent co-operation for the global common good.

ANNEX I

Message from ATCM XXX to Stations in the Antarctic

Message from ATCM XXX to Stations in the Antarctic

The Thirtieth Antarctic Consultative Meeting (ATCM XXX) was hosted by the Government of India, at New Delhi, India from 30 April to 11 May 2007.

The Honourable Minister of Science and Technology and Earth Sciences, Mr Kapil Sibal, in his inaugural address drew the attention of the Delegations to the role played by the Antarctic Treaty in teaching us good governance and environmental stewardship in Antarctica, besides being a precursor to the Space Treaty. He further observed that the International Polar Year has brought countries together for the launch of a comprehensive science mission. He called upon the Antarctic Treaty Parties to cooperate in the scientific pursuit and evolve consensual scientific programmes endorsed by a mutuality of interest and to address the importance of the polar region in the context of global climate change and its impact on our environment and the human beings, going by the recent data and issues thrown up by the Inter-Governmental Panel on Climate Change.

More than three hundred delegates and experts representing over forty-six countries and organizations participated in the Meeting. During the deliberations, forty-five Working Papers and over one hundred and forty Information Papers were discussed, a record for the ATCM. The focus was on environmental protection, Antarctic tourism, global climate change and the preservation of the pristine Antarctic environment as a continent of peace and science. ATCM XXX introduced two new Antarctic Specially Managed Areas, No 5: Amundsen – Scott South Pole Station, and No 6: Larsemann Hills, East Antarctica as well as revising plans for two Antarctic Specially Protected Areas, No 109: Moe Island, South Orkney Islands, and No 129: Rothera Point, Adelaide Island. Among other measures, the Meeting adopted a Resolution recommending Parties to discourage or decline landing of passengers in the Antarctic Treaty area by ships carrying more than 500 passengers.

A special lecture on "Climate Change" by Prof. Chris Rapley, Chairman of the Scientific Committee for Antarctic Research (SCAR) and Director of the British Antarctic Survey was organized on the occasion of ATCM XXX by SCAR. The lecture was very informative on global warming and climate change and the importance of Antarctic research in continuous monitoring of climate variations.

From the capital of India – New Delhi, which is in its summer, the delegations participating in the Thirtieth Antarctic Treaty Consultative Meeting send their best wishes to all who are wintering in the Antarctic. We salute your efforts in your scientific pursuits in the pristine Antarctic continent, and in guarding the principles of the Antarctic Treaty.

Prof. U.R. Rao

Chairman of ATCM XXX – 11 May 2007

ANNEX J

Preliminary Agenda for ATCM XXXI

Preliminary Agenda of ATCM XXXI, Kiev 2008

1. Opening of the Meeting
2. Election of Officers and Creation of Working Groups
3. Adoption of the Agenda and Allocation of Items
4. Operation of the Antarctic Treaty System: Reports by Parties, Observers and Experts
5. Operation of the Antarctic Treaty System: General Matters
6. Operation of the Antarctic Treaty System: Review of the Secretariat's Situation
7. Report of the Committee for Environmental Protection
8. Liability: Implementation of Decision 1 (2005)
9. Safety and Operations in Antarctica
10. The International Polar Year 2007- 2008
11. Tourism and Non-Governmental Activities in the Antarctic Treaty Area
12. Inspections under the Antarctic Treaty and the Environment Protocol
13. Science Issues, Including Climate-related Research, Scientific Co-operation and Facilitation
14. Operational Issues
15. Education Issues
16. Exchange of Information
17. Biological Prospecting in Antarctica
18. Preparation of the XXXII Meeting
19. Any Other Business
20. Adoption of the Final Report

ANNEX K

List of Documents

Working Papers

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
WP - 1 rev.1	Document withdrawn	X	-	-	-	SCAR	ATCM 13 CEP 8(b)	
WP - 2	Open-Ended Intersessional Contact Group on Review of Measures: Area Protection and Management	X	X	X	X	United States	ATCM 5	
WP - 3	Draft Management Plan for ASMA No. X: Amundsen-Scott South Pole Station, South Pole	X	X	X	X	United States	CEP 7(a)	M2 (2007) A. Management Plan ASMA South Pole M2 (2007) A1. ASMA South Pole Map 1 M2 (2007) A2. ASMA South Pole Map 2 M2 (2007) A3. ASMA South Pole Map 3 M2 (2007) A4. ASMA South Pole Map 4
WP - 4	Draft Comprehensive Environmental Evaluation of New Indian Research Base at Larsemann Hills, Antarctica	X	X	X	X	India	CEP 6(a)	
WP - 5	Draft Management Plan for ASMA No. X: Southwest Anvers Island and Palmer Basin	X	X	X	X	United States	CEP 7(a)	ASPA Anvers Island and Palmer Basin Map 1 ASPA Anvers Island and Palmer Basin Map 2 ASPA Anvers Island and Palmer Basin Map 3 ASPA Anvers Island and Palmer Basin Map 4 ASPA Anvers Island and Palmer Basin Map 5 ASPA Anvers Island and Palmer Basin Map 6 ASPA Anvers Island and Palmer Basin Map 7 ASPA Anvers Island and Palmer Basin Map 8
WP - 6	Approaches to Tourism Policy – Next Steps	X	X	X	X	United States	ATCM 11	
WP - 7	Report of the CEP Observer to the Twenty-fifth meeting of the Scientific Committee to CCAMLR, 23 to 27 October 2006	X	X	X	X	New Zealand	CEP 14	

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
WP - 8	Larsemann Hills, East Antarctica. Antarctic Specially Managed Area Management Plan	X	X	X	X	Australia China India Romania Russian Federation	CEP 7(a)	M2 (2007) B1. Map A. Topography and physical features M2 (2007) B2. Map B. Management zones and ice free areas M2 (2007) B3. Map C. Detail of northern part of facilities zone M2 (2007) B4. Map D. Zhongshan - buildings, facilities and zones M2 (2007) B5. Map E. Progress II - buildings, facilities and zones
WP - 9	Draft Antarctic Specially Protected Area (ASPA) Management Plan for Amanda Bay, Ingrid Christensen Coast, Princess Elizabeth Land, East Antarctica	X	X	X	X	Australia China	CEP 7(a)	Amanda Bay. ASPA Management Plan Map A. Location Amanda Bay on Ingrid Christensen Coast Map B. Location of Emperor Penguin Colony and Physical Features
WP - 10	Intersessional CEP Consideration of Draft Management Plans	X	X	X	X	Australia	CEP 3 CEP 7(e)	
WP - 11	Review of Antarctic Specially Protected Area (ASPA) No. 130	X	X	X	X	New Zealand	CEP 7(a)	
WP - 12	Systematic Environmental Protection in Antarctica: Final progress report on Environmental Domains Analysis for the Antarctic continent	X	X	X	X	New Zealand	CEP 7(d)	
WP - 13	Environmental Impact of Tourism and Other Non-Governmental Activities in the Antarctic Treaty Area	X	X	X	X	New Zealand	ATCM 11	
WP - 14 rev.1	Tourist Vessels flagged to non Parties; Implications for the effectiveness of the Antarctic Treaty System	X	X	X	X	New Zealand	ATCM 11	

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
WP - 15	A Five-Year Work plan for the CEP: Report of the Intersessional Contact Group	X	X	X	X	New Zealand	CEP 3	Appendix 1. Tables 1, 2 and 3
WP - 16	Report of the Antarctic Treaty inspections undertaken jointly by Sweden, France and New Zealand in accordance with Article VII of the Antarctic Treaty and Article 14 of the Protocol on Environmental Protection to the Antarctic Treaty	X	X	X	X	Sweden France New Zealand	ATCM 12 CEP 10	
WP - 17	On the concept of the Antarctic Marine Protected Areas	X	X	X	X	Russian Federation	CEP 7(e)	
WP - 18	Russian studies of acoustic influence on marine biota	X	X	X	X	Russian Federation	CEP 8(c)	
WP - 19	On review of Annex II to the Protocol on Environmental Protection to the Antarctic Treaty: Conservation of Antarctic Fauna and Flora	X	X	X	X	Russian Federation	ATCM 5	
WP - 20	Peculiarities of conducting inspections of infrastructure facilities of the Antarctic Programs	X	X	X	X	Russian Federation	ATCM 12	
WP - 21	Area Protection and Management. Proposal for a new Antarctic Specially Protected Area at Marion Nunataks, Charcot Island, Antarctic Peninsula	X	X	X	X	United Kingdom	CEP 7(a)	Marion Nunataks ASPA Management Plan
WP - 22	Site Guidelines for Brown Bluff, Tabarin Peninsula	X	X	X	X	United Kingdom United States	CEP 7(c)	Site Guidelines for Brown Bluff, Tabarin Peninsula Brown Bluff Map Brown Bluff Edge of Adelie Colony and closed area B Large boulders near landing site
WP - 23	Safety Issues Relating to Passenger Vessels in Antarctic Waters	X	X	X	X	United Kingdom	ATCM 11	
WP - 24	Use of Ecodiesel in Antarctica - Experience at “Artigas Station”	X	X	X	X	Uruguay	ATCM 14	
WP - 25	Revised Management Plan for Antarctic Specially Protected Area No. 150 Ardley Island, Maxwell Bay, King George Island	X	X	X	X	Chile	CEP 7(a)	
WP - 26	The Application of IUCN Endangerment Criteria at the Regional Level of the Antarctic Treaty Area	X	X	X	X	SCAR	ATCM 13 CEP 8(b)	

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
WP - 27	Current Status of the Ross Seal (Ommatophoca rossii): A Specially Protected Species under Annex II	X	X	X	X	SCAR	CEP 8(b)	Summary of status of the Ross seal
WP - 28	Climate Changes	X	X	X	X	Norway	ATCM 13 CEP 9	
WP - 29	Environmental Monitoring in Antarctica – lessons learned from the Arctic	X	X	X	X	Norway	CEP 9	
WP - 30	Revised Management Plan for Antarctic Specially Protected Area No. 129, Rothera Point, Adelaide Island	X	X	X	X	United Kingdom	CEP 7(a)	M1 (2007) B. ASPA Management Plan Rothera Point
WP - 31	Revised Management Plan for Antarctic Specially Protected Area No. 109 Moe Island, South Orkney Islands	X	X	X	X	United Kingdom	CEP 7(a)	M1 (2007) A. ASPA Management Plan Moe Island
WP - 32 rev.1	Draft Management Plan for the Antarctic Special Protected Area Mount Harding, Grove Mountains, East Antarctica	X	X	X	X	China	CEP 7(a)	
WP - 33	A Proposed Checklist for Inspecting Protected Areas in Antarctica	X	X	X	X	New Zealand United Kingdom United States	CEP 10	
WP - 34	Identification of Activities Covered by Article VII.5 of the Antarctic Treaty	X	X	X	X	Netherlands	ATCM 5	
WP - 35	Best Practice for Energy Management – Guidance and Recommendations	X	X	X	X	COMNAP	CEP 15	
WP - 36	Biological Prospecting in the Antarctic Treaty Area – Scoping for a Regulatory Framework –	X	X	X	X	Netherlands Belgium France	ATCM 17	
WP - 37 rev.1	The M/S Nordkapp incident	X	X	X	X	Norway	ATCM 9 ATCM 11 CEP 11	
WP - 38	Antarctic Protected Areas System: Revised List of Historic Sites and Monuments (Measure 3 (2003) Draft Guidelines for its Application	X	X	X	X	Chile	CEP 7(b)	
WP - 39	"Trinity Peninsula/Louis Philippe Land" (Translation of place-name)	X	X	X	X	Chile	CEP 7(b)	
WP - 40	Guidelines for Visitors to Snow Hill	X	X	X	X	Argentina Sweden	ATCM 11 CEP 7(c)	Guidelines for Tourist Visits to Snow Hill (rev.2)
WP - 41	Monument to the Antarctic Treaty	X	X	X	X	Chile	CEP 7(b)	

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
WP - 42	Antarctic Information Exchange: Importance of Unambiguous and Consistent Geo-referencing	X	X	X	X	COMNAP	ATCM 16	
WP - 43	Guidance for Working Papers on Area Protection and Management	X	X	X	X	United Kingdom	ATCM 5 CEP 7(e)	
WP - 44	Appointment of an External Auditor	X	X	X	X	Argentina	ATCM 6	
WP - 45 rev.1	Support for CCAMLR and action to combat Illegal, Unreported and Unregulated Fishing	X	X	X	X	Australia New Zealand United Kingdom	ATCM 5	

Information Papers

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
IP - 1	Report by the CCAMLR Observer at the Thirtieth Antarctic Treaty Consultative Meeting	X	X	X	X	CCAMLR	ATCM 4	
IP - 2	Initial Environmental Evaluation for Placement of Shelter Huts at the proposed site of new Indian Research Base, Larsemann Hills, East Antarctica	X	-	-	-	India	CEP 6(b)	
IP - 3	Antarctic Research in Finland 1998–2005. International Evaluation	X	X	-	X	Finland	ATCM 13	
IP - 4	International Workshop "Impacts of seismic survey activities on whales and other marine biota"	X	-	-	-	Germany	CEP 8(c)	
IP - 5	State of the Antarctic and Southern Ocean Climate System (SASOCS)	X	-	-	-	SCAR	ATCM 13 CEP 9	
IP - 6	SCAR Report to XXX ATCM	X	-	-	-	SCAR	ATCM 4	
IP - 7	Draft Comprehensive Environmental Evaluation of New Indian Research Base at Larsemann Hills, Antarctica	X	-	-	-	India	CEP 6(a)	Full text of draft CEE of new Indian Research Station
IP - 8	Annual Report of Spain Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty	X	-	-	X	Spain	CEP 4	
IP - 9	Opening of Lago Escondido at Deception Island	X	-	-	X	Spain	CEP 7(e)	
IP - 10	United States Report of Inspections	X	-	-	X	United States	ATCM 12 CEP 10	U.S. Report of Inspections, 2006 Comments of Argentina Comments of Chile
IP - 11	Antarctic Site Inventory: 1994-2007	X	-	-	-	United States	ATCM 11 CEP 7(c)	
IP - 12	Science Supported by Antarctica New Zealand 2006/2007	X	-	-	-	New Zealand	ATCM 13	
IP - 13	Antarctic environment protection under French law	X	X	-	-	France	ATCM 4	
IP - 14	Annual Report submitted by France on the Protocol on Environmental Protection to the Antarctic Treaty as required by Article 17 of the Protocol 2007	X	X	-	X	France	CEP 4	
IP - 15	Subglacial Antarctic Lake Environments (SALE) in the International Polar Year 2007-2008	X	-	-	-	SCAR	ATCM 13 CEP 8(d)	

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
IP - 16	Ecuador's National Policy Proposal for Antarctica	X	-	-	X	Ecuador	ATCM 13	
IP - 17	Annual Report of China Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty	X	-	-	-	China	CEP 4	
IP - 18	International Workshop of Antarctic Competent Authorities	X	-	-	-	Belgium France Germany Netherlands Peru Russian Federation Ukraine United Kingdom	CEP 15	
IP - 19	Future perspectives for Kohnen Station (Dronning Maud Land)	X	-	-	-	Germany	CEP 6(b)	
IP - 20	Ukrainian Antarctic Research for 2006-2007 summer season	X	-	-	-	Ukraine	ATCM 13	
IP - 21	Borehole Remediation and Closure Activities at Lake Vida in the McMurdo Dry Valleys Antarctic Specially Managed Area	X	-	-	-	United States	CEP 12	
IP - 22 rev.1	Progress Report on the Discussion of the International Working Group about Possibilities for Environmental Management of Fildes Peninsula and Ardley Island	X	-	-	-	Germany Chile	CEP 7(e)	
IP - 23	Report by the International Hydrographic Organization (IHO) on"Cooperation in Hydrographic Surveying and Charting of Antarctic Waters"	X	X	X	X	IHO	ATCM 4	Status of INT Chart Production March 2007
IP - 24	Pasantías antárticas para el Año Polar Internacional	-	-	-	X	Uruguay	ATCM 10	
IP - 25	Monitoreo Ambiental Biológico para el Plan de Contingencia de la descarga de combustible en la Base Científica Antártica Artigas (BCAA)	-	-	-	X	Uruguay	CEP 11	
IP - 26	Fluxgate and Proton Precession technology for fixed monitoring station in BCAA	X	-	-	X	Uruguay	CEP 9	
IP - 27	Informe Anual de Acuerdo al Artículo 17 del Protocolo al Tratado Antártico sobre la Protección del Medio Ambiente Periodo 2006 - 2007	-	-	-	X	Uruguay	CEP 4	

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
IP - 28	Scientific Activities at the Argentine Antarctic Bases and International Polar Year	X	-	-	X	Argentina	ATCM 10 ATCM 13	
IP - 29	Report of the Depositary Government of the Antarctic Treaty and its Protocol in accordance with Recommendation XIII-2	X	-	-	-	United States	ATCM 4	Status of the Antarctic Treaty Status of the Protocol Status of Recommendations (rev.1)
IP - 30	The Replacement of Fuel Tanks at Vernadsky Station	X	-	-	-	Ukraine	CEP 6(b)	
IP - 31	Annual Report Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty	X	-	-	-	Ukraine	CEP 4	
IP - 32	Census of Antarctic Marine Life (CAML)	X	-	-	-	Australia SCAR	ATCM 13 CEP 8(d)	
IP - 33	Australian Research on the Assessment and Remediation of Contaminated Sites in Antarctica	X	-	-	-	Australia	ATCM 13 CEP 12	
IP - 34	On-site Assessment of Metal Contamination During Remediation of a Waste Disposal Site in Antarctica	X	-	-	-	Australia	ATCM 13 CEP 12	
IP - 35	Global Outlook for Ice and Snow	X	-	-	-	UNEP	ATCM 15	Global Outlook for Ice and Snow brochure
IP - 36	Non-native species: Pathways and Vectors between New Zealand and Scott Base, Antarctica	X	-	-	-	New Zealand	CEP 8(a)	
IP - 37	Hull fouling as a source of marine invasion in the Antarctic	X	-	-	-	SCAR	ATCM 13 CEP 8(a)	
IP - 38	Update on progress towards the CCAMLR Workshop on Bioregionalisation of the Southern Ocean (Brussels, Belgium, 13-17 August 2007)	X	X	X	X	CCAMLR	CEP 7(e)	
IP - 39	Annual Report of New Zealand pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty 2006/2007	X	-	-	-	New Zealand	CEP 4	
IP - 40	Fire on Board the Japanese Whaling Vessel Nisshin Maru	X	-	-	-	New Zealand	ATCM 14	
IP - 41	Systematic Environmental Protection in Antarctica: local and regional scale application of Environmental Domains Analysis for the Antarctic continent	X	-	-	-	New Zealand	CEP 7(d)	

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
IP - 42	Marine Acoustics in Antarctic Waters:Report of an International Whaling Commission Workshop	X	-	-	-	New Zealand	CEP 8(c)	Seismic workshop report SC rep seismic extract
IP - 43	The Global Invasive Species Database	X	-	-	-	New Zealand	CEP 8(a)	
IP - 44	Collaborations with Other Parties in Science and Related Activities during the 2006/2007	X	-	-	-	Korea, Republic	ATCM 13	
IP - 45	Korea's First Ice Breaker	X	-	-	-	Korea, Republic	ATCM 14	
IP - 46	A Korean Public Awareness Program 'Pole-to-Pole Korea'	X	-	-	-	Korea, Republic	ATCM 15	
IP - 47	Annual Report of the Republic of Korea Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty	X	-	-	-	Korea, Republic	CEP 4	
IP - 48	Mawson Station Wind Farm – Four Years of Operational Experience	X	-	-	-	Australia	ATCM 14 CEP 15	
IP - 49	Aliens in Antarctica	X	-	-	-	Australia SCAR	ATCM 10 CEP 5 CEP 8(a)	
IP - 50	International Coordination of Hydrography in Antarctica: Significance to Safety of Antarctic Ship Operations	X	X	X	X	COMNAP	ATCM 9	
IP - 51	Construction and Operation of the new Belgian Research Station, Dronning Maud Land, Antarctica. Final Comprehensive Environmental Evaluation (CEE)	X	-	-	-	Belgium	CEP 6(b)	
IP - 52	The Sixth Continent Initiative: Capacity Building in Antarctic Research during IPY 2007-2008	X	-	-	-	SCAR UNEP	ATCM 13	
IP - 53	Criteria for the selection of Marine Protected Areas (MPAs)	X	X	X	X	United Kingdom	CEP 7(e)	
IP - 54	Antarctic Liability: Domestic Implementation of Annex VI to the Environmental Protocol. Key Issues and Areas of Difficulty	X	X	X	X	United Kingdom	ATCM 8	
IP - 55	Report on the Implementation of the Protocol on Environmental Protection as Required by Article 17 of the Protocol	X	-	-	-	United Kingdom	CEP 4	

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
IP - 56 rev.1	Report Submitted to Antarctic Treaty Consultative Meeting XXX by the Depositary Government for the Convention for the Conservation of Antarctic Seals in Accordance with Recommendation XIII-2, Paragraph 2(D)	X	-	-	-	United Kingdom	ATCM 4	
IP - 57 rev.1	Chinese Antarctic Environmental Report (2006-2007)	X	-	-	-	China	CEP 15	Monitoring stations. Location and examples.
IP - 58	Studies in the Indian Sector of the Southern Ocean: India's initiative and future Plans	X	-	-	-	India	ATCM 13	
IP - 59	IPY - Indian Contribution	X	-	-	-	India	CEP 5	
IP - 60	Scientific activities at Indian station Maitri and proposed new research base at Larsemann during 2006 - 2007 season	X	-	-	-	India	ATCM 13	
IP - 61	Proposed New Polar Research Vessel (PRV) of India for Bi-Polar Expeditions and Southern Ocean Research	X	-	-	-	India	ATCM 14	
IP - 62	Admiralty Bay Antarctic Specially Managed Area (ASMA No. 1) Management Group Report	X	-	-	-	Brazil Ecuador Peru Poland United States	CEP 7(e)	
IP - 63	Preliminary results of Russian expedition studies of the subglacial Lake Vostok in 2006-2007	X	-	X	-	Russian Federation	ATCM 13 CEP 6(b)	
IP - 64	Russian scientific studies of the Antarctic in 2006	X	-	X	-	Russian Federation	ATCM 13	
IP - 65	Concept and structure of the Federal Law of the Russian Federation "On regulating activities of the Russian citizens and legal entities in the Antarctic"	X	-	X	-	Russian Federation	ATCM 5	
IP - 66	Activities of Russia in Antarctica at the first stage of the International Polar Year (2007-2008)	X	-	X	-	Russian Federation	ATCM 10	
IP - 67	Biological Prospecting in Antarctica: Review, Update and Proposed Tool to Support a Way Forward	X	X	-	X	UNEP	ATCM 17	
IP - 68	Investigación Científica del Perú en el periodo 2006-2007 (Temporada de verano)	-	-	-	X	Peru	ATCM 13	
IP - 69	Progress with the Implementation of the Agreement on the Conservation of Albatrosses and Petrels (ACAP)	X	-	-	-	ACAP	ATCM 4 CEP 14	

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
IP - 70	Annual Report Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty 2006-2007	X	-	-	-	Italy	CEP 4	
IP - 71	Initial Environmental Evaluation. Construction and Operation of Nansen Ice Runway (Terra Nova Bay, Ross Sea, Antarctica)	X	-	-	-	Italy	CEP 6(b)	Initial Environmental Evaluation. Construction and Operation of Nansen Ice Runway (Terra Nova Bay, Ross Sea, Antarctica) (rev.1)
IP - 72	Initial Environmental Evaluation. Restructuring works of the pier at the Mario Zucchelli Italian Scientific Station (Terra Nova Bay, Ross Sea, Antarctica)	X	-	-	-	Italy	CEP 6(b)	Initial Environmental Evaluation. Restructuring works of the pier at the Mario Zucchelli Italian Scientific Station (Terra Nova Bay, Ross Sea, Antarctica)
IP - 73	IPY Report for ATCM XXX	X	-	-	-	IPY-IPO	ATCM 10 CEP 5	
IP - 74	Report by the Head of the Australian Delegation in her capacity as Representative of the Depositary Government for the Convention on the Conservation of Antarctic Marine Living Resources to the Thirtieth Antarctic Treaty Consultative Meeting	X	-	-	-	Australia	ATCM 4	
IP - 75	Report by the Head of the Australian Delegation in her capacity as Representative of the Depositary Government for the Agreement on the Conservation of Albatrosses and Petrels to the Thirtieth Antarctic Treaty Consultative Meeting	X	-	-	-	Australia	ATCM 4	
IP - 76	Australia in the International Polar Year (2007/08)	X	-	-	-	Australia	ATCM 10	
IP - 77	Australia's Antarctic Scientific Research Programme 2006/07	X	-	-	-	Australia	ATCM 13	
IP - 78	Australia's Antarctic Air Service 2006/07	X	-	-	-	Australia	ATCM 14	
IP - 79	The Case Against Tourism Landings From Ships Carrying More Than 500 Passengers	X	-	-	-	ASOC	ATCM 11 CEP 6(b)	The Case Against Tourism Landings from Ships Carrying More than 500 Passengers

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
IP - 80	Taking Action on Marine Noise in the Southern Ocean	X	-	-	-	ASOC	CEP 6(b)	Taking Action on Marine Noise in the Southern Ocean
IP - 81	Amendment or Modification of Annex II and the Implications for Further Annex Review	X	-	-	-	ASOC	ATCM 5	Amendment or Modification of Annex II and the Implications for Further Annex Review
IP - 82 rev.1	The Antarctic and Climate Change	X	-	-	-	ASOC	ATCM 13 CEP 9	
IP - 83	A Commentary on Policy Issues Arising from On-Site Review of Guidelines for Visitor Sites in the Antarctic Peninsula	X	-	-	-	ASOC	ATCM 11 CEP 7(c)	A Commentary on Policy Issues Arising from On-Site Review of Guidelines for Visitor Sites in the Antarctic Peninsula
IP - 84	Strengthening the CEE Process	X	-	-	-	ASOC	ATCM 5 CEP 6(b)	Strengthening the CEE Process
IP - 85	Tourism and the Duty for ATCP Action	X	-	-	-	ASOC	ATCM 11	Tourism and the Duty for ATCP Action
IP - 86 rev.1	The Human Footprint of the IPY 2007-2008 in Antarctica	X	-	-	-	ASOC	ATCM 10 CEP 5	The Human Footprint of the IPY 2007-2008 in Antarctica (rev.1)
IP - 87	Marine Protected Areas – Steps Forward for the ATCM	X	-	-	-	ASOC	ATCM 10 CEP 7(e)	Marine Protected Areas – Steps Forward for the ATCM
IP - 88	Initial Environmental Evaluation law-Racovita Base	X	-	-	-	Romania	CEP 6(b)	
IP - 89	Annual Report Pursuant to the Protocol on Environmental protection to the Antarctic Treaty	X	-	-	-	Romania	CEP 4	
IP - 90	Participation of Romanian Scientists in the International Polar Year 2007-2008	X	-	-	-	Romania	ATCM 10	
IP - 91	Cooperation Research Opportunities in Larsemann Hills, East Antarctica	X	-	-	-	Romania	ATCM 13	
IP - 92	Romanian Antarctic Activities in Law-Racovita Australian-Romanian	X	-	-	-	Romania	ATCM 14	
IP - 93	Informe Anual del Perú de acuerdo con el Artículo 17 del Protocolo al Tratado Antartico sobre Protección del Medio Ambiente	-	-	-	X	Peru	CEP 4	
IP - 94 rev.1	Avances al plan de gestión territorial, manejo ambiental y conservación del patrimonio histórico de la base Gabriel González Videla. Verano 2007	-	-	-	X	Chile	CEP 7(b)	

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
IP - 95	60 años del primer vuelo antártico chileno y sus repercusiones 1947 - 2007	-	-	-	X	Chile	ATCM 15	
IP - 96	Informe Anual del Ecuador de acuerdo con el Artículo 17 del Protocolo al Tratado Antártico sobre Protección del Medio Ambiente	-	-	-	X	Ecuador	CEP 4	
IP - 97	International Polar Year Research: Project ANDRILL	X	-	-	-	New Zealand	ATCM 13	
IP - 98	COMNAP's 2006 Workshop on Waste Management in Antarctica	X	-	-	-	COMNAP	CEP 12	IP 98: Executive Summary
IP - 99	Contingency Planning and Emergency Response	X	-	-	-	COMNAP	ATCM 9 CEP 11	IP 99: Executive Summary
IP - 100	Accidents and Medical Evacuations within the German Antarctic Program during Season 2006/2007	X	-	-	-	Germany	ATCM 14	
IP - 101	The International Polar Year 2007/08 in Germany. Education and Outreach	X	-	-	-	Germany	ATCM 15	
IP - 102	Final Comprehensive Environmental Evaluation (CEE) for the Proposed Construction and Operation of Halley VI Research Station, and the Demolition and Removal of Halley V Research Station, Brunt Ice Shelf, Caird Coast, Antarctica	X	-	-	-	United Kingdom	CEP 6(b)	
IP - 103	The 50th Anniversary of the Japanese Antarctic Research Expedition	X	-	-	-	Japan	ATCM 15	
IP - 104	Japan's Antarctic Scientific Programs in 2006/07 - Selected Highlights	X	-	-	-	Japan	ATCM 13	
IP - 105	Tourism on Barrientos	X	-	-	X	Ecuador	ATCM 11	
IP - 106	IPY 2007-2008 Launch in Japan	X	-	-	-	Japan	ATCM 10	
IP - 107	Asian Forum for Polar Sciences (AFoPS): Report of the VIth Delegates Meeting, 2007	X	-	-	-	Japan	ATCM 13	
IP - 108	Report of the Deception Island Antarctic Specially Managed Area (ASMA) Management Group	X	X	-	X	Argentina Chile Norway Spain United Kingdom United States	CEP 7(e)	
IP - 109	Patrulla de rescate en Base "O'Higgins"	-	-	-	X	Chile	ATCM 14	
IP - 110	Chile incrementa la investigación científica en la base "O'Higgins"	-	-	-	X	Chile	ATCM 13	

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
IP - 111	A Monitoring Programme for the Admiralty Bay Antarctic Specially Managed Area (ASMA Nº 1)	X	-	-	-	Brazil Ecuador Peru	CEP 9	
IP - 112	Possible Modules of a "Fildes Peninsula region" ASMA Management Plan	X	-	-	-	Germany	CEP 7(e)	
IP - 113	Pruebas de un sistema de radar FMCW en las cercanías de base O'Higgins, península Antártica	-	-	-	X	Chile	ATCM 14	
IP - 114	Brief Update on the Antarctic Peninsula Landing Site Visits and Site Guidelines	X	-	-	-	IAATO	ATCM 11 CEP 7(c)	
IP - 115	Management and further protection within ASPA 125: Current situation	X	-	-	-	Chile	CEP 7(e)	Management and further protection within ASPA 125: Current situation
IP - 116	IAATO Information Outreach to Private One-off Non-Member Expeditions	X	-	-	-	IAATO	ATCM 11 ATCM 15	Visitor Guidelines Poster Boot and Clothing Decontamination Poster Marine Wildlife Watching Poster Part 1 Marine Wildlife Watching Poster Part 2 Marine Wildlife Watching Guidelines Leaflet
IP - 117	Workshop on Coordination of Activities in the Fildes Peninsula Region	X	-	-	-	Chile	CEP 7(e)	
IP - 118	Air Safety on the Antarctic Peninsula	X	-	-	X	Chile	ATCM 9	
IP - 119	Grounding of Vessels on Deception Island and the M/N "Nordkapp" Incident	X	-	-	X	Chile	ATCM 9 ATCM 11	
IP - 120 rev.1	Report on an aircraft accident and aircraft removal during Dronning Maud Land Air Network operations in season 2006/2007	X	-	-	-	Finland Germany	ATCM 14	
IP - 121	IAATO Overview of Antarctic Tourism 2006-2007 Antarctic Season	X	-	-	-	IAATO	ATCM 11	
IP - 122	Antarctic Treaty Inspection Process for Tourist Vessels. Suggested Improvements	X	-	-	-	IAATO	ATCM 12	
IP - 123	Historical Sites of Byers Peninsula, Livingston Island, South Shetland Islands, Antarctica	X	-	-	X	Chile	CEP 7(b)	
IP - 124	SCAR Lecture. "Climate Change and the Antarctic: What Next?"	X	-	-	-	SCAR	ATCM 5	Climate Change and the Antarctic: What Next?

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
IP - 125	Report Submitted to the XXX ATCM by IUCN The World Conservation Union	X	-	-	-	IUCN	ATCM 4	
IP - 126	Prevention and Management of Harmful Non-Native Species in the Antarctic and the Sub Antarctic	X	-	-	-	IUCN	CEP 8(a)	
IP - 127	Historic Sites of the Northern Coast of Fildes Peninsula, King George Island (South Shetland Group)	X	-	-	X	Chile	CEP 7(b)	
IP - 128	Report of the Antarctic and Southern Ocean Coalition (ASOC)	X	-	-	-	ASOC	ATCM 4	
IP - 129	Annual Report Pursuant to the Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty	X	-	-	-	Japan	CEP 4	
IP - 130	Brief information on the activities of Byelorussia in the polar regions	X	-	X	-	Belarus	ATCM 13	
IP - 131 rev.1	Status of the Argentine Icebreaker "Almirante Irízar"	X	-	-	X	Argentina	ATCM 14	
IP - 132	Initial Environmental Evaluation. Replacement of Fuel tanks at the Comandante Ferraz Antarctic Station	X	-	-	-	Brazil	CEP 6(b)	
IP - 133	COMNAP Report to ATCM XXX	X	-	-	X	COMNAP	ATCM 4 CEP 14	Main Antarctic facilities operated by the National Antarctic Programs in 2007 COMNAP work groups 2006/2007
IP - 134	Report of the International Association of Antarctica Tour Operators 2006-2007	X	-	-	-	IAATO	ATCM 4 ATCM 11	
IP - 135	Consideration of Education and Outreach Issues by the Antarctic Treaty Consultative Meeting (ATCM)	X	-	-	-	United Kingdom	ATCM 13	
IP - 136	Implementing the Madrid Protocol: A case study of Fildes Peninsula, King George Island	X	-	-	-	ASOC	CEP 7(e)	
IP - 137	Re-issue of WP 44 (ATCM XXIX) Review of Annex II of the Environmental Protocol	X	X	X	X	United Kingdom	ATCM 5	
IP - 138	Antarctica and climate change – implications for governance	X	-	-	-	United Kingdom	ATCM 13 CEP 9	

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
IP - 139	Additional Information on draft CEE on proposed new Indian research base at Larsemann Hills, East Antarctica	X	-	-	-	India	CEP 6(a)	Response to Australian comments/ Suggestions Response to Germany's comments/ Suggestions Response to New Zealand's comments/ Suggestions Response to United Kingdom's comments/ Suggestions IER_draftCEE (Word format)
IP - 140	Discurso de apertura del Jefe de la Delegación Venezolana	-	-	-	X	Venezuela	ATCM 5	
IP - 141	Supplemental information to WP 44 on the external audit of the Antarctic Treaty Secretariat	X	-	-	X	Argentina	ATCM 6	
IP - 142	The International Polar Year in The Netherlands	X	-	-	-	Netherlands	ATCM 10	
IP - 143	The Spanish Research Activities During IPY	X	-	-	-	Spain	ATCM 10	

Secretariat Papers

Number	Title	E	F	R	S	Presented by	Agenda Items	Attachments
SP - 1 rev.2	Agenda and Schedule	X	X	X	X	ATS	ATCM 3	
SP - 2	Antarctic Treaty Secretariat Report 2006/7	X	X	X	X	ATS	ATCM 6 CEP 4	D4 (2007) A. Financial Report (rev.4)
SP - 3 rev.3	Secretariat Programme 2007/08	X	-	-	-	ATS	ATCM 6	
SP - 4 rev.1	Contributions to the Secretariat 2005-2008	X	X	X	X	ATS	ATCM 6	
SP - 5	Status of the Secretariat Archive of Final Reports	X	X	X	X	ATS	ATCM 6	
SP - 6	Manual for the Submission of Documents to the Antarctic Treaty Consultative Meeting and the Committee for Environmental Protection	X	X	X	X	ATS	ATCM 5	
SP - 7	Register of the Status of Antarctic Specially Protected Area and Antarctic Specially Managed Area Management Plans. Updated March 2007	X	X	X	X	ATS	CEP 7(e)	
SP - 8	Annual list of Initial Environmental Evaluations (IEE) and Comprehensive Environmental Evaluations (CEE) prepared between April 1st 2006 and March 31st 2007	X	X	X	X	ATS	CEP 6(b)	
SP - 9	The recommendations of the ATCM: survey of their status	X	X	X	X	ATS	ATCM 5	
SP - 10	Review of the Status of ATCM Recommendations on Environmental Issues	X	X	X	X	ATS	ATCM 5	
SP - 11 rev.1	Electronic Information Exchange System	X	X	X	X	ATS	ATCM 16 CEP 4	
SP - 12	Information Exchange System: Survey of current practice	X	X	X	X	ATS	ATCM 16	
SP - 13 rev.2	ATCM XXX List of Delegates and Heads of Delegation	X	-	-	-	ATS	ATCM 5	ATCM XXX List of Delegates and Heads of Delegations (rev.2)

ANNEX L

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ANNEX M

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