PART III

OPENING AND CLOSING ADDRESSES AND REPORTS FROM ATCM XXXI

ANNEX D

Opening and Closing Addresses

Message from the President of Ukraine Mr Victor Yuschenko to the Participants of the XXXI Antarctic Treaty Consultative Meeting

Ladies and Gentlemen,

Please accept my warm congratulations on the opening of the XXXI Consultative Meeting of the State Signatories to the Antarctic Treaty. I hope you have everything you need for constructive and productive work in hospitable Ukraine.

Antarctica is a unique wilderness reserve belonging to all of mankind. It is our duty to work together to study Antarctica and preserve its pristine nature for future generations.

The sixth continent is rightfully considered as a global research laboratory. It is through the joint efforts of our countries that the seemingly unfriendly land has become a region of true friendship, mutual understanding, and of collaborative scientific endeavour among courageous representatives from many nations.

Ukraine has always taken an active part in international Antarctic studies. We are committed to further development of such an important global research area. Our country, as always, stands for strict compliance with the Antarctic Treaty, and for united efforts by all interested states in studying the severe but beautiful part of our planet.

I am confident that studies of Antarctica and its climatic and geological features will show mankind how to address numerous environmental issues, enrich global science, and promote progress and security in our civilization.

I wish all of you successful and creative work, inspiration, all the best and joy.

III. Opening and Closing Addresses

Welcoming Address to the Participants of XXXI Antarctic Treaty Consultative Meeting by Vice Prime Minister of Ukraine Mr Grigoriy Nemyrya

2 June 2008

Dear Ladies and Gentlemen,

On behalf of the Ukrainian Government, I would like to extend our warmest welcome to the representatives of the Parties to the 1959 Antarctic Treaty in the city of Kiev, capital of Ukraine.

We are proud that, for the first time, Ukraine is hosting a Consultative Meeting.

Ukraine joined the 1959 Antarctic Treaty in 1992. However, it was the signing of the memorandum on the transfer of British Antarctic Base Faraday on Galindez Island (currently Vernadsky Station) to Ukraine in London in 1996 that was a key milestone in Ukraine's joining the international Antarctic community.

The station is now named after Vladimir Vernadsky, the founder of the Ukrainian Academy of Sciences. This is quite symbolic, because it was Vernadsky who drew mankind's attention to the fact that our thoughts and actions are part of the ecumenical mechanism to study and maintain the unique terrestrial civilization with its extremely vulnerable nature.

Since the establishment of Vernadsky Station, there have been 13 Antarctic expeditions. The station has hosted wintering teams and has conducted studies in many research areas during the summer season.

Ukraine's annual research in Antarctica includes ozone layer observations, as well as meteorological, hydrological, ionospheric, and terrestrial magnetism studies. It is no exaggeration to say this research is extremely valuable for global climate change assessments. Due to the high quality of the research, Vernadsky Station is part of the Global Climate Observing System.

We take care to extend our business contacts with Antarctic researchers from other countries and, to that end, have signed long-term agreements, exchange wintering personnel and scientists, and have developed a number of joint research programs and logistic operations.

Ukraine cooperates with scientists from the UK, Argentina, Bulgaria, Spain, Israel, China, Germany, Poland, Russia, Slovakia, Slovenia, USA, Czech Republic, Chile, Japan, and many other countries.

The Ukrainian Antarctic Research Center, which is our National Antarctic Operator, interacts with international organizations, such as WMO, COMNAP, SCAR and others. Our international contacts are becoming more and more dynamic every year, and we address the issues of the unique Ice Continent and Southern Ocean.

Antarctica is the only remaining safeguard on our blue planet, where climatic conditions helped minimize the impact of human technological activities, and where present and future generations may still admire the exceptional beauty and purity of the first pages of the Earth's history. This live nature reserve of global significance, and worldwide research laboratory, still exists, first due to your efforts, and second due to geopolitical agreements developed and successfully supported by the international Antarctic club, its research institutions and NGOs.

We are highly grateful to you for that.

Unfortunately, global warming and glacier melting processes currently observed in the polar regions are caused not only by anthropogenic, but also by natural factors. It is therefore our mission to

forestall negative phenomena that may promote destabilization of the planetary water/ice balance and provoke international conflicts over redistribution of Antarctic mineral and biological resources.

The Government always pays attention to issues, such as restriction and regulation of the use of natural resources in the Southern Ocean, circumpolar regions, Antarctic offshore zone, and Southern sea basin; coordination of research; and management of adventure and environmentally sound tourism. We are convinced that joint efforts by politicians, diplomats, scientists and entrepreneurs will permit these issues to be addressed in a civilized way for the benefit of all mankind.

Ukrainian scientists regularly submit monitoring data to worldwide weather centers. They have started 16 new projects within the framework of the Third International Polar Year and have recently begun modernizing station equipment, refurbishing research and engineering facilities, and developing expedition-based studies to cover not only the Argentina Islands area but also inland Antarctica.

Funds for research at Antarctic Vernadsky Station are included in the annual national budget by the Ukrainian Government and allocations for 2008 amount to 20.4 million Ukranian hryrna.

We are making continuous efforts to establish a requisite national regulatory legal framework in support of Antarctic activities, and take care to create adequate social conditions for people working under special circumstances.

The Ukrainian Supreme Rada has approved, in the first reading, a draft national Law on Antarctic Operations. Its enactment will surely open up new opportunities for Ukrainian Antarctic researchers. Therefore, the Government will work to support the draft Law and have it approved.

Completion of the Third IPY projects and ATCM XXXI has caused much interest in the Ukrainian society and especially the younger generation. Antarctica attracts attention at schools, lyceums, universities; children draw penguins and icebergs and watch Antarctic video films and slides.

It depends on all of us, to a certain extent, whether our children and grandchildren will have such an opportunity in the future.

I am confident that your work on issues included in the agenda of XXXI Antarctic Treaty Consultative Meeting will be a powerful impetus to strengthen international environmental cooperation and encourage the development of relevant international and national organizations.

I wish you successful work and balanced and wise decisions to provide for the integrity of a unique Antarctic nature which is so close to us.

Enjoy your stay in our hospitable country.

Thank you for your attention. Good luck!

Message from the Minister of Foreign Affairs of Ukraine Mr Volodymyr S. Ogryzko to the Participants of the XXXI Antarctic Treaty Consultative Meeting

2 June 2008

Esteemed Chairperson, Heads and Members of Delegations as well as participants in the Meeting, Dear colleagues,

Ladies and Gentlemen,

Let me welcome you in connection with holding the XXXI Antarctic Treaty Consultative Meeting in our capital, the city of Kyiv.

The founding states of the Meeting of the Consultative Parties to the Antarctic Treaty in the previous century created a solid basis for international cooperation in this special area of the planet.

The conclusion of the Antarctic Treaty emphasized the recognition of previous achievements in the research of the Antarctic continent and confirmed the wish of the international community to create a basis for the protection of both the vulnerable natural system of the continent and the adjacent waters. The fact that the number of Consultative Parties and states having the observer status increased from 12 to 46 is an evidence of understanding the importance of the Antarctic for the humankind.

Ukraine's obtaining the status of the Consultative Party to the Treaty in 2004 enabled our state to join this global movement. "Academician Vernadsky," the Ukrainian research station, is included in the 17 basic centres of the global climate change observing system of the World Meteorological Organization, and this fact is indicative of the recognition, by the world community, of Ukraine's capabilities and, at the same time, imposes certain international obligations on our state.

I would like to recall, without exaggeration, ponderable efforts made by states participating in the Antarctic Treaty System, by the Consultative Parties and by the Secretariat of the Antarctic Treaty concerning the preservation of the Antarctic continent. The creation of Specially Protected Antarctic Areas and Antarctic Specially Managed Areas is one of lines of these activities. As you know, today there are 67 Specially Protected Antarctic Areas and 6 Antarctic Specially Managed Areas.

I hope that you will successfully consider numerous proposals concerning the determination and revision of plans to manage the existing areas which are to be considered at the Kyiv Meeting.

Finally, I would like to welcome you once again on the soil of Ukraine. I would like to express the hope that, apart from your fruitful work, you will have an opportunity to enjoy the Ukrainian hospitality, the cultural achievements of our people and the unforgettable colouring of Kyiv, a city having a millenary history, and this will, for certain, impress you and leave vivid recollections about the Ukrainian land forever.

I wish you fruitful work, cheerful mood and all the best!

III. Opening and Closing Addresses

Greetings from Vernadsky Station

1. Yevgeniy Karyagin, station Commander:

"Good afternoon, Ladies and Gentlemen! The 13th Ukrainian Antarctic expedition with me, Yevgeniy Karyagin, as the Base leader are glad to greet you. We know the 31st Antarctic Treaty Consultative Meeting is open in Kiev. Our congratulations with the beginning of your work! Being here in Antarctica we hope that the main result of your work will be some right decisions for this beautiful place, for Antarctica. We are sure you are already familiar to our wonderful capital – the city of Kiev. We offer to meet Ukraine here in Antarctica at Akademik Vernadsky Station. Welcome, friends!"

2. Igor Gvozdkovskiy, geophysicist:

"Dear participants of the 31st ATCM, on behalf of all winterers, I would like to congratulate you on the opening of the Meeting, and wish you success in creative resolution of all issues and problems."

3. Vadim Lisinchuk, station doctor:

"On behalf of the 13th Antarctic expedition, I would like to welcome the participants of the Meeting, wish them good health, creative inspiration, and resolution of all issues on the agenda. He who has ever been in Antarctica cannot help falling in love with this land, its beautiful landscapes, unforgettable sunset and exotic fauna. It is our key task to preserve such beauty for future generations. We trust and rely on you. Using the opportunity, I would like to invite all participants, especially women, to our Antarctic station to get acquainted with Ukrainian Antarctic cuisine and sing Ukrainian songs. Welcome!"

4. Roman Sokolovsky, system administrator:

"I'd like to thank the Ukrainian Antarctic Center for the chance to visit this beautiful place, to meet new friends and say these wonderful words. Thank you."

5. Anatoliy Rudenko, electrical engineer:

"As you can see, we have beautiful sunny weather. However, it is not always like this. Local weather is changeable as a fickle girl's mood. Despite that, relations and atmosphere at our station are stable, warm and friendly, and I also wish you warmth and comfort in your families and homes."

6. Yevgeniy Karyagin, station Commander:

"And finally, I would like to wish you success and fruitful work in your essential mission that is defending the interests of Antarctica."

ANNEX E

Report of the Committee for Environmental Protection (CEP XI)

Report of the Committee for Environmental Protection (CEP XI)

Kyiv, June 2–6, 2008

Item 1: Opening of the Meeting

(1) The CEP Chair, Dr Neil Gilbert (New Zealand), opened the meeting on Monday 2 June 2008. The Chair thanked Ukraine for arranging and hosting the meeting, as well the Secretariat of the Antarctic Treaty for its support during the intersessional period.

(2) The Chair joined Brazil in expressing deep sadness of the death of Dr Edith Fanta and noted her many years of support for Antarctic work, particularly through her role as chair of CCAMLR's Scientific Committee. The Committee stopped in silent reflection for Dr Fanta and those who lost their lives in Antarctica over the past year.

(3) The Chair summarised the work undertaken since CEP X. The Chair noted that a number of intersessional groups had been established at CEP X to deal with, respectively, the five-year work plan, the review of Management Plans (through the Trial Informal Group), the review of the draft CEE from China, preparation of a model action plan for Specially Protected Species, the Electronic Information Exchange System (EIES) and the status of southern giant petrels in accordance with Resolution 2 (2007). The Chair thanked those who had participated and noted that the outcomes of these intersessional groups would be discussed further throughout the meeting.

(4) The Chair also noted his attendance on behalf of the Committee at the 26th CCAMLR Scientific Committee Meeting, noting that his report would be discussed under agenda item 14.

Item 2: Adoption of the Agenda

(5) 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
   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

(6) The Committee considered 46 Working Papers, 64 Information Papers and 4 Secretariat Papers (Annex 1, page 453).

Item 3: Strategic Discussions on the Future of the CEP

(7) Australia presented WP 17 *Preparation for Scheduled CEP Discussions: Reviews of Past Activities*, proposing two ideas for improving the efficiency and effectiveness of the Committee. Australia recommended that the Committee consider having a topic summary prepared in advance of discussions scheduled through the five-year work plan, noting that Australia's IP 7 (submitted under agenda item 9b), summarising past discussions and

agreements on environmental monitoring and reporting, was an example. Australia suggested that such summaries would aid the Committee's debates by acting as a reminder of past discussions, and that such topic summaries could be prepared, as required, by the Secretariat and / or willing Members.

(8) Australia also proposed that Members include an abstract at the start of each Working and Information Paper, to assist with the preparation of topic summaries and with Members' review of papers for each meeting.

(9) The Committee supported the proposal for Working and Information Papers to include an abstract that would highlight the key aspects and proposals or recommendations contained in the paper. The Committee noted that such abstracts could be used by the Chair and Secretariat in preparing an annotated agenda for the Committee.

(10) There was general agreement to Argentina's suggestion that Working Papers ideally should include a clear recommendation, or a clear question for discussion.

(11) Members also agreed in principle with Australia's proposal for topic summaries to be prepared, if required. Some Members posed questions about the time that would be required to prepare such topic summaries, whether they would be required for all items on the CEP's agenda, and the potential impact on the Secretariat's resources.

(12) Australia responded that in its view topic summaries would be an additional tool to support the CEP's five-year work plan and that the need for such topic summaries should be considered on a case-by-case basis.

(13) The Secretariat indicated that it would be willing to prepare topic summaries, but that the Committee should clearly define the scope of the summary, on which topics they would be required and by what deadline. Connected with this, France suggested to add a link to the original documents when possible.

(14) The Committee agreed that topics could be selected from the five-year work plan and that the Secretariat and willing volunteers could be asked to prepare topic summaries and make them available on the CEP website, well in advance of the meeting at which the topic would be discussed, so as to assist Parties in their preparations.

(15) Noting the large and increasing number of papers presented to the Committee, France suggested that one possible alternative to discussion of Information Papers at the meeting would be to make them available on the CEP website for discussion by Members via an on-line forum.

(16) The Secretariat responded that whilst such an approach would be technically possible, this could be resource intensive due to the large number of Information Papers. ASOC also noted that invited experts can only introduce Information Papers. As such, an on-line discussion forum would preclude discussion of all papers submitted from those invited experts. Several Members indicated a desire for more time to consider this proposal.

(17) France agreed to reflect further on the idea during the intersessional period with other interested Members for possible further consideration at the next Meeting.

(18) New Zealand introduced WP 24 *Improving the CEP's Role in Advising the ATCM on the State of Antarctic Environments* recalling lengthy discussions on how the CEP might meet one of its core functions of advising the ATCM on the state of the Antarctic environment as required by Article 12 (1) (J) of the Protocol. New Zealand suggested that it could be argued that the Committee is already going some way towards meeting this requirement, in that regular meetings and intersessional work of the Committee have provided a significant body of advice to the ATCM. Modifying CEP's working practices would help to ensure that it is dealing with priority issues in a targeted and efficient manner.

(19) New Zealand made a series of recommendations to the CEP noting that these did not constitute a significant departure from the way the CEP currently works, but did include modifications in order to make the CEP more dynamic and responsive to key environmental risks.

(20) Brazil considered that WP 24 proposed interesting mechanisms which could help the Committee to deal with the priority issues defined in the five-year work plan. However, some of the proposals may need further consideration, possibly through intersessional discussions.

(21) Australia supported the concept of taking a more strategic approach to the CEP's work as outlined in the paper and endorsed a number of recommendations contained in the paper, including:

- the need to adopt the five-year work plan and use it to set the CEP's agenda;
- encouraging increased engagement from Parties, Observers and experts in intersessional work;
- seeking dedicated support from the Secretariat for project work; and
- changing the structure of the CEP report to make its advice to the ATCM explicit.

(22) The UK also emphasised the importance of taking a more strategic approach to the CEP's work noting that it could take decisions to drop certain items and take a proactive approach to deciding on the advice required by the ATCM.

(23) With no further comments the Chair noted that WP 24 would be further considered under Agenda item 9b.

(24) The CEP Chair introduced WP 29 rev.1 *A Five-Year Work plan for the CEP: Report on Intersessional Review* (New Zealand). The Chair reminded the Committee that a draft five-year work plan, which was endorsed on a provisional basis by CEP X, had been made available on the CEP Discussion Forum to provide an opportunity for all Members to comment further on it during the intersessional period. The Chair noted that the comments received had been included in the current version of the work plan appended to the paper.

(25) The CEP Chair noted that of the comments received during the intersessional period, Members had indicated their support for taking a more strategic or prioritised approach to the work of the Committee. Several Members also stressed the need to retain flexibility within the work plan; the need to ensure that Members have the opportunity to raise additional subjects at meetings of the Committee at any time, and the requirement to regularly review the work plan to make sure it remains relevant and up-to-date.

(26) In response both Brazil and the US noted that the mechanisms for working would need to depend on the issue in question and the resources available. The US suggested that even spending half a day at a CEP meeting on a particular topic may assist in making a leap of progress. Several Members also encouraged greater participation in intersessional activities and discussion groups to assist in taking matters forward.

(27) France, supported by Germany, noted that the use of the priority words "high", "medium" and "low", implied possible disregard by the Committee of issues given a "low" status. Instead France suggested the use of a numbered ranking system, with which the Committee agreed.

(28) The Chair recommended that the work plan be modified to include the numbered ranking system, and was considered again under Agenda item 8, when the Committee discussed the issue of non-native species, (Appendix 1, page 463). As this matter had received the highest rating in the work plan, it would be a useful "test case" to plan the CEP's work on this issue over the next few years. At the Chair's suggestion, the work plan was considered again when the Committee prepared its Agenda for CEP XII.

(29) The Committee adopted the five-year work plan contained in Appendix 1.

(30) Brazil introduced WP 57 *Report on Effectiveness of Trial Informal Group* summarising the lessons learned from operating the Trial Informal Group (TIG) established to review protected and managed area management plans. Brazil noted that the group worked via electronic means to review the management plans it was tasked with assessing. The TIG had developed a useful checklist which had greatly assisted the group in reviewing management plans in a comprehensive, systematic and clear manner. The group concluded that the whole process of evaluation, once internal operational procedures were established, was quite successful as:

- it provided useful advice in a focussed structured manner;
- participation had been better than in previous ICGs;
- the manner in which the group approached the review process seemed to facilitate the task considerably;
- responses by proponents had indicated that it greatly helped to improve management plans; and
- the development of the checklists was a useful tool for both the TIG and, possibly, by those preparing or revising management plans in the future.

(31) As a result the TIG recommended that:

- the CEP agree to formalise the Trial Informal Group (TIG) as a permanent standing group to review management plans (SGMP);
- the CEP encourage proponents to draw closely on the *Guide to the Preparation of Management Plans for Antarctic Specially Protected Areas* as well as the checklist developed by the TIG, when preparing management plans;
- the CEP encourage proponents to include a summary cover sheet when presenting new or revised management plans;
- the CEP encourage greater participation by Members in the intersessional review of management plans; and
- if the TIG is established on an ongoing basis, proponents should be encouraged to resubmit modified plans that the TIG has revised, back to the TIG at least 60 days before the CEP meeting.

(32) Many Members commented on how the intersessional work helped countries in the elaboration and revision of management plans, noting the TIG had responded to its mandate in an effective manner.

(33) New Zealand asked whether the TIG had been able to identify opportunities to make management plans more effective. In response Brazil, supported by Australia, commented that the group had engaged in a wide-ranging discussion on matters such as this, but that they had been constrained by their Terms of Reference.

(34) Sweden noted that revision of management plans would be easier to evaluate if they were written in a formalised way. Sweden suggested that the text be harmonised. This work could be taken on by the SGMP.

(35) Australia commented that the TIG had operated as envisaged in its proposal put to CEP X in WP 10.

(36) Russia emphasised the importance of ensuring the efficacy of management plans and that the management measures remained relevant and effective. To this end it was important in establishing such a group on an ongoing basis to ensure its Terms of Reference were appropriate.

(37) Germany questioned what options might be available for the Members and the CEP to gauge the extent to which comments on the management plan had been incorporated by the proponent.

(38) It was noted that some proponents (though not all) had added a further column to the TIG's checklist to indicate how the comments had been addressed and what changes to the management plan had been made. Australia noted that this point lay behind the TIG's

recommendation that management plans revised on the basis of the TIG's advice should then be resubmitted to the TIG for a final review.

(39) Argentina, in supporting the establishment of such a group to assess management plans on an ongoing basis, indicated its desire to ensure that membership of such a group was open to all Members. Argentina also encouraged SCAR participation in the group noting the importance of having scientific advice on key elements of management plans.

(40) In response SCAR indicated that assisting with the review of management plans was a role it had withdrawn from in recent years responding to the CEP's wish to take on the review completely under its own remit, and ensuing changes in SCAR's organisation and the changes to the process by which it engaged with the CEP. Nevertheless, a recent meeting to review SCAR's support to the CEP had recommended that SCAR should engage with the review of management plans, as provided for by Article 6 of Annex V, and it may look to re-engage on assessing those elements of management plans that fell within SCAR's remit. The Committee welcomed SCAR's willingness to look at this issue.

(41) Japan questioned what benefits would be acquired from the formal establishment of such a management plan review group as opposed to continuing with the TIG.

(42) Australia responded noting that assessing new and revised management plans was an ongoing task for the Committee that currently required considerable time at its annual meetings. Establishing a permanent group to undertake this role would provide for consistency and continuity in ensuring that management plans were fit for purpose. It was also noted that a permanent group would also benefit from a consistent membership and an agreed convener.

(43) CEP Advice to the ATCM:

The Committee therefore agreed an outlined proposal for establishing a subsidiary group on management plans (included at Appendix 3, page 473). The Committee forwarded this proposal to the ATCM for approval in accordance with Rule 10 of the CEP's Rules of Procedure.

(44) Pending ATCM approval, the Committee welcomed Ewan McIvor (Australia) as the convenor of the group.

Item 4: Operation of the CEP

(45) The Secretariat briefly introduced SP 3 *Secretariat Report 2007/08*, commenting that the CEP website is now integrated into the ATS website and available in the four Treaty languages.

(46) Members thanked the Secretariat for this important work and noted the ease of use of the new website.

(47) The Secretariat introduced SP 12 *Electronic Exchange of Information System*, recalling that at CEP X the meeting had agreed to continue using the system on a trial basis during the intersessional period. During this period several Members submitted comments and suggestions on the system. The Secretariat had modified the system in response to all the suggestions received and concluded that the trial period could now be considered complete.

(48) Many Members agreed that it was a very useful system and agreed in principle that it should be used. Some noted that they had questions of a technical nature but these could be addressed in the future.

(49) The Committee noted that in accordance with Resolution 6 (2001) some Members met their Article 17 requirements by providing an online report via the Secretariat's website.

(50) The Chair proposed to the meeting that the system could now be used for complying with the requirements of annual environmental exchange of information under Article 17 of the Protocol, noted that the system will evolve to respond to opportunities to further improve the system. The Chair encouraged Members to begin to use the system and will recommend to the ATCM that the system be utilized as a reporting tool for the CEP.

(51) CEP Advice to the ATCM:

The CEP proposes that the Electronic Information Exchange System be utilised as a reporting tool to exchange information required under Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty.

(52) The following papers submitted to meet the reporting requirements under Article 17 of the Protocol, were also submitted under this agenda item:

- IP 14 *Rapport annuel présenté par la France conformément à l'article 17 du Protocole au Traité sur l'Antarctique relatif à la protection de l'environnement 2008* (France)
- IP 15 *Informe Anual del Ecuador de acuerdo con el Artículo 17 del Protocolo al Tratado Antártico sobre Protección del Medio Ambiente* (Ecuador)
- IP 22 *Annual Report Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty* (Ukraine)
- IP 24 *Annual Report Pursuant to the Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty* (Japan)
- IP 25 *Informe Anual de España de acuerdo con el Artículo 17 del Protocolo al Tratado Antártico sobre Protección del Medio Ambiente* (Spain)
- IP 34 *Informe Anual de Acuerdo al Artículo 17 del Protocolo al Tratado Antártico sobre la Protección del Medio Ambiente Periodo 2007 – 2008* (Uruguay)
- IP 36 *Annual Report pursuant to the Protocol on Environmental Protection to the Antarctic Treaty* (Belgium)

- IP 42 *Annual Report pursuant to Article 17 of The Protocol on Environmental Protection to The Antarctic Treaty* (South Africa)
- IP 55 *Report on the Implementation of the Protocol on Environmental Protection as Required by Article 17 of the Protocol* (United Kingdom)
- IP 68 *Annual Report of China Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty* (China)
- IP 71 *Annual Report Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty 2007-2008* (Italy)
- IP 90 *Annual Report of New Zealand pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty 2007/2008* (New Zealand)
- IP 96 *Annual Report pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty* (Peru)

Item 5: International Polar Year

(53) SCAR Introduced IP 59 *International Polar Year 2007-2008 Planning Document: 2008 and Beyond*, stressing that IPY seemed poised to achieve and even exceed its ambitious goals. SCAR noted that IPY will make major advances in polar knowledge and understanding. SCAR also commented that whilst most legacies will take longer to develop, important outcomes and networks are, nevertheless, under development and, with time and continued international co-ordination, they will achieve an exceptional level of interest and participation.

(54) Dr Colin Summerhayes, on behalf of the IPY Steering Committee, noted the significant investment made to date in IPY science and called for sustainable funding to support the IPY legacy. In particular, funding in support of data management, informing the public and leaving a scientific legacy were still needed. Proper data management from IPY activities would be key to the legacy and would require national data co-ordinators who would provide secure data archives.

(55) SCAR noted that the Arctic Council had been asked to support a scoping study on IPY legacy issues and a workshop of stakeholders in IPY legacy topics. The idea to include Antarctic legacy issues into the workshop had been proposed so that it would be bi-polar in character.

(56) ASOC noted its work with the Association of Polar Early Career Scientists (APECS) in preparation for a Polar Youth Forum organised for the time of the 2009 ATCM in the United States, in the context of its IPY endorsed Environmental Legacy Project.

(57) The Committee encouraged Members to consider how further funding might be found in support of IPY legacy events and activities.

(58) Brazil presented IP 125 on the *South American Network on Antarctic Marine Biodiversity (BioMAntar)*, which involves seven South American countries: Argentina,

Brazil, Chile, Ecuador, Peru, Uruguay and Venezuela. It was emphasised that these countries are making an effort to optimise logistics and undertake joint scientific activities in the Antarctic region. Brazil advised the Meeting that one good example of this increasing cooperation is the Latin American consortium for the Census of Antarctic Marine Life (LA CAML). Discussions involving scientists and administrators of these Latin American Programmes had been undertaken during the past three years to identify common scientific interests, research interfaces, sampling protocols, data exchange, and education and outreach activities. It was also noted that the countries are planning joint field work activities for the next austral summer.

(59) Australia commented that this consortium represented an excellent example of Antarctic cooperation and a lasting legacy of IPY.

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

(60) China introduced WP 5 *The Draft Comprehensive Environmental Evaluation for the construction and operation of the Chinese Dome A Station in Antarctica* and IP 4, with the same title, containing the complete draft CEE document. China supplemented its introduction of WP 5 with a powerpoint presentation summarising the proposed activity and the key findings of the draft CEE.

(61) China noted that the draft CEE had been circulated on 31 January 2008, 120 days before CEP XI, in accordance with the requirements of Annex I to the Protocol.

(62) The new Chinese Station is proposed to be located in the hinterland of East Antarctica at the summit in the central part of Dome A ice sheet with an elevation of 4093m (80°222 003 S; 77°212 113 E). The new Station will be located 1228km from Zhongshan Station. The draft CEE, prepared by the Chinese Arctic and Antarctic Administration (CAA) of the State Oceanic Administration (SOA), assessed the impacts arising from the transportation process for cargo and personnel to Dome A, the construction of the station and its ongoing operations.

(63) The location of the station had been selected because it is:

- an ideal site for the study of global climatic and environmental change;
- one of the most suitable sites for obtaining deep ice cores providing a record exceeding one million years; and
- a favourable site for monitoring and detecting global background atmospheric baseline environments; and a suitable site for astronomical observations and ozone monitoring.

(64) The construction of Dome A Station is planned to commence in 2008/09 and be completed in two austral summers, by the 2009/10 season. The station has a design life of 25 years. In the short term it will accommodate 15-20 people for summer only, and in the long term it will be used by 25 people as a year-round station. China noted that the design of the station followed the principles of environmental protection, safety and energy conservation, and that the environmental impact will be minimised during its construction, operation and decommissioning phases.

(65) China noted that the draft CEE had continued to be developed since its circulation to the Parties and to the Committee and particular attention had been paid to issues related to safety of expedition members, energy saving initiatives, scientific study and logistical support activities.

(66) China reaffirmed that the design of the Dome A Station was scientific, rational and technically practicable. China's draft CEE had concluded that the construction and operation of the Station would have no more than minor or transitory impacts on the environment. Moreover, the implementation of the prevention and mitigation measures outlined in the draft CEE would further reduce identified impacts. China considered that the scientific benefits of constructing the station outweighed the identified environmental impacts.

(67) Australia introduced WP 15 *Report of the Intersessional Open-ended Contact Group to Consider the draft CEE for the "Proposed Construction and Operation of the New Chinese Research Station at Dome A"*. Australia recalled that the intersessional contact group had been established in accordance with the *Procedures for consideration of draft CEEs* (Appendix 4 to the Final Report of CEP X) from which its terms of reference had been drawn. Australia noted that ten Members and one observer had participated in the intersessional discussions.

(68) Australia stated that the ICG had determined that the draft CEE generally conformed to the requirements of Article 3 of Annex I of the Environmental Protocol, but that several participants identified a number of matters for which they considered further information or clarification should be provided in the final CEE. In particular, many participants suggested the proponent should consider expanding the scope of the impact assessment to more adequately cover the proposed activities as described. In this respect, it was felt that more attention should be given in the final CEE to:

- the planned transition to a year-round station and the impacts associated with operating a year-round base;
- the research activities to be undertaken at the station, in particular ice core drilling;
- the movement of personnel and equipment through the Larsemann Hills ASMA; and
- the possible use of aircraft at and around the station.

(69) Several ICG participants also suggested the final CEE should provide more details about planned waste management measures, including the handling of human waste during construction and operational phases, the management of ice pits, and the storage and handling of hazardous waste, and plans for fuel handling and storage.

(70) Australia also commented that the ICG had worked well, particularly as a first test for the new procedure adopted at CEP X, and thanked ICG participants for their contribution.

(71) Several ICG participants agreed with the proponent's conclusion that the proposed activity is justified on the basis of the significant contribution it is likely to make to the support and conduct of important science. However, some participants expressed the view that, for a range of reasons identified in the analysis of the draft CEE, it would be more appropriate to conclude that the activity is likely to have more than a minor or transitory impact on the Antarctic environment. A range of editorial suggestions were also put forward by the ICG.

(72) China thanked the CEP Members and, in particular Mr Ewan McIvor for his effective work in coordinating the ICG. China noted that IP 77 *Additional Information on draft CEE on proposed new Chinese Dome A Station in Antarctica*, provided its initial response to each of the points raised by the ICG and that the comments and suggestions received would be taken into account in preparing the final CEE.

(73) Members thanked China for presenting its detailed responses in the form of IP 77. This approach was regarded as a useful model to follow for future draft CEEs.

(74) Ukraine questioned how waste would be handled, noting, for example, that the draft CEE did not estimate quantities of human waste expected to be removed from the station.

(75) China responded that waste management, including quantities, was already addressed in the draft CEE, and additional information will be included in the final CEE.

(76) The Russian Federation congratulated China on its ambitious and pioneering proposal, but recognised the unique difficulties that inland stations presented. Russia commented on the reported power requirements for the new station which were, in its view, insufficient especially when scientific drilling is undertaken. Russia, supported by France, also requested further information on the planned air activities, noting that this would add an increased environmental impact.

(77) Germany expressed a wish to see fuller consideration given to the likely impacts on the Larsemann Hills Antarctic Specially Managed Area, and questioned the time that will be spent transiting through the Larsemann Hills ASMA each season.

(78) New Zealand added that they would like to see more consideration given to cumulative impacts in the document and also to the likely impact on wilderness values. New Zealand noted that consideration of wilderness values more generally was an issue that the Committee may wish to give further attention to.

(79) In response China noted that mitigation measures to reduce impacts on the Larsemann Hills ASMA were contained in the draft CEE. Approximately 10 days would be spent transiting through the ASMA each season. The provisions of the Larsemann Hills ASMA would be fully adhered to. Regarding the planned scientific drilling, China noted that this activity is not envisioned until 2011 and a further environmental impact assessment will be prepared for that specific activity.

(80) With regard to power requirements, China indicated that it would give further consideration to the matter and would provide more details in the final CEE. Regarding air operations, as mentioned in the draft CEE, aircraft will be used for emergency rescue and science support. The plane was likely to be a fixed-wing, ski-equipped aircraft, which would conduct about three rotations to Dome A each season. Fuel for air operations will be stored at a relay site between Dome A and Zhong Shan station. China noted that it would be keen to draw on the experience of those already operating aircraft in inland Antarctica, in planning for these activities.

(81) France noted that the project will contribute to fundamental scientific knowledge and offered to share its experience gained from the French / Italian Concordia Station and noted that a Chinese delegation had been invited to visit this station in the near future. France also commented on the need to minimise duplication of scientific research.

(82) China thanked France and Italy for the invitation to visit Concordia Station and noted that the new Chinese station will adopt an open policy as a science base for other countries in the spirit of the Antarctic Treaty. China responded that before making the plan for constructing the new Dome A Station, it had held some international workshops on the feasibility study on the setting up of the new station to avoid the duplication of scientific activities undertaken by other National Programmes. China noted that it will take the environmental impacts from the scientific programme, including the wilderness values, into account in the final CEE.

(83) The UK thanked China for the draft CEE and the additional information provided in IP 77 which answered many of the questions posed by the ICG, in which the UK had participated. The UK noted the scope of the proposed science programme and agreed with New Zealand on the need for greater consideration of cumulative impact.

(84) Many Members welcomed the scientific benefits that would arise from the new station. Romania also welcomed China's efforts to learn from the experience of other operators, and encouraged China to make use of modern technology to reduce emissions and other impacts on the environment.

(85) China indicated that it is always willing to enhance collaboration and communication with other Parties and also pointed out that as part of its preparation for constructing Dome A Station Chinese professionals and experts had visited the inland stations and obtained significant experience and information.

(86) India congratulated China on the presentation of the draft CEE and pointed out that the impact on the environment appeared to be underestimated. It hoped that the final CEE would incorporate the suggestions given by delegations.

(87) The US noted that for China to ensure that the cumulative impacts of the activities associated with the construction and operation of the new station were fully taken into account it should also take into account the potential impacts of planned scientific activities. The US also commented that the current draft CEE would most likely not account for all activities during the life time of the station and that separate EIAs would be appropriate for unforeseen or as yet unplanned activities.

(88) Norway noted that in the past ice core drilling projects had been subject to CEE level assessment in their own right and queried in that context whether it would be appropriate to do a separate assessment for the scientific activity taken rather than now including it in the final CEE for the Dome A Station.

(89) The Netherlands encouraged China to account for drilling fluids remaining in ice core drill holes in the final CEE.

(90) ASOC commented that every new Antarctic station has a cumulative environmental impact. Construction of the new Chinese station would have impacts on both the wilderness of the high plateau region as well as impacts on the Larsemann Hills ASMA through the logistic support activities of the station. ASOC therefore asked China whether this station will be removed after a certain time and what that time period might be.

(91) China responded that cumulative impacts of the activities would be considered in the final CEE. Regarding the dismantlement of the station, and noting that the station has a design life of 25 years, China noted it would give consideration to the removal of the buildings. China also welcomed the additional comments and noted that it would take these into account in preparing the final version of the CEE. China would also be open to considering further comments on the CEE as it is being finalised and when it is circulated in accordance with Annex I to the Protocol.

(92) China commented that the draft CEE's conclusion raised two issues: whether a CEE should conclude that the activity was likely to have more than a minor or transitory impact; and whether the conclusion of its draft CEE was adequately supported by the information contained in the document. On the first issue, China considered that a CEE could reach one of two conclusions according to Article 3 of Annex I to the Protocol.

(93) China noted that, in general, a CEE would conclude that the activity was likely to have more than a minor or transitory impact. However, compared with other stations recently or soon to be built in Antarctica, the proposed Dome A station was small in scale. A smaller labour force would be involved in its construction and few personnel would stay at the station during its operation. Furthermore, the duration of its operation would be short (only two months each year), including the travel time, for about half of its life span. China noted

that it was available to undertake a further environmental evaluation based on the discussion and the full improvement of the whole plan.

(94) The Chair thanked China for its willingness to consider all of the points raised.

(95) CEP Advice to the ATCM:

The Committee discussed in detail the draft Comprehensive Environmental Evaluation (CEE) prepared by China for "Proposed Construction and Operation of the new Chinese Dome A Station, Dome A, Antarctica" (WP 5 and IP 4). It also discussed the comprehensive report by Australia of the ICG established to consider the draft CEE in accordance with the Procedures for intersessional CEP consideration of draft CEEs (WP 15), and additional information provided by China in response to issues raised in the ICG (IP 77). Those discussions are summarised in paragraphs 60-93 above.

Having fully considered the draft CEE, the Committee advises ATCM XXXI that:

- The draft CEE and the process followed by China generally conform to the requirements of Article 3 of Annex I to the Protocol on Environmental Protection to the Antarctic Treaty. When preparing the required final CEE, the proponent should closely consider, and address as appropriate, the comments raised by Members. In particular, the ATCM's attention is drawn to the suggestion that China should consider expanding the scope of the impact assessment in the final CEE to more adequately cover the full scope of the proposed activity (Section 3.1 of WP 15 and paragraphs 68-89 above).
- The Committee generally agreed with China's conclusion that the proposed activity is justified on the basis of the significant contribution it is likely to make to the support and conduct of important science. Many Members expressed the view that it would be more appropriate for the CEE to conclude that the activity is likely to have more than a minor or transitory impact on the Antarctic environment (Section 3.2 of WP 15).
- The draft CEE is clear and well-structured, and the final CEE could be improved by taking into consideration editorial suggestions raised by ICG participants (Appendix B to WP 15) and by consolidating text to reduce repetition.

General discussion on draft CEEs

(96) Many Members commented on the conclusions that may be drawn by CEEs. Some Members agreed that a CEE could legitimately conclude that the activity in question would have *no more than* a minor or transitory impact, whilst other Members felt that a CEE should inherently conclude that the activity *will have more than* a minor or transitory impact.

(97) Norway noted that the breadth of activities associated with the station previously discussed, in addition to the station itself, justified a conclusion that the impacts will be

more than minor or transitory. Norway noted, however, that a "no more than minor or transitory" conclusion can be reached through a CEE process.

(98) Argentina reminded the Committee that the CEP had discussed this issue before. EIA is a process as represented in *Guidelines for Environmental Impact Assessment in Antarctica* adopted through Resolution 4 (2005). At the time of the preparation of the Guide, it had been concluded that a CEE document will only be prepared on a proposed project which is deemed likely to have more than a minor or transitory impact.

(99) Australia noted that Article 3 of Annex I states *"If an Initial Environmental Evaluation indicates or if it is otherwise determined that a proposed activity is likely to have more than a minor or transitory impact, a Comprehensive Environmental Evaluation shall be prepared"*. The Protocol does not prescribe what the conclusion of the CEE should be, only that a draft CEE must be circulated. As such, the final conclusion should be determined by the impacts identified by the environmental impact assessment process and the extent of mitigation measures. As such Australia believed it is entirely possible that some CEEs could indeed conclude that an activity will not have more than a minor or transitory impact.

(100) France concurred that Article 3 of Annex 1 does not pre-judge the conclusion of a CEE, and that the conclusion of a CEE is not necessarily of fundamental importance. What is important is that a CEE level assessment allows for a detailed analysis of the impacts of an activity and a process of review by the Members and discussion during the CEP meeting.

(101) Spain noted its agreement with Argentina stating that, according to Article 2, Annex I to the Protocol the step up to a CEE from an IEE would be undertaken if the IEE result shows that the level of impact could be more than minor or transitory.

(102) The Czech Republic noted that because the terms "minor or transitory" in the Protocol are not defined, such ambiguity was always likely to remain.

(103) The Chair noted that different views on the conclusions of CEEs clearly remained and that it was unlikely that a consensus view could be reached. Nevertheless, the discussion had been useful, would allow Members to reflect on the points made and could be returned to at future meetings.

(104) Argentina and France welcomed the translation of the non-technical summary of the Chinese draft CEE in to the four Treaty languages, which had assisted intersessional review of the document. Argentina felt that translation of draft CEEs in their entirety, given the technical level of the language used, would be preferable.

(105) The Chair noted that this matter had been raised with the ATCM last year, and that the ATCM had neither agreed nor disagreed with the proposal. The ATCM had simply noted that the budgetary consequences would need to be taken into account. The Secretariat noted that the matter was a financial one as there was currently no Secretariat budget line to provide for translation of draft CEEs.

(106) The Chair noted that an interim solution was to continue to at least provide translations of the non-technical summaries of each draft CEE.

6b) Other EIA matters

(107) SCAR introduced WP 12 *Human Disturbance to Wildlife in the Broader Antarctic Region: A Review of Findings,* provided in response to a request from CEP X to report on the current state of knowledge with respect to human disturbance of wildlife in Antarctica. WP 12 included a comprehensive review paper, entitled: *Review of recent research into the effects of human disturbance on wildlife in the Antarctic and sub-Antarctic region*.

(108) SCAR drew attention to the Working Paper's two major conclusions and three recommendations. Specifically, SCAR noted that the effects of human disturbance on Antarctic wildlife are highly variable and that no 'one size fits all' solution can be applied to managing human disturbance effects on wildlife. SCAR also noted with concern the decline in the number of long-term studies being undertaken and recommended that Parties encourage long-term work that would help improve management of wildlife populations in the region.

(109) SCAR also suggested that site-specific, timing-specific and species-specific studies are required to produce results of use in managing human activities near wildlife aggregations, and that investigations of interactions between human disturbance and other factors affecting wildlife populations, such as climate change and incidental mortality, are urgently required.

(110) The Committee endorsed these recommendations and congratulated SCAR on its excellent report. Many delegations noted the importance of undertaking long-term research, especially in the context of other factors affecting wildlife populations in the region, and that SCAR's report would be invaluable for ongoing discussions on this topic.

(111) In welcoming SCAR's paper, New Zealand noted that the CEP was not endorsing a "one size fits all" approach distance, and suggested that a further review of this matter was required by the CEP.

(112) Australia noted that it placed a high level of importance on providing appropriate guidance and education to its expeditioners and that its current approach distances accounted for different species and stages in their life cycles as well as other factors.

(113) Argentina noted the need to have educational material regarding behaviour around wildlife.

(114) IAATO noted the importance of education in mitigating human disturbance and stated that in its view the current 5 metre rule was regarded as the basic minimum distance; tourists were warned to stay further away if disturbance was perceived to be occurring.

(115) The US, supported by the UK, emphasised SCAR's comment with respect to conducting long-term studies in the context of other influences and noted that this was in

part addressed through CCAMLR's ecosystem monitoring programme, from which the CEP could also benefit. The US noted that the idea of a joint CEP / Scientific Committee workshop was proposed and that discussion of such monitoring studies could form a useful part of that meeting.

(116) The UK urged the need for more studies to better inform management decisions regarding wildlife distances and urged caution against drawing general or generic conclusions from one or two specific case studies. The UK also noted that it would be continuing with its long-term penguin monitoring studies at Port Lockroy and would ensure the data and results were made available in due course.

(117) COMNAP noted that it was preparing an on-line library of current training materials available through national programmes.

(118) The Committee welcomed this initiative noting that it would be a useful means of sharing information and educational material with respect to current approach distances.

(119) France introduced WP 34, *A Mechanism for Centralizing Tourism and Non-governmental Activity Declarations and Authorization Requests Suitable for Taking Cumulative Impacts into Account*. It noted that, although the impact of a single activity in a given site can be assessed as less than minor or transitory, it had became difficult to estimate the cumulative impact of the overall activity resulting from visits of several operators to a given site. France recalled that, according to the Protocol, tourist activity was subjected to a prior environmental impact assessment and that it had to be done based on sufficient information. It also mentioned that several recommendations adopted recently by the ATCM were directly or indirectly related to the cumulative impacts of tourist activity in the Antarctic.

(120) France proposed to establish a mechanism for centralising tourism and non-governmental activity authorisation to allow national competent authorities to be aware of the information and their status, in real time, before October 1st (the deadline for exchanging pre-season information) to better consider the possible cumulative environmental impacts at a given site. France suggested that an ICG should be established to work in close cooperation with the Secretariat to consider such a procedure.

(121) The Committee agreed on the importance of new initiatives to help develop a better understanding of cumulative impacts.

(122) Several Members indicated that they could support France's proposal in principle, but highlighted practical concerns with its implementation bearing in mind significant differences in the way authorising agencies in various countries operated, and the need to avoid duplication of effort between such a centralised system and Parties' own requirements.

(123) Spain stated that in order to avoid a situation whereby individuals were able to elude their own national legislation, those organising non-governmental expeditions should seek authorisation from their own national authorities, according to the provisions of Annex I to the Protocol, Measure 4 (2004) and Resolution 4 (2004).

(124) Several Members and COMNAP noted the importance of having data available on tourism activities, particularly with landings close to stations and bases.

(125) The US suggested the need to have reference to existing data on use of visitor sites.

(126) Argentina noted that relevant information, particularly IEEs on tourism activities, was not always publicly available. Access to such information would be valuable to adequately assess cumulative impacts.

(127) Australia noted that cumulative impact was a vexing issue that the Committee had considered over many years, and that further work was scheduled in the five-year work plan. It considered there may be challenges with France's proposal, and that it may be better to separate consideration of the proposed mechanism from further work to understand cumulative impacts.

(128) IAATO thanked France for WP 34 and the useful discussion. IAATO had some concerns with the assumption that cumulative impacts could be linked only to numbers of visits and/or visitors, noting that consideration had been given to the complexity of issues surrounding assessment of cumulative impacts for many years. That said, IAATO supported the concept of a single database of information on all visitor activities as good cooperation and coordination is integral to successful management.

(129) IAATO also noted that in addition to the current distribution of detailed information on Member activities prior to the season to COMNAP and other Parties, they would be pleased to pass this information on to other National Authorities if this would be of use. In addition, following a comment from New Zealand on the important role of guides, IAATO noted that field staff are of key importance in the current mechanism of identifying and assessing potential impacts thus allowing for immediate action to be taken.

(130) Argentina questioned IAATO as to whether there is a post-season evaluation of the differences between planned and actual activities.

(131) IAATO said that estimates from field staff indicate a 10 – 15% change from the pre-season planning.

(132) IUCN urged that a comprehensive review of Antarctic tourism be undertaken so as to better inform appropriate management measures.

(133) New Zealand raised the idea of a detailed study at a highly visited tourist site to gather hard data to help inform the process of assessing cumulative impacts.

(134) CEP Advice to the ATCM:

The Committee discussed the proposals set out in WP 34. Whilst several Members expressed in-principle support, a number of concerns were raised regarding the practical implementation of the proposed database. The Committee reinforced the importance of adequately assessing cumulative impacts at regularly visited sites, but noted the challenges

involved in gathering appropriate information and data. Noting that WP 34 would be considered also by the ATCM through its Tourism Working Group, the Committee agreed that it would await the outcomes of that discussion before assessing how it might contribute further to the issue.

(135) The United Kingdom introduced WP 60 *Quantifying Atmospheric Emissions in Antarctic Comprehensive Environmental Evaluations* reporting on an analysis of the emissions estimated in final CEEs prepared since 1989. The UK noted the wide variety of chemical species reported on, and the range of different methodologies used in the final CEE produced since the Environment Protocol entered into force.

(136) To assist Parties compiling final CEEs, the UK proposed to develop a common approach to emission reporting in CEEs based on existing agreed international standards. If the CEP considered that this might be a useful approach, the UK indicated that it would be willing to prepare a more detailed paper, in conjunction with interested Parties, for consideration at CEP XII.

(137) Many Members and ASOC indicated their support for the UK , recognising the benefits of being able to have a consistent approach to calculating emissions, not least when preparing CEEs.

(138) China commented that whilst this appeared to be a useful proposal it may not be a priority matter for the Committee. China also expressed concern that the CEP should not be duplicating efforts of other organisations, particularly with respect to CO_2, which was not considered to be a pollutant by some countries.

(139) Germany and the US expressed caution over attempting to set standards for calculating emissions, with many countries bound by their own domestic standards.

(140) In supporting the proposal Russia noted the EU standards on transboundary transfer of pollutants may be a useful reference.

(141) COMNAP offered assistance to the UK of its Energy Management Network which had embarked on drafting proposals for indicators of energy consumption, noting that whilst the level of Antarctic CO_2 emissions were insignificant compared to global emissions, the world was watching Antarctica and it was therefore important to take an appropriate leadership and educational role in the Antarctic context.

(142) In responding the UK welcomed the feedback provided, noting that it was not intended that any common approach would supersede national requirements or other accepted standards. It also recalled that its proposal was to identify a common approach to calculating emissions in CEEs for activities undertaken in Antarctica. The UK also agreed with COMNAP that whilst the contribution of Antarctic emissions to global emissions was negligible, there was an opportunity for Antarctica to set an example to the rest of the world.

(143) The Committee encouraged the UK and other interested Parties to further develop the proposal for consideration at CEP XII.

(144) The Secretariat introduced SP 8 covering the *Annual list of Initial Environmental Evaluations (IEE) and Comprehensive Environmental Evaluations (CEE) prepared between April 1st 2007 and March 31st 2008*, noting that information had been received on more than 80 EIAs from 15 Parties. The Secretariat also noted that the web based EIA database now contained entries on 677 EIAs, many of which also include the actual EIA document in electronic format.

(145) Romania introduced IP 1 *Initial Environmental Evaluation Law-Racovita Base*, on the assessment of impacts associated with scientific and logistic activities at Law-Racovita Base, Larsemann Hills, during the Romanian Antarctic Expedition 2008/09. The adverse impacts on the environment will be minor.

(146) India introduced IP 16 *Update on the Comprehensive Environmental Evaluation of New Indian Research Base at Larsemann Hills, Antarctica.* India informed the Meeting that a preliminary design of the station was prepared and that, during the 2007/08 season, further studies were carried out in Larsemann Hills. Construction of the station will start in summer 2009/10 and it will be commissioned in 2010/11.

(147) Belgium requested clarification on the timing of the circulation of India's final CEE, and expressed its concern over potential impacts on the lakes in the area, in particular lake 7, in which unique species and a rich biodiversity had recently been identified.

(148) India confirmed that the final CEE would be circulated at least sixty days before the commencement of the activities in accordance with the requirements of Annex I to the Protocol. India also stated that it was well aware of the research that had been conducted on lakes in the area, and that lake 7 would not be interfered with.

(149) India introduced IP 26 *Initial Environmental Evaluation for Installation of Earth Station at Maitri, Schirmacher Oasis, Antarctica*, noting that the objective of the activity was to provide better communication and real time data transfer facility between Antarctica and mainland India. Once operational it will help in enhancing the capabilities and efficacies of Indian polar orbiting satellites. The IEE had concluded that the adverse impacts on the environment at the site were no more than minor or transitory.

(150) India also presented IP 49 *Initial Environmental Evaluation for Installation of Wind Energy Generators (WEG) at Maitri, Schirmacher Oasis, Antarctica,* informing the meeting that the long-term data collected on wind speed indicated the potential of harnessing wind energy to convert into electrical energy. The installation of the WEG is planned in the winter of 2008/09 and India concluded that the gains through electricity generation by wind will reduce the sustained impact on the environment. India had concluded that an IEE was sufficient to address the impacts of the activity.

(151) ASOC introduced issues concerning EIA and tourism addressed in IP 41 *A decade of Antarctic tourism: Status, change and actions needed.* ASOC considered that tourism EIAs hitherto had been Initial Environmental Evaluations or Preliminary Assessments, which often did not go into adequate detail about what is actually proposed, and insufficiently

address cumulative impact. EIAs for tourism operations tended to focus on routine activities, without taking into consideration the potential impact of accidents. The EIAs of the largest ship to sail in Antarctica ever, in 2006-07, which carried nearly 3,000 passengers, and of the *M/V Explorer*, which sank in Antarctic waters in November 2007, were used as examples. ASOC recommended CEP look critically at the application of EIA to tourism. EIAs could be conducted for sites for which site-specific guidelines are in place, which are among those under higher tourism pressure, to better assess cumulative impacts.

(152) The US strongly disagreed with ASOC's overarching criticism of the EIA process for tourism activities, particularly with regard to multi-year assessments, and with ASOC's conclusions regarding the level of assessment for the 3000 passenger ship activities.

(153) Russia introduced IP 44 *Results of Russian studies of the subglacial Lake Vostok during the season 2007-2008.* Russia recalled a number of incidents that had occurred in borehole 5G-1 during 2007 that had delayed progress with further drilling of the ice core and penetration of the sub-glacial Lake Vostok. Further attempts would be made towards recovery of the trapped drill, though if this was not successful Russia plans to abandon the area where the drill is trapped and instead drill around the accident area.

(154) As a result of these technical delays, and a delay in collecting further data and information on ice characteristics near the ice sheet bottom, Russia noted that it had not been possible to complete the final CEE for penetration of Lake Vostok. However, Russia stated that it would present the final version of the CEE as soon as electrical-mechanical drilling is stopped close to the lake surface and before commencing with thermal drilling for lake penetration.

(155) Russia also presented IP 45 *On obtainment of permit to authorize activities of the Russian Antarctic Expedition for the period from 2008 to 2012,* on the authorisation process of the Russian Antarctic Expedition for next the 5-year period. Russia said that an IEE was prepared and it indicated that all the considered activities being carried out now and planned to be carried out during the next 5-year period, would have no more than a minor or transitory impact on the Antarctic environment.

(156) New Zealand introduced IP 101 *The ANDRILL Independent Environmental Audit* recalling that the ANDRILL CEE had provided for an independent audit to be undertaken. Such an audit was conducted by the British Antarctic Survey and the Australian Antarctic Division on the ANDRILL McMurdo Sound Portfolio project in November 2007 on the invitation of Antarctica New Zealand.

(157) The audit had concluded that the programme was undertaken in compliance with the Protocol and largely in accordance with the CEE, and that the impacts were believed to be within the environmental limits established in the CEE. The audit provided several recommendations for the ANDRILL partners to consider. New Zealand concluded that such an external audit could be considered a satisfactory way of achieving the requirements of Resolution 2 (1997), and encouraged other Members to provide for such audits for activities carried out under CEEs.

(158) Australia and the UK thanked New Zealand for the opportunity to carry out the audit and supported the recommendation that Parties use independent audits to assess the findings of CEE level activities, whenever possible.

(159) Ukraine presented IP 102 *On the Issue of the Replacement of Fuel Tanks at Vernadsky Station,* informing the meeting of the progress made in installing new fuel tanks at Vernadsky station. Ukraine also noted that half of one of the old tanks had now been cleared of oil product deposits. It is planned to finish clearing both of the old tanks and to use them as a storage facility for dry solid materials.

(160) Ukraine also introduced IP 124 *Initial Environmental Evaluation "RMM-technology on recycling of solid food wastes at Ukrainian Antarctic Vernadsky station"* on the development and usage of a new technology on recycling of solid food wastes to conform to Article 1(2) of Annex III of Environment Protocol.

(161) Ecuador presented IP 105 *Plan de Manejo Ambiental Estación Maldonado Ecuador* on an environmental management programme at Maldonado Station which included a number of activities such as prevention of environmental impacts, contingency planning, recovering of affected zones, training, monitoring and measures to protect wildlife.

Item 7: Area Protection and Management

7a) Management plans

i. Draft management plans which had been reviewed by the trial informal group

(162) The Committee considered four draft management plans for Antarctic Specially Protected Areas and one draft management plan for an Antarctic Specially Managed Area which had been reviewed intersessionally by the Trial Informal Group (TIG) established at CEP X.

(163) As convenor of the TIG, Brazil presented WP 58 *Review of Draft Management Plans by Trial Informal Group*. Brazil recalled that the TIG had developed a checklist for assessing protected and managed area management plans and informed the Meeting that this had greatly assisted their work. Brazil noted that the draft conclusions of the TIG were made available at the CEP Discussion Forum in the four Treaty languages and feedback was received by several Members and observers.

(164) The TIG had reviewed one ASMA and four ASPA Management Plans in accordance with the terms of reference set by CEP X.

(165) *Draft Management Plan for ASMA No X: South-west Anvers Island and Palmer Basin* – was presented under WP 39 (United States).

(166) The TIG considered that the draft Management Plan was well written and that it adequately addressed the provisions of Annex V and relevant CEP guidelines. The TIG noted that the CCAMLR Scientific Committee had reviewed the draft Management Plan

and had supported the proposal, noting that some minor changes would be required. The TIG recommended only minor amendments to this Management Plan, and the United States submitted a revised draft adequately addressing those recommendations. Separate to the TIG, comments on the draft Management Plan were submitted by ASOC.

(167) The TIG therefore recommended that the CEP adopt the Management Plan for the proposed South-west Anvers Island and Palmer Basin ASMA.

(168) *Draft Antarctic Specially Protected Area (ASPA) Management Plan for Amanda Bay, Ingrid Christensen Coast, Princess Elizabeth Land, East Antarctica* – was presented under WP 19 (Australia and China).

(169) The TIG considered that this draft Management Plan had been prepared to a high standard, and that it adequately addressed the provisions of Annex V and relevant CEP guidelines. The TIG recommended only minor amendments to this Management Plan, and Australia and China submitted a revised draft adequately addressing those recommendations. Separate to the TIG, no comments on the draft Management Plan were submitted by other Members.

(170) The TIG therefore recommended that the CEP adopt the Management Plan for the proposed Amanda Bay ASPA.

(171) *Revised Management Plan for Antarctic Specially Protected Area No 150 Ardley Island, Maxwell Bay, King George Island* – was presented under WP 46 rev. 1(Chile).

(172) The TIG considered that Chile had made good progress with updating the Management Plan for Ardley Island, and that the draft revised Management Plan addressed the provisions of Annex V and relevant CEP guidelines. The TIG recommended only minor amendments to this Management Plan, and Chile submitted a revised draft adequately addressing those recommendations. Separate to the TIG, comments on the draft Management Plan were submitted by Germany and ASOC.

(173) The Trial Informal Group recommended that the CEP adopt the revised Management Plan for ASPA 150, Ardley Island.

(174) *Revised Draft Antarctic Specially Protected Area Management Plan for Mount Harding, Grove Mount, East Antarctic* – was presented under WP 52 (China).

(175) The TIG considered that the draft Management Plan should be modified to more closely comply with the provisions of Annex V and relevant CEP guidelines. The TIG recommended a number of changes to this Management Plan, and China submitted a revised draft adequately addressing those recommendations. Separate to the TIG, comments on the draft Management Plan were submitted by Australia. Australia indicated that the revised draft Management Plan adequately addressed those comments.

(176) The Trial Informal Group recommended that the CEP adopt the Management Plan for the proposed Mount Harding ASPA.

(177) *Antarctic Specially Protected Area (ASPA) Management Plan for Marion Nunataks, Charcot Island, Antarctic Peninsula* – presented under WP 53 (United Kingdom).

(178) The TIG considered that the draft Management Plan was well written and that it adequately addressed the provisions of Annex V and relevant CEP guidelines. The TIG recommended only minor amendments to this Management Plan, and the United Kingdom submitted a revised draft adequately addressing those recommendations. Separate to the TIG, no comments on the draft Management Plan were submitted by other Members.

(179) The Trial Informal Group recommended that the CEP adopt the Management Plan for the proposed Marion Nunataks ASPA.

(180) The Committee thanked the TIG, and its coordinator Tânia Brito in particular, for the valuable work done during the intersessional period in assessing these management plans and for the advice it had provided.

(181) With regard to the new draft management plans for South-west Anvers Island and Palmer Basin ASMA, and Marion Nunataks ASPA, the Committee agreed that these plans could be forwarded to the ATCM for adoption.

(182) Romania suggested that China consider including soil micro organisms in the ASPA Management Plan for Mount Harding.

(183) China stated that the primary consideration of the ASPA in Mount Harding is to protect the unique geomorphological features. The new finding of microbiological organisms in the cold desert soil in Mount Harding made by Romanian scientists is interesting, but needs further investigation. China would like to consider it in the future.

(184) With regard to the new draft Mount Harding Management Plan Japan asked for clarification with respect to prohibitions on bringing fauna and flora in to the protected area. With some minor changes to the text the Committee endorsed the Management Plan and forwarded it to the ATCM for adoption.

(185) With regard to the new draft Amanda Bay Management Plan, Japan asked for clarification with respect to the management of human waste in the area. Following clarification of this issue from Australia, the Committee agreed to forward the Management Plan to the ATCM for adoption.

(186) Regarding the revised Management Plan for ASPA 150, Ardley Island, Germany reminded the meeting that it was working towards the development of a future ASMA for Fildes Peninsula, which includes Ardley Island, and therefore it considered that the review of the ASPA Management Plan should be considered as part of the process for designating the ASMA in Fildes Peninsula. Besides, some comments from Germany made in the intersessional work were not properly reflected. Germany therefore noted that it could not approve the revised ASPA during the meeting and recalled that the existing Management Plan remains in force until 2010.

(187) Chile responded that it had not anticipated comments from Germany after the review process by the TIG. Chile noted that the current version of the Management Plan was adopted in 1991 and that this updated draft addressed the latest knowledge of the site and included new measures for improved protection. Several delegations supported the comments made by Chile.

(188) Some delegations asked Chile for more clarification on the change in the boundaries of the ASPA to allow tourism visits to some areas that now would be outside the boundaries of the protected area. ASOC noted that tourist activity associated with any ASPA could set a bad precedent for the Antarctic protected area system.

(189) In responding to these questions Chile noted that confusion had existed among the various activities occurring in the area. As a result a very well differentiated coastal zone was removed from the boundaries of the ASPA to provide a buffer zone so as to avoid impacts on the values of the area from tourism activity.

(190) As result of discussions, Chile agreed to continue discussing the future of Fildes Peninsula in the framework of an international working group (IWG) on Fildes, but making it clear that terms of reference for that group should recognise that Ardley Island is an existing ASPA designated and adopted by the ATCM.

(191) Germany agreed and noted that the terms of reference in the work plan for the future activities of the IWG agreed by this working group were distributed and would be made available on the IWG web-based discussion forum after the Meeting.

(192) The Committee agreed to send this Management Plan for further intersessional review.

ii. Draft revised management plans which had not been reviewed by the trial informal group

(193) The Committee considered revised management plans for the following Antarctic Specially Protected Areas (ASPAs) under this category:

- WP 7 *Five Years Review of Antarctic Specially Protected Area (ASPA) No 161 Terra Nova Bay, Ross Sea* (Italy)
- WP 8 *Revised Management Plan for Antarctic Specially Protected Area No 138 Linnaeus Terrace, Asgard Range, Victoria Land* (United States)
- WP 9 *Revised Management Plan for Antarctic Specially Protected Area No 137, North-west White Island, McMurdo Sound* (United States)
- WP 13 *Revised Management Plan for Antarctic Specially Protected Area No 106 Cape Hallett, Northern Victoria Land, Ross Sea* (United States)
- WP 14 *Revised Management Plan for Antarctic Specially Protected Area No 124 Cape Crozier, Ross Island* (United States)
- WP 25 *Review of Antarctic Specially Protected Area (ASPA) No 105, 118, 154, 155 and 156* (New Zealand)

- WP 31 *Review of Management Plans for Antarctic Specially Protected Areas (ASPAs) 135, 143, 160* (Australia)
- WP 32 *Review of Antarctic Specially Protected Area (ASPA) No 141* (Japan)
- WP 37 *Revised Management Plan for Antarctic Specially Protected Area No 123 Barwick and Balham Valleys, Southern Victoria Land* (United States)
- WP 47 *Revised Management Plan for Antarctic Specially Protected Area No 125, Fildes Peninsula, King George Island (Isla 25 De Mayo)* (Chile)

(194) In introducing WP 7, Italy noted that there had been no substantial changes made to the provisions of the existing Management Plan. Italy noted that the changes related to the supporting bibliography, the new projects to be undertaken in the area, a small addition on the presence of cetacean species and new information regarding the Antarctic silver fish, *Pleurogramma antarcticum* around the Terra Nova Bay ASPA.

(195) Noting the minor changes to the Management Plan, the Committee agreed to forward it to the ATCM for adoption.

(196) In introducing its five revised ASPA management plans the United States noted that:

- No substantial changes had been made to the existing Management Plan of ASPA 138 (Linnaeus Terrace). The boundaries of the Area remained the same and only minor edits and corrections had been made to the description of the Area and plan policies.
- No substantial changes were made to the Management Plan of ASPA 123 (Barwick and Balham Valley). Changes in the Management Plan were limited to minor edits and corrections to the description of the area and plan policies.
- Some substantial changes had been introduced in the Management Plan of ASPA 137 (North-west White Island). These related to the extension of some boundaries, clarification and improvement of the aircraft access guidelines, and improvement of precautions against alien introductions.
- Substantial changes were also introduced to the Management Plan of ASPA 124 (Cape Crozier). These related to changes in the boundaries of the ASPA, changes in the values to be protected; the scientific activities permitted in the area; clarification in the aircraft access guidelines and more restrictions on aircraft activities in the area.
- Substantial modifications had been made to the Management Plan of ASPA 106 (Cape Hallett). These related to changes in the boundaries of the ASPA, the description of the values of the area, improvements in the description of the objectives of the ASPA, updating of maps, as well as additional controls on access to and movements within the Area. The somewhat novel approach proposed with the revised Management Plan was to include a flexible boundary that was defined by the extent of the penguin colony. The US noted that this

approach of using a biological feature to delineate the area was not entirely without precedent and was currently used for Beaufort Island, ASPA 105. Nevertheless, the US suggested that this Management Plan be sent for intersessional review.

(197) The Committee also endorsed the changes to the Management Plan for ASPA 124 (Cape Crozier) and agreed to forward this revised Management Plan to the ATCM for adoption.

(198) With respect to the revised management plans for ASPAs 123 (Barwick and Balham Valley), 137 (North-west White Island) and 138 (Linnaeus Terrace), Japan suggested minor changes to specific parts of the text. With these changes the Committee endorsed the management plans and agreed to forward them to the ATCM for adoption.

(199) With respect to the revised ASPA 106 (Cape Hallett) Management Plan, Japan indicated that imprecise boundaries such as those proposed, provided particular difficulties in adopting such plans in Japanese law. Japan welcomed the opportunity to discuss this matter further in the intersessional period.

(200) New Zealand presented WP 25 on the review of five ASPA management plans: ASPAs 105 (Beaufort Island), 118 (Mount Melbourne), 154 (Botany Bay), 155 (Cape Evans) and 156 (Lewis Bay). New Zealand noted that the review process for ASPA 105 had been initiated, but could not be completed as local sea ice conditions did not allow a visit to take place in the 2007/08 season. In informing the Committee on changes made to the management plans of these ASPAs, New Zealand noted that:

- there had been only minor changes made to the provisions of the existing Management Plan of ASPA 118 (Mount Melbourne);
- some substantial changes were introduced in the existing Management Plan of ASPA 154 (Botany Bay), relating to the re-drawing of the Managed Zone boundary, permits for access to the area for conservation visits to historic sites, and substantial changes in the maps to include vegetation cover;
- a substantial change had been made to the provisions of the existing Management Plan for ASPA 155 (Cape Evans) to allow vehicle access into the area. This change was required to overcome the immediate extreme risk to the hut from ice and snow build up. Vehicles will be used for ice and snow removal; and
- no changes to Management Plan for ASPA 156 (Lewis Bay) were proposed given the enduring nature of the values and the absence of any other concerns regarding the Area.

(201) With only minor changes to the Management Plan for ASPA 154 (Botany Bay), the Committee agreed to send the management plans for ASPAs 118 (Mount Melbourne), 154 (Botany Bay) and 155 (Cape Evans) to the ATCM for adoption, noting the existing Management Plan for ASPA 156 (Lewis Bay) remains extant.

(202) Australia presented WP 31 on the review of three management plans: ASPAs 135 (North-east Bailey Peninsula), 143 (Marine Plain), 160 (Frazier Islands) noting that:

- no changes were required to the Management Plan for ASPA 143 (Marine Plain);
- changes to the Management Plan for ASPA 135 (North-east Bailey Peninsula) included new provisions to allow for limited and appropriate vehicle access for the purposes of safe maintenance of essential communications equipment, updating of the list of supporting documentation and updating of the appendixes summarising species information;
- an introduction had been added to the Management Plan of ASPA 160 (Frazier Islands), an appendix on observations of southern giant petrel was updated, the provisions for conducting censuses of this species were modified, and the supporting documentation was updated.

(203) With respect to the revised Management Plan for ASPA 135, Japan asked Australia for clarification regarding the use of vehicles which was not in the current Management Plan. Also with respect to the revised Management Plan for ASPA 160, Japan asked Australia for clarification regarding the change in the length of time allowed for censuses. Australia explained the reasons for these changes and the Committee agreed to forward the management plans to the ATCM for adoption. The Committee also noted that the Management Plan for ASPA 143 had been reviewed and required no revision.

(204) In presenting WP 32 on the issue of ASPA 141, Japan informed the Meeting that a visit by the Japanese Antarctic Research Expedition to the area in February 2008 indicated that no changes to the value of the Area's unique ecosystem were observed, and therefore, the Management Plan was still effective.

(205) The Committee agreed, noting that the existing Management Plan remains in force.

(206) Chile introduced WP 47 *Revised Management Plan for Antarctic Specially Protected Area No 125, Fildes Peninsula, King George Island (Isla 25 de Mayo)*. Chile noted that the area was currently insufficient to protect the fossils found in the area. Following recent studies in the region, the area of the ASPA was being extended to include eight areas containing fossils.

(207) Germany thanked Chile for developing the revised plan and agreed that extra protection was required in this area. However, recent German findings differed from those presented by Chile with respect to the precise areas requiring protection. Germany referred to its earlier intervention with respect to developing a broader ASMA for the Fildes Peninsula region, noting that this Management Plan should also be included in the broader review.

(208) The Committee agreed to refer the Management Plan for further intersessional review.

iii. New draft management plans for protected/managed areas

(209) After a presentation by Korea, the Committee considered WP 3 *Proposal for a new Antarctic Specially Protected Area at Narêbski Point, Barton Peninsula, King George Island* (Republic of Korea,). Korea noted that the area had high species richness of flora and fauna, and the abundance of some of these was, in some cases, exceptional. The cover of mosses, lichens, and grasses was very extensive. The area contains the largest Chinstrap penguin colony in King George Island, a large number of gentoo penguins and breeding areas of seven other birds. As such, the area provides exceptional opportunities for the scientific study of terrestrial biological communities. The Management Plan aims to protect the unique terrestrial ecosystem found in the Area and, in particular, to reduce the risk of invasive species introductions from both local and global sources.

(210) The Committee thanked Korea for its presentation and agreed to refer this new ASPA Management Plan for intersessional review.

(211) Argentina noted that it would be pleased to participate in this intersessional review and provide data and information, given its scientific experience in the area.

(212) CEP Advice 4 to the ATCM:

The Committee had before it 21 new or revised protected or managed area management plans. Five of these had been subject to review by the Trial Informal Group (TIG) established by CEP X. 16 new or revised management plans had been submitted directly to CEP XI.

In reviewing the advice of the TIG, and following the Committee's assessment of those plans that had not been subject to intersessional review, the Committee decided to:

- Forward the following 14 management plans to the ATCM, with the recommendation that they be adopted by AT:

#	**Name**
ASMA new	*South-west Anvers Island and Palmer Basin*
ASPA new	*Mount Harding, Grove Mount, East Antarctic*
ASPA new	*Amanda Bay, Ingrid Christensen Coast, Princess Elizabeth Land, East Antarctica*
ASPA new	*Marion Nunataks, Charcot Island, Antarctic Peninsula*
ASPA 118	*'Cryptogam Ridge' Mount Melbourne, Victoria Land*
ASPA 123	*Barwick and Balham Valley, Victoria Land*
ASPA 124	*Cape Crozier, Ross Island*
ASPA 135	*North-eastern Bailey Peninsula, Budd Coast, Wilkes Land*
ASPA 137	*North-west White Island, McMurdo Sound*
ASPA 138	*Linnaeus Terrace, Asgaard Range, Victoria Land*
ASPA 154	*Botany Bay, Cape Geology, Victoria Land*
ASPA 155	*Cape Evans, Ross Island*
ASPA 160	*Frazier Islands, Wilkes land, East Antarctica*
ASPA 161	*Terra Nova Bay, Ross Sea*

- Forward the following four management plans for further intersessional review:

#	Name
ASPA new	*Narębski Point, Barton Peninsula, King George Island*
ASPA 106	*Cape Hallett, Victoria Land*
ASPA 125	*Fildes Peninsula, King George Island, South Shetland Islands*
ASPA 150	*Ardley Island, Maxwell Bay, King George Island*

The Committee also advised that the following three management plans had been reviewed according to the requirements of Annex V, but no changes had been made and therefore the existing plans remain in force:

#	Name
ASPA 141	*'Yukidori Valley', Langhovde, Lützow-Holmbukta*
ASPA 143	*Marine Plain, Mule Peninsula, Vestfold Hills, Princess Elizabeth Land*
ASPA 156	*Lewis Bay, Mount Erebus, Ross Island*

iv. Other matters relating to management plans for protected / managed areas

(213) The Chair noted Secretariat Paper 6 *Register of the Status of Antarctic Specially Protected Area and Antarctic Specially Managed Area Management Plans* recalling that this information is available online at the CEP website.

(214) Romania presented IP 64 *Grove Mountains, East Antarctica - between scientific research and environmental protection,* on the field-based research in the region since 2003, during the Chinese Antarctic Expedition. Romania suggested that the objectives of a future Management Plan of Grove Mountains should include also biological data of the area and that it will make efforts to increase knowledge of the environmental importance of the Area, and the impacts of human activities.

7b) Historic sites and monuments

(215) Chile introduced WP 61 *Antarctic Protected Area System: Revised List of Historic Sites and Monuments Measure 3 (2003) Guidelines for its Application,* recalling earlier decisions taken by the ATCM to manage historic sites and monuments, including Resolution 4 (2001), and Resolution 8 (1995). Chile also recalled that through Measure 3 (2003) the ATCM consolidated the "List of Historic Monuments Identified and Described by the Proposing Government or Governments" updating the information and removing sites or monuments which no longer exist.

(216) Chile considered that taking these provisions into account it still remains important and useful to consolidate the existing provisions on HSMs, in order to maintain and improve the quality of the protection afforded to the present sites and monuments, and appropriately build on the established rules and procedures to manage the List of Historic Sites and Monuments. Therefore Chile proposed new guidelines to focus on the ATCM List of Historic Sites and Monuments as a more comprehensive management tool.

(217) Several Members supported Chile's proposal in principle, noting some concerns over certain aspects of the proposed guidelines. The Committee agreed to ask Chile to coordinate an intersessional review of the proposed guidelines, together with interested Members and to present an updated version to the next meeting.

(218) The other paper submitted under this agenda ítem was IP 12 *Recuperación del Sitio Histórico Nº 56 Base Aérea Antártica "Pdte. Gabriel González Videla"* (Chile).

7c) Site guidelines

(219) Ukraine introduced WP *2 Site Guidelines for Wordie House, Winter Island, Argentine Islands*, (United Kingdom & Ukraine). Ukraine noted that Wordie House is the site of the British 'Base F', which had been recognised for its historical importance and adopted as HSM 62 in 1995. The UK had carried out a heritage survey in February 2007- this included a detailed description of the site with recommendations for its future management. Vernadsky station undertakes management of the Base "F" on behalf of the UK.

(220) In presenting WP 40, *Site Guidelines for Shingle Cove, Coronation Island,* the United Kingdom recalled that the area is located on the southern shore of Coronation Island, opposite to Signy Research Station (UK). The UK emphasised that it is a biologically rich site. The aim of the site guidelines was primarily to protect nesting snow petrels from human disturbance.

(221) The United Kingdom also introduced WP 44, *Site Guidelines for Devil Island, Vega Island.* Devil Island is a narrow island lying in the centre of a bay on the north coast of Vega Island. This small island is a popular landing site for visitors and possesses a large breeding colony of Adelie penguins (approximately 8,500 pairs). Skuas also breed there, while other bird species, including kelp gull, sheathbill and Wilson's storm-petrel are suspected to nest on the island. A number of plant species are observed on the higher slopes of the north eastern peak and a large area of moss species is situated on the flat area behind the penguin colony.

(222) The UK thanked IAATO for its assistance and support in drawing up all three of the Site Guidelines.

(223) On behalf of its co-authors Norway introduced WP 56, *Site Guidelines for Whalers Bay, Deception Island, South Shetland Islands,* (Argentina, Chile, Norway, Spain, UK and US, in conjunction with IAATO and ASOC), noting that it was pleasing to see so many Site Guidelines on the Agenda. Whalers Bay is located on Deception Island, South Shetland Islands and over the last 10 years has continuously been one of the most visited tourist sites in Antarctica. The entire site is recognised for its historical importance and has been adopted as HSM 71 in 2003. The site also has important wilderness and environmental values, a number of bird species breed in the area, and several seal and penguin species use the beach as a resting place. Important or unique floral species and assemblages are also present.

(224) Norway recalled that the Management Plan for ASMA 4 includes a conservation strategy for Whalers Bay, which included a Code of Conduct for Visitors to the site. The Deception Island Management Group saw merit in reformatting the Code of Conduct to be consistent with guidelines adopted for other sites. The Deception Island Management Group therefore recommended the CEP submit these site guidelines for Whalers Bay for endorsement by the ATCM.

(225) Argentina introduced WP 59 *Guidelines for Half Moon Island, South Shetland Islands* stating that the growing number of visitors that had been in evidence at this site during past years, which had reached 15,000 tourist landings from 30 cruise ships during the 2006/07 season, had turned the site into one of the four most visited tourist locations in Antarctica. Argentina proposed these guidelines in order to improve protection measures associated with potential impacts from visitors on the flora and fauna present on the island. Argentina also advised that Cámara Station is not part of the area considered in the guidelines.

(226) IAATO noted that it was pleased to work in conjunction with Parties on development of these guidelines.

(227) In presenting WP 45 *Site Guidelines for Cape Hallett, Northern Victoria Land, Ross Sea,* the United States informed the Meeting that, since the guidelines were associated with the revised Management Plan for Antarctic Specially Protected Area No 106, and the Management Plan was referred for intersessional review, it had decided to postpone the site guideline proposal for CEP XII.

(228) Several Members made comments on particular issues regarding the proposed site guidelines, mainly connected with the description of values to be protected, total number and time ashore of visitors permitted, movement of visitors though the landing areas, and cleaning procedures before landing. On this issue, IAATO reminded the meeting that for IAATO visitors the site guidelines were complemented by a suite of management provisions aimed at minimising disturbance.

(229) Regarding the site guidelines proposed for *Wordie House, Winter Island, Argentine Islands* in WP 2 some delegations expressed concern about a reference made in a footnote to a particular national policy on visits to historic sites. The UK noted with regret that although there was consensus on the guidelines themselves it had not been possible to agree revised wording for the footnote on UK management of this base. Reluctantly, the co-proponents, UK and Ukraine, had decided to withdraw the proposal from the CEP meeting. The UK assured the Committee that the existing good management practices would continue to be followed and the draft site guidelines would be passed to IAATO for implementation by its members.

(230) IAATO expressed its disappointment that these guidelines were not agreed. It assured the Committee that IAATO members would follow the provisions of the proposed guidelines.

(231) After modification by the proponents of some topics proposed by Members, the Committee endorsed and recommended the approval by the ATCM of the following site guidelines:

- Shingle Cove, Coronation Island
- Devil Island, Vega Island
- Whalers Bay, Deception Island, South Shetland Islands
- Half Moon Island, South Shetland Islands

(232) IAATO introduced IP 82 *Update on the Antarctic Peninsula Landing Site Use and Site Guidelines* focusing on the application of the ATCM site guidelines during this past season, level of use and relevant issues. IAATO highlighted the importance placed on education to ensure continued good understanding and compliance with the guidelines and noted that the organisation was developing an online field staff training and assessment programme. IAATO also drew attention to key issues which need to be addressed to ensure continued success of the ATCM site guidelines: the need for an efficient systematic review process of the guidelines; the importance of good coordination between all visiting parties and assurance that all visitor activities are included in a single tourism database.

(233) After this presentation, France posed a general issue related to the visitor site guidelines objectives and effectiveness, noting that several guidelines adopted during the last three years had standard wording, which was not related to the specific characteristics of each site. France emphasised some specific issues which should be defined taking into account the site features and its environmental sensitivities such as the distance to approach fauna and the number of people ashore.

(234) Other Members raised issues connected to the maximum number of people including guides inside historic ASPAs and huts and expressed concern on how this was being managed to avoid damage to those values. On this matter IAATO agreed with New Zealand that the number of people inside a hut and in the environs of ASPAs related to historic sites was important to ensure protection of the historic artefacts. IAATO also noted its view that limits were important to safeguard the visitor experience. In areas where space is less constricted, it may be more effective for management purposes to restrict the maximum number of visitors, excluding guides.

(235) ASOC noted that in its view, placing limits to visitor numbers could be used as an environmental management tool at any site as a precautionary action to minimise impacts. Spain showed its agreement with the comments made by ASOC with regard to the benefits for environmental protection entailed by placing limits on visitor numbers in those areas of the Antarctic where environmental precautionary action so requires.

(236) Other Members noted that specific codes of conduct adopted by National Antarctic Programmes for certain sites often visited by tourists could be used as a basis to develop site guidelines as done for Whalers Bay. IAATO noted that when the ATCM site guidelines

were first considered, the ICG, noting the existence of Recommendation XVIII-1, discussed considering the development of a general code of conduct as a 'cover sheet' for the guidelines in due course. IAATO observed that it may now be time reconsider this issue and IAATO would be happy to be involved in drafting any such general guidelines.

(237) Argentina noted that Recommendation XVIII-1 was still not in force. The Chair proposed to transmit to the ATCM the urgency in the approval of this important management instrument to better protect the Antarctic environment from possible impacts associated with tourist activity.

(238) After further interventions on this issue, France agreed to coordinate an intersessional discussion with interested Members, to identify those issues which might constitute general guidance, perhaps as a generic cover sheet to site guidelines, and those issues which merit site specific guidance and report back to CEP XII.

(239) The following paper was also submitted under this Agenda item: IP 6 rev.1 *Antarctic Site Inventory: 1994-2008* (United States).

7d) Systematic environmental geographic framework

(240) New Zealand introduced WP 27 *Systematic Environmental Protection in Antarctica: Final report on Environmental Domains Analysis for the Antarctic continent as a dynamic model for a systematic environmental geographic framework for Annex V of the Protocol*, recalling that, since 2000, it had been working on a systematic environmental geographic framework (SEGF) in order to provide substance to this undefined phrase in Article 3(2) of Annex V of the Protocol.

(241) New Zealand noted that Version 2.0 of the classification framework, identifying 21 different Environments, was the best possible achievement using currently available climate, slope, land cover and geological data. Further continental-scale data (e.g. on lakes, biota, biogeography and soils) would be useful when available. Until then the Environmental Domain Analysis (EDA) addressed the immediate need. Version 2.0 provided a scientifically sound basis for a systematic spatial classification of Antarctica into Environments of quantifiable character. New Zealand suggested that examining environmental risk to Environments poorly represented amongst the existing Antarctic Specially Protected and Managed Areas would be an essential next step for the CEP to take.

(242) New Zealand therefore recommended:

- the EDA to the CEP as a dynamic model for a systematic environmental geographic framework (provided for in Article 3(2) of Annex V of the Protocol) for the Antarctic continent; and
- that the CEP request the support of the Antarctic Treaty Secretariat, specific Parties and/or COMNAP to disseminate the EDA, including making *Environmental Domains of Antarctica Version 2.0 Final Report, Manaaki*

Whenua Landcare Research New Zealand Ltd (Morgan *et al.*, Manaaki Whenua Landcare Research New Zealand, 2007) available on the Antarctic Treaty Secretariat website.

(243) Many Parties congratulated New Zealand on what was a major accomplishment, noting that the model proposed for use by the CEP was the result of sustained work over a number of years. EDA would be a practical systematic tool for the CEP to use to help protect the Antarctic environment. Version 2.0 gave a better characterization of the ice-free areas. As well as including more representative areas, it would be important to look particularly at which Environments were vulnerable.

(244) Australia and COMNAP offered support in making the EDA more widely available. It was noted that EDA was an example of an environmental classification that is also being referred to as bioregionalisation in the marine environment. A number of applications were noted such as the representation of ASPAs and the role of the ASPA system, environmental monitoring, statistics about human activities, assessing risks from invasion of non-native species, its surrogacy value and general conservation planning.

(245) SCAR noted that it was in the process of assessing the EDA using data on terrestrial biodiversity.

(246) Argentina noted that each proposed ASPA would still need to be considered on its own merits.

(247) ASOC also noted that EDA would provide a valuable tool for extending the ASPA system.

(248) The UK noted the similarities between the methodologies and objectives of the environmental domain analysis and the marine bioregionalization work. In particular it highlighted the potential for developing common applications for these marine and terrestrial classifications.

(249) The Committee strongly endorsed the EDA as a dynamic model for the identification of Antarctic Specially Protected Areas within the Systematic Environmental Geographic Framework (SEGF) referred to in Article 3(2) of Annex V, and recommended that the ATCM adopt a Resolution "*Environmental domains Analysis for the Antarctic continent as a dynamic model for a systematic environmental geographic framework*".

7e) Other Annex V matters

(250) The United Kingdom introduced WP 41 *Guidance for Working Papers on Area Protection and Management,* reminding the meeting that the proposal had been considered by ATCM XXX and that Parties had been encouraged to use the guidance during the intersessional period on a trial basis.

(251) Australia suggested a minor amendment to Template A in the document to more accurately reflect the process agreed in Decision 9 (2005) for consultation with CCAMLR

on proposed areas with a marine component. The Committee agreed with this suggestion and endorsed the amended version of the Guide.

(252) The United Kingdom introduced IP 2 *Workshop on Bioregionalisation of the Southern Ocean (Brussels, Belgium, August 2007)*, (United Kingdom and United States) informing the meeting that the aim of the Workshop was to provide a scientific basis for the identification of representative areas for protection in the Southern Ocean. The United Kingdom noted that the results of the Workshop had been endorsed by CCAMLR at its meetings in 2007 and that CCAMLR had agreed that these results were sufficient to allow progress on developing practical approaches to the selection of marine areas for protection.

(253) The United Kingdom also presented IP 3 *Proposed approach for the identification of important marine areas for conservation*, proposing an approach for the identification of important marine areas for conservation based on "Systematic Conservation Planning" methodology, noting that they intend to undertake a pilot study to identify key decisions and data sets required. South Africa offered to provide its expertise in this matter.

(254) Australia and IUCN strongly supported the development of a representative network of protected areas in the Southern Ocean. Australia felt it would be appropriate for the Committee to echo CCAMLR's endorsement of the workshop recommendations and agree that the results can be used by the CEP and CCAMLR to inform marine spatial management.

(255) The Committee agreed that further work on this topic is of key importance and Members were encouraged to continue working with CCAMLR to utilise the outcomes of the CCAMLR-CEP bioregionalisation workshop.

(256) IUCN noted that the ATCM would benefit from endorsing the UK approach described in IP 3 and encouraged other Members to conduct similar studies to contribute to the development of best guidance to identify important marine areas for conservation.

(257) Japan recorded its position that in general the matter of marine protected areas should be mainly discussed in the CCAMLR context.

(258) The United Kingdom pointed out that Article 3 of Annex V of the Protocol confirmed that the development of marine ASPAs and ASMAs is within the CEP's remit, noting that the working relationship with CCAMLR, including through ATCM Decision 9 (2005), was very important. Australia recorded its agreement with the United Kingdom's statements.

(259) The CCAMLR observer informed the CEP that CCAMLR had endorsed the administrative procedures, introduced by the CCAMLR Secretariat in 2007, to ensure that ATCM proposals for protected areas with marine components are reviewed without undue delay by CCAMLR following ATCM Decision 9 (2005).

(260) Germany presented IP 30 *Final Report on the Research Project "Risk assessment for Fildes Peninsula and Ardley Island and the development of management plans for designation as Antarctic Specially Protected or Managed Areas"* informing the meeting that this project had been carried out between 2003 and 2006. The document contained a summary as well

as a detailed version of the report. Germany also made available a CD version of the final report, and informed the Meeting that the full report could also be downloaded from the Umweltbundesamt (UBA) webpage and that the printed version could be sent out to each contracting party on request.

(261) Romania presented IP 64 *Grove Mountains, East Antarctica – Between scientific research and environmental protection*, noting its intention to gather more data.

(262) Brazil introduced IP 117, *The Admiralty Bay ASMA website*, demonstrating the website for the CEP (*www.admiraltybayasma.aq*).

(263) ASOC presented IP 57 *Area Protection: Time for Action*, noting their view that the rolling Annex review process offers an opportunity to both consider the effectiveness of Annex V to deliver best practice area protection for the Antarctic Treaty area, and to review the barriers to effective implementation of current requirements.

(264) Other papers submitted under this agenda item were IP 94 *Ross Sea Heritage Conservation Project: Conservation of Shackleton's Hut, Cape Royds, ASPA 157* (New Zealand), IP 109 *Amundsen-Scott South Pole Station, South Pole Antarctic Specially Managed Area (ASMA 5) First Year Management Report* (United States), and IP 126 *Report of the Deception Island Antarctic Specially Managed Area (ASMA) Management Group* (Argentina, Chile, Norway, Spain, United Kingdom, and United States).

Item 8: Conservation of Antarctic Fauna and Flora

8a) Quarantine and non-native species

(265) Australia introduced WP 16 *Antarctic Alien Species Database*, advising the Meeting that the Australian Antarctic Division maintained a Biodiversity Database in support of the SCAR Life Sciences Program Evolution and Biodiversity in the Antarctic (EBA). This contained species records from the Antarctic and sub-Antarctic, including observations of over 190 alien species. It can be searched by species, geographic region, or alien status (transient, persistent, invasive).

(266) Australia reminded Members that the provisional CEP Five Year Work Plan adopted at CEP X included as a suggested action "establish a database of non-native species occurrences in Antarctica" and therefore Australia recommended that the Committee encourage Members to use the Biodiversity Database as the central database of alien species occurrences in the Antarctic region.

(267) The Committee and SCAR supported the Australian recommendation, with SCAR noting that its EBA committee consistently screened incoming data.

(268) IUCN noted the importance of such databases and highlighted the need for further work on marine alien species.

(269) Australia presented IP 17 *Measures to protect the Larsemann Hills, East Antarctica, from the introduction of non-native species,* (Australia, China, India, Romania and the Russian Federation) noting that, in accordance with the high priority given by the CEP's proposed five-year action plan, the Parties active in ASMA No 6 were instituting a range of precautionary measures aimed at minimizing the accidental introduction of non-native species, and high risk quarantine materials to the Larsemann Hills.

(270) In response to a question from New Zealand, Australia noted that the Parties were in the process of implementing these measures, which were not expected to require significant additional resources. The Larsemann Hills Parties would consider reporting back to future meetings on progress.

(271) Uruguay presented IP 33 *Medidas preventivas para evitar la introducción de especies alienas en la Antártida, en cumplimiento del Anexo II del Protocolo*.

(272) New Zealand presented IP 75 *Non-native Species Incursions at Scott Base, Antarctica* on a significant incursion of vinegar flies *(Drosophilae)* at Scott Base during 2007, and the response and management of that incident. New Zealand noted that the application of the recommendations from the *2006's Non-native Species in Antarctica Workshop* resulted in a more comprehensive reporting system on these sorts of incursions.

(273) A number of Members noted that it was useful to share experiences about the control and eradication of such incursions, which appeared to be linked often to the importation of human food-stuffs.

(274) The United States submitted IP 93 rev. 1 *Non-native Species Awareness Campaign: "Don't Pack a Pest" When Travelling to Antarctica,* on an awareness programme aimed at reducing the risk of introduction of non-native species to Antarctica.

(275) COMNAP presented IP 98 *Survey on existing procedures concerning introduction of non native species in Antarctica,* which was undertaken by its Antarctic Environmental Officers Network (AEON) in regard to existing procedures within National Antarctic Programmes to minimize introduction of alien species. The survey was based on three main topics: awareness programmes; operational procedures; and monitoring/surveillance programmes. COMNAP informed the Meeting that the survey had shown that the issue was already addressed by most National Antarctic Programmes through awareness programs, and that a significant number of Programmes also implemented a range of operational procedures aimed at minimising the risk of introduction of non-native species. Lessons learnt from this survey will be useful to National Antarctic Programmes to continue improve their procedures. COMNAP will keep the CEP informed.

(276) The United States introduced IP 110 *Report on Exploration of Antarctic Subglacial Aquatic Environments; Environmental and Scientific Stewardship.* This made a series of recommendations to help manage risk to subglacial environments while allowing exploration and sampling of these environments to occur.

(277) A number of Members and ASOC congratulated the United States on this important paper. The Chair noted its importance with regards to environmental impact assessment, non-native species and area protection. The Committee agreed to further assess the report intersessionally and looked forward to further discussion at CEP XII.

(278) References were also made to *Aliens in Antarctica*, a SCAR-sponsored IPY project being led by Australia. SCAR noted that further details on the results of the project would be reported to the CEP at future meetings.

(279) The Chair noted that the reports delivered under that agenda item would contribute to the development of the CEP's future work on non-native species as prioritized in the 5 year work plan.

8b) Specially protected species

(280) SCAR introduced WP 10 rev. 1 *Status of the Regional, Antarctic Population of the Southern Giant Petrel – Progress*, and summarized the steps taken by SCAR to advise the ATCM on whether the southern giant petrel should be listed as a Specially Protected Species (SPS) under Annex II to the Protocol on Environmental Protection, particularly a workshop held in Cambridge in May 2008, where members of several parties, SCAR, BirdLife International and ACAP had participated. For the purposes of this workshop, SCAR compiled an extensive database on abundance and trends of the species at all known breeding sites, and scrutinized the data according to the IUCN red list criteria for regional assessments.

(281) SCAR also raised several caveats. First, that data for several sites are not current, but that by comparison with assessments for other bird species globally, the data are extensive. Second, that data on fledging success, juvenile and adult survival, and breeding frequency are available for only a few breeding sites, and much variation exists between these site-specific data, so precluding demographic modelling of future trends. Third, that census data at sites are often not comparable among years.

(282) SCAR concluded that:

- According to the IUCN Red List Categories and Criteria, the southern giant petrel population south of 60°S is of Least Concern under Criteria A2 and B-E. Therefore it does not qualify as Critically Endangered, Endangered, Vulnerable or Near Threatened, and the present data and analysis do not support the designation of the southern giant petrel as a SPS under Annex II.
- Additional censuses of breeding sites and of fledging success should be undertaken in a consistent scientific manner, which SCAR outlined, to enable better estimates to be made of current trends in the southern giant petrel population (north and south of 60°S). Should such work indicate a change in the status of the species, it should be reassessed.
- Further quantitative work should be undertaken, using both current and new data, so that quantitative demographic models can be applied to the species.

Because these models rely on carefully collected, time series information, the collection of such information was encouraged.

- Sites that have been censused more than 10 years ago should be revisited at an appropriate time so that an assessment of the status of the species at these sites can be made.
- The lessons learnt from this process should be applied to other species.

(283) A number of Members thanked SCAR for the quality of its advice, noting it was a good example of cooperation between the CEP and SCAR. The SCAR recommendations were supported.

(284) Australia stated that making the workshop data available to ACAP would assist with its global assessment of the species and would also help with determining the level of uncertainty with the Antarctic regional assessment. Australia strongly supported the development of a standardised methodology for population counts, and suggested the guidance contained in SCAR's paper could be referred to ACAP for consideration and further advice to the CEP if required. It also noted that the current assessment does not reduce the sensitivity of the species to disturbance, so the Parties should continue the commitments made in earlier Resolutions to limit such disturbance, including by taking steps to protect breeding habitat. These sentiments were endorsed by the Committee.

(285) The UK described its future plans for survey and for continued convening of the ACAP breeding sites working group, and noted that advice and cooperation from experts within SCAR and CEP would be appreciated.

(286) IUCN also noted that the IUCN Red List status of the species, released in May 2008, is "near threatened" and that the Red List assessment notes the ongoing threats from Illegal, Unreported and Unregulated (IUU) fishing. The assessment also recommended conservation measures including, continued monitoring, minimising disturbance at breeding sites, and adoption of mitigation measures in all fisheries within the species range.

(287) New Zealand presented WP 30 rev. 3 *Draft Action Plan for Southern Giant Petrel Macronectes giganteus,* noting that the primary objective of the document was to provide a means of continuing to test the *Guidelines for CEP Consideration of Proposals for New and Revised Designations of Antarctic Specially Protected Species under Annex II of the Protocol* adopted at CEP VIII and to illustrate how a draft Action Plan could be developed following the accompanying template.

(288) New Zealand noted that this test of the CEP's SPS guidelines had been conducted in the full knowledge that the range of southern giant petrels included areas outside of the Antarctic Treaty area and CAMLR Convention areas and, therefore, the concept of the Antarctic environment and dependent and associated ecosystems was particularly relevant to the protection of southern giant petrels. New Zealand also expressed that hopefully the test would be useful in clarifying the roles of the CEP, CCAMLR and the Antarctic Treaty Parties on this matter.

(289) Several Members thanked New Zealand for producing a useful model, noting that, together with SCAR's robust review, the process of producing the Action Plan was a good test of the CEP's guidelines and the process for collaboration between the CEP and the Scientific Committee on CAMLR about protected marine species.

(290) France noted that it intends to make use of the draft action plan for its own management purposes and encouraged other Members to do so.

(291) Noting that the Parties that had contributed to the draft Action Plan largely operate in East Antarctica, Australia invited Parties with experience of the Antarctic Peninsula region to consider whether the types of actions identified in the plan would be appropriate to that region also.

(292) The Committee agreed that because the southern giant petrel would not be listed as a Specially Protected Species, it was not appropriate to formally adopt the draft as an Action Plan. The draft action plan would be made available through the Antarctic Treaty Secretariat website as an example, and for comment.

8c) Marine acoustics

(293) Germany noted that its work on a strategic risk assessment for Antarctic marine acoustics was still progressing. Germany anticipated providing a full report to CEP XI.

8d) Other matters relating to the conservation of Antarctic fauna and flora

(294) The United Kingdom submitted IP 21 *Update on Wildlife Awareness Information for Aircraft Operations in Antarctica* on a development of larger-scale maps using information about the location of wildlife concentrations. These maps were designed to support helicopter operations in Antarctica and to assist pilots in planning their routes so that they avoid wildlife concentrations.

(295) Ecuador introduced IP 107 *Censos del Petrel Gigante del Sur Macronectes giganteus y las skúas Catharacta spp en la Punta Fort Williams-Isla Greenwich y la Isla Barrientos, Shetland del Sur, Antártida*, informing the meeting on the results of the census of southern giant petrels and skuas undertaken during January and February 2007. The document was provided in due time for SCAR's consideration with regard to changes in the southern giant petrel population and the workshop that was organised at their headquarters in May 2008.

Item 9: Environmental Monitoring and Reporting

9a) Climate change

(296) Norway introduced WP 35 *Antarctic Climate Change Issues* (Norway and United Kingdom). In introducing the paper, Norway noted that climate change is one of the main challenges faced in Antarctica, and a priority area for the CEP as identified in the five-year

work plan. Norway stressed that climate change and its impacts are likely to have knock-on impacts on Antarctic activities, and that it therefore is important to consider consequences of climate change for Antarctica at a broad level and also for more specific management and protection.

(297) The document proposed several recommendations for actions that Parties should take. These included:

- ensuring Resolution 3 (2007) is followed up and reporting activities in this regard;
- SCAR being asked to keep the CEP updated on new knowledge on climate changes and its effects in Antarctica;
- asking COMNAP to continue to collect and disseminate experience on alternative energy production and good practice to help reduce greenhouse gases in Antarctica;
- encouraging National Operators and others as appropriate to further cooperate and coordinate logistics to reduce emissions;
- the CEP developing a clear methodology for calculating emissions and considering how to incorporate such information into the EIA process; and
- convening an Antarctic Treaty Meeting of Experts in 2009 to assess the consequences of climate change in Antarctica for the management of Antarctica and to consider the necessary practical and legal steps to meet related challenges.

(298) SCAR introduced IP 62 *Antarctic Climate Change and the Environment: A Progress Report*. SCAR noted that the Antarctic Climate Change and the Environment (ACCE) project was aimed at providing an up-to-date assessment of the climatic changes that had taken place on the Antarctic continent and across the Southern Ocean, to give improved estimates of how the climate might evolve over the next century and to examine the possible impact on the biota and other aspects of the environment.

(299) SCAR informed the Committee that the final published report would be a comprehensive approach taking into account the role of Antarctica as a major component of the global system, the climate variability and the Antarctic, the history of the Antarctic climate and environment, the changes registered during the 'instrumental' period of the last several decades as well as the predicted evolution of the Antarctic climate over the next 100 years. The report would be circulated widely for comment, including to the CEP and CCAMLR, during July and August, and SCAR would welcome feedback.

(300) Many Members welcomed both papers and expressed concern at the environmental changes described in SCAR's report, although recognising that uncertainties still remain. The importance of research including sustained scientific monitoring to understand trends, supported by Resolution 3 (2007), was stressed.

(301) Some Members considered that some of the recommendations in WP 35 needed to be clarified, for example the frequency in reporting to the CEP. In addition, some Members suggested that legal matters needed to be addressed in other fora rather than being duplicated by the ATCM, but that a meeting of Antarctic experts might be useful. It was agreed that ATCPs had the responsibility to lead by example and to take account of consequences and risks for the management of the Antarctic environment.

(302) The UK noted that Members had acknowledged that climate change was important for the CEP to consider and that the Committee should examine the management of climate change impacts on the Antarctic environment and the associated fauna and flora. To this end scientific research in this area is vital.

(303) The Committee discussed the need to reduce emissions in Antarctica, with some Members noting that Antarctic emissions are insignificant on a global scale, with some other Members noting that even at a local scale the significance of emissions was minor. Some Members noted the ethical importance of reducing emissions and leading by example using best practice. It was noted that some Parties were already taking actions consistent with the recommendations in WP 35, including by COMNAP on alternate fuels, fuel handling and other mitigation measures.

(304) In summarising the discussions the Chair noted:

- the concerns that had been expressed on the impacts of climate change on the Antarctic environment;
- the importance that Members had placed on the need for ongoing scientific research in the Antarctic, and the need to place a high priority on long term monitoring, as set out in Resolution 3 (2007);
- that the Committee had welcomed SCAR's progress report on Antarctic Climate Change and the Environment, recognising that it would be an important part of the Committee's future work to review the findings of the report when it is available in early 2009;
- that in the light of the findings of SCAR's report the Committee would have an opportunity to assess the environmental management implications of a changing Antarctic climate;
- the Committee may wish to reconsider the proposal for a meeting of Antarctic experts to focus on climate change in the Antarctic context, after the SCAR report was available; and
- the ongoing efforts by National Antarctic Programmes and COMNAP to reduce emissions in the Antarctic, and that some Members had also commented on the underpinning ethical responsibilities in this area.

(305) The Committee welcomed the Chair's summary and looked forward to future discussions on this issue.

(306) ASOC introduced IP 56 *Impacts of Climate Change on Antarctic Ecosystems* providing a further review of the latest science and emphasizing the value of full consideration of climate change management decisions.

(307) Other papers submitted under this agenda item were IP 23 *Australia's Antarctic and Southern Ocean Climate Science* (Australia), IP 50 *Antarctic Peninsula: rapid warming in a pristine environment* (United Kingdom), and IP 51 *Antarctic Peninsula: Ice shelf status* (United Kingdom). The United Kingdom distributed a useful composite map of ice shelf change in the Antarctic Peninsula.

9b) Other environmental monitoring and reporting matters

(308) The CCAMLR observer delivered an informative presentation on CCAMLR's work, including ecosystem monitoring, which provided very useful background for the CEP and in respect of the joint SC-CAMLR and CEP workshop (see paragraphs 337 to 346).

(309) Belgium introduced WP 55 *The Marine Biodiversity Information Network: 2010 and Beyond*, as an instrument for science-based management and invited Members to join the project, since funding by Belgium is not guaranteed beyond 2010. Several Members thanked Belgium for this excellent scientific tool which, it was noted, provided basic data for the Census of Antarctic Marine Life (CAML) and the SC-CAMLR and CEP workshop on bioregionalisation. Belgium also noted that the database was available at *www.scarmarbin.be.*

(310) New Zealand referred again to WP 24 *Improving the CEP's Role in Advising the ATCM on the State of Antarctic Environments.* It noted that the first three recommendations would help improve environmental monitoring and reporting.

(311) ASOC thanked the United Kingdom and France for their IP 54 *The Recovery of Drilling Fluid from a Deep Ice-Core Drilling Site on James Ross Island, Antarctic Peninsula*, noting the importance of such recovery, which had been the first successful remediation of a deep ice core bore hole in Antarctica.

(312) The Chair reminded the Meeting of the request from the Secretariat of the Stockholm Convention on Persistent Organic Pollutants, for data and information on Persistent Organic Pollutants (POPs) in the Antarctic environment.

(313) Chile introduced IP 97 *Antarctic Persistent Organic Pollutants: Notes on a Request from the Stockholm Convention* regarding access to information from the Antarctic Treaty System. Several Parties and SCAR noted they had information or databases on the subject.

(314) SCAR agreed to coordinate this information for the CEP, should the ATCM decide to develop a consolidated Antarctic input to the Stockholm Convention.

(315) Other papers submitted under this agenda item included IP 07 *Summary of Environmental Monitoring and Reporting Discussion* (Australia), IP 35 *Environmental Monitoring of the Indian Permanent Station-Maitri in Pursuant to the Article 17 of Protocol*

on Environmental Protection to the Antarctic Treaty (India), IP 118 *Brazilian contribution to the Monitoring Programme for the Admiralty Bay Antarctic Specially Managed Area (ASMA No 1)* (Brazil), and IP 122 *Monitoring of Human Impacts at McMurdo Station, Antarctica* (United States).

Item 10: Inspection Reports

(316) The United States presented WP 26 *A Proposed Checklist for Inspecting Specially Protected and Managed Areas in Antarctica* (New Zealand, United Kingdom and United States) noting that it was a resubmission of an original proposal that had been made by the same proponents at CEP IX and that the matter had also been briefly considered at the CEP X.

(317) The US noted that the adoption of a checklist for inspecting specially protected and managed areas would provide an optional, though useful tool in carrying out inspections in those areas, complementing the set of inspection checklist adopted by the ATCM through Resolution 5 (1995). The US also noted that the draft checklist had been prepared and tested in Antarctica by inspecting five ASPAs and one ASMA in the 2005/06 season.

(318) Brazil commented on the usefulness of the checklist, noting that it had made use of them informally during the last summer in assessing the Admiralty Bay ASMA.

(319) France and Chile, supported by several other Members, expressed their support for this new checklist, noting that it remains a useful tool for future inspection of ASPAs and ASMAs, and carries no formal obligation to use it.

(320) Argentina stated that it was pleased to see that its comments on a previous draft were taken into account in this final version of the document. Consequently, Argentina supported the recommendation for adoption.

(321) Argentina introduced WP 54 *Proposal to revise the inspection checklists contained in Resolution 5 (1995)*, noting that considerable time had passed since the set of checklists were adopted. It proposed that, taking into account the experience gained with their extended use and considering that valuable information can be obtained from the Secretariat's Information Exchange System prior to the inspections visits, the list adopted in 1995 could be reviewed.

(322) Argentina proposed to establish an ICG in the framework of the ATCM to begin with the review of List A *"Permanent Antarctic Stations and Associated Installations"* appended to Resolution 5 (1995), as the first step towards revising all the lists included in the Resolution, and to urge the Parties to submit to the Secretariat the information required under the exchange of information requirements under the Antarctic Treaty and the Protocol.

(323) This proposition received unanimous support. Many Members and COMNAP notified their wish to participate in such an ICG if established by the ATCM.

(324) CEP Advice to the ATCM:

The Committee considered a proposed new checklist for inspecting protected and managed areas, and a separate proposal to review the existing inspection checklist A adopted under Resolution 5 (1995). The Committee agreed to forward the draft checklist for inspecting specially protected and managed areas in Antarctica to the ATCM for approval by means of a Resolution. The Committee supported the proposal for establishing an ATCM ICG to review the inspection checklist A.

Item 11: Emergency Response and Contingency Planning

(325) COMNAP introduced IP 91 *The COMNAP Fuel Manual, incorporating revised guidelines for fuel handling and storage in Antarctica,* informing the Committee that a set of four guidelines for fuel storage and handling in Antarctica had been developed by COMNAP between 1990 and 1993, and that they had provided valuable guidance to Antarctic operators for 15 years. COMNAP noted that the guidelines had been edited to make them compatible with the Protocol wording, and that the former four separate guidelines were reorganized in a single "COMNAP Fuel Manual" in which additional sections could be inserted as required.

(326) COMNAP stated that it will continue developing and updating the Fuel Manual and promoting and facilitating its use by all operators.

(327) The Committee thanked COMNAP for this work and for keeping the Committee informed.

Item 12: Waste Management

(328) Japan introduced IP 80 *Completion of a Four-year Campaign to Clean Up the Syowa Station Area,* covering its four-year programme to clean up the Syowa Station area from 2005 to 2008. The cleanup programme consisted of three major activities: cleaning up large old waste items like snow vehicles, an intensive cleanup campaign, and starting sewage treatment for the Summer Lodge building at Syowa.

(329) The Committee congratulated Japan on the successful cleanup programme.

Item 13: Prevention of Marine Pollution

(330) ASOC introduced IP 58 *Antarctic Shipping* noting the increase in the number and type of vessels operating in Antarctica, and that this increase raised environmental and marine safety issues. While there is considerable effort underway to improve the standards of shipping in the Antarctic region, not all proposed measures apply to all vessels operating in the region, and many international shipping instruments developed and adopted by the International Maritime Organization (IMO) over the past decades have not been ratified.

(331) ASOC undertook a review of the recent developments in the framework of IMO and the ATCM and made several recommendations to the ATCM, including a joint assessment

with IMO of the threats resulting from the full range of vessels operating in the region, increasing collaboration between national-level IMO and ATCM representatives, urgent ratification and full implementation of existing shipping instruments by ATCPs, and greater control by Flag and Port States over vessels operating in the Antarctic region.

(332) The Committee thanked ASOC for keeping it informed on this matter and noted the activities being undertaken within the IMO.

Item 14: Cooperation with Other Organisations

(333) The Chair introduced WP 28 *Report of the CEP Observer to the twenty-sixth meeting of the Scientific Committee to CCAMLR, 22 to 26 October 2007*. The Chair drew the Committee's attention to several matters arising from SC-CAMLR XXVI, noting in particular:

- the Scientific Committee's suggestion for a joint SC-CAMLR and CEP workshop in 2009. The Chair recommended that the Committee give consideration to agenda items for such a workshop, as well as a possible venue and timing;
- the Scientific Committee's decision to discontinue the Seal Island CCAMLR Ecosystem Monitoring Programme (CEMP) site as research was no longer undertaken in the area;
- the outcomes to the bioregionalisation workshop had been endorsed by the Scientific Committee and agreed that further work be undertaken within the context of its Working Group on Ecosystem Monitoring and Management (WG-EMM);
- the Scientific Committee's concern over the increasing interest in the krill fishery for the 2007/08 season;
- the attention given to developing a systematic process for assessing the impacts of bottom fishing on vulnerable marine ecosystems;
- the very low levels of marine mammal by-catch and zero levels of seabird by-catch in longline fisheries;
- the Scientific Committee's encouragement for its members to use and promote ACAP resources and to work with Regional Fisheries Management Organisations (RFMOs) to reduce bird by-catch in fisheries adjacent to CCAMLR waters;
- the Scientific Committee's decision to establish a WG-EMM sub group on status and trends in predator populations.

(334) Argentina expressed its concern about the potential increase in the exploitation of krill, and its possible effects on the rest of the food web, especially on species of interest to the CEP under Annex II. Argentina wondered if the Committee could express its concern on this matter to the ATCM.

(335) The Committee noted the potential implication of declining krill stocks on those species covered by Annex II.

(336) The CCAMLR observer informed the Meeting that the current levels of krill catches had not increased despite the five-fold increase in notified catches for the 2007-08 season. The CCAMLR observer also reminded the CEP that the impact of krill fishing on krill dependent species is a central part of the risk-based ecosystem approach to management of marine resources taken by CCAMLR.

(337) Noting the proposal made by the CCAMLR Scientific Committee to hold a joint SC-CAMLR and CEP workshop in 2009, to further strengthen cooperation between the two bodies, the Committee was requested to give further consideration to this proposal, and to identify key agenda items for such a workshop.

(338) The Committee noted ATCM Resolution 1 (2006) on CCAMLR in the Antarctic Treaty System, which encourages increased cooperation between the ATCM and CCAMLR at a practical level in respect of the conservation and protection of the Antarctic environment.

(339) Noting also that there are several areas of common interest between the CEP and the SC-CAMLR, the Committee welcomed the proposal for a joint SC-CAMLR and CEP workshop, as an opportunity to consider ways in which to improve and maintain practical cooperation between the two bodies.

(340) The Committee recommended that an overarching theme for the proposed workshop might be: 'Opportunities for collaboration and practical cooperation between the CEP and SC-CAMLR'.

(341) The Committee further recommended that issues of common interest between the CEP and the SC-CAMLR might be used to focus discussions relating to the proposed workshop theme. Such issues of common interest might include, though may not be limited to:

- Climate change research
- Ecosystem and environmental monitoring
- Protected areas and spatial management measures
- Species requiring special protection
- Marine pollution
- Biodiversity and non-native species

(342) The aim would not be to address theses issues in substantive detail, but rather to focus on the development of mechanisms for practical cooperation which may be specific to these issues.

(343) Although the timing of the workshop remains open for discussion, it could be conveniently scheduled immediately prior to CEP XII in Baltimore, US. The workshop

might follow a similar model to the two-day workshop on Antarctica's Future Environmental Challenges held in Edinburgh, UK, immediately prior to CEP IX.

(344) A workshop Steering Group comprising both CEP and SC-CAMLR Members should be convened as soon as is practical. The Committee agreed to nominate its Chair and two Vice chairs as representatives on the Steering Group. In developing a workshop agenda, this Steering Group might wish to consider the proposed workshop theme and issues of common interest outlined above.

(345) Pending the further development of an agenda and practical arrangements for the workshop, CEP Members were encouraged to consider the nomination of workshop participants to contribute to the issues outlined above.

(346) The Committee requested the CCAMLR observer to forward its recommendations on the proposed workshop to SC-CAMLR Members for their consideration. The Committee looked forward to working together with SC-CAMLR colleagues towards the convening of a joint workshop in 2009.

(347) The CEP Chair introduced to WP 23 *Commission for the Conservation of Antarctic Marine Living Resources Performance Review* (New Zealand) noting the Commission's decision to undertake a performance review of CCAMLR. In recognition of the important linkages between the ATCM and CCAMLR, the Commission had decided to invite the Chair of the CEP to participate in the Review, *ex officio*, as one of the panel members.

(348) The Chair noted that the performance criteria were appended to WP 28. A draft Resolution on the issue was also appended to WP 23. The CEP Chair welcomed Members providing him with comments and suggestions with respect to his involvement in the panel.

(349) Australia welcomed the CEP Chair's involvement in the review panel, noting that of the criteria set out for reviewing the performance of CCAMLR, matters related to environmental protection, conservation, protected areas, marine pollution and ecosystem approach were matters the Chair may wish to particularly concentrate on.

(350) The CCAMLR observer noted that the review panel would meet in Hobart 23 – 27 June 2008 and that the panel's report would go to CCAMLR XXVII in October of this year.

(351) The Chair welcomed SCAR's invitation for a CEP representative to attend the SCAR delegates meeting in Moscow (14-16 July 2008). The Committee thanked SCAR for this invitation and welcomed Hugo Decleir's (Belgium) offer to represent the Committee at this meeting.

(352) The Chair provided a verbal report on his recent participation in a SCAR Action Group established to review and improve SCAR's advisory role to support the work of the CEP. The Chair noted that several recommendations to enhance this role had been agreed and that a more complete report would be provided to the CEP once the recommendations and findings had been considered by the SCAR delegates and its Executive.

(353) SCAR thanked the CEP Chair for his participation in the action group.

Item 15: General Matters

(354) No papers received.

Item 16: Election of Officers

(355) The meeting re-elected Dr Neil Gilbert (New Zealand) for a second term as Chair of the CEP and Ewan McIvor (Australia) for a first term as Second Vice Chair. Both were elected by acclamation. Dr Yves Frenot continues in his role as First Vice Chair.

(356) The Committee thanked Dr Tânia Brito (Brazil) for her involvement during the two last years in the CEP work as Vice Chair and congratulated Neil Gilbert and Ewan McIvor for their election.

Item 17: Preparation for CEP XII

(357) The Committee adopted the agenda for CEP XII in Appendix 2.

Item 18: Adoption of the Report

(358) The Committee adopted the draft Report.

Item 19: Closing of the Meeting

(359) The Chair closed the meeting on Friday 6 June 2008.

ANNEX 1

CEP XI 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 17	Preparation for Scheduled CEP Discussions: Reviews of Past Activities	Australia
WP 29 rev.1	A Five-Year Work plan for the CEP: Report on Intersessional Review	New Zealand
WP 57	Report on Effectiveness of Trial Informal Group	Brazil

Item 4: Operation of the CEP

SP 3 rev.2	Secretariat Report 2007/08	Secretariat
SP 12	Electronic Information Exchange System	Secretariat
IP 14	Rapport annuel présenté par la France conformément à l'article 17 du Protocole au Traité sur l'Antarctique relatif à la protection de l'environnement 2008	France
IP 15	Informe Anual del Ecuador de acuerdo con el Artículo 17 del Protocolo al Tratado Antártico sobre Protección del Medio Ambiente	Ecuador
IP 22	Annual Report Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty	Ukraine
IP 24	Annual Report Pursuant to the Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty	Japan
IP 25	Informe Anual de España de acuerdo con el Artículo 17 del Protocolo al Tratado Antártico sobre Protección del Medio Ambiente	Spain
IP 34	Informe Anual de Acuerdo al Artículo 17 del Protocolo al Tratado Antártico sobre la Protección del Medio Ambiente Periodo 2007 - 2008	Uruguay
IP 36	Annual Report pursuant to the Protocol on Environmental Protection to the Antarctic Treaty	Belgium
IP 42	Annual Report pursuant to Article 17 of The Protocol on Environmental Protection to The Antarctic Treaty	South Africa
IP 55	Report on the Implementation of the Protocol on Environmental Protection as Required by Article 17 of the Protocol	United Kingdom
IP 68	Annual Report of China Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty	China
IP 71	Annual Report Pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty 2007-2008	Italy
IP 90	Annual Report of New Zealand pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty 2007/2008	New Zealand
IP 96	Annual Report pursuant to Article 17 of the Protocol on Environmental Protection to the Antarctic Treaty	Peru

Paper Nº	Title	Submitted by

Item 5: International Polar Year

IP 59	International Polar Year 2007-2008 Planning Document: 2008 and Beyond	SCAR
IP 88	Antarctic Treaty Summit: Science-Policy Interactions in International Governance	IPY-IPO
IP 125	South American Network on Antarctic Marine Biodiversity (BioMAntar)	Brazil

Item 6: Environmental Impact Assessment

6a) Draft comprehensive environmental evaluations

WP 5	The Draft Comprehensive Environmental Evaluation for the construction and operation of the Chinese Dome A Station in Antarctica	China
WP 15	Report of the Intersessional Open-ended Contact Group to Consider the Draft CEE for the "Proposed Construction and Operation of the New Chinese Research Station at Dome A"	Australia
IP 4	The Draft Comprehensive Environmental Evaluation for the construction and operation of the Chinese Dome A Station in Antarctica	China
IP 77	Additional Information on draft CEE on proposed new Chinese Dome A Station in Antarctica	China

6b) Other EIA matters

WP 12	Human Disturbance to Wildlife in the Broader Antarctic Region: A Review of Findings	SCAR
WP 34	A Mechanism for Centralizing Tourism and Non-governmental Activity Declarations and Authorization Requests Suitable for Taking Cumulative Impacts into Account	France
WP 60	Quantifying Atmospheric Emissions in Antarctic Comprehensive Environmental Evaluations	United Kingdom
SP 8	Annual list of Initial Environmental Evaluations (IEE) and Comprehensive Environmental Evaluations (CEE) prepared between April 1st 2007 and March 31st 2008	Secretariat
IP 1	Initial Environmental Evaluation Law-Racovita Base	Romania
IP 16	Update on the Comprehensive Environmental Evaluation of New Indian Research Base at Larsemann Hills, Antarctica	India
IP 26	Initial Environmental Evaluation for Installation of Earth Station at Maitri, Schirmacher Oasis, Antarctica	India
IP 41	A decade of Antarctic tourism: Status, change, and actions needed	ASOC
IP 44	Results of Russian studies of the subglacial Lake Vostok during the season 2007-2008	Russian Federation
IP 45	On obtainment of permit to authorize activities of the Russian Antarctic Expedition for the period from 2008 to 2012	Russian Federation
IP 49	Initial Environmental Evaluation for Installation of Wind Energy Generators (WEG) at Maitri, Schirmacher Oasis, Antarctica	India
IP 101	The ANDRILL Independent Environmental Audit	New Zealand and United Kingdom
IP 102	On the Issue of the Replacement of Fuel Tanks at Vernadsky Station	Ukraine
IP 105	Plan de Manejo Ambiental Estación Maldonado Ecuador	Ecuador
IP 124	Initial Environmental Evaluation "RMM-technology on recycling of solid food wastes at Ukrainian Antarctic Vernadsky station"	Ukraine

Paper Nº	Title	Submitted by

Item 7: Area Protection and Management Plans

7a) Management plans

WP 3	Proposal for a new Antarctic Specially Protected Area at Narębski Point, Barton Peninsula, King George Island	Korea (ROK)
WP 7	Five Years Review of Antarctic Specially Protected Area (ASPA) N° 161 Terra Nova Bay, Ross Sea	Italy
WP 8	Revised Management Plan for Antarctic Specially Protected Area No. 138 Linnaeus Terrace, Asgard Range, Victoria Land	United States
WP 9	Revised Management Plan for Antarctic Specially Protected Area No. 137, North-west White Island, McMurdo Sound	United States
WP 13	Revised Management Plan for Antarctic Specially Protected Area No. 106 Cape Hallett, Northern Victoria Land, Ross Sea	United States
WP 14	Revised Management Plan for Antarctic Specially Protected Area No. 124 Cape Crozier, Ross Island	United States
WP 19	Revised Draft Antarctic Specially Protected Area (ASPA) Management Plan for Amanda Bay, Ingrid Christensen Coast, Princess Elizabeth Land, East Antarctica	Australia & China
WP 25 rev. 1	Review of Antarctic Specially Protected Area (ASPA) No.s 105, 118, 155, 154, and 156	New Zealand
WP 31	Review of Management Plans for Antarctic Specially Protected Areas (ASPAs) 135, 143, 160	Australia
WP 32	Review of Antarctic Specially Protected Area (ASPA) No. 141	Japan
WP 37 rev. 1	Revised Management Plan for Antarctic Specially Protected Area No. 123 Barwick and Balham Valleys, Southern Victoria Land	United States
WP 39	Draft Management Plan for ASMA No. X: South-west Anvers Island and Palmer Basin	United States
WP 46 rev. 1	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 47	Revisión del Plan de Gestión de la Zona Antártica Especialmente Protegida Nº 125 Península Fildes, Isla Rey Jorge (Isla 25 de Mayo)	Chile
WP 52	Revised Draft Antarctic Specially Protected Area Management Plan For Mount Harding, Grove Mount, East Antarctic	China
WP 53	Antarctic Specially Protected Area (ASPA) Management Plan for Marion Nunataks, Charcot Island, Antarctic Peninsula	United Kingdom
WP 58	Review of Draft Management Plans by Trial Informal Group	Brazil
SP 6	Register of the Status of Antarctic Specially Protected Area and Antarctic Specially Managed Area Management Plans	Secretariat

7b) Historic sites and monuments

WP 61	Antarctic Protected Area System: Revised List of Historic Sites and Monuments - Measure 3 (2003). Guidelines for its Application	Chile
IP 12	Recuperación del Sitio Histórico Nº 56 Base Aérea Antártica "Pdte. Gabriel González Videla"	Chile

7c) Site guidelines

WP 2	Site Guidelines for Wordie House, Winter Island, Argentine Islands	Ukraine & United Kingdom
WP 12	Human Disturbance to Wildlife in the Broader Antarctic Region: A Review of Findings	SCAR
WP 40 rev.2	Site Guidelines for Shingle Cove, Coronation Island	United Kingdom
WP 44 rev. 1	Site Guidelines for Devil Island, Vega Island	United Kingdom
WP 45	Site Guidelines for Cape Hallett, Northern Victoria Land, Ross Sea	United States
WP 56	Site Guidelines for Whalers Bay, Deception Island, South Shetland Islands	Argentina, Chile, Norway, Spain, United Kingdom and United States
WP 59	Guidelines for Half Moon Island, South Shetland Islands	Argentina
IP 6 rev. 1	Antarctic Site Inventory: 1994-2008	United States
IP 82	Update on the Antarctic Peninsula Landing Site Use and Site Guidelines	IAATO

Paper Nº	Title	Submitted by

7d) Systematic environmental geographic framework

WP 27	Systematic Environmental Protection in Antarctica: Final report on Environmental Domains Analysis for the Antarctic continent as a dynamic model for a systematic environmental geographic framework for Annex V of the Protocol	New Zealand

7e) Other Annex V matters

WP 41 rev. 1	Guidance for Working Papers on Area Protection and Management	United Kingdom
IP 2	Workshop on Bioregionalisation of the Southern Ocean (Brussels, Belgium, August 2007)	United Kingdom & United States
IP 3	Proposed approach for the identification of important marine areas for conservation	United Kingdom
IP 30	Final Report on the Research Project "Risk assessment for Fildes Peninsula and Ardley Island and the development of management plans for designation as Antarctic Specially Protected or Managed Areas"	Germany
IP 57	Area Protection: Time for Action	ASOC
IP 64	Grove Mountains, East Antarctica - between scientific research and environmental protection	Romania
IP 94	Ross Sea Heritage Conservation Project: Conservation of Shackleton's Hut, Cape Royds, ASPA 157	New Zealand
IP 109	Amundsen-Scott South Pole Station, South Pole Antarctic Specially Managed Area (ASMA No. 5) First Year Management Report	United Satates
IP 110	Report on Exploration of Antarctic Subglacial Aquatic Environments: Environmental and Scientific Stewardship	United States
IP 117	The Admiralty Bay ASMA website	Brazil
IP 126	Report of the Deception Island Antarctic Specially Managed Area (ASMA) Management Group	Argentina, Chile, Norway, Spain, united Kingdom & United States

Item 8: Conservation of Antarctic Flora and Fauna

8a) Quarantine and non-native species

WP 16	Antarctic Alien Species Database	Australia
IP 17	Measures to protect the Larsemann Hills, East Antarctica, from the introduction of non-native species	Australia, China, India, Romania & Russian Federation
IP 33	Medidas preventivas para evitar la introducción de especies alienas en la Antártida, en cumplimiento del Anexo II del Protocolo	Uruguay
IP 75	Non-native Species Incursions at Scott Base, Antarctica	New Zealand
IP 93	Non-native Species Awareness Campaign: "Don't Pack a Pest" When Traveling to Antarctica	United States
IP 98	Survey on existing procedures concerning introduction of non native species in Antarctica	COMNAP
IP 110	Report on Exploration of Antarctic Subglacial Aquatic Environments: Environmental and Scientific Stewardship	United States

Paper Nº	Title	Submitted by

8b) Specially protected species

WP 10 rev. 1	Status of the Regional, Antarctic Population of the Southern Giant Petrel - Progress	SCAR
WP 30 rev.3	Draft Action Plan for Southern Giant Petrel Macronectes giganteus	New Zealand

8c) Marine acoustics

8d) Other Annex II matters

IP 21	Update on Wildlife Awareness Information for Aircraft Operations in Antarctica	United Kingdom
IP 107	Censos del Petrel Gigante del Sur Macronectes giganteus y las Skúas Catharacta spp en la Punta Fort Williams-Isla Greenwich y la Isla Barrientos, Shetland del Sur, Antártida	Ecuador

Item 9: Environmental Monitoring and Reporting

9a) Climate change

WP 35	Antarctic Climate Change Issues	Norway & United Kingdom
IP 23	Australia's Antarctic and Southern Ocean Climate Science	Australia
IP 50	Antarctic Peninsula: rapid warming in a pristine environment	United Kingdom
IP 51	Antarctic Peninsula: Ice shelf status	United Kingdom
IP 56	Impacts of Climate Change on Antarctic Ecosystems	ASOC
IP 62	Antarctic Climate Change and the Environment: A Progress Report	SCAR

9b) Other environmental monitoring and reporting matters

WP 24	Improving the CEP's Role in Advising the ATCM on the State of Antarctic Environments	New Zealand
WP 55	The Marine Biodiversity Information Network: 2010 and Beyond	Belgium
IP 7	Summary of Environmental Monitoring and Reporting Discussions	Australia
IP 35	Environmental Monitoring of the Indian Permanent Station-Maitri In Pursuant to the Article 17 of Protocol on Environmental Protection to the Antarctic Treaty	India
IP 54	The Recovery of Drilling Fluid from a Deep Ice-core Drilling Site on James Ross Island, Antarctic Peninsula	United Kingdom and France
IP 97	Antarctic Persistent Organic Pollutants. Notes on a Request from the Stockholm Convention	Chile
IP 118	Brazilian contribution to the Monitoring Programme for the Admiralty Bay Antarctic Specially Managed Area (ASMA Nº 1)	Brazil
IP 122	Monitoring of Human Impacts at McMurdo Station, Antarctica	United States

Item 10: Inspection Reports

WP 26	A Proposed Checklist for Inspecting Specially Protected and Managed Areas in Antarctica	New Zealand, United Kingdom & United States
WP 54	Proposal to revise the inspection checklists contained in Resolution 5 (1995)	Argentina

Paper Nº	Title	Submitted by

Item 11: Emergency Response and Contingency Planning

IP 91	The COMNAP Fuel Manual, incorporating revised guidelines for fuel handling and storage in Antarctica	COMNAP

Item 12: Waste Management

IP 80	Completion of a Four-year Campaign to Clean Up the Syowa Station Area	Japan

Item 13: Prevention of Marine Pollution

IP 58	Antarctic Shipping	ASOC

Item 14: Cooperation with Other Organisations

WP 23	Commission for the Conservation of Antarctic Marine Living Resources Performance Review	New Zealand
WP 28	Report of the CEP Observer to the twenty-sixth meeting of the Scientific Committee to CCAMLR, 22 to 26 October 2007	New Zealand
IP 127	COMNAP Report to ATCM XXXI	COMNAP

Item 15: General Matters

Item 16: Election of Officers

Item 17: Preparation for CEP XII

Item 18: Adoption of the Report

Item 19: Closing of the Meeting

ANNEX 2

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Appendix 1

Five Year Work plan for the CEP

Issue / Environmental Pressure	Priority for CEP	Actions	Timetable for actions to be addressed at CEP meetings and during the Intersessional periods (subject to annual review)									
			Inters. period	CEP XII 2009	Inters. period	CEP XIII 2010	Inters. period	CEP XIV 2011	Inters. period	CEP XV 2012	Inters. period	CEP XVI 2013
Introduction of non-native species	1	1. Review Workshop recommendations 2. Develop practical guidelines / standards / norms for all Antarctic operators 3. Establish a database of non-native species occurences in Antarctica 4. Review / endorse SCAR's RiSCC guidelines	Secretariat preparation of topic summary	Consideration of results of Alien in Antarctic IPY project Report by SCAR on workshop on minimising introduction of alien species Submission of information about measures taken by Parties Dedicated time for discussion	Workshop with SCAR and COMNAP or ICG established	Dedicated time for discussion						
Tourism and NGO activities	1	1. Provide advice to ATCM as requested	ICG established as required	If required, dedicated time for discussion								
Global Pressure: Climate change	1	1. Consider implications of climate change for management of Antarctic environment 2. SCAR currently undertaking a Review of Antarctic Climate and Environment		Standing sub-item. SCAR report presented to CEP - dedicated time for discussion		Standing sub-item		Standing sub-item		Standing sub-item		Standing sub-item

Issue / Environmental Pressure	Priority for CEP	Actions	Timetable for actions to be addressed at CEP meetings and during the Intersessional periods (subject to annual review)								
			Inters. period	CEP XII 2009	Inters. period	CEP XIII 2010	Inters. period	CEP XIV 2011	Inters. period	CEP XV 2012	Inters. period	CEP XVI 2013
Global Pressure: Pollution	1	1. Maintain a watching brief on pollution monitoring	SCAR to compile information about POPs	Consideration of SCAR report and address Stockholm Convention request for information								
Processing new and revised protected / managed area management plans	1	1. Refine the process for reviewing new and revised management plans 2. Update existing guidelines	Review of draft management plans by Subsidiary Group on Management Plans or Trial Informal Group	Consideration of SGMP / TIG report	SGMP / TIG conducts work as required	Consideration of SGMP / TIG report. Review of effectiveness of SGMP (if esiabliished at ATCM XXXI)	SGMP / TIG conducts work as required	Consideration of SGMP / TIG report	SGMP / TIG conducts work as required	Consideration of SGMP / TIG report	SGMP / TIG conducts work as required	
Marine protected areas	1	1. Cooperate with CCAMLR on Southern Ocean bioregionalisation 2. Identify processes for MPA designation		Review CCAMLR outcomes and consider further CEP action								

Issue / Environmental Pressure	Priority for CEP	Actions	Timetable for actions to be addressed at CEP meetings and during the Intersessional periods (subject to annual review)									
			Inters. period	CEP XII 2009	Inters. period	CEP XIII 2010	Inters. period	CEP XIV 2011	Inters. period	CEP XV 2012	Inters. period	CEP XVI 2013
Operation of the CEP and Strategic Planning	1	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 3. Consider long-term objectives for Antarctica (50-100 years time)		Standing item		Standing item		Standing item		Standing item		Standing item
Human footprint / wilderness management	2	1. Develop an agreed understanding of the terms "footprint" and "wilderness"		Assign to a Standing Group; or assign to the Treaty Secretariat; or Standing item agenda	Consultation with "expert" bodies		Workshop	Dedicated time for discussion				

Issue / Environmental Pressure	Priority for CEP	Actions	Timetable for actions to be addressed at CEP meetings and during the Intersessional periods (subject to annual review)								
			Inters. period	CEP XII 2009	Inters. period	CEP XIII 2010	Inters. period	CEP XIV 2011	Inters. period	CEP XV 2012	Inters. period	CEP XVI 2013
Maintain the list of Historic Sites and Monuments	2	1. Maintain the list and consider new proposals as they arise	Intersessional discussion of guidelines for HSMs			SG report, or Secretariat report, or standing item		SG report, or Secretariat report, or standing item		SG report, or Secretariat report, or standing item		SG report, or Secretariat report, or standing item
Monitoring and state of the environment reporting	2	1. Identify key indicators of human impacts 2. Establish a process for reporting to the ATCM		Dedicated discussion of environmental monitoring and reporting Report by SCAR on current long-term monitoring		Standing Group established				Dedicated time for discussion and possible establishment of an Expert Group		
Exchange of Information	2	Assign to the Secretariat	Commence use of EIES	Secretariat Report		Secretariat Report		Secretariat Report		Secretariat Report		Secretariat Report
Biodiversity loss	2	1. Maintain awareness of threats to existing biodiversity										

Issue / Environmental Pressure	Priority for CEP	Actions	Timetable for actions to be addressed at CEP meetings and during the Intersessional periods (subject to annual review)									
			Inters. period	CEP XII 2009	Inters. period	CEP XIII 2010	Inters. period	CEP XIV 2011	Inters. period	CEP XV 2012	Inters. period	CEP XVI 2013
Site specific guidelines for tourist-visited sites	2	1. Review site specific guidelines as required 2. Provide advice to ATCM as required		Assign to a 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
Implementing and improving the EIA provisions of Annex I	3	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	Establish ICG to review draft CEEs as required	Consideration of ICG report on draft CEE, as required Consideration of work on reporting of emissions in CEEs	Establish ICG to review draft CEEs as required	Consideration of ICG report on draft CEE, as required Standing Group established to handle draft CEEs (and other EIA matters) or dedicated discussion time to strengthen existing ICG process	Establish ICG to review draft CEEs as required	Consideration of ICG report on draft CEE, as required SG report or ICG report	Establish ICG to review draft CEEs as required	Consideration of ICG report on draft CEE, as required SG report or ICG report	Establish ICG to review draft CEEs as required	Consideration of ICG report on draft CEE, as required SG report or ICG report

Issue / Environmental Pressure	Priority for CEP	Actions	Timetable for actions to be addressed at CEP meetings and during the Intersessional periods (subject to annual review)									
			Inters. period	CEP XII 2009	Inters. period	CEP XIII 2010	Inters. period	CEP XIV 2011	Inters. period	CEP XV 2012	Inters. period	CEP XVI 2013
Specially protected species	3	1. Consider listing / delisting proposals as they come forward	Forward SGP data and standard census methodology to ACAP for consideration	Consideration of advice from ACAP								
Overview of the protected areas system / SEGF	3	1. Apply the domains analysis (SEGF) to the existing system – undertake a gap analysis		SCAR report on fit of biological data Discuss possible implications of an updated gap analysis based on EDA		Assign to an area protection Standing Group						
Emergency response action and contingency planning	3	To be determined				COMNAP advice on ERA and CP requested		COMNAP report presented to CEP – dedicated time for discussion				

Issue / Environmental Pressure	Priority for CEP	Actions	Timetable for actions to be addressed at CEP meetings and during the Intersessional periods (subject to annual review)									
			Inters. period	CEP XII 2009	Inters. period	CEP XIII 2010	Inters. period	CEP XIV 2011	Inters. period	CEP XV 2012	Inters. period	CEP XVI 2013
Updating the Protocol and reviewing Annexes	3	1. Complete review of Annex II (currently with the ATCM) 2. Prepare a prioritized 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)	3	1. Review inspection reports as required 2. Review environmental component of inspection checklists as required	If required, ICG to review of Checklist A	Standing item Consideration of ICG report		Standing item		Standing item		Standing item		Standing item
Shipping Guidelines	4					Review status of guidelines within IMO				Establish Expert Group to review guidelines		
Ballast water guidelines	4	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		

Issue / Environmental Pressure	Priority for CEP	Actions	Timetable for actions to be addressed at CEP meetings and during the Intersessional periods (subject to annual review)										
			Inters. period	CEP XII 2009	Inters. period	CEP XIII 2010	Inters. period	CEP XIV 2011	Inters. period	CEP XV 2012	Inters. period	CEP XVI 2013
Energy management	4	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	4	1. Review current examples and identify opportunities for greater education and outreach								Dedicated time for discussion		
Marine acoustics	5	1. Develop guidelines for use of noise-emitting devices 2. Maintain a watching brief on the issue		Report by Germany on marine acoustics risk assessment (para 261)								
Waste	5	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	5	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

Appendix 2

CEP XII 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. 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. Cooperation with Other Organisations
12. General Matters
13. Election of Officers
14. Preparation for Next Meeting
15. Adoption of the Report
16. Closing of the Meeting

Appendix 3

Subsidiary Group on Management Plans

Background

Since its first meeting in 1998, the CEP has discussed the need to improve its procedures for reviewing new and revised Management Plans. During this time, the CEP has adopted a documented process for its consideration of draft Antarctic Specially Protected Area Management Plans,[1] established individually convened informal intersessional contact groups for each draft Management Plan and established an online Discussion Forum to assist with intersessional work. The resource burden created by the large number of Management Plans under review each year will continue to be further considered within the context of the CEP's wider discussions on its five year work plan.

Benefits of establishing a Subsidiary Group on Management Plans (SGMP)

Under its Rules of Procedure, the CEP is able to establish formal subsidiary groups to assist with its work.[2] CEP X considered an Australian proposal to establish a coordinated intersessional process to review draft Management Plans, supported by a standing group, as a further improvement.[3]

CEP X agreed to establish a Trial Intersessional Group (TIG), considering the major benefits of establishing a TIG to be:

- improving the efficiency of CEP meetings by replacing detailed consideration of each draft Management Plan with consideration of the recommendations arising from a coordinated intersessional review (particularly with the increasing number of Management Plans falling due for a five-year review);
- promoting consistency between Management Plans through the TIG providing proponents with practical advice on the suitability of the Management Plan for the area in question, consistency with other Management Plans, and how the proposed Management Plan would contribute to the protected areas system as a whole; and
- improved participation by Members in intersessional work through utilising an experienced core group of participants while maintaining open membership of the group, achieving continuity and improved institutional knowledge.

Operation and outcome of the Trial Intersessional Group

The TIG was convened by Vice Chair Dr Tânia Britto of Brazil and operated remotely through the online Discussion Forum. Discussion took place in English, with the recommendations to proponents and report to the CEP translated through the Antarctic Treaty Secretariat to the four languages of the Antarctic Treaty. The TIG has reported to CEP XI that the trial was successful, and CEP XI considers that the appropriate next step is to formally establish a SGMP.

[1] Guidelines for CEP Consideration of New and Revised Draft Management Plans for Protected Areas (2000, and revised in 2003).

[2] Rule 10: The Committee may establish, with the approval of the Antarctic Treaty Consultative Meeting, subsidiary bodies, as appropriate. Such subsidiary bodies shall operate on the basis of the Rules of Procedure of the Committee where applicable.

[3] ATCM XXX WP 10 submitted by Australia.

Potential further activities for a SGMP

Other activities a SGMP could undertake as its resources allow include providing practical advice as requested to CEP Members who intend to prepare new draft Management Plans for the CEP's consideration, revising current guidelines and providing guidance to the CEP on how Management Plans can be made more consistent. This guidance could be used by CEP Members where Management Plans are reviewed with little or no changes made and are therefore not sent to the SGMP. The Terms of Reference (TOR) should be sufficiently broad to include such activities without the need for the CEP to continuously review the TOR.

Proposal for establishing a SGMP

Draft TOR are below for the Antarctic Treaty Consultative Meeting's (ATCM) consideration. Matters important to the operation of the SGMP are also outlined below, along with the timeline for its operation[4]. It will be necessary to update the *Guidelines for CEP Consideration of New and Revised Draft ASPA and ASMA Management Plans* to reflect the establishment of the SGMP (see Annex 1).

Proposed Terms of Reference

1) Examine any draft new or revised Management Plan to consider, in consultation with relevant experts if appropriate:
   - whether it is consistent with the provisions of Annex V to the Protocol, particularly Articles 3, 4 and 5[5], and with relevant CEP guidelines;[6]
   - its content, clarity, consistency and likely effectiveness;[7]
   - whether it clearly states the primary reason for designation;[8] and
   - whether it clearly states how the proposed Area complements the Antarctic protected areas system as a whole.[9]
2) Advise proponents of suggested amendments to the draft Management Plan to address issues in relation to 1) above.
3) Submit a Working Paper to the CEP with recommendations for the adoption or otherwise of each new or revised draft Management Plan, identifying where the Plan reflects comments received by Members, and where they have not been, the reasons for not doing so. The Working Paper is to include all revised Management Plans and the information required by the ATCM's Legal and Institutional Working Group.
4) Provide advice to the CEP as necessary for the purpose of improving Management Plans and the process for their intersessional review.

Operational matters

- Translation: Under Rule 22 of the CEP Rules of Procedure, English, French, Russian and Spanish shall be the official languages of subsidiary bodies. The appropriateness of

[4] CEP X Final Report, p259.

[5] Modified from "Terms of Reference for an Intersessional Contact Group to Consider draft Management Plans" ToR #2 (CEP VII Final Report, Annex 4).

[6] Currently including – for ASPAs – Resolution 2 (1998) *Guide for the Preparation of Management Plans for Antarctic Specially Protected Areas*.

[7] From "Guidelines for CEP Consideration of New and Revised Draft ASPA and ASMA Management Plans" paragraph 8 (CEP VI Final Report, Annex 4), and "Terms of Reference for an Intersessional Contact Group to Consider draft Management Plans" ToR #2 (CEP VII Final Report, Annex 4).

[8] Agreement at CEP VIII (Final Report paragraph 187).

[9] Agreement at CEP VIII (Final Report paragraph 187).

translation arrangements for subsidiary bodies needs to be considered on a case by case basis. Noting that the proposed SGMP will conduct its business remotely, the CEP considers that translation of the SGMP's advice to proponents and to the CEP is sufficient to achieve compliance with Rule 22.

- Membership: While membership of the SGMP will remain open to all CEP Members, CEP Representatives are particularly encouraged to participate in the SGMP where they will be able to do so for several consecutive intersessional periods so as to achieve continuity in membership and improved institutional knowledge. The expectation is that all Members in the SGMP would participate in the review of all Plans except those they have proposed. The SGMP needs to maintain a minimum number (4) of participants to remain viable. The convenor will have oversight of maintaining the membership of the SGMP.
- Convener: The convener of the SGMP may be either one of its elected Vice Chairs or a CEP Representative elected as convenor under the same conditions as set out for the Vice Chairs in Rule 16 of the Rules of Procedure as applicable. The convenor may, but is not required to, provide technical contribution to the SGMP's activities.
- Submission: Revised draft Management Plans should be submitted to the SGMP at least 60 days prior to the meeting at which the Plan will be considered by the CEP.
- Review: The CEP intends to review the effectiveness of the SGMP after a 2 year period, and to revise the TOR as necessary.

Timeline

Period	Action	Timing
Intersessional period	• Antarctic Treaty 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 the Discussion Forum. • Subsidiary Group on Management Plans (SGMP) considers draft Management Plans in accordance with its Terms of Reference and prepares a report with recommendations for proponents. SGMP report is translated and posted to the Discussion Forum.	3-6 months following CEP meeting
	• Draft Management Plans are revised by proponents in response to comments provided by Members, Observers and the SGMP, and posted to the Discussion Forum.	60 days prior to CEP meeting
Working Paper deadline	• SGMP convener 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 SGMP's recommendations.	

Appendix 3 - Annex 1

Guidelines for CEP Consideration of New and Revised Draft ASPA and ASMA Management Plans

1. Draft Management Plans (new or revised) shall be submitted by the proponent(s) to the CEP for consideration at its next meeting.

2. For those areas that include a marine component, and which meet the criteria set out in Decision 9 (2005)[10], draft Management Plans shall also be forwarded by the proponent(s) to CCAMLR for its consideration.

- The proponent(s) shall submit draft Management Plans to the CCAMLR Secretariat by mid-June to ensure that CCAMLR has adequate time to review the draft plans and provide comments within the timetable of the CEP's own review. Draft Management Plan(s) may be submitted to CCAMLR ahead of submission to the CEP depending on the timing of the CEP meeting in any one year.

3. At its meeting the CEP may, as appropriate, refer draft Management Plans to:

- the ATCM for adoption; or
- to the Subsidiary Group on Management Plans (SGMP) for intersessional review.

4. In accordance with its Terms of Reference, the SGMP shall consider each draft Management Plan referred to it, advise the proponent(s) on recommended changes, consider any revised version of the Management Plan prepared during the intersessional period, and report to the CEP on its review.

5. With consideration of the recommendations of the SGMP, and any additional comments by Members, the CEP shall consider each Management Plan reviewed by the SGMP in accordance with paragraph 3 above.

[10] Decision 9 (2005) states that:

Draft management plans which require the approval of CCAMLR are those which include marine areas:

- In which there is actual harvesting of potential capability for harvesting of marine living resources which might be affected by the sites' designation; or
- For which there are provisions specific in a draft management plan which might prevent or restrict CCAMLR-related activities.

And that:

Proposals for ASPAs and ASMAs which might have implications for CCAMLR Ecosystem Monitoring Programme (CEMP) sites should be submitted to CCAMLR for its consideration before any decision is taken on the proposal.

ANNEX F

Reports pursuant to Recommendation XIII-2

Report of the Depositary Government of the Antarctic Treaty and its Protocol 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 Principality of Monaco acceded to the Antarctic Treaty on May 31, 2008. There are now forty-seven (47) Parties to the Treaty. There have been no new accessions to the Protocol on Environmental Protection in the past year. There are thirty-two (32) 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	1 May 2008
	Mr David Colson	1 May 2008

Lists of Parties to the Treaty, to the Protocol, and of Recommendations/Measures and their approvals are attached.

THE ANTARCTIC TREATY

Done: Washington; December 1, 1959

Entry into force: June 23, 1961

In accordance with Article XIII, the Treaty was subject to ratification by the signatory States and is open for accession by any State which is a Member of the United Nations, or by any other State which may be invited to accede to the Treaty with the consent of all the Contracting Parties whose representatives are entitled to participate in the meetings provided for under Article IX of the Treaty; instruments of ratification and instruments of accession shall be deposited with the Government of the United States of America. Upon the deposit of instruments of ratification by all the signatory States, the Treaty entered into force for those States and for States which had deposited instruments of accession to the Treaty. Thereafter, the Treaty enters into force for any acceding State upon deposit of its instrument of accession.

Legend: (no mark) = ratification; **a** = accession; **d** = succession; **w** = withdrawal or equivalent action

Participant	Signature	Consent to be bound		Other Action	Notes
Argentina	December 1, 1959	June 23, 1961			
Australia	December 1, 1959	June 23, 1961			
Austria		August 25, 1987	**a**		
Belarus		December 27, 2006	**a**		
Belgium	December 1, 1959	July 26, 1960			
Brazil		May 16, 1975	**a**		
Bulgaria		September 11, 1978	**a**		
Canada		May 4, 1988	**a**		
Chile	December 1, 1959	June 23, 1961			
China		June 8, 1983	**a**		
Colombia		January 31, 1989	**a**		
Cuba		August 16, 1984	**a**		
Czech Republic		January 1, 1993	**d**		[1]
Denmark		May 20, 1965	**a**		
Ecuador		September 15, 1987	**a**		
Estonia		May 17, 2001	**a**		
Finland		May 15, 1984	**a**		
France	December 1, 1959	September 16, 1960			

[1] Effective date of succession by the Czech Republic. 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.

Participant	Signature	Consent to be bound		Other Action	Notes
Germany		February 5, 1979	**a**		[2]
Greece		January 8, 1987	**a**		
Guatemala		July 31, 1991	**a**		
Hungary		January 27, 1984	**a**		
India		August 19, 1983	**a**		
Italy		March 18, 1981	**a**		
Japan	December 1, 1959	August 4, 1960			
Korea (DPRK)		January 21, 1987	**a**		
Korea (ROK)		November 28, 1986	**a**		
Monaco		May 31, 2008	**a**		
Netherlands		March 30, 1967	**a**		[3]
New Zealand	December 1, 1959	November 1, 1960			
Norway	December 1, 1959	August 24, 1960			
Papua New Guinea		March 16, 1981	**d**		[4]
Peru		April 10, 1981	**a**		
Poland		June 8, 1961	**a**		
Romania		September 15, 1971	**a**		[5]

[2] The Embassy of the Federal Republic of Germany in Washington transmitted to the Department of State a diplomatic note, dated October 2, 1990, which reads as follows:

"The Embassy of the Federal Republic of Germany presents its compliments to the Department of State and has the honor to inform the Government of the United States of America as the depositary Government of the Antarctic Treaty that, t[h]rough 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 [A]ntarctic system.
"The Embassy would be grateful if the Government of the United States of America could inform all contracting parties to the Antarctic Treaty of the contents of this note.
"The Embassy of the Federal Republic of Germany avails itself of this opportunity to renew to the Department of State the assurances of its highest consideration."

Prior to unification, the German Democratic Republic deposited an instrument of accession to the Treaty, accompanied by a declaration, on November 19, 1974, and the Federal Republic of Germany deposited an instrument of accession to the Treaty, accompanied by a statement, on February 5, 1979.

[3] The instrument of accession to the Treaty by the Netherlands states that the accession is for the Kingdom in Europe, Suriname and the Netherlands Antilles; as of January 1, 1986, Aruba as a separate entity.

[4] Date of deposit of notification of succession by Papua New Guinea; effective September 16, 1975, the date of its independence.

[5] The instrument of accession to the Treaty by Romania was accompanied by a note of the Ambassador of the Socialist Republic of Romania to the United States of America, dated September 15, 1971, which reads as follows:
"Dear Mr Secretary:
"Submitting the instrument of adhesion of the Socialist Republic of Romania to the Antarctic Treaty, signed at Washington on December 1, 1959, I have the honor to inform you of the following:
'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.'
"I am kindly requesting you, Mr Secretary, to forward to all parties concerned the text of the Romanian instrument of adhesion to the Antarctic Treaty, as well as the text of this letter containing the above mentioned statement of the Romanian Government.
"I avail myself of this opportunity to renew to you, Mr Secretary, the assurances of my highest consideration."

Copies of the Ambassador's letter and the Romanian instrument of accession to the Treaty were transmitted to the Antarctic Treaty parties by the Secretary of State's circular note dated October 1, 1971.

Participant	Signature	Consent to be bound		Other Action	Notes
Russian Federation	December 1, 1959	November 2, 1960			[6]
Slovak Republic		January 1, 1993	**d**		[7]
South Africa	December 1, 1959	June 21, 1960			
Spain		March 31, 1982	**a**		
Sweden		April 24, 1984	**a**		
Switzerland		November 15, 1990	**a**		
Turkey		January 24, 1996	**a**		
Ukraine		October 28, 1992	**a**		
United Kingdom	December 1, 1959	May 31, 1960			
United States	December 1, 1959	August 18, 1960			
Uruguay		January 11, 1980	**a**		[8]
Venezuela		March 24, 1999	**a**		

[6] The Treaty was signed and ratified by the former Union of Soviet Socialist Republics. By a note dated January 13, 1992, the Russian Federation informed the United States Government that it "continues to perform the rights and fulfil the obligations following from the international agreements signed by the Union of Soviet Socialist Republics."

[7] Effective date of succession by the Slovak Republic. 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.

[8] The instrument of accession to the Treaty by Uruguay was accompanied by a declaration, a Department of State English translation of which reads as follows:
"The Government of the Oriental Republic of Uruguay considers that, through its accession to the Antarctic Treaty signed at Washington (United States of America) on December 1, 1959, it helps to affirm the principles of using Antarctica exclusively for peaceful purposes, of prohibiting any nuclear explosion or radioactive waste disposal in this area, of freedom of scientific research in Antarctica in the service of mankind, and of international cooperation to achieve these objectives, which are established in said Treaty.
"Within the context of these principles Uruguay proposes, through a procedure based on the principle of legal equality, the establishment of a general and definitive statute on Antarctica in which, respecting the rights of States as recognized in international law, the interests of all States involved and of the international community as a whole would be considered equitably.
"The decision of the Uruguayan Government to accede to the Antarctic Treaty is based not only on the interest which, like all members of the international community, Uruguay has in Antarctica, but also on a special, direct, and substantial interest which arises from its geographic location, from the fact that its Atlantic coastline faces the continent of Antarctica, from the resultant influence upon its climate, ecology, and marine biology, from the historic bonds which date back to the first expeditions which ventured to explore that continent and its waters, and also from the obligations assumed in conformity with the Inter-American Treaty of Reciprocal Assistance which includes a portion of Antarctic territory in the zone described in Article 4, by virtue of which Uruguay shares the responsibility of defending the region.
"In communicating its decision to accede to the Antarctic Treaty, the Government of the Oriental Republic of Uruguay declares that it reserves its rights in Antarctica in accordance with international law."

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)	May 24, 2002
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

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
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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* Signed at Madrid on October 4, 1991; thereafter at Washington until October 3, 1992.

** 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

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 a the date on which this Protocol was adopted. (Article 23)
***Adopted at Bonn on October 17, 1991 at XVI 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, May 1, 2008.

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	ALL	ALL	ALL	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			ALL	ALL	ALL
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	ALL
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	ALL	ALL	ALL	ALL	ALL
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		ALL	*	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-1, 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	XXVII-1 *, XXVII-2 *, XXVII-3 **, XXVII-4
Uruguay (1985)+	ALL	ALL (except XXIV-1 and XXIV-2)	*	XXVI-1, 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.

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)	3 Measures adopted at Thirtieth Meeting (New Delhi 2007)
	Approved	Approved	Approved
Argentina	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Australia	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Belgium	ALL except Measure 1	ALL	ALL
Brazil (1983)+	XXVIII-2, XXVIII-3, XXVIII-4, XXVIII-5	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Bulgaria (1998)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Chile	XXVIII-2, XXVIII-3, XXVIII-4, XXVIII-5	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
China (1985)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Ecuador (1990)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Finland (1989)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
France	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Germany (1981)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
India (1983)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Italy (1987)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Japan	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Korea, Rep. (1989)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Netherlands (1990)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
New Zealand	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Norway	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Peru (1989)+	XXVIII-1, XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Poland (1977)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Russia	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
South Africa	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	ALL	XXX-1 *, XXX-2 *, XXX-3 **
Spain (1988)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Sweden (1988)+	XXVIII-1, XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Ukraine (2004)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
U.K.	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
Uruguay (1985)+	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-3 **
U.S.A.	XXVIII-2 *, XXVIII-3 *, XXVIII-4 *, XXVIII-5 **	XXIX-1 *, XXIX-2 *, XXIX-3 **, XXIX-4 ***	XXX-1 *, XXX-2 *, XXX-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 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, May 1, 2008

Report Submitted to Antarctic Treaty Consultative Meeting XXXI 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 2006 to 28 February 2007.

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 2007 – 2008 year will be submitted to ATCM XXXII, once the June 2008 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 and the UK would encourage all Contracting Parties to CCAS to submit returns on time to ensure that all relevant information can be provided.

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).

May 2008

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 2006 to 28 February 2007.

Contracting Party	Antarctic Seals Captured	Antarctic Seals Killed
Argentina	Nil	Nil
Australia	131[f]	Nil
Belgium	Nil	Nil
Brazil	275[b]	Nil
Canada	Nil	Nil
Chile	579[a]	Nil
France	40[g]	Nil
Germany	Nil	Nil
Italy*	-	-
Japan	Nil	Nil
Norway	Nil	Nil
Poland	Nil	Nil
Russia	Nil	Nil
South Africa	Nil	Nil
United Kingdom	7[c]	Nil
United States of America	682[d]	1[e]

* No report received

[a] 568 Antarctic fur seals, 11 leopard seals

[b] 30 Antarctic fur seals, 5 crabeater seals, 5 leopard seals, 230 southern elephant seals, 5 Weddell seals

[c] 1 southern elephant seal, 6 Weddell seals

[d] up to 500 Antarctic fur seals, 80 southern elephant seals, 102 Weddell seals

[e] 1 juvenile male Weddell seal

[f] 12 southern elephant seals, 119 Weddell seals

[g] 40 Weddell 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 to the Thirty-first Antarctic Treaty Consultative Meeting 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

Summary

A report is provided by Australia as depositary of the Convention on the Conservation of Antarctic Marine Living Resources 1980 on the status of the Convention.

Depositary report

Australia, as depositary of the Convention on the Conservation of Antarctic Marine Living Resources 1980 (the Convention) is pleased to report to the Thirty first Antarctic Treaty Consultative Meeting on the status of the Convention.

Australia advises the Antarctic Treaty Parties that, since the Thirtieth Antarctic Treaty Consultative Meeting, no States have acceded to the Convention.

The People's Republic of China lodged its application to become a member of the Commission for the Conservation of Antarctic Marine Living Resources, in accordance with Article VII(2) of the Convention, with the Depositary on 13 July 2007. Pursuant to Article VII(2) of the Convention, the People's Republic of China became a Member of the Commission on 2 October 2007.

A copy of the status list for the Convention is available upon request to the Treaties Secretariat of the Australian Government Department of Foreign Affairs and Trade. Requests could be conveyed through Australian diplomatic missions, or 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 to the Thirty-first Antarctic Treaty Consultative Meeting 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

Summary

A report is provided by Australia as depositary of the Agreement on the Conservation of Albatrosses and Petrels 2001 on the status of the Agreement.

Depositary report

Australia, as depositary of the Agreement on the Conservation of Albatrosses and Petrels 2001 (the Agreement) is pleased to report to the Thirty-first Antarctic Treaty Consultative Meeting on the status of the Agreement.

Australia advises the Antarctic Treaty Parties that, since the Thirtieth Antarctic Treaty Consultative Meeting, no States have acceded to the Agreement.

The Depositary further advises that Australia's reservation to the entry into force of the Amendment to Annex 1 of the Agreement was withdrawn on 23 November 2007.

A copy of the status list for the Agreement is available upon request to the Treaties Secretariat of the Australian Department of Foreign Affairs and Trade. Requests could be conveyed through Australian diplomatic missions, or via the internet on the Australian Treaties Database at the following internet address:

http://www.austlii.edu.au/au/other/dfat/treaty_list/depository/consalbnpet.html

Report by the CCAMLR Observer to the Thirty-first Antarctic Treaty Consultative Meeting

Introduction

1. The Twenty-sixth Meeting of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) was held in Hobart from 22 October to 2 November 2007. A number of routine matters were addressed along with notable specific issues, including:
   - CCAMLR fisheries in 2006/07;
   - Illegal, unreported and unregulated (IUU) fishing;
   - Ecosystem monitoring and management;
   - Deep-sea bottom fishing;
   - By-catch in longline and trawl fisheries;
   - Marine Protected Areas;
   - Co-operation with international organizations, particularly the ATCM, and
   - Performance review of the organisation.
2. CCAMLR's deliberations on the issues identified in paragraph (1), and others, are summarised below. Emphasis is given to items that are particularly relevant to the ATCM XXXI and CEP XI agendas. An overall summary of important discussions and decisions from CCAMLR XXVI is provided in Appendix I along with references to the meeting's report paragraphs.

CCAMLR Fisheries in 2006/07

3. Fisheries in the CAMLR Convention Area during 2006/07 (1 December 2006 to 30 November 2007) targeted Patagonian and Antarctic toothfish (*Dissostichus eleginoides* and *D. mawsoni*), mackerel icefish (*Champsocephalus gunnari*) and krill (*Euphausia superba*). The 2006/07 catches reported in CCAMLR-XXVI were interim catches, and the revised numbers will be published in Volume 20 of the *CCAMLR Statistical Bulletin* (*http://www.ccamlr.org/pu/e/e_pubs/intro.htm*).
4. The reported catch of *Dissostichus* spp. in 2006/07 (to 30 November 2007) was 16328 tonnes, taken predominantly by longlining, compared to 16843 tonnes in the previous season (1 December 2005 to 30 November 2006). It is estimated that, in addition to reported catches, some 3615 tonnes of *Dissostichus* spp. were taken as a result of IUU fishing in the Convention Area during 2006/07, compared with 3420 tonnes in 2005/06. The total global catch for *Dissostichus* spp. in 2006/07 was estimated at 26722 tonnes, compared with 30053 tonnes the previous season. For further discussion on IUU fishing, please refer to CCAMLR-XXVI, paragraphs 10.1 to 10.6 (see also paragraphs 10.7 to 10.50).
5. The reported krill catch in 2006/07 (to 30 November 2007) was 104586 tonnes compared with 106591 tonnes in the previous season. The reported catch in 2006/07 was well below the notified catch (368 000 tonnes; SC-CAMLR-XXV, paragraph 4.19). Annual catches of krill have remained in the relatively stable range of krill catches (80 000 to 120 000 tonnes) since 1992/93
6. The discrepancy in reported and notified krill catches for 2006/07 has been attributed to operational considerations such as fuel costs and processing difficulties.
7. However, the notified 2007/08 krill catch was 684 000 tonnes, an effective doubling of the notified catches for 2006/07 and in excess of five times the current catch level. The catches notified for 2007/08 are also higher than the catch trigger level for subdividing the precautionary catch limits for krill in Area 48.

8. Once again, CCAMLR has 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 subarea, including small-scale management units. To this effect the Commission is focusing on orderly development of the krill fishery, improvement of the krill fishery notification system, systematic scientific observer coverage and ensuring that the trigger level in Area 48 should not be exceeded until a method to sub-divide allowable catches is developed and implemented.

9. The Commission adopted conservation measures (CMs) for all fisheries to be conducted in the 2007/08 season, as well as general measures for regulating fishing activities and reporting fisheries information from the Convention Area. The most notable new CMs provide for notification of intent to participate in the krill fishery (CM 21-03) and management of bottom fishing in the CCAMLR Area (CM 22-06). All measures are published in the *Schedule of Conservation Measures in Force 2007/08* available from the CCAMLR Secretariat or the website: *http://www.ccamlr.org/pu/e/e_pubs/cm/07-08/toc.htm*.

10. 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;
    - Interim prohibition on deep-sea gillnetting and restrictions on the use of bottom trawling gear;
    - General environmental protection during fishing;
    - 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;
    - Promoting compliance with CCAMLR CMs by Contracting Party nationals
    - 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", (j) a "Non-Contracting Party Co-Operation Programme" and (k) "International actions to reduce the incidental mortality of seabirds arising from fishing".

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 again 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" which can be found at *http://www.ccamlr.org/pu/e/sc/fish-monit/iuu-vess.htm* along with a list of vessels licensed to fish in CCAMLR waters (*http://www.ccamlr.org/pu/e/sc/fish-monit/vess-licensed.htm*). 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. Such interaction includes 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 Commission endorsed a variety of scientific advice on estimating B_0 (initial exploitation biomass) for krill in various statistical areas. This parameter forms the basis for estimating krill precautionary catch levels.

18. 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 south-west Atlantic (Area 48) to Small Scale Management Units (SSMUs);
    - Further development of ecosystem models to take into account the complex interactions between predators, target species and fisheries other than the krill fishery;
    - Further consideration of bioregionalisation in the context of marine protected areas (see paragraph 26 below);
    - Further modelling work to include a special Workshop to be held in June 2008 to provide abundance estimates of land-based predators as well as a joint CCAMLR-IWC Workshop on Antarctic ecosystem model inputs in August 2008, and
    - The Scientific Committee considering how to address the issue of climate change in relation to conservation of Antarctic marine living resources within its agenda.

By-catch in Longline and Trawl Fisheries

19. 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*).

20. 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 in waters outside the CAMLR Convention Area.

21. CCAMLR Resolution 22/XXIII remains as an important initiative in efforts to reduce incidental mortality of CAMLR Convention Area seabirds in adjacent areas.

22. 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, CCSBT and WCPFC) in an effort to secure 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 by-catch data, including seabird by-catch.

23. 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 2007/08* at *http://www.ccamlr.org/pu/e/e_pubs/cm/07-08/toc.htm*).

Protected Areas (Including Marine Protected Areas [MPAS])

24. CCAMLR has endorsed the administrative procedures introduced by the CCAMLR Secretariat in 2007 to ensure that ATCM proposals for protected areas with marine components are speedily reviewed by CCAMLR following ATCM Decision 9 (2005).

25. 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 CCAMLR Bioregionalisation Workshop was held in Belgium in August 2007 to develop a representative network of MPAs;
    - The CEP Chair actively cooperated with CCAMLR in preparing for this Workshop, and
    - Various examples have illustrated the development, designation and management of local MPAs within the CCAMLR Area, particularly in respect of MPAs proclaimed by Australia, France and South Africa.

26. The Workshop's outcomes require further work by CCAMLR's Working Group on Ecosystem Monitoring and Management (WG-EMM). Such work includes:

    - Primary regionalisation of the pelagic environment can be regarded as useful for application by CCAMLR and the CEP;

- Initial regionalisation for the benthic environment should be reviewed and optimized for use by CCAMLR and the CEP;
- Future refinement of the benthic bioregionalisation is possible in the future as methods improve and further data are acquired and analyzed;
- Additional finer-scale bioregionalisation work can be undertaken in a number of areas using existing data;
- Future work could include efforts to delineate fine-scale provinces to address fine-scale regionalisation, including use of statistical methods and other potential data sources;
- Inclusion of process and species information should be considered further in the context of systematic conservation planning, and in developing a spatial decision-making framework, and
- A procedure should be established to identify marine areas for protection and to further CCAMLR conservation objectives.

CCAMLR Performance Review

27. Since 1996, CCAMLR has had a standing item on its agenda to deal with implementing the Convention's objectives. A major development in this regard was a symposium, co-sponsored by Australia and Chile, in 2005 to discuss CCAMLR's future. A number of general and specific initiatives were proposed with a view to improving CCAMLR's effectiveness and operational efficiency.
28. Consequently, and following developments at COFI-27 and in UNGA Resolution 61/105, CCAMLR-XXVI agreed to undertake a review of the institution's performance in 2008. The terms of reference, workplan and performance criteria to be examined by this review are attached at Appendix 2.

Co-operation with Non-contracting Parties

29. In implementing its Catch Documentation Scheme (CDS), CCAMLR has done much to work with various Non-Contracting Parties (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 address their potential involvement in IUU fishing undermining its CMs. This achieved through *CCAMLR's Policy to Enhance Cooperation between CCAMLR and Non-Contracting Parties* aimed at improving the effectiveness of CCAMLR-NCP cooperation, including a cooperation enhancement program.

Co-operation with Other International Organizations

30. 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.
31. 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.

32. The Twenty-seventh Meeting of COFI (COFI-27) took place in March 2007. 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) (see paragraph 28 above). At this stage, CCAMLR stands alone as the leading example of global best practice in addressing marine fisheries conservation issues.

Co-operation with the ATCM

33. Once again, CCAMLR-XXVI expressed satisfaction with the growing co-operation between CCAMLR and the ATCM/CEP

34. In particular, it noted a number of points from ATCM-XXX as being directly relevant to its work. These included:

- ATCM Resolution 2 (2007) on southern giant petrel conservation and the need for CCAMLR Members to provide relevant data to SCAR;
- ATCM Resolution 3 (2007) on long-term monitoring and sustained environmental observation in Antarctica;
- CEP support for Conservation Measure 26-01 (*General Environmental Protection During Fishing*);
- A CCAMLR information session for CEP-11 to report on CCAMLR's experience in setting-up and implementing its ecosystem monitoring programme (CEMP);
- ATCM deliberations on IUU fishing in the CCAMLR Area;
- Supporting a proposal that the CCAMLR Science Officer periodically accompany the Chair of the CCAMLR Scientific Committee to the CEP in order to improve institutional continuity between the CEP and CCAMLR;
- Possible inclusion of "climate change" as an agenda item, or subitem, on the Commission and Scientific Committee agendas in a manner similar to that of the CEP, and
- Presence of the Antarctic Treaty Secretariat Executive Secretary at CCAMLR-XXVI.

35. Following the points highlighted in paragraph 34 above, it should be noted that the possibility of a joint CEP-CCAMLR Scientific Committee meeting in 2009 was also mooted at CCAMLR-XXVI.

36. CCAMLR-XXVI saw that the award of the prestigious 2007 WWF Duke of Edinburgh Conservation Medal to the CCAMLR Executive Secretary at Buckingham Palace on 17 October 2007 as recognising both CCAMLR's many notable achievements and the Executive Secretary's long-standing involvement with the Commission's work. For such an acknowledgement to have been made during the IPY was doubly meaningful.

Appendix 1

CCAMLR-XXVI References for Topics & Decisions

The CCAMLR-XXVI report is downloadable from:

http://www.ccamlr.org/pu/e/e_pubs/cr/07/toc.htm

Topics & Decisions		CCAMLR-XXVI Paragraphs
1. General Fishery Matters		
1.1	Fisheries Catches in 2006/07	4.32, 4.51-4.52
1.3	Fishery Regulation Measures 2007/08	13.3, 13.26, 13.47, 13.48, 13.51, 13.52-13.71, 13.72-13.73, 13.74-13.75, 13.76-13.77, 13.78
1.3	Bottom Fishing	13.40-13.46, 13.42
1.4	Mitigation Measures	13.27
1.5	Scheme International Scientific Observation	11.1-11.10
2. IUU fishing in Convention Area		
2.1	Current Levels	10.1-10.50
2.2	Development IUU Estimation Methods	10.51
2.3	IUU Vessel Lists	10.52-10.75
3. General Compliance		
3.1	Compliance with Conservation Measures	8.3-8.70
3.2	New Compliance-Related Measures (Trade)	13.28-13.39
3.3	Development Compliance Evaluation Procedure	8.18-8.19
4. Ecosystem Approach to Fisheries Management		
4.1	Krill Ecosystem-Based Feedback Management	4.16-4.28, 4.29-4.31
4.2	Incidental Mortality Seabirds/Marine Mammals	6.5-6.17
4.3	Marine Debris Impact on Biota	6.1-6.4
4.4	Joint CCAMLR-IWC Workshop	4.92
4.5	IPY Activities	20.1-20.10
5. Marine Protected Areas		
5.1	CEMP Site Protection	7.1-7.2
5.2	Bioregionalisation	7.3-7.17, 7.18-7.19
6. Cooperation Antarctic Treaty System		
6.1	ATCM	15.1-15.15, 15.41-15.49
6.2	Climate Change & CCAMLR	15.16-15.36
6.3	CEP	15.7, 15.10, 15.12-15.14
6.4	SCAR	15.37-15.40
7. Cooperation Other International Organisations		
7.1	UN/FAO	16.17
7.2	ACAP	16.1
7.3	NGOs	16.5-16.9, 16.10
7.4	General	16.11-16.39
8. CCAMLR Performance Review		
7.1	General	17.2-17.20
7.2	Terms of Reference & Workplan	Annex 7

Appendix 2

CCAMLR Decision to Undertake a Performance Review of the Organisation

The Commission for the Conservation of the Antarctic Living Marine Resources (CCAMLR),

Recalling Article II of the CAMLR Convention which states that the objective of the Convention is the conservation of the Antarctic marine living resources and that, for the purpose of the Convention, the term 'conservation' includes rational use,

Also recalling Article V of the CAMLR Convention, which highlights the special obligations and responsibilities of Antarctic Treaty Consultative Parties for the protection and preservation of the environment of the Antarctic Treaty Area,

Further recalling that any harvesting and associated activities in the CAMLR Convention Area are to be conducted in accordance with the provisions of the Convention and with principles of conservation as set forth in the Convention,

Noting the discussions held at the CCAMLR Symposium in Valdivia, Chile, from 5 to 8 April 2005,

Considering the recent calls of the international community to organisations with management and conservation responsibilities with respect to fisheries and marine living resources to strengthen their efforts to attain their objectives and to implement adequate approaches to fisheries management,

Further considering the 2006 UN General Assembly Resolution 61/105 calling for Regional Fisheries Management Organisations and arrangements with management and conservation responsibilities on fisheries and marine living resources, to undertake urgently a Performance Review,

Deciding that it would be appropriate to undertake for itself such a Performance Review,

Decides, in accordance with Article IX, paragraph 1:

1. That a Performance Review of CCAMLR shall be conducted during the 2007/08 intersessional period and a final report shall be submitted to the Contracting Parties at the 2008 annual meeting.
2. The Review shall be carried out on the basis of the attached list of criteria.

   The Review Panel may consider adding criteria, if needed. The Panel may take into consideration the discussions held at the Valdivia Symposium referred to above.
3. The Review Panel will be composed of nine persons, as follows:

   (i) four internationally recognised persons who have experience in the CCAMLR context and a thorough understanding of the CAMLR Convention, and who shall reflect the composition of the Members of CCAMLR;

   (ii) the Chair of the Committee for Environmental Protection (CEP);

   (iii) an expert from a CCAMLR non-governmental organisation (NGO) observer;

   (iv) three external experts, among whom there is experience in relevant areas of science, fisheries management and legal matters (including compliance and enforcement issues).

   The Review Panel shall be appointed by the Commission.

The external experts shall be internationally recognised in their field, but shall have no involvement or direct experience with CCAMLR.

The Panel members shall be independent and participate in their personal capacity.

The Review Panel Chair shall be a Panel member selected by the Panel.

4. CCAMLR Members may provide in writing two names, each accompanied by a one-paragraph curriculum vitae (CV), for each category ((i) internal members, (ii) external expert in science, (iii) external expert in fisheries management, (iv) external expert in legal matters related to international law) to the Chair of the Commission, through the Secretariat, by 31 December 2007.

   The Chair of the Commission shall provide to Members, by 15 January 2008, four lists, containing the names proposed by the Members for the appointment of:

   (i) the four persons who have experience in the CCAMLR context; and

   (ii) the three external experts to the Review Panel.

   The Members shall immediately acknowledge receipt of the communication. Members may respond in writing to the Chair of the Commission within 30 days indicating preferences for two persons from each list.

   The Chair of the Commission, at the end of the 30-day period shall, through the Secretariat, inform Members of the names of the persons for whom preference has been expressed through the selection process described above.

   Once these persons have been identified, the Secretariat shall write to each person selected by the Members for appointment to the Review Panel, indicating CCAMLR's desire to appoint him or her and seeking their positive response.

5. The NGO expert will be recommended to the Commission by the NGOs accredited as official observers to CCAMLR by 31 December 2007. The name of the NGO expert selected will be communicated to the Chair of the Commission through the Secretariat.

   The Chair of the Commission will provide the name of the NGO expert to the Members of the Commission together with the four lists of candidates mentioned above.

6. The Review Panel will meet at the CCAMLR Headquarters during May/June 2008.

7. The CCAMLR Secretariat shall provide logistical support and information to the Review Panel and shall not form part of this Panel.

8. The Review Panel shall decide by consensus. In the event consensus cannot be reached, individual members of the Panel may include their views in the Panel's report.

9. Travel and accommodation costs for the participants in the Review Panel meeting shall be borne by the CCAMLR budget, except for the NGO representative.

10. The report and the conclusions (including recommendations) of the Performance Review shall be communicated by the Panel Chair to CCAMLR Members, the Chair of the Commission and the Executive Secretary 45 days in advance of the 2008 annual meeting at which they will be considered firstly by SCIC, SCAF and the Scientific Committee and then by the Commission for discussion and action, if needed.

    SCIC, SCAF and the Scientific Committee shall report to the Commission the results of their discussions on this issue.

    The Report and the conclusions shall also be distributed to Contracting Parties and observers at the 2008 annual meeting, and shall be placed on the CCAMLR website.

11. Following the first review, subsequent reviews may be conducted if deemed appropriate by the Commission.

Criteria for Reviewing the Performance of CCAMLR

Area	General Criteria	Detailed Criteria
1. *Role of CCAMLR within the Antarctic Treaty System*	Relationship with the Antarctic Treaty System	• Extent to which CCAMLR effectively implements its obligations under Articles III and V of the Convention.
	Environmental protection	• Extent to which CCAMLR has effectively observed measures, resolutions and decisions of the Antarctic Treaty Consultative meetings related to the protection of Antarctic marine living resources.
	Conservation	• Extent to which CCAMLR has taken into account the effects of harvesting, research, conservation and associated activities on the marine ecosystem, the known or potential effects of environmental changes in its management of Antarctic marine living resources, and the risks and effects of the introduction of alien species.
	Protected areas	• Effectiveness of CCAMLR's relationship with the ATCM in considering proposals for ASPAs and ASMAs with marine components and providing advice to the ATCM. • What management and administrative tools are available to build up a system of protected areas. • Extent to which CCAMLR has made progress to respond to the WSSD target to establish a representative network of marine protected areas by 2012.
	Marine pollution	• Effectiveness of CCAMLR to implement measures to provide for protection of the Southern Ocean and Antarctic environment from the impacts of vessels engaged in harvesting, research, conservation and associated activities, including measures relating to marine pollution and vessel safety.
2. *Conservation and management*	Status of living marine resources	• Status of Antarctic marine living resources under the purview of CCAMLR. • Trends in the status of those resources. • Status of species that belong to the same ecosystems as, or are associated with or dependent upon, targeted Antarctic marine living resources. • Trends in the status of those species.
	Ecosystem approach	• Extent to which CCAMLR decisions take account of and incorporate an ecosystem approach to management.
	Data collection and sharing	• Extent to which CCAMLR has agreed formats, specifications and timeframes for data submissions. • Extent to which CCAMLR Members and Contracting Parties, individually or through CCAMLR, collect and share complete and accurate data concerning Antarctic marine living resources and other relevant data in a timely manner. • Extent to which fishing and research data and fishing vessel and research vessel data are gathered by CCAMLR and shared among Members. • Extent to which CCAMLR is addressing any gaps in the collection and sharing of data as required.
	Quality and provision of scientific advice	• Extent to which CCAMLR receives and acts on the basis of the best scientific advice relevant to the Antarctic marine living resources under its purview, as well as to the effects of harvesting, research, conservation and associated activities, on the marine ecosystem.

Area	General Criteria	Detailed Criteria
2. *Conservation and management* (continued)	Adoption of conservation and management measures	• Extent to which CCAMLR has adopted conservation and management measures for Antarctic marine living resources that ensure the conservation, including rational use, of those resources and are based on the best scientific evidence available. • Extent to which CCAMLR has applied a precautionary approach as set forth in the Code of Conduct for Responsible Fisheries Article 7.5, including the application of precautionary reference points. • Extent to which CCAMLR is applying uniform principles and procedures to all species in the Antarctic ecosystem. • Extent to which CCAMLR has moved toward the adoption of conservation and management measures for previously unregulated fisheries, including new and exploratory fisheries. • Extent to which CCAMLR has taken due account of the need to conserve marine biological diversity and minimise harmful impacts of harvesting, research, conservation and associated activities on marine living resources and marine ecosystems. • Extent to which CCAMLR has adopted measures to minimise pollution, waste, discards, catch by lost or abandoned gear, catch of non-target Antarctic marine living resources, and impacts on associated or dependent species through measures including, to the extent practicable, the development and use of selective, environmentally safe and cost-effective fishing gear and techniques.
	Capacity management	• Extent to which CCAMLR has identified fishing capacity levels commensurate with the conservation, including rational use, of Antarctic marine living resources. • Extent to which CCAMLR has taken actions to prevent or eliminate excess fishing capacity and effort. • Extent to which CCAMLR monitors the levels of fishing effort, including taking into account annual notifications for participation by Contracting Parties.
3. *Compliance and enforcement*	Flag State duties	• Extent to which CCAMLR Members are fulfilling their duties as Flag States under the treaty establishing CCAMLR, pursuant to measures adopted by CCAMLR, and under other international instruments, including, *inter alia*, the 1982 Law of the Sea Convention and the 1993 FAO Compliance Agreement, as applicable.
	Port State measures	• Extent to which CCAMLR has adopted measures relating to the exercise of the rights and duties of its Members and Contracting Parties as Port States, as reflected in the Code of Conduct for Responsible Fisheries Article 8.3. • Extent to which these measures are effectively implemented.
	Monitoring, control and surveillance (MCS)	• Extent to which CCAMLR has adopted integrated MCS measures (e.g. required use of VMS, observers, catch documentation and trade tracking schemes, restrictions on transhipment, boarding and inspection schemes). • Extent to which these measures are effectively implemented.
	Follow-up on infringements	• Extent to which CCAMLR, its Members and Contracting Parties follow up on infringements to management measures.
	Cooperative mechanisms to detect and deter non-compliance	• Extent to which CCAMLR has established adequate cooperative mechanisms to both monitor compliance and detect and deter non-compliance (e.g. compliance committees, vessel lists, sharing of information about non-compliance). • Extent to which these mechanisms are being effectively utilised.
	Market-related measures	• Extent to which CCAMLR has adopted measures relating to the exercise of the rights and duties of its Members and Contracting Parties as Market States for Antarctic marine living resources.

Area	General Criteria	Detailed Criteria
4. *Decision-making and dispute settlement*	Decision-making	• Efficiency of Commission meetings and working groups in addressing critical issues in a timely and effective manner. • Extent to which CCAMLR has transparent and consistent decision-making procedures that facilitate the adoption of conservation measures in a timely and effective manner. • Existence of an informal mechanism of cooperation between Members based on reciprocities.
	Dispute settlement	• Extent to which CCAMLR has established adequate mechanisms for resolving disputes.
5. *International cooperation*	Transparency	• Extent to which CCAMLR is operating in a transparent manner, taking into account the Code of Conduct for Responsible Fisheries Article 7.1.9. • Extent to which CCAMLR decisions, meeting reports, scientific advice upon which decisions are made, and other relevant materials are made publicly available in a timely fashion.
	Relationship to non-Contracting Parties cooperating with various CCAMLR measures	• Extent to which CCAMLR facilitates cooperation between Members and non-Members, including through encouraging non-Contracting Parties to become Contracting Parties and Members of the Commission or to implement voluntarily CCAMLR conservation measures.
	Relationship to non-cooperating non-Contracting Parties	• Extent to which CCAMLR provides for action in accordance with international law against non-Contracting Parties undermining the objective of the Convention, as well as measures to deter such activities, as well as encouraging them to become Contracting Parties and Members of the Commission or to implement voluntarily CCAMLR conservation measures.
	Cooperation with other international organisations	• Extent to which CCAMLR cooperates with other international organisations.
	Special requirements of Developing States	• Extent to which CCAMLR recognises the special needs of Developing States and pursues forms of cooperation with Developing States, taking into account the Code of Conduct for Responsible Fisheries Article 5. • Extent to which CCAMLR Members, individually or through the Commission, provide relevant assistance to Developing States.
6. *Financial and administrative issues*	Availability of resources for activities	• Extent to which financial and other resources are made available to achieve the aims of CCAMLR and to implement CCAMLR's decisions.
	Efficiency and cost-effectiveness	• Extent to which CCAMLR is efficiently and effectively managing its human and financial resources, including those of the Secretariat. • Extent to which the schedule and organisation of the meetings could be improved.

COMNAP Report to ATCM XXXI

COMNAP activities relevant to current ATS work and concerns

Section	*Topic*	*Agenda Items*	
		ATCM XXXI	*CEP XI*
3.1	Towards better Search and Rescue coordination in the Antarctic	9	11
3.2	COMNAP Ship Position Reporting System	9, 16	11
3.3	Automatic Identification System (AIS)	9	11
3.4	Antarctic Flight Information Manual	9, 14, 16	11
3.5	COMNAP Fuel Manual	9, 14	11, 13
3.6	Training material – online library	14, 16	
3.7	International collaboration in Antarctica	13, 14	
3.8	Procedures concerning introduction of non-native species	14	8a
3.9	Environmental Monitoring Activities	14, 16	9
3.10	Information Exchange	9, 14, 16	
3.11	Mapping products	9, 14, 16	
3.12	Collaboration with the Antarctic Treaty Secretariat	16	
3.13	Operational publications	9, 14, 16	
3.14	General information publications	16	
3.15	Facilitating and promoting the distribution and use of publications	16	
3.16	Support of the International Polar Year (IPY) 2007-2008	10	5

1. Introduction

(1) It is traditional in the Antarctic to work together and help each other. In keeping with this tradition, the Council of Managers of National Antarctic Programs (COMNAP) brings together the Managers of National Antarctic Programs (MNAPs) and other designated members of their Programs.

(2) A National Antarctic Program is defined as the entity with national responsibility for managing, coordinating and supporting, and more generally making possible, scientific research in the Antarctic Treaty Area on behalf of its government, and in the spirit of the Antarctic Treaty.

(3) COMNAP provides a forum for development of practical and technical solutions for dissemination among National Antarctic Programs. Effective and efficient support and management of science, safety, increased international collaboration, environmental protection and effective Antarctic governance are among our main concerns.

(4) 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.

(5) 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, standalone paper.

2. Predominant focus

2.1 Objectives

(6) In support of its mission, and the missions of its members – supporting and managing science in the Antarctic - COMNAP's current predominant focus is on four often inter-related objectives:

- Safety
- Efficiency
- International collaboration
- Environmental management and protection

2.2 Support Systems

(7) 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
- A web- and email-based "COMNAP Information Exchange" platform 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 Antarctic Treaty System work and concerns

(8) 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.

(9) Naturally, each of these activities often contributes to progress towards several of these objectives concurrently and uses a combination of support systems.

3.1 Towards better Search and Rescue (SAR) coordination in the Antarctic

(10) The representatives of the very first ATCM in 1961 in Recommendation I-X *reaffirm[ed] the traditional Antarctic Principle that expeditions render all assistance feasible in the event of an emergency request for help [...]*. Since then, safety has remained a very important focus and priority for the ATCM, National Antarctic Programs and other operators, and there has been a reasonably low occurrence of emergencies and major accidents.

(11) The current increase in activity and traffic in the Antarctic, in particular maritime traffic in the Antarctic peninsula region, is potentially pushing existing systems to the limit and is cause for concern.

(12) A total of 7 Rescue Coordination Centres (RCCs) have responsibilities for the coordination of maritime and aeronautical Search and Rescue in the Antarctic under a range of international agreements. These 7 RCCs are based in 5 countries that are all Antarctic Treaty Consultative Parties and all have a National Antarctic Program active in the relevant area - Argentina, Australia, Chile, New Zealand and South Africa.

(13) With the increase in activity and traffic, a need has emerged for more exchange of information and more organised, coordinated and uniform channels of communications between the RCCs and Antarctic operators.

(14) COMNAP and the RCCs are working together to review the situation and work towards better search and rescue coordination in the Antarctic region.

(15) COMNAP has prepared in collaboration with the RCCs Information Paper ATCM XXXI-IP 99 *Search and Rescue in the Antarctic Region*. The paper answers common questions about arrangements in place, provides practical examples illustrating how current systems work, outlines the work done to continually improve systems and procedures, and outlines a possible vision for the future.

(16) An operational workshop will be held in Valparaiso, Chile, 12-14 August 2008, hosted by the Chilean navy in collaboration with COMNAP and titled *towards better search and rescue coordination in the Antarctic region*. It will bring together RCC authorities and National Programs from Argentina, Australia, Chile, New Zealand and South Africa and other stakeholders, including representatives from the International Maritime Organisation (IMO) and the International Civil Aviation Organisation (ICAO). A draft agenda is provided in IP 99 at Appendix B.

(17) The intention is to continue working towards a uniform, coordinated approach to Search and Rescue coordination and response throughout the Antarctic region, founded on established international agreements and existing infrastructure.

(18) The workshop will focus on technical issues. While it will try to identify any regulatory or legal barriers to implementing desirable technical solutions, it will not take any position other than operational on possible solutions to their barriers.

(19) Many possible improvements may require, or be facilitated by, guidance and support from the ATCM. This may in particular include any dealings with the IMO regarding access to Long Range Identification and Tracking information from the Antarctic area.

(20) Conclusions and recommendations from the workshop will be forwarded to the ATCM and other relevant organisations for consideration.

For further information: ATCMXXXI-IP 99 *Search and Rescue in the Antarctic.*

3.2 COMNAP Ship Position Reporting System

(21) 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.

(22) 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 Rescue Coordination Centres (RCCs) which cover the Antarctic region, as an additional source of information complementing all other national and international systems in place.

(23) The SPRS has been the subject of a significant overhaul over 2007 and 2008. It now has the capability to collect a wider variety of ship and voyage information. Latest positions and other practical information of all participating vessels is returned to each vessel, and is pushed every 24h to the Antarctic RCCs. It is anticipated that the upcoming workshop *towards better search and rescue coordination in the Antarctic region*, will provide useful input in the future evolution of the SPRS with respect to its contribution to safety.

(24) In parallel, development will continue with respect to the primary purpose of the SPRS – facilitating collaboration between National Programs. It will be extended into a generalised Voyage Information System that will cover all kinds of voyages – sea but also air and land voyages - and include advance information on future schedules. It also will be dynamically linked to information on the capability of relevant vessels, aircraft or tractor trains, include a mapping interface and the capability to create reports. It will also be able to exchange data as appropriate with the Antarctic Treaty Secretariat's Electronic Information Exchange System (EIES).

3.3 Automatic Identification System (AIS)

(25) 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.

(26) AIS equipment is very portable, very reasonably priced, and does not have to be limited to ships. It can be easily fitted to various types of transport, from small rubber boats to tracked vehicles to quad bikes, and can also be fitted to mobile camps – tents or shelters. It has potential applications in Antarctica, in particular in areas where several nations operate, for increased safety.

(27) Uruguay reported at ATCM XXIX in Working Paper ATCMXXIX-WP 6 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.

(28) The COMNAP Safety Working Group has been working with Uruguay to analyse the potential, advantages and disadvantages of the system and discuss potential applications.

(29) A Canadian company is developing and testing systems to collect AIS information by satellite. This would free AIS from its current short range limitations and give AIS new potential applications for increased safety in the Antarctic.

(30) Further discussions on the potential of AIS are on the agenda of the upcoming workshop *towards better search and rescue coordination in the Antarctic region.*

3.4 Antarctic Flight Information Manual

(31) The Antarctic Flight Information Manual (AFIM) is a handbook of aeronautical information published by COMNAP as a tool towards safe air operations in Antarctica as recommended by ATCM XV (1989) in Recommendation XV-20 "Air safety in Antarctica".

(32) Recommendation XV-20 comprised a number of specific recommendations including:

> *For the purpose of improving air safety in Antarctica, national Antarctic programmes operating aircraft in Antarctica and their aircrews should be provided with a continuously updated compendium ('Handbook') describing ground facilities, aircraft and aircraft operating procedures (including helicopters) and associated communications facilities operated by each national Antarctic programme (out of the use of which questions of liability will not arise) and, therefore, they should:*
>
> *(a) prepare such a Handbook as a matter of urgency;*
>
> *(b) facilitate the preparation of such a Handbook by their national Antarctic programme operators by collective action through the medium of the Council of Managers of National Antarctic Programmes (COMNAP) federated to SCAR;*
>
> *(c) adopt a loose-leaf format in which information provided by each national operator is kept separate (unless facilities are jointly operated) so as to facilitate updating of information;*
>
> *(d) request their national Antarctic operators to provide information for the purpose of compiling the Handbook in accordance with Annex 2 to this Recommendation.*

(33) Annex 2 to ATCM Recommendation XV-20 includes one page that briefly outlines the content of this "Antarctic Aeronautical Information Handbook", noting that information should be provided using Appendix I to Annex 15 to the Convention on International Civil Aviation as a guideline.

(34) A review of the AFIM is under way. It includes a review of the structure of its information, of the management of its updating process and of its usage by managers and pilots. Implementation of an electronic version of the AFIM is under consideration. This would complement and support, but not replace, the current printed version.

(35) It can be noted that a range of information maintained in the AFIM has overlaps with some of the permanent information that Treaty Parties are required to maintain under Resolution 6 (2001). A management of the AFIM through its electronic version could allow exchange of this information (import/export) with the Antarctic Treaty's Electronic Information Exchange System (EIES) developed by the Antarctic Treaty Secretariat under instructions from the ATCM. This could significantly reduce duplication of efforts and mismatch of data between parallel systems.

3.5 COMNAP Fuel Manual

(36) COMNAP developed between 1990 and 1993 a number of guidelines and recommendations related to fuel handling and storage.

(37) These documents reflected best practice and were promptly circulated to, and used by, National Antarctic Programs and were endorsed by the ATCM. They underwent several routine reviews between 1998 and 2005 with no revision deemed necessary.

(38) A more in-depth review was conducted between the end of 2005 and 2007. The text of the guidelines and the practices it described were found to be essentially still adequate. It was agreed that here was a need to rejuvenate the guidelines with graphics, actual examples, associated brochures and posters and give them a higher profile. This would make the guidelines more accessible and hence more effective.

(39) It was decided to bring all guidelines and recommendations and associated documents together into a single "Fuel Manual" document. It provides a simple, clear access point to all fuel related material and additional sections can be inserted as required - in particular new sections containing supporting information or links to such information, checklists or pro-formas for internal auditing of installations and procedures.

(40) The new "COMNAP Fuel Manual" is presented in ATCMXXI-IP 91 *The COMNAP Fuel Manual, incorporating revised guidelines for fuel handling and storage in Antarctica*.

(41) The format and presentation of this Fuel Manual will also be progressively rejuvenated to facilitate its readability. This will include inserting diagrams, photos or cartoons wherever possible and inserting, linking to or attaching actual examples of good practice.

(42) COMNAP will continue to develop and update the Fuel Manual and to promote and facilitate its use by all operators. The original objectives remain as current and important as they were in 1990:

- preventing oil spills;
- responding to a spill should one occur; and
- sharing information about spills to help determine if, and where, there was a need to modify or improve fuel handling practices.

For further information: ATCMXXXI-IP 91 *The COMNAP Fuel Manual, incorporating revised guidelines for fuel handling and storage in Antarctica*.

3.6 Training material – online library

(43) The COMNAP Training Officers Network (TRAINET) is the COMNAP work group dealing with the training of National Program staff for deployment to Antarctica.

(44) TRAINET has developed an online library of training related material used by member Programs - this covers a range of material from course syllabus, standard operating procedures and training regulations and policies, in various languages.

(45) This online library will be commissioned at the upcoming COMNAP Annual General Meeting in St Petersburg, Russia.

(46) It is anticipated that the availability to all National Programs of this resource will considerably facilitate and increase the transfer of experience, expertise and best practice between Programs. It will support the harmonisation or compatibility of procedures and standards between Programs, and facilitate international collaboration and exchange of personnel.

(47) Development of a glossary of terms commonly used in the Antarctic – including, but not only, for the training of Antarctic personnel – is also under way. It will facilitate understanding, use and reuse of training material and facilitate participation of personnel in joint training initiatives.

3.7 International Collaboration in Antarctica

(48) International collaboration is widespread and a normal part of National Programs' activities. COMNAP remains committed to facilitating and promoting collaboration between National Programs and joint activities when possible. This is one of COMNAP's main missions.

(49) At ATCM XXIX (2006), *attention was drawn to the reiteration of CEP's concern about the potential environmental consequences of an excessive concentration of stations in Antarctica. It was noted that these concerns can be addressed, in part, by increased cooperation in Antarctica and that some parties are making efforts to share their facilities and encourage wider participation in their research programmes*. Refer ATCM XXIX final report, paragraph 73.

(50) To provide a broader perspective of such collaboration, COMNAP conducted a survey in 2007 to assess the extent of international scientific and logistic collaboration amongst National Antarctic Programs at a time when a number of nations are either building new research stations or replacing old ones.

(51) Results of the survey are presented to the ATCM in ATCMXXXI-IP 92 I *International Scientific and Logistic Collaboration in Antarctica*. It confirmed a high and increasing level of international collaboration. For example:

- 96% of National Antarctic Programs host scientists from other nations (always or sometimes);
- 60% expect the number of scientists hosted from other nations to increase
- 96% share ships or aircraft with other nations
- 78% provide logistic facilities for other nations
- 35% operate or manage logistic facilities in 'partnership' with other nations – this can for example include joint operation of a station or joint management of support facilities for their stations.

(52) The high and increasing level of scientific and logistic collaboration amongst National Antarctic Programs is in the finest spirit of the Antarctic Treaty. This excellent situation has been facilitated by COMNAP through the exchange of practical, operational information to help improve the way all National Antarctic Programs can fulfil their various missions, together or independently. That includes mutual support in the design, ongoing improvement and operation of Antarctic facilities and transport infrastructure.

For further information: ATCMXXXI-IP 92 *International Scientific and Logistic Collaboration in Antarctica*.

3.8 Procedures concerning introduction of non-native species

(53) The threat of introduction of non-native species into the Antarctic has emerged recently in the discussions of the CEP, in particular in response to new information on climate change, and has received a high priority in its 5-year work plan.

(54) Although many National Programs did have a range of relevant procedures in place, a more global view and analysis of what was in place around the continent was considered necessary. COMNAP undertook a survey of its members on existing procedures concerning the minimisation of risk of introduction of non native species. Information was sought in three main areas:

- awareness programs;
- operational procedures; and
- monitoring/surveillance programs.

(55) Responses were received from 15 Programs that together run almost 70% of all Antarctic stations, and are deemed to provide a realistic picture of the current efforts made by the Antarctic Parties as a whole to minimise introduction of alien species into the continent.

(56) Results of the survey are presented to the CEP in ATCMXXXI-IP 98 *Survey on existing procedures concerning introduction of non native species in Antarctica.*

(57) The survey showed that awareness programs are well covered and monitoring/surveillance programs are also reasonably well covered, while more could be done on operational procedures.

(58) Lessons learned from this survey will be useful to National Antarctic Programs to continue improve their procedures. It is hoped this work can also be useful to future CEP discussions on this issue.

For further information: ATCMXXXI-IP 98 *Survey on existing procedures concerning introduction of non native species in Antarctica.*

3.9 Environmental Monitoring Activities

(59) The need to conduct environmental monitoring was clearly expressed in Article 3, 2.e) of the Protocol on Environmental Protection to the Antarctic Treaty: *regular and effective monitoring shall take place to facilitate early detection of the possible unforeseen effects of activities carried on both within and outside the Antarctic Treaty area on the Antarctic environment and dependent and associated ecosystems.*

(60) At CEP X (New Delhi, 2007), the Meeting noted that the issue of environmental monitoring had been the subject of much attention by the CEP over several meetings and Intersessional Contact Groups, though with limited progress.

(61) At the same Meeting, some Members 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 its *Practical Guidelines for Developing and Designing Environmental Monitoring Programmes in Antarctica* - the use of which was recommended by ATCM XXVIII through Resolution 2 (2005).

(62) Although endorsed only on a provisional basis, the CEP five-year work plan has identified Monitoring and State of the Environment Reporting as an issue with Medium to High priority. The CEP is therefore expected to work in the following years on the identification of key indicators of human impacts.

(63) In parallel, ATCM Resolution 3 (2007) *Long Term Monitoring* also underlines the importance of monitoring activities. One of its recommendations is that Antarctic Treaty Parties *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.*

(64) COMNAP has maintained for several years outline information on Monitoring Activities undertaken by its members. Snapshots of this information have been compiled and published a number of times as *Summary of Environmental Monitoring in Antarctica.*

(65) COMNAP agreed at its 2007 annual meeting (Washington, July 2007) to task the COMNAP Antarctic Environmental Officers Network (AEON) to:

- provide information on basic operational monitoring parameters currently measured in Antarctic stations, as part of environmental monitoring programs in place – recognising that COMNAP had already invested a lot in this domain; and
- reshape COMNAP' *Summary of Environmental Monitoring in Antarctica*, in order to make it more easily accessible for likely users.

(66) A reshaped system of exchange of information on monitoring activities has been designed and will be submitted to COMNAP at its upcoming annual meeting.

(67) It would collect additional information on monitoring activities in a simple and structured way that takes into account the latest categorising and priorities agreed by the CEP. It would allow easy aggregation and categorisation of information, for example by region, by type of monitoring (Operational or State of the Environment), by indicator monitored or by parameter measured.

(68) The new system should be implemented by the end of 2008 and reports on information collected and maintained in the system should be available for presentation at CEP XII in 2009.

3.10 Information Exchange

(69) The re-development of COMNAP's electronic information exchange system continues and will be reviewed by COMNAP at its upcoming annual meeting.

(70) It includes a range of dynamic information on National Program capabilities and activities including stations, airfields, ships, medical facilities, monitoring activities, operational contact details or ship position reports. It will also later include voyage schedule and tracking, incident reports and lessons learned, etc.

(71) Importantly, it provides 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, increasing our capability to support new or smaller Programs.

(72) An important requirement and characteristics of the COMNAP Information Exchange system is its capability 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. Part of this functionality is already working in demonstration mode for review by COMNAP members and Treaty parties.

(73) The objective is that any information entered by a National Program into the COMNAP Information Exchange system will never need to be manually re-entered in the Antarctic Treaty systems or in any other system used by that National Program.

3.11 Mapping Products

(74) COMNAP produced in 2006 a large format map of Antarctica showing the main facilities operated by National Antarctic Programs. Work is under way on a simplified, semi-automated process to update the map at regular intervals (for example annually) by loading information maintained by each program on the new COMNAP Information Exchange System. The information is being exported out of the Information Exchange System in a well defined and extensible format that is also compatible with Google Earth.

(75) The information exported in this standard format will not be limited to basic information about facilities. It will also cover a range of information that has a geographic dimension – such as environmental monitoring activities.

(76) Individual National Programs will be able to use this export functionality by themselves, as and when needed, to use for their own maps or applications.

(77) An updated COMNAP map showing the main facilities operated by National Antarctic Programs, as well as a range of important information such as information about Rescue Coordination Centres and Search and Rescue Region boundaries, will be published during 2008. A working draft will be displayed at ATCM XXXI.

3.12 Collaboration with the Antarctic Treaty Secretariat

(78) 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 four years.

(79) 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.

(80) In particular, collaboration on the design of the two organisations' Information Exchange Systems and their capability to exchange information has the potential to significantly reduce duplication and mismatch between the systems, and make a useful contribution to an efficient and productive exchange of information within the Antarctic Treaty System.

3.13 Operational publications

(81) 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.

(82) 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. A review of the AFIM is under way (see Section 3.4 for more details).

(83) A COMNAP fuel manual has just been published, bringing together a range of existing documents, and will be extended (see Section 3.5 for more details). The creation of other such manuals is under consideration.

3.14 General information publications

(84) 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 on-line form, and 'layers' of information for overlaying on maps and satellite imagery (see Section 3.11 for more details). The commissioning of the new COMNAP Information Exchange platform will allow provision of richer and more dynamic information products.

3.15 Facilitating and promoting the distribution and use of publications

(85) 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 Creative Commons licences.

(86) With a Creative Commons license, you keep your copyright but allow people to copy and distribute your work provided they give you credit — and only on the conditions you specify. This

promotes the distribution and re-use of work while protecting the rights of all contributors. See *http://creativecommons.org/license/* for more details.

3.16 Support of the International Polar Year (IPY) 2007-2008

(87) 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.

(88) 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.

(89) 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 Chairmanship

(90) Gérard Jugie of the French Antarctic Program ended his three-year term as COMNAP Chair in July 2007, and was succeeded by José Retamales of the Chilean Program.

4.2 COMNAP meetings and events

(91) 'COMNAP XIX', the 2007 Annual General Meeting (AGM), was held from Monday 09 to Friday 13 July 2007 in Washington DC, USA. It was hosted by the COMNAP member for USA, the National Science Foundation's Office of Polar Programs and included:

- one and a half days of plenary sessions;
- two days of parallel meetings of COMNAP's various work groups - committees, working groups, coordinating groups and networks and open sessions focused on specific topics.

(92) Five group officers ended their term at the meeting after several years of valuable service to COMNAP:

- Yeadong Kim of the Korean National Program and Henry Valentine of the South African Program as members of the COMNAP Executive Committee;
- Valery Klokov of the Russian Program as Chair of the COMNAP Air Operations Working Group (AIROPS);
- Claude Bachelard of the French Program as coordinator of the COMNAP Medical Officers Network (MEDINET); and
- Patricio Eberhard of the Chilean Program as coordinator of the COMNAP Training Officers Network (TRAINET).

and were succeeded by:

- Rasik Ravindra of the Indian Program and Lou Sanson of the New Zealand Program, elected on the COMNAP Executive Committee;
- Giuseppe de Rossi of the Italian Program, new Chair of the the COMNAP Air Operations Working Group (AIROPS);

- Iain Grant of the UK Program, new coordinator of the COMNAP Medical Officers Network (MEDINET); and
- Albert Lluberas of the Uruguayan Program, new coordinator of the COMNAP Training Officers Network (TRAINET).

(93) In addition, Kazuyuki Shiraishi of the Japanese Program was elected next Chair of the COMNAP Standing Committee on Antarctic Logistics and Operations (SCALOP) and will succeed to current Chair John Pye of the UK Program this July 2008.

(94) A number of intersessional meetings were held, including:

- a meeting of those COMNAP members attending the 2007 ATCM in Delhi, India, in May 2007; and
- a two-day meeting of the COMNAP Executive Committee in Cambridge, UK, in October 2007 to finalise the conclusions and results of the 2007 Annual General Meeting and the work plan for 2007/2008.

(95) The 2008 AGM, COMNAP XX, will be held from Sunday 29 June to Friday 04 July 2008 in St Petersburg, Russia. The meeting will be hosted by the COMNAP member for Russia, the Arctic and Antarctic Research Institute (AARI). 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;
- a one-day workshop of the COMNAP Energy Management Network (ENMANET); and
- a one-day workshop of the COMNAP Information Officers Network (INFONET).

4.3 COMNAP IT support infrastructure

(96) COMNAP has continued to progress the re-development of its IT support infrastructure, following the principles and directions outlined in COMNAP's reports to the last ATCMs.

(97) These have a strong focus on supporting the internal work of COMNAP, supporting safety and facilitating collaboration between National Antarctic Programs. It also aims at reducing duplication by interfacing as appropriate with the Antarctic Treaty's Electronic Information Exchange System (EIES).

4.4 COMNAP Secretariat operation

(98) 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 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.

(99) 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.

4.5 Member participation, capacity building and secondments

(100) 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, as one of their working languages, the language used in COMNAP meetings and proceedings (English). 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.

(101) 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.

(102) 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 is on allowing significant progress on specific COMNAP projects while providing beneficial training and capacity building opportunities to member staff. A successful secondment in late 2007 resulted in the development of an online library of training material (see Section 3.6 for more details) - it is anticipated that the availability to all National Programs of this resource will considerably facilitate and increase the transfer of experience, expertise and best practice between Programs.

5. Conclusion

(103) COMNAP remains committed to supporting the Antarctic Treaty System.

(104) 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.

For more information, please visit COMNAP's web site at *www.comnap.aq* or email us at *info@comnap.aq*.

Appendix 1

Main Antarctic facilities operated by the National Antarctic Programs in 2008 in the Antarctic Treaty Area (south of 60 degrees latitude South)

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. These facilities 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*)

- **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*)

Details of main Antarctic facilities operated by National Antarctic Programs in 2008 in the Antarctic Treaty Area

Name of Facility	UN Locode	Operated by National Program(s) from	Latitude	Longitude	Altitude above sea level	Airfield (5) Length Longest Runway	Airfield (5) Landing Gear Suitability	First Opened	Facility Type (7)	Current Status (8)	Winter Average Population	Peak Population (9)
Aboa	AQ-ABA	Finland	73°03'S	013°25'W	400 m			1989	Station	Seasonal	n/a	20
Amundsen-Scott	AQ-AMS	USA	89°59.85'S	139°16.37'E	2 830 m	3660 m	ski	1956	Station	Year-round	75	250
Arctowski	AQ-ARC	Poland	62°09.57'S	058°28.25'W	2 m			1977	Station	Year-round	12	40
Artigas	AQ-ART	Uruguay	62°11.07'S	058°54.15'W	17 m			1984	Station	Year-round	9	60
Arturo Parodi		Chile	80°19.10'S	081°18.48'W	880 m	2500 m	wheel & ski		Station	Seasonal	n/a	
Arturo Prat	AQ-APT	Chile	62°30'S	059°41'W	~ 10 m			1947	Station	Year-round	8	15
Asuka		Japan	71°31.30'S	024°08.20'E				1984	Station	Seasonal	n/a	
Belgrano II (1)	AQ-BEL	Argentina	77°52.48'S	034°37.62'W	50 m			1955	Station	Year-round	12	12
Bellingshausen	AQ-BHN	Russia	62°11.78'S	058°57.65'W	16 m			1968	Station	Year-round	25	38
Brown		Argentina	64°53'S	62°53'W	10m			1951	Station	Seasonal	n/a	18
Browning Pass		Italy	74°37.37'S	163°54.82'E	170 m	915 m	ski		Airfield Camp	Seasonal	n/a	
Cámara		Argentina	62°36'S	59°56'W	22m			1953	Station	Seasonal	n/a	36
Carvajal		Chile	67°46'S	68°55'W				1985	Station	Seasonal	n/a	
Casey	AQ-CAS	Australia	66°17.00'S	110°31.18'E	30m	variable	ski	1969	Station	Year-round	20	70
Comandante Ferraz	AQ-CFZ	Brazil	62°05.00'S	058°23.47'W	8m			1984	Station	Year-round	12	40
Concordia (2)	AQ-CON	France & Italy	75°06.12'S	123°23.72'E	3220m	1500m	ski	1997	Station	Year-round	13	45
D10 skiway		France	66°40.08'S	139°49.18'E	~ 100 m	variable	ski		Airfield Camp	Seasonal	n/a	
D85 skiway		France	70°25.50'S	134°08.75'E	2850 m	variable	ski		Airfield Camp	Seasonal	n/a	
Dakshin Gangotri		India	70°05'S	12°00'E				1983	Station	Seasonal	n/a	
Dallman		Germany	62°08.40'S	58°24'W				1994	Station	Seasonal	n/a	12
Davis	AQ-DAV	Australia	68°34.63'S	077°58.35'E	15 m	variable	ski	1957	Station	Year-round	22	70
Decepcíon		Argentina	62°59'S	60°42'W	7m			1948	Station	Seasonal	n/a	65
Dome Fuji	AQ-DMF	Japan	77°19.02'S	039°42.20'E	3810m	variable	ski	1995	Station	Seasonal	n/a	15
Druzhnaya 4	AQ-DRZ	Russia	69°44'S	073°42'E	20m			1987	Station	Seasonal	n/a	50
Dumont d'Urville	AQ-DDU	France	66°39.77'S	140°00.08'E	42m			1956	Station	Year-round	26	100
Edgeworth-David		Australia	66°15'S	100°36'E	15m				Camp	Seasonal	n/a	
Enigma Lake		Italy	74°42.81'S	164°02.49'E	170m	730m	ski		Airfield Camp	Seasonal	n/a	
Escudero	AQ-ESC	Chile	62°12.07'S	058°57.75'W	10m			1994	Station	Year-round	2	33
Esperanza	AQ-ESP	Argentina	63°23.70'S	056°59.77'W	25m			1952	Station	Year-round	55	90

Name of Facility	UN Locode	Operated by National Program(s) from	Latitude	Longitude	Altitude above sea level	Airfield (5) Length Longest Runway	Airfield (5) Landing Gear Suitability	First Opened	Facility Type (7)	Current Status (8)	Winter Average Population	Peak Population (9)
Fossil Bluff		United Kingdom	71°19.76'S	068°16.02'W	92m	1200m	ski		Airfield Camp	Seasonal	n/a	
Frei		Chile	62°12.00'S	058°57.85'W	10m			1969	Station	Year-round	70	120
Gabriel de Castilla	AQ-GDC	Spain	62°59'S	060°41'W	15m			1990	Station	Seasonal	n/a	14
Gondwana		Germany	74°22.80'S	164°07.80'E				1983	Station	Seasonal	n/a	
Great Wall	AQ-GWL	China	62°12.98'S	058°57.73'W	10 m			1985	Station	Year-round	14	40
Gregor Mendel		Czech Republic	63°48.04'S	057°52.95'W	~ 10 m			2006	Station	Seasonal	n/a	20
Halley	AQ-HLY	United Kingdom	75°34.90'S	026°32.47'W	37 m	1200 m	ski	1956	Station	Year-round	15	65
Juan Carlos Primero	AQ-JCP	Spain	62°39'S	060°23'W	12 m			1989	Station	Seasonal	n/a	14
Jubany	AQ-JUB	Argentina	62°14.27'S	058°39.87'W	10 m			1982	Station	Year-round	20	100
King Sejong	AQ-KSG	Korea	62°13.40'S	058°47.35'W	10 m			1988	Station	Year-round	18	70
Kohnen	AQ-KHN	Germany	75°00'S	000°04'E	2900 m	900 m	ski	2001	Station	Seasonal	n/a	28
Law – Racovita	AQ-LAW	Australia & România	69°23'S	076°23'E	65 m			1987	Station	Seasonal	n/a	13
Lenindgradskaya		Russia	69°30'S	159°23'E				1971	Station	Temporarily Closed	n/a	
Macchu Picchu		Peru	62°05.49'S	058°28.27'W	10 m			1989	Station	Seasonal	n/a	28
Maitri	AQ-MTR	India	70°45.95'S	011°44.15'E	130 m			1989	Station	Year-round	25	65
Maldonado		Ecuador	62°26.96'S	059°44.54'W	~ 10 m			1990	Station	Seasonal	n/a	22
Marambio	AQ-MRB	Argentina	64°14.70'S	056°39.42'W	200 m	1200 m	wheel	1969	Station	Year-round	55	150
Marble Point Heliport		USA	77°24.82'S	163°40.75'E					Airfield Camp	Seasonal	n/a	
Mario Zucchelli	AQ-MZU	Italy	74°41'S	164°07'E	15 m	3000 m	wheel & ski	1986	Station	Seasonal	n/a	90
Marsh	AQ-TNM	Chile	62°11.45'S	058°59.20'W	45 m	1300 m	wheel		Airfield Camp	Year-round	n/a	
Matienzo		Argentina	64°58'S	60°03'W	32m			1961	Station	Seasonal	n/a	15
Mawson	AQ-MAW	Australia	67°36.28'S	062°52.25'E	5m	variable	ski	1954	Station	Year-round	20	60
McMurdo	AQ-MCM	USA	77°50.88'S	166°40.10'E	~ 10m	3000m	wheel & ski	1955	Station	Year-round	250	1000
Melchior		Argentina	64°20'S	62°59'W				1947	Station	Seasonal	n/a	36
Mid Point		Italy	75°32.44'S	145°49.12'E	2520m	1200m	ski		Airfield Camp	Seasonal	n/a	
Mirny	AQ-MIR	Russia	66°33.12'S	093°00.88'E	40m			1956	Station	Year-round	60	169
Mizuho		Japan	70°41.70'S	44°19.50'E				1970	Station	Seasonal	n/a	
Molodezhnaya		Russia	67°40.97'S	046°08.08'E	225m			1962	Station	Temporarily Closed	n/a	
Molodezhnaya Airfield		Russia	67°40.97'S	46°08.08'E	225m	2560m	wheel & ski		Airfield Camp	Seasonal	n/a	

Name of Facility	UN Locode	Operated by National Program(s) from	Latitude	Longitude	Altitude above sea level	Airfield (5) Length Longest Runway	Airfield (5) Landing Gear Suitability	First Opened	Facility Type (7)	Current Status (8)	Winter Average Population	Peak Population (9)
Neumayer	AQ-NEU	Germany	70°38.00'S	008°15.80'W	40m	1000m	ski	1981	Station	Year-round	9	50
Novolazarevskaya	AQ-NOV	Russia	70°46.43'S	011°51.90'E	102m			1961	Station	Year-round	30	70
Novolazarevskaya Airfield		Russia	70°49.52'S	11°37.68'E	550m	3000m	wheel & ski		Airfield Camp	Seasonal	n/a	
O'Higgins	AQ-OHG	Chile	63°19.25'S	057°54.02'W	12m	800m	ski	1948	Station	Year-round	16	44
Odell Glacier		USA	76°39'S	159°58'E	1600m	1800m	wheel		Airfield Camp	Seasonal	n/a	
Ohridiski		Bulgaria	62°38.48'S	060°21.88'W	~ 10m			1988	Station	Seasonal	n/a	15
Orcadas	AQ-ORC	Argentina	60°44.33'S	044°44.28'W	4m			1904	Station	Year-round	14	45
Palmer	AQ-PLM	USA	64°46.50'S	064°03.07'W	~ 10m			1965	Station	Year-round	12	43
Petrel		Argentina	63°28'S	56°13'W	18m			1967	Station	Seasonal	n/a	55
Primavera		Argentina	64°09'S	60°57'W	50m			1977	Station	Seasonal	n/a	18
Princess Elizabeth		Belgium	71°57'S	23°21'E					Station	Under Construction	n/a	
Progress 2	AQ-PRO	Russia	69°23'S	076°23'E	15m			1989	Station	Year-round	20	77
Prud'homme		France	66°41.22'S	139°54.42'E	~ 10m				Camp	Seasonal	n/a	
Refugio Ecuador (6)		Ecuador	62°08'S	058°22'W	~ 10m			1990	Refuge	Seasonal	n/a	4
Ripamonti		Chile	62°12.07'S	58°53.13'W	50m			1982	Station	Seasonal	n/a	4
Risopatron		Chile	62°22'S	59°40'W	40m			1954	Station	Seasonal	n/a	12
Rothera	AQ-ROT	United Kingdom	67°34.17'S	068°07.20'W	16m	900 m	wheel	1976	Station	Year-round	22	130
Rothera Skiway		United Kingdom	67°34.23'S	68°07.76'W	250m	2500 m	ski		Airfield Camp	Seasonal	n/a	
Russkaya		Russia	74°45'S	136°40'W				1980	Station	Temporarily Closed	n/a	
S17		Japan	69°01.50'S	040°06.50'E	620m	1200 m	ski		Airfield Camp	Seasonal	n/a	
San Martín	AQ-SMT	Argentina	68°07.78'S	067°06.20'W	5m			1951	Station	Year-round	20	20
SANAE IV (3)	AQ-SNA	South Africa	71°40.42'S	002°49.73'W	850m	1000 m	ski	1962	Station	Year-round	10	80
Scott Base	AQ-SBA	New Zealand	77°51.00'S	166°45.77'E	10m			1957	Station	Year-round	10	85
Signy	AQ-SGN	United Kingdom	60°43'S	045°36'W	5m			1947	Station	Seasonal	n/a	10
Siple Dome		USA	81°39'S	149°04'W		variable	ski		Airfield Camp	Seasonal	n/a	
Sitry		Italy	71°39.32'S	148°39.15'E	1600 m	1000 m	ski		Airfield Camp	Seasonal		
Sky Blu		United Kingdom	74°51.38'S	071°34.16'W	1370-1500 m	variable	wheel		Airfield Camp	Seasonal		
Sobral		Argentina	81°05'S	40°39'W	1000m			1965	Station	Seasonal	n/a	7
Soyuz		Russia	70°35'S	68°47'E	336m			1982	Station	Temporarily Closed	n/a	

Name of Facility	UN Locode	Operated by National Program(s) from	Latitude	Longitude	Altitude above sea level	Airfield (5) Length Longest Runway	Airfield (5) Landing Gear Suitability	First Opened	Facility Type (7)	Current Status (8)	Winter Average Population	Peak Population (9)
Syowa	AQ-SYW	Japan	69°00.37'S	039°35.40'E	29m	1000 m	ski	1957	Station	Year-round	40	110
Tor	AQ-TOR	Norway	71°53'S	005°09'E	1625m			1985	Station	Seasonal	n/a	4
Troll (4)	AQ-TRL	Norway	72°00.12'S	002°32.03'E	1300m	3000 m	wheel	1990	Station	Year-round	7	40
Vernadsky	AQ-VKY	Ukraine	65°14.72'S	064°15.40'W	7m			1996	Station	Year-round	12	24
Videla		Chile	64°49'S	62°51'W				1957	Station	Seasonal	n/a	
Vostok	AQ-VOS	Russia	78°28.00'S	106°48.00'E	3500m	3000 m	ski	1957	Station	Year-round	13	25
Wasa	AQ-WSA	Sweden	73°03'S	013°25'W	~ 400m			1989	Station	Seasonal	n/a	20
Wilkins Runway		Australia	66°41.45'S	111°31.73'E	740m	4000 m	ski & wheel		Airfield Camp	Seasonal	n/a	
Yelcho		Chile	64°50'S	63°35'W	10m			1962	Station	Seasonal	n/a	9
Zhongshan	AQ-ZGN	China	69°22.27'S	076°23.22'E	~ 10m			1989	Station	Year-round	15	30
										Station Population Totals:	1088	4229

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. In many cases they are prepared only when and as required by National Programs. Airfield information is extracted from the Antarctic Flight Information Manual (AFIM) published and maintained by COMNAP. See *http://www.comnap.aq/publications/afim.*

(6) Refugio Ecuador (full name "Refugio República del Ecuador") was previously known as "Vicente".

(7) Facility Types are: (*NOTE that these are indicative definitions only at this stage – these definitions are being reviewed and clarified to ensure they can be interpreted in a similar manner by all National Programs*).

- **Station**: an established installation with fixed buildings and mechanical services – reticulated power, water and sewage, etc.;
- **Camp**: a more basic and less permanent installation, such as a group of tents/ shelters, often used only for a small number of seasons;
- **Refuge**: usually a small and very basic installation, sometimes only one small hut, but usually of a permanent nature;
- **Airfield Camp**: an installation, whatever its size and type, attached to an airfield – if the airfield is not attached to a station, camp or refuge that is already listed separately;
- **Depot**: a depot of food, fuel or other supply.

(8) Current Status options are:

- **Year-round**: opened all year round – winter and summer;
- **Seasonal**: opened Seasonally only – typically opened every summer or most summers;
- **Temporarily Closed**: closed temporarily and ready to be re-opened as and when required;
- **Closed**: closed indefinitely – but at least part of the facility still exists and could be renovated and/or re-used;
- **No Longer Exists**: the facility no longer exists;
- **Under Construction**: construction work has commenced, but not completed;
- **Under Consideration**: construction planned but no construction has commenced.

(9) Peak population - the maximum number of persons present at the facility at any one time. This will typically be the number of persons accommodated/based at the facility at the busiest time of the summer. This can be higher or lower than the nominal accommodation capacity of the facility.

Appendix 2

COMNAP work groups 2007-2008

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

Safety

- SAFETY – COMNAP Safety Working Group

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)

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 [and Outreach] Officers Network

(both overseen by CODAT – COMNAP Coordinating Group on Outreach 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 2007-2008

Notes:

Tasks indicated are tasks for the period July-2007 to June-2008, that is between the 2007 annual meeting COMNAP XIX (Washington) and the 2008 annual meeting COMNAP XX (St Petersburg).

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
José Retamales (CL) 08-2007 to 07-2010
Membership
One representative for each member National Program, the Manager of National Program (MNAP), assisted by his/her designated members of his/her National Program.

EXCOM – COMNAP Executive Committee

Membership

- *Chair:* ***José Retamales (CL) 08-2007 to 07-2010***
- *Past Chair:* ***Gérard Jugie (FR) 08-2007 to 07-2008***
- *COMNAP Representatives:* ***Christo Pimpirev (BG) 08-2006 to 07-2009; Rasik Ravindra (IN) 08-2007 to 07-2010; Lou Sanson (NZ) 08-2007 to 07-2010***

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)***

Terms of Reference

- 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***

Terms of Reference

- 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

SAFETY

SAFETY – COMNAP Safety Working Group

Chair: ***Kim Pitt (AU) 08-2006 to 07-2009***

Terms of Reference

- Share and review safety, contingency planning and emergency policies and practices used in Antarctica
- Improve, maintain and monitor the COMNAP Accident, Incident and Near Miss Reporting (AINMR) system
- Work with SCALOP, TANGO, SHIPOPS, AIROPS, TRAINET, MEDINET (on occupational health matters) 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
- Develop the agenda and assist SCALOP to conduct a joint meeting during the next COMNAP in St Petersburg of (as a minimum) SHIPOPS, AIROPS and Safety to reach consensus on the most practical way for the Safety WG to assist COMNAP
- Support COMNAP's participation in the informal open-ended Intersessional Contact Group (ICG) set-up by ATCM XXX "to examine the issue of further steps to address passenger vessels in the Antarctic Treaty Area"

ANTARCTIC LOGISTICS AND OPERATIONS - GENERAL

SCALOP – COMNAP Standing Committee on Antarctic Logistics and Operations

Chair: ***John Pye (UK) 08-2005 to 07-2008***

Chair-elect: Kazuyuki Shiraishi ***(JP) to be Chair 08-2008 to 07-2011***

Terms of Reference

The Committee consists of the national SCALOP representatives, designated by their Manager of National Antarctic Program, 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

- Complete the survey on collaboration at research stations and in the field, and draft an ATCM Information Paper for EXCOM on the extent of international collaboration.

SYMP - COMNAP Symposium Working Group

Chair: ***Valery Klokov (RU) 08-2006 to 07-2008***

Terms of Reference

- Review the previous Symposium on Antarctic Logistics and Operations and develop plans for the next event

Tasks

- Organise 2008 SCALOP Symposium in conjunction with COMNAP XX in St Petersburg

SHIPPING AND AIR OPERATIONS

AIROPS - COMNAP Working Group on Air Operations

Chair: ***Giuseppe de Rossi (IT) 08-2007 to 07-2010***

Terms of Reference

- 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

- Update information on member policies on airfield access as part of AFIM electronic version
- Identify operators' practices and AFIM usage by managers and pilots and consider implementing AFIM in electronic format on COMNAP web site
- Start implementing a parallel version of the AFIM in electronic format on the COMNAP web site, which may complement but not replace the current printed version
- Work together with SCALOP and the Safety Working Group on development of principles for SAR cooperation between operators.

SHIPOPS - COMNAP Working Group on Ship Operations

Chair: ***Manuel Catalán (ES) 08-2004 to 07-2007***

Terms of Reference

- 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 Commission on Antarctica (HCA)
- Share and discuss, with other related COMNAP groups, operational experiences and information related to Antarctic ship operations and associated communication, navigation, energy use, contingency response and safety

Tasks

- 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
- Maintain a productive relationship with other COMNAP groups, such as the Safety Working Group, on matters of common interest
- Continue the development of the COMNAP Ship Position Reporting System (SPRS)
- Contribute to COMNAP's participation in the informal open-ended Intersessional Contact Group (ICG) set-up by ATCM XXX “to examine the issue of further steps to address passenger vessels in the Antarctic Treaty Area”
- Review and follow the development of the International Maritime Organization's (IMO) recommendations, including those related to safety and marine environmental protection, and identify components that could be incorporated into National Program operations
- SHIPOPS Chair and Executive Secretary, in liaison with Safety and TANGO Chairs, to monitor and participate in the ICG set up to examine the issue of further steps to address passenger ('tourist') vessels in the Antarctic Treaty Area, and ensure that all communications are posted on the COMNAP web site, accessible to all members.
- Participate as an observer in the 7th meeting of the Hydrographic Commission 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)***

Terms of Reference

- 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

AEON - COMNAP Antarctic Environment Officers Network

Coordinator : ***Rodolfo Sánchez (AR) 01-2006 to 07-2009***

Terms of Reference

- 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
- 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
- Finalise and publish COMNAP fuel handling and storage guidelines
- Continue to ascertain, in close cooperation with AIROPS, current coverage of aircraft wildlife awareness guidelines by National Programs
- Reshape the COMNAP's "Summary of Environmental Monitoring in Antarctica" (2005), in order to make it more easily accessible for likely users.
- Provide input on the "Code of Conduct for Fieldwork in Antarctica" and keep close liaison with SCAR on this issue.
- Prepare an Information paper on the survey on procedures to minimize introductions of alien species for presentation at CEP XI (Kiev, 2008).
- Make all necessary arrangements for the organization of a Workshop on procedures to minimize introductions of alien species during or before COMNAP XX (St Petersburg, 2008).

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)***

Terms of Reference

- 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***

Terms of Reference

- 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:
    - the type of systems employed
    - the maximum and average power output of the systems
    - the capital and operating costs
    - problems encountered in operation, if any
- Facilitate the exchange of operating experience and encourage cooperative projects in alternative energy and emerging technologies

Tasks

- Update energy database and transfer to new web site
- Exchange information on best practice and technologies
- Enable collaborative projects where this can lead to effective delivery
- Hold a workshop in June 2008 in conjunction with COMNAP XX in St Petersburg

MEDICAL SUPPORT

COMED - COMNAP Medical Coordinating Group

Membership: ***Mariano Memolli (AR - Chair 08-2005 to 07-2008), Virginia Mudie (AU), Robert Culshaw (UK), Maaike Vancauwenberghe (BE)***

Terms of Reference

- 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 : Iain Grant (UK) ***08-2007 to 07-2010***

Terms of Reference

- 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

1. Make available, through the medical facilities database on the COMNAP web site, National Programs' documents on summer medical standards and medical information
2. Establish common standards for medical screening for the interchange of personnel between national programs
3. Establish a database of current national program medical capabilities, including facilities, equipment and staffing
4. Encourage the use by all National Programs and other Antarctic operators of the agreed format for medical information for use in medical evacuation within and from the Antarctic continent
5. Consider how National Programs should respond to the threat of a human infectious disease outbreak in the Antarctic (i.e. pandemic influenza)
6. Establish an anonymised database of medical events
7. Share medical aspects of “Major Incident Plans”
8. Develop information for prevention, management and treatment of common medical problems in Antarctica – the first information will consider altitude sickness
9. Prepare guidelines to assist with medical plans in case of mass unusual animal mortality

Actions

- Provide a full business plan about the Anonymised Database of Medical Events project to EXCOM by end of September 2007

TRAINING AND OUTREACH

CODAT - COMNAP Coordinating Group on Outreach and Training

Membership: ***Lou Sanson (NZ - Chair 08-2005 to 07-2008), Karl Erb (US), Hosung Chung (KR), Jan Stel (NL)***

Terms of Reference

- Guide and coordinate the progress of the Outreach 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 : ***Albert Lluberas (UY) 08-2007 to 07-2010***

Terms of Reference

- 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
- Maintain a record of training exchanges for National Programs
- Review the voluntary Training Checklist

INFONET - COMNAP Antarctic Information and Outreach Officers Network

Coordinators : ***Eva Grönlund (SE) and Linda Capper (UK) 01-2007 to 07-2009***

Terms of Reference

- 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 CODAT/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 National Program opportunities to leverage from high profile Antarctic outreach activities
- Hold a workshop in conjunction with COMNAP XX (St Petersburg, 2008)

INTERACTION WITH OTHER OPERATORS

TANGO - COMNAP Working Group on Tourism and Non-Government Operators

Chair: ***José Retamales (CL) 08-2005 to 07-2008***

Terms of Reference

- 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
- Continue to 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
- Conduct a survey on the question "What is the impact of tourism on science" - this should not be limited to ship voyages but also include flights, including possible flights to newly opened areas such as Dronning Maud Land and the Australian sector

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)***

Terms of Reference

- Encourage multi-national logistical partnerships and the integration of technological developments to advance the scientific goals established for IPY
- Track progress of IPY activities by all members
- 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

SCAR Annual Report 2007-2008

Executive Summary

The Scientific Committee on Antarctic Research (SCAR) is the foremost, non-governmental organisation for initiating, developing, and coordinating high quality international scientific research in the Antarctic region, including the study of Antarctica's role in the Earth System. SCAR adds value to research conducted by individual nations by facilitating and encouraging researchers to extend beyond their programmes and to partner with other colleagues worldwide that have similar or complimentary research interests. Collectively, SCAR programmes can often accomplish research objectives that are not easily obtainable by any single country, research group, or researcher.

Through its biennial Open Science Conference SCAR provides a forum for the community of polar scientists, researchers, and students to gather to report on the latest science, exchange ideas and explore new opportunities. SCAR also supports research Fellows and provides a broad range of data management and information products and services.

SCAR provides objective and independent scientific advice on the underlying scientific knowledge and principles necessary for the wise management of the Antarctic environment by the Antarctic Treaty Parties (through Consultative Meetings); the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR); the Convention for the Conservation of Antarctic Seals (CCAS), the Advisory Committee of the Agreement on Conservation of Albatrosses and Petrels (ACAP) and the Council of Managers of National Antarctic Programmes (COMNAP).

SCAR has led the development of a network of the four main bodies of the International Council for Science (ICSU) that are concerned with research in the polar regions and/or the cryosphere; these include SCAR, the World Climate Research Programme (WCRP), the International Arctic Science Committee (IASC), and the newly formed International Association for Cryospheric Sciences (IACS) of the International Union for Geodesy and Geophysics (IUGG). Creation of this 4-component network will help to ensure that polar scientific research is effectively coordinated.

We are now in the International Polar Year (IPY) 2007-2009, to which SCAR is making a significant contribution through its scientific research programmes. In recognition of the importance of the IPY the SCAR Open Science Conference for July 8-11 2008 (St Petersburg, Russia) has been broadened to be the SCAR/IASC Open Science Conference, and has the theme "Polar Research – Arctic and Antarctic Perspectives in the IPY". The IPY Steering Committee has formally adopted it as the first of three thematic IPY conferences (the second will be in Oslo in June 2010 and the third in Canada in 2012). Planning for the conference, which has attracted almost 1400 registrants, has occupied much of the year.

SCAR leverages its limited resources by partnering with selected global science programmes, providing them with an Antarctic perspective. These include the World Climate Research Programme (WCRP), elements of the International Geosphere-Biosphere Programme (IGBP), the International Permafrost Association (IPA), the Global Ocean Observing System (GOOS), the Partnership for Observations of the Global Ocean (POGO), the Census of Marine Life (COML), the Global Biodiversity Information Facility (GBIF), the Scientific Committee on Oceanic Research (SCOR), and the Scientific Committee on Solar Terrestrial Physics (SCOSTEP).

During 2007, SCAR's research focused on five themes in Antarctic science: (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 subglacial 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. Highlights of scientific discoveries include:

1. A new medium depth (136 m) ice core has been drilled in a high accumulation site on the south-western Antarctic Peninsula. It records a doubling of accumulation since the 1850s, with acceleration in recent decades. This rapid increase is strongly associated with changes in the regional meteorology – especially in the southern hemisphere Annular Mode (SAM).

2. Excess deuterium data from Dome A shallow ice cores show an increasing trend during the past ~4000 years, implying that the average moisture sources of Dome A in the southern hemisphere are moving equatorwards.

3. New marine geological data suggest the possibility of rapid and synchronous ice retreat from much of Antarctica's continental margin following the last glaciation, beginning about 11,500 years ago and lasting less than 1,000 years, which may be related to globally-relevant meltwater pulses.

4. The latest inventory of Antarctic subglacial lakes and aquatic environments has identified more than 160 features. The spectrum of subglacial environments provides a framework for comparing and contrasting lake environments enhancing our ability to test hypotheses about the origin, evolution, and significance of subglacial aquatic environments.

5. Tests of the extent to which auroral events in both hemispheres are joined together (inter-hemispheric conjugacy) have long showed that some auroral structures are synchronous and may even pulsate in tune (i.e. are conjugate). Recent observations with ground-based all-sky TV-cameras confirm this conjugacy but also show some non-conjugate auroras: (i) pulsating auroras in both hemispheres with different spatial appearance and period, and (ii) pulsating auroras in one hemisphere only.

6. A continent-wide analysis of biological distribution patterns provides many independent examples of long-term persistence and evolution within Antarctica, over timescales from the Pleistocene to Gondwana breakup, providing a new challenge and constraint to reconstructions of the history of ice on the continent.

1. What Is SCAR (for further details see *www.scar.org*)?

The Scientific Committee on Antarctic Research (SCAR) is the principal non-governmental organization responsible for the international coordination of scientific research in the Antarctic region. SCAR is an Interdisciplinary Body of the International Council for Science (ICSU). ICSU formed SCAR in 1958 to continue coordination of scientific research in Antarctica that began during the International Geophysical Year of 1957-58. The need for such coordination has grown as the role of Antarctica in the global system has become apparent and continues unabated in the International Polar Year (IPY) 2007-2008, in which SCAR is playing a leading role. SCAR's Members currently include 34 nations and 8 of ICSU's Scientific Unions linking SCAR to a wide range of scientific activities.

SCAR aims to improve understanding of the nature and evolution of Antarctica, the role of Antarctica in the Earth System, and the effects of global change on Antarctica. Its main objective is to initiate, develop, and co-ordinate high quality international scientific research in the Antarctic region including studying the role of the Antarctic in the Earth system. To meet this objective 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 large scientific questions**.**

In addition SCAR provides objective and independent scientific advice, as an official Observer, on issues of science and conservation affecting the management of Antarctica and the Southern Ocean, to four intergovernmental bodies having responsibilities in the Antarctic region:

(i) the Antarctic Treaty System through the Antarctic Treaty Consultative Meeting (ATCM) and the Committee for Environmental Protection (CEP);

(ii) the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), and its Scientific Committee;

(iii) the Advisory Committee of the Agreement on Conservation of Albatrosses and Petrels (ACAP); and

(iv) The Council of Managers of National Antarctic Programmes (COMNAP).

2. SCAR Science

2.1 Major Scientific Research Programmes

Currently SCAR research is focused on five major Scientific Research Programmes (SRPs), each addressing key issues at the frontiers 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;
- Subglacial 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 at the SCAR web site. Advances in each programme in 2007-8 are summarized below. SCAR welcomes the involvement of scientists in these programmes (enquiries to *info@scar.org*).

Earth System Science tells us that all components of the earth are interconnected. To ensure the sort of cross disciplinary interactions that are essential to effectively addressing the most pressing and societal relevant scientific questions in Earth System Science, strong links are fostered between SCAR's Scientific Research Projects; SCAR's Standing Scientific Groups; and other global programmes.

2.1.1 Antarctica In The Global Climate System (AGCS)

Antarctica in the Global Climate System (AGCS) is a cross-disciplinary science programme that focuses on three key aspects of climate change: (i) how does the modern climate system work in the Antarctic; (ii) how has it developed over roughly the last 10,000 years (i.e. outside the longer geological time frame addressed by the ACE programme); and (iii) producing improved estimates of how the climate of the Antarctic may evolve over the next century under different greenhouse gas emission scenarios. The results will be of value to a number of groups within SCAR, as well as to the Intergovernmental Panel on Climate Change (IPCC). For background to the programme see the web site: *http://www.antarctica.ac.uk/met/SCAR_ssg_ps/AGCS.htm*. AGCS and its sub-project are co-sponsored by the World Climate Research Programme (WCRP). Several IPY projects contribute to AGCS goals.

2.1.1.1 Progress

A number of advances were made during 2007. A paper was accepted for publication in the Journal of Geophysical Research that gave improved projections for how the climate of the Antarctic and Southern Ocean would evolve over the 21st Century. The work was based on the output of the models used in the Fourth Assessment Report of the IPCC and was reported as a SCAR highlight last year (Bulletin 163).

Another paper accepted by the same journal, is the first assessment of the circumpolar distribution of sea ice and snow thickness on the sea ice around Antarctica. The paper is derived from the SCAR Antarctic Sea Ice Processes and Climate (ASPeCt) climatology, which is based on ship observations from 1980 to 2005.

Regional changes in bottom water production have been discovered that have the potential to affect the ventilation of the global ocean abyss. The densest layers of the oceanic overturning circulation form in the Southern Ocean. An oceanographic section across the eastern Scotia Sea revealed significant variability in the deep and bottom waters. Warming (~0.1ºC) of the warm mid-layer waters in the Scotia Sea between 1995 and 1999 reversed through to 2005, reflecting changes seen earlier upstream in the Weddell Sea. The volume of deep waters with potential temperature less than 0ºC decreased during 1995-2005. Entry of the abyssal waters to the eastern Scotia Sea changed from the south to the north-east between 1995 and 1999, then back to the south by 2005. These changes reflect inter-annual variations in the deep waters exiting the Weddell Sea, that are due to changes in the strength of the Weddell Gyre, and large-scale atmospheric variability that may include the El Niño/Southern Oscillation. These signals promulgate into the world ocean.

Exciting new data on snow accumulation, temperature and ice thickness have been obtained from Dome A. Excess deuterium data from Dome A shallow ice cores show an increasing trend during the past ~4000 years, implying that the average moisture sources of Dome A in the southern hemisphere are moving equatorwards. A deep ice core collected here could provide a climate record extending back more than a million years.

A new medium depth (136m) ice core has been drilled in a high accumulation site on the south-western Antarctic Peninsula. Its record reveals a doubling of accumulation since the 1850s, from a decadal average of 0.49m (water equivalent) per year in 1855–1864 to 1.10m per year in 1997–2006, with acceleration in recent decades. This rapid increase is the largest observed across the region. It is strongly associated with changes in the regional meteorology – especially the southern hemisphere Annular Mode (SAM).

AGCS has been involved in a number of successful field campaigns, many of which contribute to IPY:

- Traverse to Dome-A as part of the Chinese IPY programme, PANDA, measuring ice layers, bedrock, snow accumulation rates and ice flow;
- Ice cores collected near Maîtri station as part of the Indian ITASE (2006-2007) collaborative programme;
- Joint Brazilian-Chilean-US ice core drilling on the Detroit Plateau, Antarctic Peninsula, as part of the Climate of the Antarctic and South America (CASA) programme;
- The US ITASE team completed their second traverse to the Pole on 24 December 2007;
- The Norwegian – US Scientific Traverse of East Antarctica involved scientific investigations along two overland traverses in East Antarctica;
- The Australian Sea Ice Physics and Ecosystem eXperiment (SIPEX) and the US Sea Ice Mass Balance of Antarctica (SIMBA) campaigns aimed to improve understanding of the

physics, biology and biogeochemistry of the sea ice. The Geoscience Laser Altimeter System (GLAS) aboard NASA's ICESat satellite was turned on for 33 days to coincide with the field campaigns to calibrate and validate satellite data.

Good progress has been made in preparing the SCAR Antarctic Climate Change and the Environment (ACCE) review document. A draft of the review will be presented to the SCAR Delegates in Moscow. As part of this exercise a major paper on the State of the Antarctic and Southern Ocean Climate System (SASOCS) has been prepared and is under revision for Reviews of Geophysics.

The Australian Antarctic Data Centre has made good progress in establishing a sea ice data portal for *in situ* sea ice data, as recommended by the International Workshop on Antarctic Sea Ice Thickness, co-sponsored by SCAR in Hobart in July 2006. SCAR funded a student to source and enter data from almost 150 files from various national programmes. This stimulated funding from Australia to develop the data portal.

AGCS led organisation of the Second Workshop on Recent High Latitude Climate Change (Seattle, USA; 22-24 October 2007), a joint effort with IASC and the WCRP/SCAR/IASC Climate and the Cryosphere (CliC) project that considered atmospheric, oceanic and cryospheric changes that had taken place during the last 50 years in the Arctic and Antarctic. A report on the meeting will appear in the scientific literature. A workshop, jointly organised with CliC, on Global Prediction of the Cryosphere, was held at the British Antarctic Survey in October 2007. The meeting reviewed our ability to predict the evolution of various aspects of the cryosphere over the coming century. A symposium on Antarctica and the Global Climate System was held at the European Geosciences Union General Assembly in Vienna, Austria in April 2007. The second issue of the AGCS Newsletter 'Notus', edited by Dr Mike Meredith, was issued in July 2007.

2.1.1.2 Plans

1) Complete drafting the ACCE review for the SCAR Delegates meeting in July 2008.
2) Support continuous ice-core drilling at Dome-A during IPY and beyond.
3) Support long-term monitoring of meteorology and ice/air interactions along the Zhongshan-Dome A traverse route.
4) Hold a workshop on driving cryospheric models with high-resolution atmospheric data.
5) Hold an ITASE Synthesis Workshop in September 2008.

2.1.2 Antarctic Climate Evolution (ACE)

The Antarctic ice sheet began forming near 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

ACE has now formed an official link to IGBP's PAGES programme, and is also an IPY project.

Aside from many papers in journals, ACE produced a new Special Issue of *Palaeogeography, Palaeoclimatology, Palaeoecology* on Antarctic Climate Evolution, which is now online at the Elsevier website and will appear as hardcopy early in 2008. This is the fourth such ACE contribution. It contains sixteen research papers based on presentations at the ACE sponsored EGU meeting in

Vienna (April 2006), and at the XXIX SCAR open Science meeting, Hobart, Tasmania (July 2006). ACE also published an overview of its work in the journal *Antarctic Science*, and Florindo and Siegert are editing a book on Antarctic Climate Evolution for publication in 2008.

ACE has been much involved in scientific meetings. It supported many activities in the 10th ISAES Conference (Santa Barbara, California, August 2007), including a short course on Geoscience Modelling for Novices, and ten individual sessions and meetings. ACE also held a Special Session on Antarctic Climate Evolution at the 2007 INQUA meeting. In addition to the many ACE-themed sessions at the 2007 Fall meeting of the American Geophysical Union, ACE organized a Town Hall Meeting attended by 65 people. Interest was high, and several people volunteered for leadership roles on ACE groups.

ACE continues to stimulate or be involved in geological drilling. ACE supported a workshop to organise a 2008 proposal to the International Ocean Drilling Programme (IODP) for drilling in the Ross Sea, where focus is on the Cenozoic evolution of the West Antarctic Ice Sheet from Eocene to present. Plans for the IODP Wilkes Land drilling are moving ahead. Co-chief scientists have been nominated (Carlota Escutia from ACE and Henk Brinkhuis), the pre-cruise meeting between the Operators and the co-chief scientists was held at College Station, Texas between 17 and 19 December 2007.

During the year, the ANDRILL (Antarctic Drilling) Project (IPY Project #256), which ACE supports, has made a major contribution to increasing the geological data set of Antarctic climate and ice sheet history for the past 20 million years. The project completed its first drill hole beneath the McMurdo Ice Shelf in January 2007. A record depth of 1284.87 metres below sea floor was reached. The recovered strata provide a record of ice shelf and climate history for the past 14 million years. The initial report is now in press as Volume 14, No. 3 of Terra Antarctica. ANDRILL's second season of drilling was completed in November 2007 with another record depth of 1138.54m drilled beneath the sea ice of southern McMurdo Sound. The recovered strata overlap with those from the first drill hole, and extend the record back to 20 million years.

Plans to undertake deep-field airborne radar surveying of the structure of the East Antarctic ice sheet have progressed, with a new ACE-focused programme emerging between the US, UK, Australia and New Zealand. The project will survey the ice sheet base across Dome C to the surrounding coastal regions in 2008. In addition plans were consolidated for the airborne surveying component (joint US-UK-Germany) of the IPY Project AGAP, which will be concentrated around Dome A in the 2008/09 field season.

An ACE Blog was established in August 2007 (*www.antarcticclimate.blogspot.com*), to complement the current ACE website (*www.ace.scar.org*), with posts on news, research updates, and events.

2.1.2.2 Plans

1) complete the ACE book to be published by Elsevier;
2) undertake deep-field airborne geophysics surveys;
3) contribute to the several major science meetings, including the SCAR Open Science Conference in St Petersburg, the International Geological Congress in Oslo, and the European Geosciences Union in Vienna;
4) reconfigure and update the ACE website;
5) publish the IODP Wilkes Land drilling Scientific Prospectus;
6) sponsor a graduate student to attend the Urbino School of Palaeoclimate;
7) plan the first ACE Open Sciences Conference (Granada, Spain, June 2009).

2.1.3 Evolution And Biodiversity In The Antarctic (EBA)

EBA aims to understand the evolution and diversity of life in the Antarctic, to determine how these have influenced the properties and dynamics of present Antarctic and Southern Ocean ecosystems, and to make predictions on how organisms and communities will respond to current and future environmental change. EBA integrates work on marine, terrestrial and limnetic ecosystems. By comparing the outcome of parallel evolutionary processes over the range of Antarctic environments, fundamental insights can be obtained into evolution and the ways in which life responds to change, from the molecular to the whole organism level and ultimately the biome level. Most national programmes individually cannot attempt a study on such a bold scale. EBA's role, as a non-science-funding umbrella or facilitator, is primarily one of connection, and encouragement of various research initiatives being undertaken towards the goals of EBA by a large number of projects, programmes and individuals covering very diverse areas of biology. To facilitate its work, EBA has established five Work Packages to cover its main areas of research (see below).

2.1.3.1 Progress

EBA is both a SCAR and an IPY programme. Several other projects that contribute to EBA are themselves IPY endorsed projects such as CAML (Census of Antarctic Marine Life), MarBIN (Marine Biodiversity Information Network), Aliens, TARANTELLA, MERGE, the Latitudinal Gradient Project, and ICED (Integrating Climate and Ecosystem Dynamics in the Southern Ocean). Of these, CAML, MarBIN and ICED are either SCAR activities or sponsored by SCAR. They are part of the list of some 40 national and international programmes contributing to EBA.

EBA's success is reflected in part in publications emerging from its scientific community, and totaled at least 159 peer-reviewed papers in 2007, including:

- IX SCAR International Biology Symposium - Evolution and Biodiversity in Antarctica. *Antarctic Science* Special Edition Volume 19(2) 2007. Eds E. Fanta, W. Arntz, W. Detrich, H. Kawall.
- Antarctic Ecology: From Genes to Ecosystems. Part 1. Rogers, A.D, Murphy, E., Clarke, A., Johnston, N. (eds). *Philosophical Transactions of the Royal Society B.* Vol. 363(1477), 2007.
- Antarctic Ecology: From Genes to Ecosystems. Part 2. Rogers, A.D, Murphy, E., Clarke, A., Johnston, N. (eds). *Philosophical Transactions of the Royal Society B.* 2007.
- Convey, P., Gibson, J. A. E., Hillenbrand, C.-D., Hodgson, D. A., Pugh, P. J. A., Smellie, J. L., and Stevens, M. I. (In press). Antarctic terrestrial life - challenging the history of the frozen continent? Biological Reviews, (2008), 83, pp. 103–117.
- Convey, P. 2007. Non-native species in the Antarctic terrestrial environment: presence, sources, impacts and predictions. "Non-native species in the Antarctic" Workshop Proceedings, Gateway Antarctica, Christchurch, New Zealand. de Poorter, M., Gilbert, N., Storey, B., and Rogan-Finnemore, M. (Eds.).
- Frenot, Y., Convey, P., Lebouvier, M., Chown, S.L., Whinam, J., Selkirk, P.M., Skotnicki, M. & Bergstrom, D.M. 2007. Biological invasions in the Antarctic: extent, impacts and implications. "Non-native species in the Antarctic" Workshop Proceedings, Gateway Antarctica, Christchurch, New Zealand. de Poorter, M., Gilbert, N., Storey, B., and Rogan-Finnemore, M. (Eds.).
- Convey P, Stevens M.I. 2007. Antarctic Biodiversity. *Science* 317(5846): 1877-1878.

EBA facilitates collaboration through workshops and conferences that maximize international and multidisciplinary involvement; in 2007 these included:

A MERGE workshop (Microbiological and Ecological Responses to Global Environmental Changes in Polar Regions), which was held during the International Conference on Cryogenic Resources of Polar Regions (18-21 June 2007, Salekhard, Russia) (*www.ikz.ru/permafrost*). A publication from NIPR Japan is being planned as an outcome of the meeting.

The Latitudinal Gradient Project (LGP; *www.lgp.aq*) workshop (Wellington, New Zealand, 2 July 2007), which was held in conjunction with a conference celebrating 50 Years of New Zealand's involvement in Antarctica. The workshop explored the possibilities of comparing ecosystem studies along the Victoria Land coast with those along the Antarctic Peninsula.

A SCAR-MarBIN workshop (Bialowieza, Poland, June 2007), which examined the Admiralty Bay Benthos Diversity Database; the Arctic Ocean Diversity data system; a Data Management Protocol for CAML cruises; technology for georeferenced Barcoding of biological data; an Interactive Antarctic Field Guide; development of the Register of Antarctic Marine Species; and improvements to the web site.

EBA also contributed to (i) the International Workshop on Antarctic Biology: Critical Issues and Research Priorities for IPY (2007-2009) (Follonica, Italy, 7-9 June 2007), and (ii) the 10th International Symposium on Antarctic Earth Sciences (ISAES) (Santa Barbara, USA 26 August - 1 September 2007), where there was a joint EBA-ACE session.

Highlights from the different Work Packages include the following:

WP 1: Evolutionary history of Antarctic organisms: Synthesizing this data is a challenge that has been met in a recent paper by EBA participants (Convey et al. Biological Reviews, 2008), which describes the evolutionary history of Antarctic organisms in the terrestrial realm from Gondwana to the present. Key results from this paper were highlighted in the 2006 annual report. Members of this EBA work package are contributing to the SCAR 'Antarctic Climate Change and the Environment' (ACCE) report.

WP 2: Evolutionary adaptation to the Antarctic environment: Microorganisms in terrestrial habitats including lakes and ponds are studied to understand their evolutionary adaptation to Antarctic conditions. The IPY-MERGE project is making a key contribution. Several MERGE expeditions and projects are underway, including ones run by Poland, UK, Japan, Spain, Malaysia, Belgium and Brazil. Organisms studied include fungi, methanogens, cyanobacteria, bacteria and microalgal protests (particularly diatoms and green algae). MERGE is bipolar and includes Arctic projects.

WP 3: Patterns of gene flow and consequences for population dynamics: isolation as a driving force: There has been work on this topic in the Ross Sea Sector. Among terrestrial organisms the work targets rotifers, tardigraves, nematodes, terrestrial arthropods (springtails and mites), lichens and mosses. In the marine realm, New Zealand's RV *Tangaroa* has been collecting fish and invertebrate samples at several sites in the Southern Ocean. Studies are planned on patterns of gene flow in populations of amphipod crustaceans.

WP 4: Patterns and diversity of organisms, ecosystems and habitats in the Antarctic, and controlling processes: Much of the faunal work under this heading is being undertaken under the Census of Antarctic Marine Life (CAML) programme, which contributes to EBA (see CAML details, below). Various studies have shown that Antarctic benthic systems are not as stable as once thought, but that they are exposed to dynamic conditions and respond to environmental changes. We are trying to find out how, and what parameters limit the resilience of such systems. In shallow water, along the western Antarctic Peninsula, studies are focusing on the response of assemblages or key species to disturbance by sea-ice and geographical shift. Deeper offshore communities are locally and regionally shaped by iceberg scouring, which can alter biodiversity. Other studies try to correlate biological and physical processes in the water column and sea-ice with higher trophic levels such as fish and

benthos. Some assemblages show significant pelago-benthic coupling. Recent studies show that algae, krill and salps, which play a key ecological role as food for predators, respond sensitively to atmospheric and oceanic changes. Efforts continue to clarify the tolerance of assemblages to changes in food supply. Gradients are being investigated (e.g. from shallow to deep waters, or along latitudes) to detect ecological controls and changes over time. The ultimate objective is to predict the evolution of marine Antarctic ecosystems.

WP 5: Impact of past, current and predicted future environmental change on biodiversity and ecosystem function. This topic addresses ecological questions and theories related to the consequences of climate change and biological invasions in the subantarctic islands. Dispersal of invasive species is being investigated, their spatial dynamics are being monitored and rates of dispersal modeled. The vulnerability of endemic biota to biological invasions is being assessed, as is the effect of climate change on invasive species.

Census of Antarctic Marine Life (CAML)

CAML is in the midst of an extensive fieldwork phase, with coordination of research on 18 Antarctic voyages during IPY. Each addresses the central CAML and EBA themes of biodiversity and evolution in Antarctica (for detail see *www.caml.aq*). *Polarstern* is conducting the "SYSTCO" project to examine benthic pelagic coupling of the ecosystem to 5,000m depth in the Weddell Sea. *Aurora Australis*, *L'Astrolabe* and *Umitaku Maru* will synchronise investigations for the East Antarctic survey "CEAMARC". *Humboldt* and *Ary Rongel* from South America are active around Admiralty Bay. *Tangaroa* has worked in the Ross Sea. Other vessels will be sailing soon. All biodiversity data will be submitted to SCAR MarBIN. An Education and Outreach scientist on each ship sends daily material to websites.

Seabird and mammal observations from tourist ships are now coming to CAML, following agreement with IAATO. The World Conference on Barcoding in Taipei in September 2007 provided directions and contacts for CAML's special DNA barcoding project, based at the British Antarctic Survey and Scott Polar Research Institute. Barcoding of Antarctic species is connected to the new POLARBOLI group based in Trondheim.

CAML is part of the global Census of Marine Life (CoML). CAML representatives attended the CoML All Programmes meeting in Auckland in November 2007 to strengthen collaboration with related projects on Arctic biodiversity, zooplankton, seamounts, and nearshore and abyssal environments. CAML is preparing an Encyclopedia of Antarctic Marine Life as a contribution to CoML. CAML also participated in the Scientific Steering Committee meeting of CoML in Antarctica in mid February 2008.

GLOBEC and ICED

SCAR is a co-sponsor of IGBP's Southern Ocean GLOBEC (Global Ecosystems Dynamics) and ICED (Integrating Climate and Ecosystem Dynamics in the Southern Ocean) programmes, which also contribute to CAML, and thence to EBA. For ICED the challenge is to predict i) how the diverse Southern Ocean ecosystems will respond to climate change and ii) the impacts of marine ecosystem change on the Earth System. Climate related changes are already having a profound effect on the marine ecosystems (especially krill), parts of which are also commercially exploited. ICED brings together oceanographers, biogeochemists, climatologists, and ecosystem and fisheries scientists to generate unique circumpolar datasets, undertake coordinated field activities and develop models to address three key questions:

1) How do climate processes affect the dynamics of circumpolar ecosystems?
2) How does ecosystem structure affect circumpolar ocean biogeochemical cycles?

3) How should ecosystem structure and dynamics be included in sustainable approaches to fisheries management?

ICED will approach its challenges through three main areas of i) historical data synthesis, ii) fieldwork, and iii) model development. A project has begun with EUR-OCEANS to retrieve biological information from past Southern Ocean cruises, especially on the abundance and distribution of pelagic species - to build a more complete picture of the changing circumpolar ecosystem. ICED will integrate international fieldwork, to address gaps in coverage and knowledge. As a first step, a picture of Southern Ocean fieldwork is provided through the interactive ICED IPY fieldwork map on the ICED website (*www.iced.ac.uk*). This is designed to encourage communication and cooperation, and will help to develop coordinated field activities in future. ICED convened its first modeling workshop (Old Dominion University, Virginia, USA 16 - 18 April 2008) to begin to characterise the Southern Ocean food web across a range of species (microbes to cetaceans), trophic levels and geographical areas, so as to identify major gaps in knowledge and data availability, and to explore the issues in modeling the Southern Ocean ecosystem.

In part the success of EBA rests on the extent to which biological data can be maintained, archived and exchanged. For the most part this is achieved through the Australian Antarctic Data Centre, which hosts and maintains a Biodiversity Database (*http://data.aad.gov.au/aadc/biodiversity/*) that contains data on Antarctic and sub-Antarctic flora and fauna. The database started through EBA's predecessor, RiSCC, and is now EBA's main database, containing all of the collections of data that we are aware of in the public domain (see *http://data.aad.gov.au/aadc/biodiversity/collections.cfm*). EBA also relies on other databases that are coordinated by several of the individual projects and programmes that contribute to EBA, such as SCAR-MarBIN, MERGE, and the Southern Ocean Continuous Plankton Recorder Programme (SO-CPR). EBA has set up a portal within the Antarctic Master Directory, which allows access to metadata that contribute to EBA's aims. For more detail see the new EBA website at *www.eba.aq*.

2.1.3.2 Plans

1. EBA contribution to the Polar and Alpine Microbiology, Banff, Alberta, Canada, 11-15 May 2008;

2. An Antarctic Gradients workshop will be held at BAS, 19-20 May 2008;

3. EBA contribution to international workshop "The polar and alpine environments: molecular and evolutionary adaptations in prokaryotic and eukaryotic organisms", Naples, Italy, May 29th—30th, 2008;

4. Presentations at the SCAR Open Science Conference, St Petersburg (July 2008);

5. Antarctic Gradients Open Workshop St Petersburg, Russia, 5 July 2008;

6. Extremophiles 2008; Cape Town, South Africa, 7-11 September 2008;

7. MARBEF, Valencia, November 2008;

8. X SCAR International Biology Symposium; Sapporo, Japan, 26 - 31 July 2009;

9. CAML papers for special volume of Deep Sea Research and a synthesis document entitled "The Status of Antarctic Marine Biodiversity".

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 subglacial lakes and streams in Antarctica following appropriate standards of environmental protection. SALE is a recognized IPY programme under the auspices of the SALE-UNified International Team for Exploration and Discovery (SALE-

UNITED) programme. For more details on SALE go the newly revised programme website at *http://scarsale.tamu.edu/*.

2.1.4.1 Progress

SALE facilitates partnerships and cooperation. Members of SALE are funded through their national programmes to conduct the science of SALE. As such, the achievements of SALE are a collaborative set of advances produced by a cohort of national efforts. Major new understanding and recognition of phenomena related to subglacial aquatic environments have advanced our understanding of Antarctica on a number of fronts during the past year. Since these environments have yet to be penetrated and sampled in a rigorous manner, SALE science and discovery is at the beginning of what will be many years of research and discovery. The following highlights three recent, major scientific advances in understanding subglacial aquatic environments. A complete bibliography of SALE related publications is provided at: *http://scarsale.tamu.edu/selected-publications*.

Subglacial accumulations of water are common features beneath thick ice sheets. In 2005, the second inventory of Antarctic subglacial lakes and aquatic environments was published, containing details (location, size, ice thickness) of 145 lakes, 68 more lakes than the previous inventory of 1996 (Siegert et al. 2005). Since this publication, several new lakes have been identified, bringing the total identified features to over 160. A third inventory is planned for 2010. It is expected that as aerial coverage by various types of survey techniques planned during the IPY improves, the number of recognized subglacial features would dramatically increase.

Outburst discharges of subglacial water have repeatedly occurred over geologic time and are an on-going process that influences the dynamics of the overlying ice**.** Satellite altimetry of the ice sheet surface has shown that a portion of the central East Antarctic ice sheet lowered by 2-3m between 1996 and 1997, at the same time the ice sheet was elevated 1-2m some 250km away. The only feasible explanation for this observation is the rapid loss of 1.8km^3 of water from a subglacial lake, which flowed along the base of the ice sheet and into a series of other lakes. Similar observations have been made near the margins of West Antarctica. Significant fluxes of water are flowing beneath the Antarctic ice sheet producing an interconnected system of subglacial lakes. The consequences for subglacial lakes as habitable environments and for modifications to large-scale ice flow conditions are considerable. The expected pathways of subglacial water drainage have been calculated, revealing a coherent network of channel systems, feeding water from large upstream catchments into several large outlets. Through these hydrological systems it is plausible that subglacial water can flow from the interior of ice-sheets to the ocean. The landforms created by paleo-outbursts have been documented suggesting that these processes have been an important agent of morphologic change over geologic history.

A spectrum of subglacial aquatic environments exists. Subglacial aquatic environments occur in a range of geological settings suggesting that individual lakes may have differing origins and evolutions. Subglacial aquatic environments are not randomly distributed across the Antarctic continent, but occur in preferred locations. This suggests that the limnological conditions, the age, the source of founder microbes, the time of isolation and the extant microbiological inhabitants will vary from location-to-location. More than one classification system has been proposed. The recognition of a spectrum of subglacial lake types provides a framework for comparing and contrasting lake environments across the Antarctic continent, greatly enhancing our ability to test fundamental hypotheses about the origins, evolution, and significance of subglacial aquatic environments to the evolution of the Antarctic continent, its ice sheets and microbiota.

During the last year, SALE has:

- built a community through workshops, meetings, and sessions at scientific meetings;

- identified major scientific and technological goals for SALE research and exploration through active engagement of the community;
- provided a framework for the US National Academies report on environmental stewardship of subglacial aquatic environments;
- held regular meetings that serve as forums for the discussion of science and technology amongst national programmes; and
- educated the public through extensive and sustained coverage of SALE science in the lay and scientific press.

The SALE IPY Programme is SALE – the Unified International Team for Exploration and Discovery (SALE-UNITED) *http://www.ipy.org/index.php?ipy/detail/sale_united/*. Antarctica's Gamburtzsev Province Exploration programme includes subglacial lake characterization. Subglacial aquatic environments are a target for exploration by the US-Norway Traverse 08-09**.** The number of SALE related publications in peer-reviewed journals is increasing each year. Lists of publications by year are maintained at the SCAR SALE web site *http://scarsale.tamu.edu/selected-publications*. The SALE Workshop organizers (Kennicutt and Petit) published an EOS front-page article in 2007 (EOS Transactions Vol. 88, No. 11, 13 March 2007, Pages 129, 131). Many important articles have been published in Science and Nature on various aspects of SALE science authored by SALE participants and collaborators during the last few years.

2.1.4.2 Plans

1. Future SALE meetings will focus on a major aspect of SALE science and a programme of invited speakers will be developed for each topic.

2. The outcome from each meeting will be given in a white paper and submitted for publication in a journal.

3. SALE will propose and organize sessions at all major earth and polar science meetings and venues.

4. There will be a subglacial aquatic environments session at the SCAR/IASC IPY Conference in St Petersburg in July 2008.

5. An informal SALE dinner meeting will be scheduled in St.Petersburg in July 2008.

6. SALE sessions will be proposed for the AGU and EGU meetings in 2008/2009.

7. A SALE annual meeting will be held in 2009 (location to be determined).

8. Application has been made for an AGU Chapman Conference entitled "Exploration And Study Of Antarctic Sub-glacial Aquatic Environments", for 2010.

2.1.5 Inter-Hemispheric Conjugacy Effects In Solar-Terrestrial And Aeronomy Research (ICESTAR)

ICESTAR is creating an integrated, quantitative description of the upper atmosphere over Antarctica and of its coupling to the global atmosphere and the geospace environment. ICESTAR operates with 4 Thematic Action Groups (TAGs):

- TAG-A: Quantification of the coupling between the polar ionosphere and neutral atmosphere from the bottom-to-top and the global electric circuit;
- TAG-B: Quantification of the inner magnetospheric dynamics using remote sensing techniques;

- TAG-C: Quantification of the state of the upper atmosphere, ionosphere, and magnetosphere over the Antarctic continent and how it differs from the northern hemisphere during a wide range of geophysical conditions;
- TAG-D: Creation and management of the data portal.

For details of ICESTAR plans and progress see *http://www.scar-icestar.org*.

2.1.5.1 Progress

Like other SRPs, ICESTAR achieves much of its impact through workshops and conferences. Among these:

- ICESTAR had a dedicated session on "Solar Influence on Geospace as Determined by Hemispherically Conjugate Observations", in the Greenland Space Science Symposium (May 2007). Proceedings will be published, in 2008, in a special issue of Journal of Atmospheric and Solar-Terrestrial Physics, with the title "Transport in the Coupled Solar Wind - Geospace System seen from a High-Latitude Vantage Point".
- ICESTAR participated in the EISCAT workshop in Åland (Finnish Archipelago) to discuss results from the system of EISCAT incoherent scatter radars; the workshop was accompanied by a two-week summer school to teach students to use the radar facilities. Papers from the workshop will appear in a special issue of Annales Geophysicae in 2008.
- ICESTAR co-sponsored the polar Gateways Arctic Circle Sunrise 2008 meeting in Barrow, Alaska, 23-29 January 2008.

ICESTAR's IPY programme is "Heliosphere Impact on Geospace", involving 29 international research groups from ICESTAR and the International Heliophysical Year communities. The project has three main themes: (i) Coupling processes between the different atmospheric layers and their connection with solar activity, (ii) Energy and mass exchange between the ionosphere, the magnetosphere, and the heliosphere, and (iii) Inter-hemispheric similarities and asymmetries in geospace phenomena.

ICESTAR is also developing a strong collaboration with the multidisciplinary IPY project POLENET (meteorology, glaciology, volcanology, seismology), which will build and maintain an extensive Antarctic network of dual-frequency GPS receivers. Data from the network will be invaluable for the ICESTAR-IPY community, which also maintains GPS receiver stations in the Antarctic for ionospheric research.

Selected scientific highlights that emerged during the year are as follows (for lists of papers and other highlights see *http://www.scar-icestar.org*):

Geospace-atmosphere coupling: Lightning during strong thunderstorms launches electromagnetic waves that propagate both in the wave-guide between the earth surface and ionosphere (spherics) and along geomagnetic field lines (whistlers). Whistlers can interact with radiation belt electrons and cause their precipitation into the atmosphere. Combined observations from VLF-antennas, lightning detection systems, and the DEMETER satellite show a causal relationship between lightning and electron precipitation events. Both data and models confirm the connection between the intensity of the electromagnetic waves and the fluxes of electrons in precipitation events [Inan, U.S., Piddyachiy, D., Peter, W.B., Sauvaud, J.A., and M. Parrot: DEMETER satellite observations of lightning-induced electron precipitation, Geophys. Res. Lett., doi:10.1029/2006GL029238, 2007].

Interhemispheric comparison studies: Tests of the extent to which auroral events in both hemispheres are joined together (inter-hemispheric conjugacy) have long showed that some auroral structures are synchronous and may even pulsate in tune (i.e. are conjugate). Recent observations with ground-

based all-sky TV-cameras confirm this conjugacy but also show some non-conjugate auroras: (i) pulsating auroras in both hemispheres with different spatial appearance and period, and (ii) pulsating auroras in one hemisphere only. [Watanabe, M., Kadokura, A., Sato, N., and T. Saemundsson, Absence of geomagnetic conjugacy in pulsating auroras, Geophys. Res. Lett., doi:10.1029/2006GL030469, 2007].

Arctic and Antarctic polar winter NOx: GOMOS satellite night-time observations of middle atmosphere NO_2 and O_3 profiles during recent polar winters in the Arctic and Antarctic have been used to study the relation between energetic particle precipitation and downward transport of polar NO*x*. NO*x* is commonly enhanced when there are high levels of high-energy particle precipitation and/or geomagnetic activity. In the Arctic winter of 2005–2006 the NO*x* enhancement was higher than expected from the geomagnetic conditions, indicating the importance of changing meteorological conditions. [Geophys. Res. Lett., 34, L12810, doi:10.1029/2007GL029733, 2007].

2.1.5.2 Plans

ICESTAR will be involved in organising or participating in several workshops or conferences, including:

1. The Third International Workshop on Riometry (June 22, 2008, Zermatt Resort in Midway, Utah); [Riometers are an important tool for space science and space weather];

2. SCAR/IASC Open Science Conference (St Petersburg July 2008);

3. Winter 2008 ICESTAR-IHY-IPY meeting.

2.2 Specific SCAR Research Areas

2.2.1 Life Sciences Group

The Standing Scientific Group for the Life Sciences (SSG-LS) is responsible for a number of activity areas aside from EBA and SALE (above).

(i) Seabirds: Members of this Group continue to provide advice regarding the nomination of Specially Protected Species status for the southern giant petrels. Trends in the population of this species will be examined at a workshop in Cambridge, UK, in May 2008, under the aegis of SCAR's Standing Committee on the Antarctic Treaty, to determine what advice to provide to Treaty Parties. The Group continued to work with BirdLife International to define Important Bird Areas in the Southern Ocean region, and continued its assessment of the potential impact of flipper banding on penguins. The Chief Officer of the Group, Dr Eric Woehler, resigned in 2007. Appointment of a successor was postponed pending the outcome of discussions on the possibility of merging with the Expert Group on Seals (see iii below). With the resignation of the Chief Officer, SCAR's representation on the Advisory Committee on Albatrosses and Petrels (ACAP) became temporarily vacant.

(ii) Seals: This Expert Group produced an update on the progress and products of the Antarctic Pack Ice Seals (APIS) programme, which was presented at the 2007 ATCM Meeting, and posted on the SCAR website (*http://www.seals.scar.org/*). In addition, a White Paper on the status of knowledge of the biology, distribution and abundance of the Ross seal, which militates against the removing of the species from the list of Specially Protected Species in Appendix A to Annex II of the Environmental Protocol, was tabled. 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.

(iii) Higher Predators: Following the advice of the July 2007 meeting of the Executive Committee, the Life Sciences SSG continued preparing a plan for merging the Expert Groups on Birds and

Seals to form a new Expert Group on Higher Predators. The plan will be discussed during meetings of the two Expert Groups in St Petersburg, Russia (July 2008), and by the Delegates to XXX SCAR in Moscow in July 2008.

(iv) Human Biology and Medicine: This Expert Group now has annual meetings with the Medical Network (MEDINET) group of COMNAP (Council of Managers of National Antarctic Programmes). A full merger of the two groups has still not been effected, but combined meeting is an essential first step on this route.

(v) The Action Group on Continuous Plankton Recorder Research (CPRAG) was formed during the SCAR XXIX meeting in Hobart 2006 and started its activities in 2007. It supports and develops the SCAR Southern Ocean CPR Survey based at the Australian Antarctic Division. The CPR Survey maps the biodiversity and distribution of plankton, including euphausiid (krill) life stages, and then uses the sensitivity of plankton to environmental change as early warning indicators of the health of the Southern Ocean. CPRAG's members include representatives of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), and the Sir Alister Hardy Foundation for Ocean Science, which leads the northern hemisphere CPR surveys. The data set holds more than 100,000 records for about 200 zooplankton species from the Scotia Arc east to the Ross Sea. The SO-CPR Survey contributes to the Census of Antarctic Marine Life, with a circum-Antarctic CPR survey conducted from at least 10 vessels.

(vi) 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 web site (*http://www.antarctica.ac.uk/Resources/BSD/ICED/index.htm*) and circulated a draft science plan for comment.

(vii) In 2008 SCAR obtained Associate Participant status in the Global Biodiversity Information Facility (GBIF). SCAR will be involved in the governing of GBIF and in implementing GBIF's goals and work plan. Bruno Danis (Belgium), manager of the SCAR-MarBIN data network, will represent SCAR in the GBIF Governing Board, and Dave Watts, (Australia), in charge of the management of the EBA Antarctic Biodiversity Database, will represent SCAR in the GBIF Participant Node Managers' Committee.

(viii) In the wake of the sinking of the *M/S Explorer* on 23 November 2007, SCAR decided to create an Action Group on Antarctic Fuel Spills (AGAFS). AGAFS stands ready to address issues that might arise related to the fate and effects of fuel releases in Antarctica. The group is tasked with responding when specific advice is requested. In this context the group will operate as an executive committee directing, facilitating and coordinating responses. Its activities will be largely quiescent until a specific need arises. Responses might include a white paper on selected topics, compilations of biological resource data for an affected geographic location, convening of a workshop of experts, and/or provision of contact information for experts as examples.

(ix) Planning for the 10th SCAR Biology Symposium (26 – 31 July 2009), which will be held at Hokkaido University, Sapporo, Japan, began in 2007. Japanese colleagues established a Local Organising Committee chaired by Dr Mitsuo Fukuchi of the National Institute for Polar Research.

2.2.2 Geosciences Group

The Standing Scientific Group for the Geosciences (SSG-GS) contains several Expert and Action Groups aside from the Scientific Research Programmes ACE and SALE.

(i) The 10th SCAR International Symposium on Antarctic Earth Science (ISAES-X) was held on August 26-31, 2007, at the University of California, Santa Barbara, USA. This is the tenth in a

series that is repeated at a different location every 4 years. It is a highlight of the activities of the SSG-GS and a key recurring event for Antarctic Geoscientists. The Proceedings "Antarctica: A Keystone in a Changing World" can be ordered from the National Academies Press (USA). Detailed description and summary of the event is available on the SCAR SSG-GS web page *http://www.scar.org/researchgroups/geoscience/*.

(ii) 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. GIANT is a leader in the bipolar IPY POLENET (Polar Earth Observing Network) project, to which GIANT will contribute the Antarctic GPS component. A POLENET workshop was organized in the frame of the 10th ISAES in Santa Barbara in August 2007. It is planned to propose POLENET as a Scientific Programme Planning Group (SPPG) for 2008-10 at the XXX SCAR meeting, with the intention of it becoming a Scientific Research Programmeme in 2010. During the XXX SCAR meeting a proposal will also be made to create a joint working group between ICESTAR/IHY and POLENET, on "GPS for Weather and Space Weather Forecast". For more information on GIANT see: *http://www.geoscience.scar.org/geodesy/giant.htm*. For information on POLENET see: *http://www.polenet.org/*.

(iii) 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 SCAR Expert Group on the International Bathymetric Chart of the Southern Ocean (IBCSO) aims to produce a high quality bathymetric map of the Southern Ocean together with topographic, geophysical, and other data. The IBCSO is a contribution to the General Bathymetric Chart of the Oceans (GEBCO). The Intergovernmental Oceanographic Commission (IOC) and the International Hydrographic Organization (IHO) accept IBCSO as a regional ocean-mapping programme and provide assistance through the Hydrographic Commission on Antarctica. IBCSO has expanded international collaboration in data collection and exchange during 2007. New multi-beam data were collected and processed by the Alfred Wegener Institute during two *Polarstern* cruises in Antarctic waters. IBCSO collaborates and exchanges data with the RADARSAT Antarctic Mapping Programme (RAMP), Antarctic Bedrock Topography (BEDMAP2), Antarctic Digital Magnetic Anomaly Project (ADMAP), Earth Topography (ETOPO2), and GEBCO. The first IBCSO meeting took place during the 10th ISAES in Santa Barbara in August 2007. The IBCSO Editorial Board now comprises 15 experts from the fields of hydrography, oceanography, and ocean mapping. Presentations on IBCSO and its relevance to other projects was given to the GEBCO Sub-Committee on Digital Bathymetry (New York, September 2007), the Southern Ocean Observing System (SOOS) planning meeting (Bremen, October 2007), the Standing Committee on Antarctic Geographic Information (SC-AGI) (Buenos Aires, October 2007), and the GEBCO Guiding Committee (Paris, November 2007). During the year, SCAR and SCOR distributed Circulars to their Members and Principal Investigators regarding the importance of bathymetric data acquisition in polar regions and their transfer to project databases. The SCAR/SCOR Expert Group on Oceanography made an explicit request to national members for bathymetric data for completing Bathymetric Charts in Antarctica. For more detail see *www.ibcso.org*.

(iv) 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 2007, ADMAP: updated a DVD of the data compiled up to 1999 for release to the World Data Centers; developed and promoted regional and continental scale interpretation of ADMAP data;

updated near-surface anomaly predictions; continued the compilation of a rock magnetic properties database in support of geological applications of the Antarctic magnetic anomalies; developed an Antarctic Reference Model for improved magnetic anomaly determination in the Antarctic; and worked on establishing a spherical harmonic cap model for the database to facilitate analytical manipulations of the Antarctic magnetic anomaly grid for geological applications. The ADMAP team met at the 10th ISAES meeting in Santa Barbara. In 2008, 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 into the ADMAP digital database. As magnetic surveys since 2001 have nearly doubled the amount of data for inclusion into the database, a database manager will be needed to carry out the work. SCAR will co-sponsor a workshop to release the updated database to the World Data Centers. ADMAP will continue developing and promoting regional and continental scale interpretation efforts, and identifying areas for new collaborative magnetic surveys.

(v) The Expert Group on Antarctic Permafrost and Periglacial Environments (EGAPPE) coordinates, communicates and exchanges 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 2007 the Group:

- Hosted a workshop at the 10th ISAES meeting (Santa Barbara, USA, August 2007);
- Published in December 2007 a special issue of *Geoderma* titled "Antarctic Soils and Soil-Forming Processes in a Changing Environment";
- Continued developing legends for soil and permafrost map units;
- Prepared provisional soil and permafrost maps of (i) Transantarctic Mountains, and (ii) Antarctic Peninsula and islands, and a permafrost map of the Andes (Trombotto, Argentina);
- Published more than 50 papers in refereed journals pertaining to soils and permafrost in Antarctica, in the period 2005-2008.
- Developed the LATITUDE60 project in Portugal that includes (i) a 18' film about Antarctic Permafrost research distributed to over 200 schools in Portugal; (ii) 30 talks about Antarctic Permafrost research in high schools all over Portugal, including the Azores; (iii) wrote daily reports and answered questions from students, directly from the Antarctic;
- Held the 1st Iberian Workshop on Antarctic Peninsula Permafrost and Climate Change (17 December 2007, Lisbon, Portugal).
- Maintained the EGGAPE database at Waikato University (*http://erth.waikato.ac.nz/antpas*).
- Monitored the active layer depth, permafrost temperatures in boreholes, and soil climate in the McMurdo Dry Valleys, North Victoria Land, and South Shetland Islands.

In 2008, EGGAPE will run one workshop at the Ninth International Conference on Permafrost (Fairbanks, Alaska, June 2008), and another at the SCAR Open Science Conference in St Petersburg, Russia (July 2008), and develop a Cryosol session with an Antarctic focus for the International Union of Soil Scientists meeting (Brisbane, Australia, 2010). They will also prepare electronic versions of soil and permafrost maps and databases of the Transantarctic Mountains and Antarctic Peninsula region.

(vi) The Sub-Ice Geological Exploration (SIGE) Action Group aims 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. Informal discussions were held in the margins of the ISAES meeting in Santa Barbara in 2007. The first meeting to develop a five-year work plan will be held in St Petersburg at the SCAR Open Science Conference in July 2008.

(vii) The Antarctic Neotectonics Group (ANTEC) ceased to exist, and its activities were absorbed into the IPY POLENET Programme. For more on POLENET see (ii) above.

2.2.3 Physical Sciences Group

The Standing Scientific Group for the Physical Sciences (SSG-PS) reported a number of highlights aside from those associated with its SRPs - AGCS and ICESTAR (above).

(i) Publication of the Bipolar Cryosphere Observing System (CryOS) Plan concluded SCAR's work on this topic with WCRP and the Integrated Global Observing System Partnership (IGOS-P) (the plan can be downloaded from *http://cryos.ssec.wisc.edu/*). 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.

(ii) The joint SCAR/SCOR Oceanography Expert Group continued with its objective of planning a Southern Ocean Observing System (SOOS). A workshop was held in Bremen, in October 2007, to more fully develop the SOOS plan. It is hoped that a draft plan will be available for discussion at the next meeting of the Expert Group that takes place as part of the XXX SCAR meeting in St Petersburg (July 2008) and that it will be ready for publication in late 2008. SOOS is co-sponsored by SCAR, SCOR, the Census of Antarctic Marine Life (CAML), the Partnership for Observation of the Global Oceans (POGO), the Global Ocean Observing System (GOOS), and WCRP. The US National Oceanic and Atmospheric Administration (NOAA) has also provided significant funding. For details see *http://www.clivar.org/organization/southern/expertgroup/SOOS_interim_report.pdf*.

(iii) In ocean sciences SCAR also co-sponsors with CLIVAR and CliC the Southern Ocean Implementation Panel (SOIP), which is involved in the development and assessment of the Southern Ocean Observing Systems, and the International Programme for Antarctic Buoys (IPAB), which deploys drifting buoys on the sea ice. These two panels provide the practical side of SOOS development, and so complement the work of the Expert Group. The SOIP did not meet in the current period but will meet in February 2009, in Melbourne. IPAB had some extensive buoy deployments during UK, Australian, and US research cruises. More than 15 buoys were deployed in February, March, September and October 2007 in the Bellingshausen Sea, Ross Sea, and East Antarctic by various IPAB partners to study small scale ice deformation and large scale ice drift. IPAB will hold its biennial meeting in Bern in early July 2008 to discuss first results of this intensive buoy deployment campaign.

(iv) Both CryOS and SOOS (i and ii, above) are key components of the SCAR Pan Antarctic Observations Network (PAntOS)(see: *http://www.scar.org/researchgroups/physicalscience/PAntOS_Plan_Rev1.pdf*), which is currently being developed and will be further discussed in St Petersburg in July 2008.

(v) The SCAR Expert Group on Ice Sheet Mass Balance and Sea Level (ISMASS) is assessing methods and uncertainties in estimating Antarctic Ice Sheet mass balance and its relation to sea level. Current models of ice sheet decay used by the IPCC are inadequate, making forecasts of sea level change unreliable. During 2007 ISMASS developed a strategy to improve existing prognostic ice-sheet models. Following an informal meeting during the 2006 Fall Meeting of the American Geophysical Union, ISMASS developed the case for "A need for more realistic ice-sheet models", published in 2007 as SCAR Report 30. The report documents key gaps in our knowledge that prevent development of more realistic models for the polar ice sheets and form the starting point for focussed discussion during a three-day workshop as part of XXX SCAR in St Petersburg (July 2008). The meeting will formulate a 5-year plan for devising and implementing more realistic ice-sheet models.

(vi) SCAR is co-sponsoring IPICS, the International Partnerships in Ice Core Sciences, which is planning major international endeavours to improve science from ice coring (*http://www.pages-igbp.org/ipics/index.html*). Other sponsors include the IGBP's PAGES programme on past global change, and the International Association of Cryosphere Sciences (IACS). During 2007 IPICS drafted science and implementation or coordination plans for its priority projects. The drafts for "The oldest ice core: A 1.5 million year record of climate and greenhouse gases from Antarctica" and "The IPICS 40,000 year network: a bipolar record of climate forcing and response" are complete, and were edited and approved by the IPICS steering committee (Vienna, April 2008). The plan for the IPICS 2K project – "A network of ice core climate and climate forcing records for the last two millennia" - is being drafted. 20 nations are members of IPICS, with a 21st applying to join. The IPICS agenda has been endorsed in Europe with the formation of EuroPICS under the European Polar Board.

(vii) A new Action Group, for Environmental Contamination in Antarctica (ECA), was formed by XXIX SCAR in July 2006. It aims:

1. To understand the mechanisms and processes controlling distribution and transport of microcomponents in polar environments, and their environmental effects.
2. To assess the effects of global climatic changes on processes controlling the dispersion and transport of micro-components and to estimate the contribution of micro-components on climate and environmental changes in polar regions.
3. To monitor the environmental characteristics in Antarctica and set up a database of environmental parameters to follow the environmental evolution in polar regions.

ECA held its first workshop in Venice (14-16 June 2007). Preliminary groups were formed for initial data collection on the following themes: Atmosphere and aerosols, Biological contamination, Hg, Inland waters and soils, Minor and trace elements in biota, POPs in general, Seawater, and Trace elements in snow and ice. ECA will hold its second meeting at XXX SCAR in St Petersburg in July 2008. A web site is under construction.

3. Data And Information Management

(i) Antarctic Data 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 involved yet more National Antarctic Data Centres (NADCs) or designated national focal points, and its now has members from 31 nations. In 2007 JCADM held its annual meeting in Rome (3-7 September), where a capacity building workshop was organized to train NADC operators. The meeting was attended by representatives from 20 countries and from the Global Change Master Directory (GCMD). One of JCADM's primary tasks is to encourage national operators and principal investigators to populate the Antarctic Master Directory (AMD) with metadata. The AMD currently contains over 4500 data set descriptions, many of these directly linked to online data. 25 nations plus SCAR-MarBIN now contribute to the AMD. The AMD proves to be a very useful tool, which is being accessed increasingly by the wider community. The number of retrievals (= information downloads) has grown from a steady 500/month in the period January 2005-March 2007 to a very impressive 2500 to 4000/month since the start of the International Polar Year (IPY) in March 2007. JCADM is now much more engaged with the scientific community, through participation in the meetings of the Chief Officers of the SSGs and of the SCAR Executive Committee and also through the JCADM liaison persons, who are members of the Steering Committees of the Scientific Research Projects (SRP). JCADM

took part in the planning meeting for the Southern Ocean Observing System (Bremen, October 2007), presenting the outline for a SOOS Virtual Observatory. Ideas for this were further discussed at an ad-hoc meeting of JCADM and SCAR officials at the British Antarctic Survey in November. JCADM's progress and plans will be reviewed in 2008, prior to the SCAR and COMNAP meetings in Russia. JCADM is in the process of developing a SCAR Data Strategy, a draft of which will be presented at XXX SCAR for discussion. JCADM continues to be closely engaged in developing the IPY scheme for data management.

(ii) Antarctic Geographic Information: At XXIX SCAR in July 2006, the former Expert Group on Geographic Information (EGGI) became the Standing Committee on Antarctic Geographic Information (SC-AGI). SC-AGI provides geographic information products and policies to support Antarctic science and operations. Its work is relevant to a wide range of users including provision of 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. A report of the deliberations of the SC-AGI workshop in Buenos Aires (September 2007) is available as SCAR Bulletin 165 (see *http://www.scar.org/publications/bulletins/*). A range of SC-AGI geographic information products is available as follows:

(i) Place Names: The SCAR composite gazetteer *http://www3.pnra.it/SCAR_GAZE*.

(ii) SCAR Map Catalogue: *http://aadc-maps.aad.gov.au/index.cfm.*

(iii) Topographic Database: The Antarctic Digital Database (ADD) at: *http://www.add.scar.org*.

(iv) The SCAR King George Island Geographical Information System (KGIS): *http://www.kgis.scar.org/*.

(v) The Cybercartographic Atlas of Antarctica: *http://www.carleton.ca/gerc/caap.*

(vi) The SCAR Feature catalogue: *http://aadc-maps.aad.gov.au/aadc/ftc/index.cfm*.

4. International Polar Year

SCAR is making a significant contribution to the International Polar Year (IPY) (2007 – 2009) launched on 1 March 2007. The SCAR President and Executive Director are members of the Joint ICSU/WMO Committee for the IPY, which also contains several eminent scientists from SCAR science programmes. They contributed to writing 'The Scope of IPY Science', published early in 2007. 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 co-chair of the IPY Data and Information Management Subcommittee. IPY activities will include three major scientific conferences, the first of which is 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"*. Almost 1400 people had registered for the conference by end April. The IPY-JC will meet in St Petersburg immediately before the conference. Recognising that the IPY is about education and outreach as well as about science, SCAR is hosting as part of the XXX SCAR Meeting an IPY Open Forum (July 7), a one-day workshop of the Association of Polar Early Career Scientists (APECS)(July 7), and a conference session on Education and Outreach in the context of the IPY. SCAR is also assisting in development of an archive documenting the development of the IPY and has a paper in press in Polar Record on this topic.

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 30th ATCM in New Delhi (May 2007). The SCAR Lecture, on "Climate Change and the Antarctic – What Next?" was delivered by the SCAR President, Prof. Chris Rapley CBE (available from *http://www.scar.org/communications/*). SCAR presented 2 Working Papers and 9 Information Papers. An additional Working Paper, on the status of the southern giant petrel was withdrawn when conflicting data emerged shortly before the meeting. SCAR's advice is provided through the Standing Committee on the Antarctic Treaty System (SC-ATS). In 2008 SCAR is conducting a review to increase the efficiency and effectiveness of its interactions with the CEP and ATCM. An Action Group under the leadership of Clive Howard-Williams (NZ) will address these matters at a meeting in May 2008. Also in May 2008 a SC-ATS workshop will be held in Cambridge to study all available data on the southern giant petrel and provide the 31st ATCM in Kiev (June2008) with the latest information on this species.

SCAR is also an Observer to the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). Graham Hosie (Australia) represented SCAR at the 26th annual CCAMLR meeting in Hobart (October 2007). 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 the SCAR/SCOR 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 invited as an Observer at meetings of the Advisory Committee on Albatrosses and Petrels (ACAP). ACAP is contributing to the SC-ATS Southern Giant Petrels workshop in May 2008.

6. Other Developments

The SCAR History Group held its third workshop, on 'National and Trans-national Agendas in Antarctic Research Since the 1950s', at the Byrd Polar Research Center, Columbus, Ohio (25–26 October 2007). The results of the first workshop (Bremen, 2005) were published in 2007 in the Alfred Wegener Institute's Reports on Polar and Marine Research; the report of the second workshop (Santiago, 2006) will be published by the Chilean Antarctic Institute in 2008; the report of the third workshop (Columbus, 2007) will be published by the Byrd Polar Research Center. A fourth workshop will be held as part of the SCAR/IASC Open Science Conference in July 2008, and published in the Polar Record. These collections of papers provide insight into the evolution of Antarctic research since the 1950s, and into the emergence and development of institutions to co-ordinate that research in a pan-Antarctic way through SCAR.

As indicated in SCAR Report 28, SCAR plans to increase its contribution to Capacity Building, Education and Training (CBET). The main contribution continues to be the SCAR Fellowship Programme (4 Fellows funded in 2007-2008). SCAR and its partner the International Polar Foundation are working to attract fellows from non-traditional Antarctic countries into the fellowship programme for 2008-9, through their shared IPY programme 'The 6th Continent Initiative'. SCAR is an Associate Member of the International Antarctic Institute (IAI), 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. Along with IASC, SCAR is now co-sponsoring the APECS meeting of young polar scientists as part of the XXX SCAR Meeting in St Petersburg (July 2008).

7. Administrative Achievements

In recent years, SCAR has led the development of a network of the four main bodies of ICSU concerned with research in the polar regions and/or the cryosphere. SCAR co-sponsors with the World Climate Research Programme (WCRP) the Climate and Cryosphere programme (CliC). SCAR works closely with the International Arctic Science Committee (IASC) on bipolar issues of common interest, and SCAR and IASC are jointly sponsoring the Open Science Conference in 2008, which will be a bipolar science meeting and the first of three major IPY science conferences. SCAR is also in the process of signing an agreement with the newly formed International Association for Cryospheric Sciences (IACS) of the International Union for Geodesy and Geophysics (IUGG). Creation of this 4-component network will help to ensure that polar scientific research is effectively coordinated.

SCAR's communications continued to be focused through the SCAR web site, especially the SCAR quarterly Newsletter. There were on average 100,000 hits per month on the SCAR web site for the first 4 months of 2008, approaching the levels typical before the 2006 Open Science Conference.

Personnel changes in the SCAR Secretariat included the departure of Dr Marzena Kaczmarska in March 2007 to join the Norwegian Polar Institute programme in Svalbard. She was replaced as Executive Officer in July 2007 by Dr Mike Sparrow, a physical oceanographer with Southern Ocean experience from the National Oceanography Centre in Southampton, UK, where he provided administrative assistance to the CLIVAR Office. Mrs Rosemary Nash was appointed as the new Administrative Assistant, operating part-time from early October 2007, replacing Mrs Karen Smith.

The Secretariat was responsible for organising the SCAR Executive Committee (Washington DC, July 9-11, 2007), and planning for XXX SCAR in Russia in July 2008 (Science Business Meetings, July 5-7; SCAR/IASC Open Science Conference, July 8-11, and SCAR Delegates Meeting, July 14-16).

In March 2008 SCAR obtained independent legal status as a Company Limited by Guarantee, and applied to become a Charity under UK Law, a process that should be complete by July 2008.

8. Organizational Details

SCAR MEMBERS and Secretariat can be seen at: *http://www.scar.org/about/officers/*

OFFICERS of SCAR and its Main Subsidiary Bodies can be seen at: *http://www.scar.org/publications/bulletins/SCAR_officers2006.pdf*

MEMBERS of the Steering Committees of SCAR's Scientific Research programmes can be seen at: *http://www.scar.org/publications/bulletins/SRPs_officers2006.pdf*

THE SCAR ORGANIZATIONAL CHART can be seen at: *http://www.scar.org/about/introduction/organization/*

Appendix

List of Acronyms

ACCE	Antarctic Climate Change and the Environment
ACE	Antarctic Climate Evolution
ADD	Antarctic Digital Database
ADMAP	Antarctic Digital Magnetic Anomaly Project
AGAFS	Action Group on Antarctic Fuel Spills
AGCS	Antarctica in the Global Climate System
AGU	American Geophysical Union
AMD	Antarctic Master Directory
ANDRILL	Antarctic Geological Drilling Project
ANTEC	Antarctic Neotectonics
ANTPAS	Antarctic Permafrost and Soils
APECS	Association of Polar Early Career Scientists
APIS	Antarctic Pack-Ice Seals
ASPeCt	Antarctic Sea Ice Processes and Climate
BAS	British Antarctic Survey
CASA	Climate of the Antarctic and South America
CBET	Capacity Building, Education and Training
CliC	Climate and Cryosphere Programme
CLIVAR	Climate Variability programme of WCRP
COML	Census of Marine Life
CPR	Continuous Plankton Recorder
CPR-AG	Continuous Plankton Recorder Action Group
EBA	Evolution and Biodiversity in the Antarctic
ECA	Environmental Contamination in Antarctica
EGAPPE	Expert Group on Antarctic Permafrost and Periglacial Environments
EGGI	Expert Group on Geographical Information
EGU	European Geophysical Union
ETOPO	Earth Topography Digital Dataset
GBIF	Global Biodiversity Information Facility
GEBCO	General Bathymetric Chart of the Oceans
GEOSS	Global Earth Observing System of Systems
GIANT	Geodetic Infrastructure for Antarctica
GLAS	Geoscience Laser Altimeter System
GLOBEC	Global Ocean Ecosystems Dynamics
GOMOS	Global Ozone Monitoring by Occultation of Stars (instrument on Envisat)
GOOS	Global Ocean Observing System
GPS	Global Positioning System
IACS	International Association of Cryospheric Sciences
IAI	International Antarctic Institute
IASC	International Arctic Science Committee
IBCSO	International Bathymetric Chart of the Southern Ocean
ICED	Integrated Climate and Ecosystem Dynamics in the Southern Ocean
ICESat	Ice, Cloud and land Elevation Satellite
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
IODP	Integrated Ocean Drilling Programme
IPA	International Permafrost Association
IPAB	International Programme of Antarctic Buoys
IPICS	International Partnership in Ice Core Science
ISAES	International Symposium on Antarctic Earth Science
ISMASS	Ice Sheet Mass Balance and Sea Level
ITASE	International Trans-Antarctic Scientific Expedition
IUGG	International Union of Geodesy and Geophysics
JCADM	Joint Committee on Antarctic Data Management
KGIS	King George Island Geographical Information System
LGP	Latitudinal Gradient Project
MarBIN	Marine Biodiversity Information Network
MEDINET	Medical Network
MERGE	Microbiological and Ecological Responses to Global Environmental Changes in Polar Regions
NADC	National Antarctic Data Centre
NASA	National Aeronautics and Space Administration
NOAA	National Oceanic and Atmospheric Administration
PAGES	Past Global Change Programme
PANDA	The Prydz Bay, Amery Ice Shelf and Dome A Observatories
PAntOS	Pan Antarctic Observations Network
POGO	Partnership for Observations of the Global Ocean
POLENET	Polar Earth Observing Network
POP	Persistent Organic Pollutants
RiSCC	Regional Sensitivity to Climate Change in Antarctic Terrestrial and Limnetic Ecosystems
SALE	Subglacial Antarctic Lake Environments
SAM	Southern hemisphere Annular Mode
SASOCS	State of the Antarctic and Southern Ocean Climate System
SC-AGI	Standing Committee on Antarctic Geographic Information
SC-ATS	Standing Committee on the Antarctic Treaty System
SCOR	Scientific Committee on Oceanic Research
SCOSTEP	Scientific Committee on Solar Terrestrial Physics
SIGE	Sub-Ice Geological Exploration
SIMBA	Sea Ice Mass Balance of Antarctica
SIPEX	Sea Ice Physics and Ecosystem eXperiment
SOIP	Southern Ocean Implementation Panel
SOOS	Southern Ocean Observing System
SPPG	Scientific Programme Planning Group
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
SYSTCO	SYstem-Coupling (IPY Programme)
TAG	Thematic Action Group
VO	Virtual Observatory
WCRP	World Climate Research Programme

ANNEX G

Reports pursuant to Article III-2 of the Antarctic Treaty

Progress with the implementation of the Agreement on the Conservation of Albatrosses and Petrels

Report to ATCM XXXI & CEP XI

The Agreement on the Conservation of Albatrosses and Petrels (ACAP) is a multilateral agreement that aims to achieve and maintain a favourable conservation status for albatrosses and petrels. The Agreement entered into force on 1 February 2004. It has been developed under the auspices of the Convention on the Conservation of Migratory Species of Wild Animals (CMS).

The impetus for the development of ACAP was international recognition that albatrosses and petrels are amongst the most threatened birds in the world, with 83% of the world's albatross species now considered to be endangered, compared with 11% of bird species overall. The most significant threat to many species of albatrosses and petrels is mortality resulting from interactions with fishing vessels; but the breeding areas of many species are subject to a number of threats including non-native species (which may predate nests and breeding adults, compete for nesting space or destroy nesting habitat), avian diseases and climate change.

At present, eleven Parties – all Antarctic Treaty Consultative Parties – have ratified ACAP: Argentina, Australia, Chile, Ecuador, France, New Zealand, Norway, Peru, South Africa, Spain and the United Kingdom. In addition Brazil has signed, but not yet ratified.

Because of the relatively small number of Parties to the Agreement, the resources available to ACAP are currently modest. A goal of existing Parties and the Interim Secretariat is to promote ACAP and encourage more Range States, including those which are a Party to the Antarctic Treaty but not yet a Party to ACAP, to accede to the Agreement and further global efforts to conserve albatrosses and petrels.

Priority actions

The Meeting of the Parties to ACAP has developed a work program and placed responsibility for its implementation with the ACAP Advisory Committee. The work program reflects the areas of the Action Plan (Annex 2 to ACAP) which have been identified as priorities for immediate attention. These are:

- fisheries bycatch of albatrosses and petrels; and
- the management and protection of breeding sites, including in particular any adverse effects of introduced species, habitat loss, climate change or avian diseases.

Recognising that much work has been done or is ongoing in these areas, the Advisory Committee has been tasked with recommending the best way to integrate the work of ACAP with existing initiatives. The aim is to enhance and advance current initiatives, not to duplicate them. In particular, in addressing seabird bycatch in fisheries, ACAP is seeking to work closely with Regional Fisheries Management Organisations by sharing information derived from tracking studies on the overlap between ACAP listed species and fisheries activities, and by calling on the considerable expertise that some ACAP Parties have in mitigating bycatch through technical solutions and modifying fishing gear and practices.

Another key area of work by the Advisory Committee is the review of the population status and trend of all ACAP listed species, which presently include 26 southern hemisphere species (19 species

of albatrosses and 7 species of petrels, including the southern giant petrel). This review, which is ongoing, is being carried out in consultation with other expert organisations, including the SCAR Group of Experts on Birds.

These comprehensive and contemporary species' assessments will identify and prioritize areas where management action is required. It is expected that the species assessments will primarily draw on data held by the Advisory Committee's Working Groups, however additional data from Antarctic Treaty Parties would be most welcome. The assessments, which will be published on the ACAP website (*www.acap.aq*) to ensure their wide availability, will be updated regularly to ensure that the information they contain remains current. A relational database has been developed and will be used to update the species assessments as new information becomes available. A sample draft species assessment is attached for information.

Future meetings

The 4th Meeting of the ACAP Advisory Committee will take place between 22 and 25 August 2008 in Cape Town, South Africa. This meeting will be preceded by meetings of the Breeding Sites, Seabird Bycatch and Status and Trends Working Groups. Antarctic Treaty Parties are invited to send representatives to these meetings.

ACAP and the Antarctic Treaty

In pursuing the objective of ACAP, ACAP Parties and the ACAP Secretariat seek to work in an integrated and synergistic manner with other international and national organisations with an interest in the conservation of albatrosses and petrels and the habitats and natural resources on which they depend.

The significance of the Antarctic Treaty, which applies to an area of importance for nearly all ACAP listed species of albatross and petrel, is recognised in the text of ACAP. It is also reflected in the invitation of an ACAP representative as an observer to meetings of the Committee for Environmental Protection (CEP) and as an expert to Antarctic Treaty Consultative Meetings (ATCM).

In working with Parties to the Antarctic Treaty, ACAP Parties continue to:

- encourage the implementation of the Antarctic Treaty and Environmental Protocol in a way that is mindful of the objective of ACAP to achieve and maintain a favourable conservation status for albatrosses and petrels, with particular reference to the populations of ACAP species which occur within the Antarctic Treaty Area (see below);
- encourage Parties to the Antarctic Treaty to take the protective measures necessary to improve the conservation status of ACAP species, including those needed to avoid disturbance of the breeding habitat of ACAP species by national or non-government activities, and to give consideration to ACAP species when preparing environmental impact assessments and conducting environmental impact monitoring;
- welcome consultation with the Committee for Environmental Protection over matters of relevance to ACAP species and their habitats, in accordance with Article 12.2 of the Environmental Protocol to the Antarctic Treaty; and
- identify opportunities for information exchange – in particular the ongoing reviews of the status and trends of ACAP species and the protection and management status of breeding sites.

ACAP species occurring within the Antarctic Treaty Area

ACAP Annex 1 includes fourteen species which occur regularly within the Antarctic Treaty Area: black-browed albatross (*Thalassarche melanophrys*), campbell albatross (*Thalassarche impavida*), chatham albatross (*Thalassarche erimita*), grey petrel (*Procellaria cinerea*), grey-headed albatross (*Thalassarche chrysostoma*), light-mantled sooty albatross (*Phoebetria palpebrata*), northern giant petrel (*Macronectes halli*), northern royal albatross (*Diomedea sanfordi*), salvin's albatross (*Thalassarche salvini*), southern giant petrel (*Macronectes giganteus*), sooty albatross (*Phoebetria fusca*), southern royal albatross (*Diomedea epomophora*), wandering albatross (*Diomedea exulans*) and white-chinned petrel (*Procellaria aequinoctialis*). The majority of these species do not breed in the area, but have foraging ranges which overlap with Antarctic waters.

The southern giant petrel *Macronectes giganteus* is the single ACAP listed species which breeds within the Antarctic Treaty Area. The recent workshop conducted by SCAR to review the population status and trends of this species in the Antarctic Treaty area concluded that "the present data and analysis do not support the designation of the southern giant petrel as a Specially Protected Species under Annex II to the Protocol on Environmental Protection". ACAP expresses its appreciation to the members of the workshop for undertaking this review. The ACAP Secretariat will refer the SCAR workshop report to the next meeting of the ACAP Advisory Committee in August 2008 for its consideration, including of the proposed standardised methodology for future counts. In the interim, the ACAP Secretariat supports the workshop's recommendations that:

- additional surveys or censuses of breeding sites and of fledging success be undertaken using a consistent methodology and on a regular basis to enable better estimates to be made of current trends in the southern giant petrel population (north and south of 60°S). The ACAP Secretariat also notes that this could assist in discerning trends between west and east Antarctic populations;
- further quantitative modelling work, and the collection of information needed for such modelling, be undertaken; and that
- sites that have not been censused more than 10 years should be revisited and an updated assessment made.

The ACAP Secretariat also supports the call in the SCAR workshop report for data owners who submitted population data to the workshop to also make those data available to the ACAP Advisory Committee. The Secretariat notes that, in most cases, these data owners are from countries which are Parties to the Antarctic Treaty and that their data would greatly facilitate the ACAP Advisory Committee's global population assessment of southern giant petrels. In doing so, the ACAP Secretariat gratefully acknowledges the support provided by SCAR in the provision of data on breeding sites to the ACAP Advisory Committee's Breeding Sites Working Group.

Finally, notwithstanding the workshop's advice and any subsequent decision about declaring Specially Protected Special status for southern giant petrels, the ACAP Secretariat notes with concern advice in the workshop report that:

> "Although the southern giant petrel varies regionally in its sensitivity to human disturbance, at several breeding sites disturbance by National Operators and by umanaged (*sic*) tourism/visitation has caused either emigration or breeding failure, and may continue doing so in the absence of any change in current procedures or in the absence of adherence to guidelines for particular areas (e.g. management plans for

ASMAs, or extant guidelines for the operation of aircraft near concentrations of birds) human disturbance."

The ACAP Secretariat encourages the CEP and the ATCM to consider whether additional protective measures are needed, including to improve protection of breeding habitat and reduce human disturbance by government and non-government activities.

Shy albatross
Thalassarche cauta

Albatros timide
Albatros de corona blanca

CRITICALLY ENDANGERED | ENDANGERED | VULNERABLE | **NEAR THREATENED** | LEAST CONCERN | NOT LISTED

Sometimes referred to as
White-capped albatross
Shy mollymawk
Tasmanian shy albatross

TAXONOMY

Order Procellariiformes
Family Diomedeidae
Genus *Thalassarche*
Species *T. cauta*

Originally a member of the polytypic species *Diomedea cauta* (Gould 1841), *T. cauta* was elevated to specific status when *Diomedea cauta* was placed in the genus *Thalassarche* [8] and split into four species: *T. cauta* (Shy albatross), *T. steadi* (White-capped albatross), *T. eremita* (Chatham albatross) and *T. salvini* (Salvin's albatross) [9]. The recognition of *T. cauta* and *T. steadi* remains controversial [2, 10] although following scrutiny of morphological, genetic and behavioural data the ACAP Taxonomy Working Group endorsed recognition of *T. cauta* and *T. steadi* as separate species in 2006 [11], and this recommendation was accepted at the Second Session of the Meeting of Parties.

CONSERVATION LISTINGS AND PLANS

International

- Agreement on the Conservation of Albatrosses and Petrels – Annex 1 [1]
- 2007 IUCN Red List of Threatened Species – Near Threatened [2]
- Convention on Migratory Species - Listed Species (Appendix II; as *Diomedea cauta*) [3]

National - Australia

- *Environmental Protection and Biodiversity Conservation Act 1999* (*EPBC ACT*) [4]
  - Listed Threatened Species – Vulnerable
  - Listed Migratory Species
  - Listed Marine Species
- Recovery Plan for Albatrosses and Petrels (2001) [5]
- Threat abatement plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations (2006) [6]

Regional - Tasmania

- *Threatened Species Protection Act 1995*, Tasmania [7]
  - Listed Species - Vulnerable

BREEDING BIOLOGY

Thalassarche cauta is a colonial, annual breeding species; each breeding cycle lasts about 8 months. Most eggs are laid in September, hatch in December and the chicks fledge in April at about 4.5 months old (Table 1) [12].

Immature birds begin to return to their breeding colony at least 3 years after fledgling. Most *Thalassarche cauta* begin breeding annually, almost always in their natal colony, when at least 5 to 6 years old [13].

Table 1. *Breeding cycle of* T. cauta.

	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
At colonies	*											*
Egg laying												
Incubating												
Chick provisioning												

* birds are present year round at colonies but individuals are away for c. 6 weeks

BREEDING STATES

Table 2. *Distribution of the global* T. cauta *population among Parties to the Agreement which have jurisdiction over the breeding sites of ACAP listed species.*

	Argentina	Australia	Chile	Ecuador	France	New Zealand	South Africa	United Kingdom
Breeding pairs	-	100%	-	-	-	-	-	-

BREEDING SITES

Thalassarche cauta is an Australian breeding endemic (Table 2) with colonies on only three islands off Tasmania: Albatross Island, Pedra Branca and the Mewstone (Figure 1; Table 3). Unpublished data submitted to ACAP in 2007 estimated the total breeding population to be approximately 12,750 pairs (Table 3). The total population was estimated to be between 55,000 and 60,000 individuals in 1998 [14].

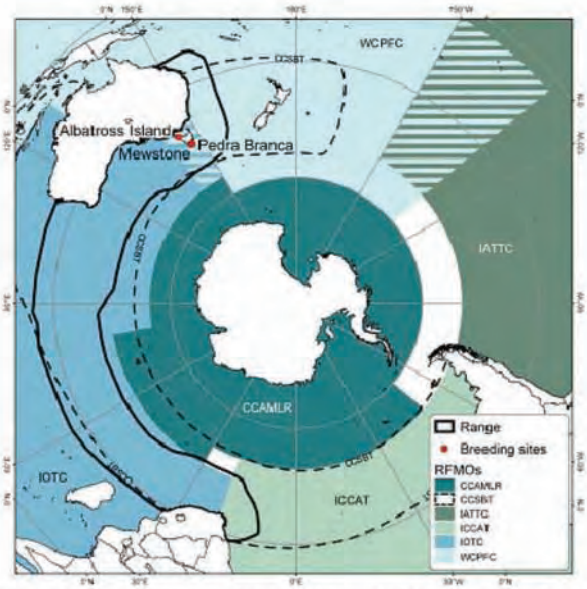


Figure 1. The approximate range of T. cauta *inferred from satellite tracking, band recoveries and genetic identification of fisheries bycatch (based on unpublished DPIW data and Abbott et al 2006 [30]). The boundaries of selected Regional Fisheries Management Organisations (RFMOs) are also shown.*

CCAMLR – Commission for the Conservation of Antarctic Marine Living Resources
CCSBT - Commission for the Conservation of Southern Bluefin Tuna
IATTC - Inter-American Tropical Tuna Commission
ICCAT - International Commission for the Conservation of Atlantic Tunas
IOTC - Indian Ocean Tuna Commission
WCPFC - Western and Central Pacific Fisheries Commission

Table 3. Monitoring methods and estimates of the population size (annual breeding pairs) for each breeding site. Table based on unpublished Tasmanian Department of Primary Industries and Water (DPIW) data submitted to ACAP in 2007.

Breeding site location	Jurisdiction	Years monitored	Monitoring method	Monitoring accuracy	Breeding pairs (last census)
Albatross Island 40° 23'S, 144° 39'E	Australia	1999-2007	A (100%)	High	5,017 (2007)
Mewstone 43° 44'S, 146° 22' E	Australia	1996	C (100%)	Unknown	c. 7,300 (1996)
Pedra Branca 43° 52' S, 146° 58' E	Australia	1984, 1991-2005	D (100%)	Medium	268 (1996)

CONSERVATION LISTINGS AND PLANS FOR THE BREEDING SITES

International

Mewstone and Pedra Branca

- Tasmanian Wilderness World Heritage Area [15]

Albatross Island

- None

National - Australia

Albatross Island, Mewstone and Pedra Branca

- Listed - Register of Critical Habitat (*EPBC Act*) [4]

Regional - Tasmania

Albatross Island

- Nature Reserve - *Nature Conservation Act 2002* (Tasmania) [16]
- Management Plan - Summary of Bass Strait Island Nature Reserves – (Draft October 2000) [17]

Mewstone and Pedra Branca

- Southwest National Park - *Nature Conservation Act 2002* (Tasmania) [16]
- Tasmanian Wilderness World Heritage Areas Management Plan 1999 [18]

POPULATION TRENDS

Albatross Island

When Europeans first sighted Albatross Island in the late 1700s, there were thought to be as many as 20,000 pairs of *T. cauta* breeding at that colony. By 1909 feather and egg collectors had reduced the colony to between 250 and 300 nests [19]. Censuses of pre-fledge chicks now suggest the population is increasing, with close to 3000 chicks fledging in 2004 (Figure 2). Trend analyses show that although the number of pre-fledging chicks on Albatross Island has been decreasing since 2004, pre-fledging chick production has actually increased by 2% [20, 21] to 3% [22] per year between 1981 and 2007 (Table 4). The number of breeding pairs on Albatross Island has also increased at a rate of approximately 3% [22] to 4% [20, 21] per year between 1999 and 2007 (Figure 3, Table 4). These data suggest the population on Albatross Island is increasing at a moderate rate ($p<0.01$) [22]. However, this colony is currently only 25% of its estimated original size.

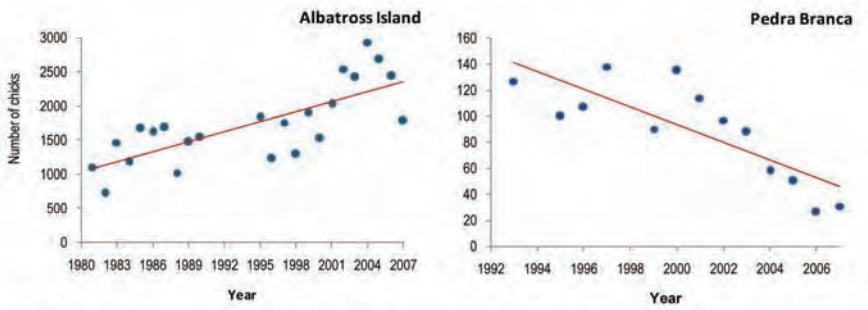


Figure 2. *Population counts of pre-fledge chicks with a simple linear regression fitted. Figures based on unpublished DPIW data submitted to ACAP in 2007, not to be used without data holder's permission. See text for assessment of population trends.*

Mewstone and Pedra Branca

The historical size of the populations on the Mewstone and Pedra Branca has not been reported so the population trend on these islands is less clear. The population on Pedra Branca may have always been small [5] but it appears competition for nesting space from Australasian gannets (*Morus serrator*) may steadily be reducing the number of fledglings produced on the island each year (Figure 2). Chick production on Pedra Branca dropped from over 100 to 31 between 1993 and 2007 (Figure 2), representing a decrease of approximately 9% [22] to 10% [20, 21] per year. This degree of change indicates that the Pedra Branca population is in steep decline ($p<0.01$) [22].

No trend data are available for the Mewstone population. In 1996 the total number of breeding pairs on the Mewstone was estimated to be approximately 7,300 (Table 3) but this estimate is of uncertain accuracy [23]. An aerial census method is being investigated to accurately determine the population size and trend.

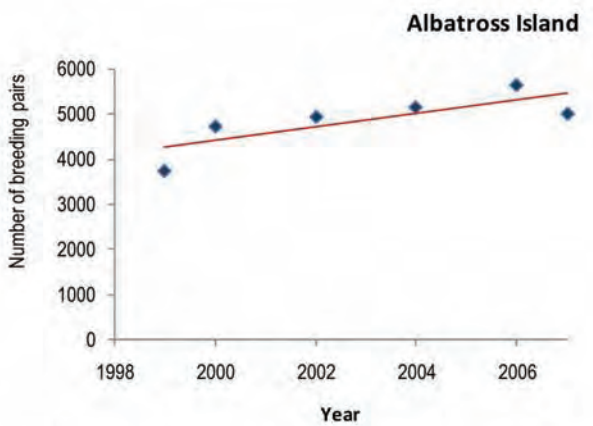


Figure 3. *Population counts of nesting adults with a simple linear regression fitted. Figure based on unpublished DPIW data, not to be used without data holder's permission. See text for assessment of population trends.*

Table 4. *Summary of population trend data for* T. cauta. *Table based on unpublished DPIW data submitted to ACAP in 2007.*

Breeding site	Current Monitoring	Trend Years	% average change per year (95% Confidence Interval) TRIM [22]	Wilcox 2006 [20, 21]	Trend
Albatross Island	Yes	1981 - 2007*	3.3 (2.9,3.7)#	1.8 (-11.1,14.8)#	Increasing
		1999 – 2007*	2.9 (2.8,3.0)^	3.7 (-8.8,16.2)^	
The Mewstone	Yes	n/a	n/a		Unknown
Pedra Branca	Yes	1993-2007*	-9.1 (-9.0,-9.2)#	-10.1 (-27.2,7.0)#	Declining

* Missing data: Albatross Island (chicks 1991 - 1994; breeding pairs 2001, 2003, 2005); Pedra Branca (1994, 1998)
# pre-fledge chicks
^ breeding pairs

Due to access and disturbance issues on the Mewstone and Pedra Branca, the breeding success and survival of juveniles and adults have only been studied in detail at Albatross Island. There, breeding success varies from 20% to 50% with an average of 37% of nests fledging a chick (Table 5). Analyses of juvenile and adult survival are in progress but adult survival is thought to be high [24].

Table 5. *Demographic data for the three* T. cauta *breeding sites. Table based on unpublished DPIW data submitted to ACAP in 2007.*

Breeding site	Mean breeding success (±SD; Years)	Mean juvenile survival	Mean adult survival
Albatross Island	37% (±7%; 1989-2007*)	In progress	In progress
The Mewstone	No data	No data	No data
Pedra Branca	No data	No data	No data

*Missing data: 1992-1993

BREEDING SITES: THREATS

Few threats exist at any of the breeding sites of *T. cauta* (Table 6) and all sites are legally protected.

Table 6. *Summary of known threats at the breeding sites of* T. cauta. *Table based on unpublished DPIW data submitted to the ACAP Breeding Sites Working Group in 2005.*

Breeding site	Human disturbance	Human take	Natural disaster	Parasite or Pathogen	Habitat loss or degradation	Predation by alien species	Contamination
Albatross Island	Low [a]	No	No	Low [c]	No [d]	No [d]	No [f]
The Mewstone	Low [a]	No	No	No	No [d]	No [d]	No [f]
Pedra Branca	Low [a]	No	Low [b]	No	High [e]	No [d]	No [f]

[a] Anthropogenic disturbance is essentially limited to activities associated with the conservation management of the islands.

[b] Pedra Branca is occasionally exposed to extreme wave action which is known to affect the breeding Australasian gannets (*Morus serrator*) on the island and may also impact the albatross population.

[c] In some years, symptoms of a pox virus infection are common on Albatross Island and this disease has been associated with chick mortality and hence depressed breeding success [25].

[d] There are no introduced species on Pedra Branca, while the European wasp is the only introduced species found on Mewstone. The two non-native vascular plant species on Albatross Island (*Catapodium marinum* currently in the process of being eradicated, and *Coprosma repens*, planned for eradication) have no impact on the albatross population.

[e] On Pedra Branca, Australasian gannets have been increasing by 4% a year since 1985 [26] and the increased competition for limited nesting space could be contributing to the sharp decline in *T. cauta* chick numbers over the last 15 years.

[f] *Thalassarche cauta* show relatively low levels of heavy metal contamination [27].

FORAGING ECOLOGY AND DIET

Thalassarche cauta usually forage singly and have been observed taking prey from the surface or occasionally making surface plunges or shallow dives. However, a study using time-depth recorders revealed *T. cauta* commonly plunge-dive within 3 m of the surface and can swim down to over 7 metres [28]. The diet of *T. cauta* has only been examined through food delivered to chicks at Albatross Island. There, fish (mostly Jack mackerel, *Trachurus declivis* and redbait, *Emmelichthys nitidus*) dominated the diet (89% wet mass), followed by cephalopods (mostly Gould's squid, *Nototodarus gouldi*) and small amounts of tunicates and crustaceans [28]. Evidence suggests *T. cauta* capture most prey during the day [29].

MARINE DISTRIBUTION

Understanding of the marine distribution of *T. cauta* is confounded by its similar appearance to other albatross species, particularly *T. steadi*. However, band recoveries, satellite-tracking data, and genetic identification of birds caught in fishing operations show that *T. cauta* are most frequently found around Tasmania and southern Australia [23; 30] but its range also extends to southern Africa (Figure 1). Satellite tracking data show *T. cauta* are less pelagic than many other albatross species, are usually found over the continental shelf, and regularly venture close to shore along the coasts of Tasmania and southern Australia [13, 31, 32] (Figure 4 & 5). Adult *T. cauta* remain close to their breeding colonies year-round [13, 31] whereas juvenile birds (predominantly from the Mewstone colony) have been recorded off southern Africa [23]. During breeding, adults forage close to their colonies, usually within 300kms, in waters less than 200m deep [13]. The only evidence that shy albatrosses occur in New Zealand is from a single band recovery from a bird that was banded at the Mewstone colony [23; 30].

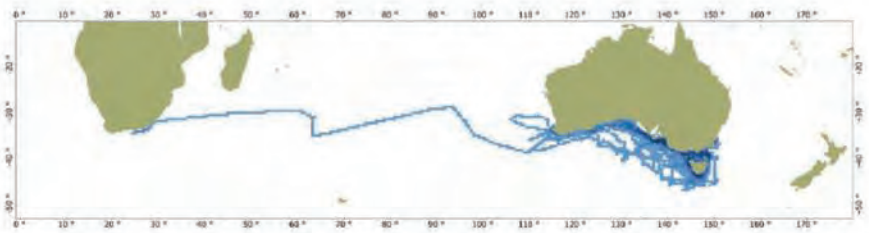


Figure 4. *Satellite-tracking data of juvenile and non-breeding adult* T. cauta *(Non-breeding adults N = 9; Juveniles N = 25; Total hours = 42,000. Unpublished DPIW data).*

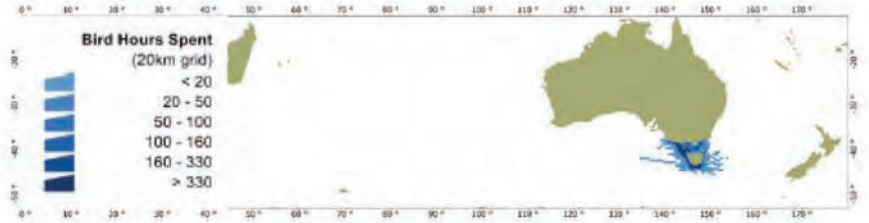


Figure 5. *Satellite-tracking data from breeding adult* T. cauta *(Number of individuals not known; Total hours = 37,600. Unpublished DPIW data).*

Satellite tracking data indicate that *T. cauta* overlap with four Regional Fisheries Management Organisations, but principally the CCSBT, IOTC and WCPFC. These RFMOs overlap in the region encompassing the breeding sites (Figure 1; Table 7). Australia and South Africa are the principal Range States for *T. cauta* (Figure 1; Table 7). It is also possible that birds transiting between the two countries forage in waters off the French Southern Territories (Figure 1) but this is unconfirmed.

Table 7. *Summary of the known ACAP Range States, non-ACAP Exclusive Economic Zones and Regional Fisheries Management Organisations that overlap with the marine distribution of* T. cauta.

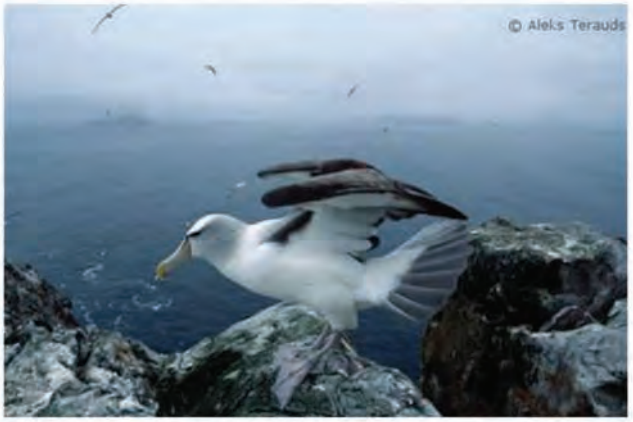
	Resident/ Breeding and feeding range	**Foraging range only**	**Few records - outside core foraging range**
Known ACAP Range States	Australia	South Africa	New Zealand
Exclusive Economic Zones of non-ACAP countries Regional		Namibia	
Fisheries Management Organisations*	WCPFC IOTC CCSBT		ICCAT

*See Figure 1 for list of acronyms

Shy albatross *Thalassarche cauta*

MARINE THREATS

Like most marine organisms, *T. cauta* are exposed to the threats of marine debris, plastic ingestion and pollution, but it is the incidental mortality of T. cauta in fishing operations that is thought to pose the greatest threat. *Thalassarche cauta* are known to be killed in longline fishing operations in Australian and South African waters [23; 30; 33; 34]. *Thalassarche cauta* juveniles that leave Australian waters and traverse the Indian Ocean to southern Africa (Figure 5) are particularly vulnerable to interactions with fishing operations. Both high seas longline fleets and South African longline and trawl fisheries are known to kill large numbers of albatrosses [34; 35]. Adult shy albatrosses largely remain within the Australian waters but, based on 2005 fishing effort profiles, their exposure to domestic longline fisheries is limited [13]. *Thalassarche cauta* are killed in Australian trawl fisheries but the magnitude of the impact is poorly understood.



KEY GAPS IN SPECIES ASSESSMENT

Thalassarche cauta is one of the more comprehensively studied albatross species. This is particularly the case for the Albatross Island population (comprising 40% of the total population) where the population trends, diet and behavioural ecology have all been the subject of investigation. The marine distribution is reasonably well known, with tracking studies being undertaken on both adults and juveniles from all three colonies [32]. However, the population size and trend for the Mewstone, the largest of the three breeding sites (c. 60% of the total population) remains a significant gap in the species' assessment, as do accurate estimates of adult and juvenile survival for all populations. Urgent assessment of management options in relation to the precarious status of the small and genetically distinct Pedra Branca population is required. The most significant threat to this species is mortality associated with fisheries operations. The impact of trawl fisheries in Australia and fishing operations in the Indian Ocean and off southern Africa is currently unknown.

REFERENCES

1. Agreement on the Conservation of Albatrosses and Petrels http://www.acap.aq
2. Birdlife International (2007). *Thalassarche cauta*. In: IUCN 2007. 2007 IUCN Red List of Threatened Species. http://www.iucnredlist.org/
3. Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals). http://www.cms.int/
4. Australian Government Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). http://www.deh.gov.au/epbc/
5. Department of Environment and Heritage (2001). Recovery Plan for Albatrosses and Giant-Petrels 2001-2005. http://www.deh.gov.au/biodiversity/threatened/publications/recovery/albatross/index.html
6. Department of Environment and Heritage (2006). Threat Abatement Plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations. http://www.environment.gov.au/biodiversity/threatened/tap-approved.html
7. Tasmanian Government Threatened Species Protection Act (1995). http://www.dpiw.tas.gov.au/
8. Nunn GB, Cooper J, Jouventin P, Robertson CJR and Robertson GG (1996). Evolutionary relationships among extant albatrosses (Procellariiformes: Diomedeidae) established from complete cytochrome-b gene sequences. *Auk* **113**:784-801.
9. Robertson CJ and Nunn GB (1998). Towards a new taxonomy for albatrosses. *In*: Albatross biology and conservation (Ed. Robertson G and Gales R) pp. 13-19. Surrey Beatty & Sons: Chipping Norton.
10. Brooke M (2004). '*Albatrosses and petrels across the world*.' Oxford University Press: Oxford.
11. Taxonomy Working Group of the Agreement on the Conservation of Albatrosses and Petrels (ACAP) (2006). Report of Taxonomy Working Group (AC2 Doc 11). Second Meeting of the ACAP Advisory Committee (AC2). http://www.acap.aq/
12. Abbott CA, Double MC, Gales R and Cockburn A (2006). Copulation behaviour and paternity in shy albatrosses, *Thalassarche cauta*. *Journal of Zoology (London)* **270**:628-634
13. Brothers N, Gales R, Hedd A and Robertson G (1998). Foraging movements of the shy albatross *Diomedea cauta* breeding in Australia - implications for interactions with longline fisheries. *Ibis* **140**:446-457.
14. Gales R (1998). Albatross populations: status and threats. *In*: Albatross Biology and Conservation (Ed. Robertson G and Gales R) pp. 20-45. Surrey Beatty & Sons: Chipping Norton.
15. United Nations Educational, Scientific and Cultural Organization http://whc.unesco.org/en/list/181
16. Tasmanian Government Nature Conservation Act 2002. http://www.parks.tas.gov.au/manage/parksres/reserves.html
17. Summary of Bass Strait Island Nature Reserves - Draft Management Plan, October 2000. http://www.parks.tas.gov.au/publications/tech/bassstrait/summary.html
18. Tasmanian Wilderness World Heritage Areas Management Plan (1999). http://www.parks.tas.gov.au/wha/
19. Johnstone GW, Milledge D and Dorward DF (1975). The white-capped albatross of Albatross Island: number and breeding behaviour. *Emu* **75**:1-11.

20. Wilcox C (2006). Review of trends monitoring methods as applied to seabird populations (AC2 Doc 32). Second Meeting of the ACAP Advisory Committee (AC2). http://www.acap.aq
21. Morris WF and Doak DF (2002). *Quantitative Conservation Biology Theory and the Practice of Population Viability Analysis.* Sinaur Associates: Sunderland, MA.
22. Pannekoek, J and van Strien, A. 2006. TRIM 3.53 (TRends & Indices for Monitoring data). Statistics Netherlands, Voorburg. http://www.cbs.nl/en-GB/menu/themas/natuur-milieu/methoden/trim/default.htm
23. Brothers NP, Reid TA and Gales RP (1997). At-sea distribution of shy albatrosses *Diomedea cauta cauta* derived from records of band recoveries and colour-marked birds. *Emu* **97**:231-239.
24. Hamilton S, Gales R and Brothers N (2000). *Shy albatrosses in Australia: population and conservation assessment.* Unpublished DPIW Report to DEH, Tasmania.
25. Woods R (2004). Result of a preliminary disease survey in Shy albatross (*Thalassache cauta* Gould 1941) chicks at Albatross Island, Bass Strait Tasmania. *In* Proceedings of the Annual conference of the Australian Association of Veterinary Conservation Biologists, Canberra, May 2004. Pages 98 – 105.
26. Bunce, A., Norman, F.I, Brothers, N, Gales, R. 2002. Long term trends in the Australasian gannet (*Morus serrator*) population in Australia. *Marine Biology* **141**: 263-269.
27. Hindell MA, Brothers N and Gales R (1999). Mercury and cadmium concentrations in the tissues of three species of southern albatrosses. *Polar Biology* **22**:102-108.
28. Hedd A, Gales R, Brothers N and Robertson G (1997). Diving behaviour of the shy albatross *Diomedea cauta* in Tasmania - initial findings and dive recorder assessment. *Ibis* **139**:452-460.
29. Hedd A and Gales R (2001). The diet of shy albatrosses (*Thalassarche cauta*) at Albatross Island, Tasmania. *Journal of Zoology (London)* **253**:69-90.
30. Abbott CA, Double MC, Baker GB, Gales R, Lashko A, Robertson CJR and Ryan PG (2006). Molecular provenance analysis for shy and white-capped albatrosses killed by fisheries interactions in Australia, New Zealand and South Africa. *Conservation Genetics* **7**:531-542.
31. Hedd A, Gales R and Brothers N (2001). Foraging strategies of shy albatross *Thalassarche cauta* breeding at Albatross Island, Tasmania, Australia. *Marine Ecology Progress Series* **224**:267-282.
32. Birdlife International (2004). *Tracking Ocean Wanderers: the global distribution of albatrosses and petrels.* Results from the Global Procellariiform Tracking Workshop, 1-5 September, 2003, Gordon's Bay, South Africa. Birdlife International: Cambridge UK.
33. Gales R, Brothers N and Reid T (1998). Seabird mortality in the Japanese tuna longline fishery around Australia, 1988-1995. *Biological Conservation* **86**:37-56.
34. Baker GB, Double MC, Gales R, Tuck GN, Abbott CL, Ryan PG, Petersen SL, Robertson CJR, Baird SJ and Alderman R (2007). A global assessment of the impact of fisheries related mortality on shy and white-capped albatrosses: conservation implications. *Biological Conservation* **137**: 319-333.
35. Ryan PG, Keith DG and Kroese M (2002). Seabird bycatch by longline fisheries off southern Africa, 1998-2000. *South African Journal of Marine Science* **24**:103-110.

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RECOMMENDED CITATION

Agreement on the Conservation of Albatrosses and Petrels. 2008. *Species assessments: Shy albatross.* Downloaded from http://www.acap.aq on 5 May 2008.

GLOSSARY AND NOTES

(i) **Years**.
The "split-year" system is used. Any count (whether breeding pairs or fledglings) made in the austral summer (e.g. of 1993/94) is reported as the second half of this split year (i.e. 1994).

The only species which present potential problems in this respect are *Diomedea* albatrosses, which lay in December-January, but whose fledglings do not depart until the following October-December. In order to keep records of each breeding season together, breeding counts from e.g. December 1993-January 1994 and productivity counts (of chicks/fledglings) of October-December 1994 are reported as 1994.

If a range of years is presented, it should be assumed that the monitoring was continuous during that time. If the years of monitoring are discontinuous, the actual years in which monitoring occurred are indicated.

(ii) Methods Rating Matrix (based on NZ rating system)

METHOD
A Counts of nesting adults (Errors here are detection errors (the probability of not detecting a bird despite its being present during a survey), the "nest-failure error" (the probability of not counting a nesting bird because the nest had failed prior to the survey, or had not laid at the time of the survey) and sampling error).
B Counts of chicks (Errors here are detection error, sampling and nest-failure error. The latter is probably harder to estimate later in the breeding season than during the incubation period, due to the tendency for egg- and chick-failures to show high interannual variability compared with breeding frequency within a species).
C Counts of nest sites (Errors here are detection error, sampling error and "occupancy error" (probability of counting a site or burrow as active despite it's not being used for nesting by birds during the season).
D Aerial-photo (Errors here are detection errors, nest-failure error, occupancy error and sampling error (error associated with counting sites from photographs), and "visual obstruction bias" - the obstruction of nest sites from view, always underestimating numbers).
E Ship- or ground- based photo (Errors here are detection error, nest-failure error, occupancy error, sampling error and "visual obstruction bias" (the obstruction of nest sites from view from low-angle photos, always underestimating numbers)
F Unknown
G Count of eggs in subsample population
H Count of chicks in subsample population and extrapolation (chicks x breeding success - no count of eggs)

RELIABILITY
1 Census with errors estimated
2 Distance-sampling of representative portions of colonies/sites with errors estimated
3 Survey of quadrats or transects of representative portions of colonies/sites with errors estimated
4 Survey of quadrats or transects without representative sampling but with errors estimated
5 Survey of quadrats or transects without representative sampling nor errors estimated
6 Unknown

(iii) Population Survey Accuracy
High Within 10% of stated figure;
Medium Within 50% of stated figure;
Low Within 100% of stated figure (eg coarsely assessed via area of occupancy and assumed density)
Unknown

(iv) Population Trend
Trend analyses were run in TRIM software using the linear trend model with stepwise selection of change points (missing values removed) with serial correlation taken into account but not overdispersion.

(v) Productivity (Breeding Success)
Defined as proportion of eggs that survive to chicks at/near time of fledging unless indicated otherwise

(vi) Juvenile Survival
defined as:
1 Survival to first return/resight;
2 Survival to x age (x specified), or
3 Survival to recruitment into breeding population
4 Other
5 Unknown

(vii) Threats
level of threat:
High a threat that is likely to be the main cause of a rapid or catastrophic decline, or reversal of recovery of a population, and lead to the local extinction of a species from the breeding area.
Medium a threat that is causing a gradual decline, or slowing of recovery of a population, at a known breeding area.
Low an existing threat that may cause decline or slow recovery of a population, or localised extinction in a breeding area.
Yes, No or Unknown available information is insufficient to assign threat level

(viii) Maps
"The distribution maps shown were created from platform terminal transmitter (PTT) and global-positioning system (GPS) loggers. The tracks were sampled at hourly intervals and then used to produce kernel density distributions, which have been simplified in the maps to show the 50%, 75% and 95% utilisation distributions (i.e. where the birds spend x% of their time). The full range (i.e. 100% utilisation distribution) is also shown. Note that the smoothing parameter used to create the kernel grids was 1 degree, so the full range will show the area within 1 degree of a track. In some cases the PTTs were duty-cycled: if the off cycle was more than 24 hours it was not assumed that the bird flew in a straight line between successive on cycles, resulting in isolated 'blobs' on the distribution maps. It is important to realise that these maps can only show where tracked birds were, and blank areas on the maps do not necessarily indicate an absence of the particular species".

Report of the Antarctic and Southern Ocean Coalition (ASOC)

1. Introduction

ASOC extends its appreciation to the Government and people of the Ukraine for hosting this ATCM in Kiev. We appreciate the invitation by ATCPs for ASOC to attend the meeting as an Expert, and look forward to contributing to substantive discussions across a wide range of matters that are critical in both the Antarctic Treaty Area, and for our planet as a whole. We hope for substantive outcomes as the Antarctic Treaty approaches its 50th anniversary.

With the Protocol of Environmental Protection to the Antarctic Treaty (the Protocol), Antarctic Treaty Parties committed themselves to the protection of the Antarctic environment, its dependent and associated ecosystems, and the intrinsic value of Antarctica as a fundamental consideration in the planning and conduct of Antarctic activities. The current status of the implementation of the Protocol is characterized by widely differing environmental standards in different Antarctic Treaty Parties. This gap is apparent in recent official inspection reports. Parties have been working on the implementation of the Protocol since 1991, so it is about time that a common understanding of what constitutes appropriate Protocol implementation standards emerges and is put into action by all Parties, both individually and collectively. ASOC contends that Parties should aim for the highest possible environmental standards rather than settling for the lowest common denominator.

An effective implementation of the letter and spirit of Protocol is critical to many of the issues that are important to the Antarctic region, notwithstanding, in many cases, the urgent need for additional actions and new instruments. This report outlines the key issues identified by ASOC that should be discussed at this ATCM, some of which are discussed in detail in ASOC's Information Papers.

2. ASOC Worldwide

ASOC has member groups located in most Antarctic Treaty Consultative Parties. 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, United Kingdom and USA.

ASOC maintains a Secretariat office in Washington DC, USA, and a website (*http://www.asoc.org)*, which provides details about the organisation and contains all ASOC documents prepared for the Antarctic Treaty System since 2000.

3. Information Papers for ATCM XXXI

In addition to this report, ASOC has introduced 5 Information Papers:

- IP 41: A decade of Antarctic tourism: Status, change, and actions needed

Tourism in Antarctica over the past decade has been characterised by steep annual increases, diversification, and geographic expansion. ASOC fears that tourism is becoming entrenched as the main Antarctic activity in terms of scale and influence, resulting inevitably in the erosion of the intrinsic values of Antarctica and the primary roles of science and environmental protection in the Antarctic Treaty System. The particularly negative forms of tourism currently emerging, such as land based tourism, state sponsored tourism, and the use of massive general purpose ships, should

be constrained before their scale is beyond the capacity of the Antarctic Treaty System to control them. Given the growing complexity of tourism, there is not a single specific action that Antarctic Treaty Parties should take to address the problems raised by tourism. Rather, there is a range of measures needed, some of them urgently. Antarctic Treaty Parties need to develop a vision for tourism in the Antarctic and to agree on a tourism strategy, which can deliver the required instruments – both legally binding and hortatory.

ASOC urges Parties to adopt a Resolution stating that it does not see unending growth of Antarctic tourism as desirable or necessary, and to ensure that Measure 4 (2004) comes into force expeditiously, perhaps through "provisional application" analogous to Decision 2 (2003). Shipping standards in the Southern Ocean should be improved, in cooperation with IMO, and vessels above a certain size and/or carrying more than a specified number of persons prevented from operating within the Antarctic Treaty Area. The development of land based tourism infrastructure should be prevented, and infrastructure already used for tourism purposes should be subject of a critical review. The management of the most commonplace aspects of tourism should be improved by building on the main existing environmental management tools – EIA, monitoring, and management plans – with major improvements required in all three areas.

- IP 56: Impacts of Climate Change on Antarctic Ecosystems

IP 56 summarizes impacts on Antarctic ecosystems based on recent scientific research. Over the past 50 years, the Western Antarctic Peninsula has warmed more than four times faster than the global average, thus making it one of the most rapidly warming regions on the planet. Although some Antarctic areas are cooling, with organisms responding in accord with their adaptations to cold, dramatic changes to terrestrial and marine ecosystems are occurring in areas of warming. The southward retreat of the high Antarctic zone, and successful invasions of non-indigenous species to sub-Antarctic islands are among a continuing trend in biotic change brought by increasing human activity and increasing temperatures.

Climate change is no longer an issue limited to the developed and more populated parts of the world. The Consultative Parties to the Antarctic Treaty have committed themselves to provide comprehensive protection to the Antarctic environment and its dependent ecosystems under the Protocol. Therefore, and based on the precautionary principle, Consultative Parties should recognize the adverse impacts of climate change on Antarctica and the Southern Ocean and take proactive action within the framework of the Treaty System to contribute towards climate change mitigation and adaptation efforts.

- IP 57: Area Protection: Time for Action

IP 57 reviews the progress made in delivering the objectives of Annex V (Area protection and management) and proposes that the Antarctic Treaty Consultative Meeting (ATCM) move from discussion to concrete action. It suggests that the current rolling annex review process offers an opportunity both to consider the effectiveness of Annex V to deliver best practice area protection for the Antarctic Treaty Area, and to review the barriers to effective implementation of current requirements.

More than 40 years ago, SCAR proposed a number of conservation-oriented recommendations, including the '*designation of selected areas as sanctuaries within which no form of disturbance should be permitted'* to protect especially important or vulnerable species or habitats in the Antarctic. While 67 Antarctic Specially Protected Areas and 6 Antarctic Specially Managed Areas have since been designated, less than 0.1 % of the Antarctic Area has been afforded special protection, and many of the values identified in Annex V of the Environment Protocol remain under-represented. In particular Treaty Parties appear to have difficulty in declaring any large geographic areas, significant wilderness sites or meaningful marine areas for ASPA level protection.

The current annex review process provides an opportunity to focus on the underachievement of Annex V. ASOC suggests that the CEP be urgently tasked with providing the ATCM with advice on which values and types of sites listed in Annex V are not yet fully represented as designated Protected Areas, in addition to designations that no longer represent best-practice or are otherwise outdated, and best new approaches to address the needs of the 21st century. The review and amendment or modification, and any actual drafting of changes to Annex V, can then occur within the ATCM.

- IP 58: Antarctic Shipping

IP 58 addresses a range of vessel-related issues in the Southern Ocean. Traffic has increased significantly in Antarctic waters over the past decade both in terms of overall numbers and the different types of vessels operating in the area, which raises a number of intrinsic environmental and marine safety issues. This is no small matter in the relatively isolated Ross Sea region, which is seeing a growth in numbers of fishing vessels, but also significant increases in sea-ice extent and a reduction in length of the open-water season. While it might appear that there is considerable effort underway to improve the standards of shipping in the Antarctic region, not all proposed measures apply to all vessels operating in the region, and many international shipping instruments developed and adopted by the International Maritime Organization (IMO) over the past decades have not been ratified.

ASOC recommends that the ATCM consider the desirability of conducting an assessment of the threats resulting from the full range of vessels operating in the region, which could be done jointly by the ATCM and IMO; increase collaboration between national-level IMO and ATCM representatives on proposals to improve Antarctic shipping operations; urge all Parties to quickly ratify and implement existing shipping instruments; and ensure greater control by Flag and Port States over vessels operating in the Antarctic region to ensure strict compliance with the highest safety and environmental standards.

- IP 119: Designation of Marine Protected Areas within the Antarctic Treaty Area

IP 119 calls on the ATCM to breathe new life into the Marine Protected Area debate within the Antarctic Treaty System. It calls upon ATCM XXXI to reaffirm, via a Decision, its intention to create a representative and coherent network of MPAs as ASPAs and ASMAs. At least 30% of the marine area of the Antarctic Treaty Area should be placed within MPAs by 2018, with a representative series in place by 2012.

4. Other Important Issues for ATCM XXXI

4.1 Ratification of the Liability Annex

ASOC is concerned at the seeming lack of urgency among ATCPs for bringing Annex VI into force. At the present rate, it will be decades before this very limited first step in addressing the requirements of Articles 15 and 16 of the Protocol enters into force. That should be unacceptable to ATCPs. Accordingly, ASOC urges Parties to redouble their efforts to ratify the Annex, with the goal of bringing it into force during 2009, the 50th anniversary of the Antarctic Treaty. This should be the subject of a Resolution of the ATCM.

In addition, ASOC suggests that this ATCM promotes a joint intersessional contact group with CCAMLR and IMO colleagues to address the remaining sources of potential liability arising from misadventure in the Southern Ocean.

4.2 Biological Prospecting

ASOC is surprised by the lack of response by Parties to Recommendation 2 of Resolution 7 (2005), to annually provide information on the nature and extent of their biological prospecting activities in the Antarctic Treaty area. This is necessary in order to support informed discussion about what management arrangements might be necessary in order to regulate this commercial activity. While ASOC strongly supported an Intersessional Contact Group being established at the last ATCM to further these discussions, it was unhelpful to exclude from these discussions key sources of information, including UNEP, IUCN and ASOC. We note that while Japan insisted on this exclusion, it did not itself then participate in the ICG. We look forward to more inclusive discussions at this ATCM and in an ICG over the next year.

4.3 Accomplishing a Greener International Polar Year

The International Polar Year (IPY) 2007-8 has been an ambitious and important international scientific initiative. As noted last year, the cumulative effect of research activities associated with the IPY is leading to increased infrastructure and levels of human activity in the Antarctica, as well as greatly enhancing world-class scientific research. ASOC congratulates the scientists and scientific programmes that have been part of the IPY, which is generating crucial information about some of the earth's most pressing problems, first and foremost global climate change, and encourages participants to strive for the greenest possible IPY.

4.4 Managing Krill Fisheries

With the key role of krill in the Antarctic ecosystem, the growing pressure to fish for krill puts CCAMLR in a pivotal position. Not only does this force CCAMLR to build on its precautionary management strategy that balances ecosystem effects of fishing with commercial interests, but also requires collaboration with other bodies of the ATS. As acknowledged by Resolution 1 (2006), ATCPs have "prime responsibilities" for the protection and preservation of the Antarctic environment.[1] Parties to the Protocol have a clear responsibility to look after the entire Antarctic environment, which includes the marine environment and its living resources. Specifically, the Antarctic krill fishery overlaps with the foraging ranges of land-based, krill-dependent predators, directly impacting species that are under the protection of the Environment Protocol, such as penguins and seals, but also recovering cetacean populations under the IWC's jurisdiction.

ASOC supports the ATCM maintaining an active interest in CCAMLR's progress towards ecosystem-based management of the krill fishery, so as to ensure that krill fishing is conducted in a way that limits adverse impacts on the Antarctic environment and dependent and associated ecosystems, as well as avoiding detrimental changes in the distribution, abundance or productivity of species populations[2]. Specifically, the ATCM should pay attention to links between its work and that of CCAMLR over issues that relate to krill conservation, such as Marine Protected Areas (MPAs); biological prospecting;[3] and environmental monitoring and reporting.[4]

[1] This Resolution also recalls that CCAMLR is an integral part of the ATS. Consequently, CCAMLR's conservation principles need to be read in the light of Antarctic Treaty environmental goals, and especially of the Environment Protocol.

[2] Articles 3(2)(a) and 3(2)(b)(iv) of the Environment Protocol.

[3] Antarctic krill has served, either wholly or in part, as the basis for a significant percentage of patents on Antarctic organisms in recent years. As the ATCM progresses in developing policy responses to biological prospecting in Antarctica, close coordination and information exchange on this issue with CCAMLR will be become increasingly important.

[4] Synergies between CCAMLR's Ecosystem Monitoring Program and on-going efforts by the Committee for Environmental Protection in the area of environmental monitoring should be further explored, especially in view of the need to increase the understanding of climate change in Antarctica and its implications for CCAMLR and ATCPs responsibilities.

4.5 Addressing the Emerging Crisis in the Ross Sea

Recent information about the Ross Sea and its web of life makes sobering reading.[5] In spite of CCAMLR applying a precautionary approach to the TAC for the toothfish fishery in CCAMLR Areas 88.1 and 88.2, the first signs of ecosystem disruption are appearing in SSRU 88.1J. In McMurdo Sound and vicinity, after 40 years of fishing by scientists, catching 200-500 adult fish per season, it is now difficult to catch an adult fish. In addition, the numbers of fish-eating killer whales have dropped dramatically and the changed diet of penguins reflects disappearance of a trophic competitor. Thus, even without a CCAMLR-designed CEMP in place, decreasing the Ross Sea TAC for toothfish is warranted under the 'precautionary principle' that guides CCAMLR. Ironically, the CCAMLR Scientific Committee has requested CCAMLR scientists to recommend data sets and analytical procedures by which fishing effects can be separated from climate effects to marine ecosystems; the toothfish fishery is now compromising several of the longest, continuous biotic data sets available in the Southern Ocean and ones which heretofore had a 'pure' climate signal.

ASOC urges the ATCPs and CCAMLR Parties to take action now while there is still time, starting by agreeing on a Resolution at this ATCM declaring a pause in all commercial fishing activities in the Ross Sea for the next five years. This will require joint action with CCAMLR regarding fishing and with the IWC on whaling in the Whale Sanctuary.[6]

4.6 Protecting Lake Vostok

After a 6-year pause to consider the risks of environmental contamination, the Russian research team resumed drilling in December 2005. At 30th ATCM in 2007, Russia reported on a serious accident deep in the borehole when the drill froze and broke. After herculean efforts, the drilling gear was removed. Also in 2007, an international working group of experts recommended very different technology for penetration of these unique ecosystems in order to protect the environment to the maximum extent.[7]

This year Russia has committed itself once again to penetrating the Lake, in the 2008-09 season. ASOC argues that this is a profoundly unfortunate step, which endangers not only Lake Vostok itself but also risks harm to other linked subglacial systems.

By filing a final CEE with the Antarctic Treaty Consultative Meeting and Committee on Environmental Protection, Russia has completed all procedural requirements of the Protocol on Environmental Protection to the Antarctic Treaty. However, Parties are still obliged to meet their substantive commitments to protect the Antarctic environment. Notwithstanding its meeting the procedural obligations, Russia's proposed drilling into Lake Vostok raises very reasonable fears about it contaminating the lake. It is inappropriate to proceed in the face of such concerns, in the context of recent operating realities at the drilling site, enumerated in information papers tabled by Russia.

[5] Arthur L. DeVries, David G. Ainley and Grant Ballard, Decline of the Antarctic Toothfish and its Predators in McMurdo Sound and the Southern Ross Sea, and Recommendations for Restoration (paper under preparation for CCAMLR's WG-EMM). See also Addressing Uncertainty Over the Importance of Antarctic Toothfish As Prey of Seals And Whales in the Southern Ross Sea: A Review, David G. Ainley & Donald B. Siniff (paper under preparation for CCAMLR's WG-EMM).

[6] ASOC submits that it is timely for the IWC and the Antarctic Treaty System to address the realities facing the Southern Ocean Whale Sanctuary (SOWS), and to consider additional steps that will help protect the Sanctuary's integrity. These include developing a Management Plan for the Sanctuary, carrying out research needed to underpin a sound management approach, and for individual states to voluntarily cease any whaling activities. A significant shift by governments and international organizations is needed to fund the sorts of research needed. To this end, ASOC welcomes the call by the Government of Australia at the March 2008 IWC Intersessional Meeting in London for a cooperative, long-term, non-lethal international research effort, nominally called the Southern Ocean Whale Research Partnership. ASOC calls on Parties to the ATCM, CCAMLR, the IWC and other international bodies to adjust their collective marine research priorities for the Southern Ocean to take full account of the international community's long-term duty of care towards the Southern Ocean Whale Sanctuary and the whales in it.

[7] Exploration of Antarctic Subglacial Aquatic Environments: Environmental and Scientific Stewardship, *http://www.nap.edu/catalog/11886.html*

ASOC has urged Russia, through an appeal to the State Duma, to re-consider its plan to penetrate Lake Vostok, and to opt for a joint international project to penetrate a smaller and more isolated lake using the latest and safest technology first. In due course, the question of whether penetration of Lake Vostok is environmentally defensible, and if so, how best to do it, can be reconsidered.

5. Intersessional Activities

Since ATCM XXX ASOC has been monitoring various aspects of the implementation of the Madrid Protocol, and has participated in intersessional work including the review of management plans for ASPAs and ASMAs; discussions of the Deception Island Management Group; the special IAATO meeting on tourism in Miami and the regular IAATO meeting held in Uruguay; and the Intersessional Contact Group on Vessels. We have monitored the Intersessional Contact Group on biological prospecting, given that we were blocked from participating.

- ASOC participated in the conference convened in Miami by the International Association of Antarctica Tour Operators (IAATO) March 17-19, 2008. Despite the positive discussion and goodwill of participants, the conference highlighted that there is still not a single conceptual framework to address Antarctic tourism. As a result there is not much coherence on tourism discussions – rather, they tend to follow multiple forking paths such as environment/safety, tourism impacts/impacts from other operators, IAATO/non IAATO. Any perceived problems with tourism are almost always attributed to others – usually actors that are not present in the discussions: adventure tourists, national program staff, luxury yachts, etc. Further, many of the problems are passed off as resulting from misdemeanors rather than from day-to-day mainstream tourism, while in fact both types of conduct may have detrimental effects on the intrinsic values of Antarctica. ASOC submits that all stakeholders, particularly Parties and the industry, have a collective responsibility to bring clarity to discussions on Antarctic tourism so that the issues can be addressed effectively.
- ASOC provided detailed comments on management plans for ASPA 150, Ardley Island, Maxwell Bay, King George Island (Chile); and ASMA "X", South-west Anvers Island and Palmer Basin (United States).
- ASOC has been involved with the development of the Deception Island Antarctic Specially Managed Area (ASMA) since 2001, and participated in the discussions conducted by the Deception Island Management Group since ATCM XXX. Deception Island is a test case of the management of a site representative of outstanding Antarctic values as well as a popular place for tourism. ASOC considers that Spain has made valid comments on certain issues concerning the management of Deception Island that have so far not been considered – the sensitivity of certain landing sites, the effect of concentrated tourism on science values and the conduct of science, the need to review the number of people landing at sites that are now established tourism destinations, and issues of maritime security and impacts on the coastal environment. ASOC considers that these issues deserve further detailed discussion in Kiev and beyond.
- Since ATCM XXX ASOC participated actively in the Intersessional Contact Group on Vessels, including circulating the paper on vessel safety that we introduced to the Marine Environment Protection Committee of IMO at its most recent session in April and commenting on the other offerings and draft report. We look forward to this ICG being continued, and for much closer coordination between the ATCM and IMO bodies.
- ASOC is encouraged by the progress made on the five-year plan for the CEP, and hopes that this plan can be implemented in a timely and effective manner.

6. Concluding Remarks

The Antarctic Treaty Area is facing ever-increasing pressures from global climate change and a diversifying range of human activities within the region. Without effort by all ATCPs at both national and global levels, and full implementation on the ground of existing international agreements, the wilderness, scientific, biodiversity and other intrinsic values of the region will deteriorate rapidly.

At the same time, the steadily increasing human footprint from the uncoordinated growth of human activities needs strategic analysis and action at regional and local levels. Kiev presents an opportunity to vow to the world community that the ATCPs and other parts of the Antarctic Treaty System will deepen their common efforts to leave the Antarctic as a place of wonder and immense value for future generations of humans and wildlife.

Report of the International Association of Antarctica Tour Operators 2007-2008

Under Article III-2 of the Antarctic Treaty

Introduction

The International Association of Antarctica Tour Operators (IAATO) is pleased to present a report of its activities to ATCM XXXI (Antarctic Treaty Consultative Meeting) in Kyiv from June 2-13, 2008, 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 2007-2008 fiscal year, IAATO has had 108 Members. Appendix C to this report lists our 2007-2008 members and registered members for 2008-2009. A Membership Directory, regularly updated, can be found on line at *www.iaato.org*.

As an organization, IAATO provides an online and central office resource for all its members. Comprehensive operational guidelines and procedures are stored in a members-only section of the website for use and downloading. Regular updates and information are shared with members throughout the year. The aim is to encourage the highest possible operating standards for IAATO companies by providing them with the information needed for a safe and environmentally responsible operation.

Despite two vessel incidents (*M/S Explorer, M/V Fram*) in the 2007–2008 Antarctic season, and the increase in tourists, numbers of vessels and aircraft operations, the day-to-day operations ran smoothly. IAATO Members continued to support established practices that have proved to be effective and assures long term protection to the areas visited. Cooperation amongst vessel captains, officers, and expedition leaders was again impressive and pivotal to the season's success.

IAATO continues to focus its activities in several key areas. The following is a brief synopsis of organizational activities:

1. **Seasonal Instructions:** The *"Seasonal Instructions"* to operators provide a comprehensive resource of materials and guidelines adopted by both IAATO members and numerous ATCM's. In addition to the Instructions which are amended annually, additional updates are circulated to all operators throughout the season. The documents are mainly held in the "Members Only" section of the IAATO website. These IAATO-wide operational procedures effectively serve to manage Antarctic tourism.
2. **Ship Scheduler:** Additional computer programming enhancements were performed on the web-based IAATO Ship Scheduler program. This Ship Scheduler program allows for the pre-scheduling of visits to sites prior to the season, not only ensuring the presence of not more than one ship at one site at one time, but also implementing the requirements laid out under the 45 IAATO Site Guidelines and the 14 ATCM Site Guidelines. In addition to noting each vessels day to day schedule, the Ship Scheduler also stores a named contact for each voyage (the expedition leader) and departure dates and ports. Non-IAATO operators' schedules were also included where information was provided.

The Ship Scheduler online input closes prior to the season and a hard copy of the master schedule is then issued as a preplanning tool. Once the Antarctic operating season begins the vessels coordinate their landings in the field. IAATO members have coordinated their schedules consistently since 1991 and the online program has worked successfully for four years.

Access to the Ship Scheduler during the 2007-2008 season was also made available to COMNAP and national programs that interact with IAATO on a regular basis with respect to station visits. The master schedule was circulated to numerous Antarctic Treaty Parties, the Antarctic Treaty Secretariat, IHO/HCA, COMNAP and others at the beginning of the Antarctic season. This enabled ease in scheduling, transport of scientists, and coordination of logistics and contingency planning.

The Ship Scheduler allows for an effective exchange of information between operators, coordinated station visits in advance, ship itineraries, and compliance with requirements under adopted Site Guidelines. It also assists the IAATO Secretariat and IAATO members in their pre-planning to address potential cumulative environmental impact issues and site usage at the various landing sites.

The tool has proven to work extremely well: even being used as a multiyear preplanning tool for arrival and departure in port cities such as Ushuaia, Argentina, in order to spread out visits in port in order to avoid crowding.

Some adjustments to the Ship Scheduler have been made for the 2008-2009 season, with IAATO members inputting their schedules in July 2008.

3. **Vessel and Company Database:** IAATO's Vessel Database is a comprehensive web-based data program that keeps detailed information on all member-operated vessels and the 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. For example, a contact information sheet for all vessels is generated through the database each season. Components of this database and contingency plan were tabled at ATCM XXIX IP 29 *IAATO Vessel Emergency Contingency Plan-An Update* (2006).

4. **Post Visit Report Database:** The computerized IAATO program for loading Post Visit Report Forms (PVRs) into a single electronic database provides a detailed record of activities coordinated by IAATO since the electronic database began in 2003. In addition, tourism statistics, compiled by the US National Science Foundation-dating back to 1989 can be found on the IAATO website at *www.iaato.org*. Each PVR is closely inspected before the data are downloaded in order to detect any potential errors. Successful programming efforts were made so that 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 Members' activities. IAATO has posted over 60 different data reports per season on tourism statistics on its website as a matter of interest to the general public. The 2007-2008 data is estimated to be available in August 2008.

5. **Post Visit Report Form Update:** Minor improvements were made to the standard PVR prior to the start of the 2007-2008 season to account for the new site guidelines, clarification of activities and simpler input for operators. The PVR that had been formerly updated for the third time and approved at ATCM XXVIII Resolution 6 (2005) *Antarctic Post Visit Report Form* is still used.

   Endorsing the adoption of ATCM XXVIII Resolution 6 (2005) noted above, IAATO welcomes submission of non-IAATO member Post Visit Report Forms for inclusion in the database. Updated

versions are sent annually to the Antarctic Treaty Secretariat in October, distributed amongst Parties who issue permits or authorization to tour operators that are outside IAATO and posted on the open pages of *www.iaato.org*, under "Operational Procedures."

6. **Site Guidelines and Staff Interviews:** Six additional site guidelines were coordinated and written in conjunction with several Antarctic Treaty Parties. Interviews by IAATO personnel were conducted at the beginning of the season with field staff operating in the Antarctic Peninsula to assess the effectiveness of ATCM-endorsed Site Guidelines as well as the IAATO Site Guidelines and other operational questions.
7. **Observer Report Forms:** IAATO developed and implemented a new form for IAATO observers on cruise only vessels and updated its IAATO Observer Report form for all other vessel use.
8. **Safety and Conservation Briefing:** IAATO updated its PowerPoint presentation – "*Safety and Conservation Briefing.*" This is a PowerPoint presentation based on Recommendation XVIII-1 and is mandatory for all passengers and crew landing in Antarctica. A Quicktime slide show version of this can be found on *iaato@iaato.org* under *Guidelines.* In addition a specially adapted version for cruise only operations is under development.
9. **Introduced Species-"Aliens":** Operational procedures were updated to continue to support all methods necessary to eliminate the potential spreading of Antarctic diseases and translocation of non-native species. Several IAATO operators supported the "Aliens in Antarctica" program and assisted in the transport of the equipment needed to conduct this International Polar Year (IPY) study.
10. **Discovery of High Mortality Events:** IAATO updated its internal procedures for members regarding a potential discovery of high mortality events in both the Antarctic and sub-Antarctic Islands.
11. **Station Visits:** IAATO continued to closely pre-coordinate schedules for station visits and landings with the United States Antarctic Program (Palmer, McMurdo and South Pole Stations), British Antarctic Survey (Rothera, Halley and Signy Stations) and Port Lockroy.
12. **Science News Sheet:** During the IPY, IAATO will be providing its field staff with information on various research projects which could be of interest to both tourists and field personnel. The Science News Sheets provide a dedicated channel for this information and aims to support the IPY, promoting relations between the scientific and tourist community. The two "Science News Sheets" currently published can be found on the IAATO website, three more are planned for the 2008-09 season (in October, December and February). IAATO welcomes input from National Programs in order to provide education and outreach to tourists travelling to Antarctica and the general public who visit IAATO's website.
13. **Education and Outreach and Posters:** IAATO produced 4 large format size posters for its vessels and member company offices as educational tools entitled:

    - Guidance for Visitors to the Antarctic *http://www.iaato.org/docs/Visitor_Guidelines-1.pdf*
    - Marine Wildlife Watching Guidelines (Parts 1&2) *http://www.iaato.org/wildlife.html*
        - IAATO updated the Marine Wildlife Watching Guidelines during the 2007-08 season, receiving endorsement of the guidelines from the United Kingdom Sea Mammal Research Unit. The Guidelines have been redesigned into a booklet form, which can also separate into two parts for poster use.
    - IAATO Boot and Clothing Decontamination Guidelines for Small Boat Operations *http://www.iaato.org/docs/Boot_Washing07.pdf*

14. **Yacht Package:** The one-off Yacht Package which includes comprehensive operating information for non IAATO operators was further improved. One private operator purchased the package during the 2007-2008 season.
15. **Emergency Response:** Continued use was made of the IAATO Member Emergency Medical Evacuation Response (EMER) action plan. Eight IAATO medevacs were required during the 2007-2008 season.
16. **IAATO Exchange of Information:** Coordination with all new members in their start-up operations was provided and support offered to companies who have employed new staff within their home offices and in the field.
17. **Accreditation:** Work on the proposed IAATO Accreditation Scheme was continued throughout the year. Different options, including ISO certification and incorporation into the ISM process for vessels are being investigated by IAATO's Accreditation Committee, as alternatives to an IAATO based accreditation process.
18. **Staff Training and Certification Scheme:** IAATO's Field Staff Training and Certification Scheme have seen further progress. A Field Operations Manual is being developed for the 2008-2009 season. This manual will form the course material. In addition a field staff training and on-line assessment program is being developed and will be piloted during the 2008-2009 season.

1. IAATO Membership and Activities

IAATO Member offices are located in 15 countries and include: Argentina, Australia, Belgium, Canada, Chile, France, Germany, Italy, Japan, Netherlands, New Zealand, Norway, Sweden, United Kingdom and its Overseas Territories, and the United States. A Membership Directory can be found on the IAATO website at *www.iaato.org*. IAATO's fiscal year is from July 1 to June 30 of the next year, which is also consistent with the Antarctic operating season.

1.2. Membership Changes and Levels during the 2007-2008 Season

IAATO experienced a 30 % increase in membership from July 1, 2007 to May 2, 2008. The actual number of Member companies increased from 83 to 108. Three companies have withdrawn their membership for 2008-2009 (2 are no longer in business and one is not operating in Antarctica) although 3 new companies have submitted an application for consideration to join.

The breakdown of the 101 IAATO companies that were members from July 1-March 30, 2008 (during the Antarctic operating season) includes the following categories:

Full Members: 38 Full Members companies. These included 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.

Provisional Members: 13 Provisional Members included ship operators, small vessel/yacht operators, and companies that charter vessels from existing Members.

Associate Members: 50 Members associated with Antarctic tourism in various forms.

Further elaboration of these categories, levels of membership and names of each of the companies can be found in section 1.3 of this paper and in Appendix C.

1.3 Membership Categories

During the 2007-2008 period (July1, 2007 - March 30, 2008) IAATO Members were grouped into each of the following categories:

1. 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. (37 Members)
2. 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. (6 Members)
3. Organizers of cruise ships making no landings (cruise only). Cruise ships carrying more than 500 passengers are not permitted to make any landings. (6 Members)
4. Organizers of land-based operations. (1 Member)
5. Organizers of air operations with over-flights only. (1 Member)
6. Organizers of air/cruise operations. (1 Member)
7. Travel Companies in support of Antarctic tourism. (49 Members)

*Note: Full, Provisional, and Probational status occurred within categories 1-7.

1.4. Bylaws Changes

During the 2007-2008 season, IAATO operated essentially under two sets of Bylaws: New Bylaws had been agreed at the Annual Meeting in 2007 in Hobart, Tasmania, but did not become effective until April 28, 2008. A short summary of the changes within the IAATO Bylaws is referenced below. IAATO Bylaws and Objectives can be found on line at *www.iaato.org* under 'About IAATO.' The latest update is April 29, 2008. See Appendix C for a list of members and their various categories of membership.

The most notable changes are as follows:

- Full Members are now referred to as "Members". Members are experienced organizers that operate travel programs to the Antarctic, have been an Associate Member for at least one year and have fulfilled the Bylaw requirements in Article III, Sections B and C, and Article X, as applicable. Only "Members" have voting privileges.
- Associate Members are defined as one of the following:
    1. Organizers that operate travel programs to Antarctica and are requesting Member status in IAATO. Once the conditions in Article III, Sections B and C, and Article X of the IAATO Bylaws are met, as applicable, these organizers can apply to become Members. (B1)
    2. Tour operators, travel agents or organizers that do not operate Antarctic tour programs themselves, but book into other Members' programs. (B2)
- Affiliate Members are companies, organizations or individuals with an interest in supporting Antarctic tourism and the IAATO objectives.
- Provisional and Probational Members are no longer levels of membership or categories within IAATO. However companies can be put on "probation" if necessary.
- Companies are eligible to apply throughout the year and the restriction on applications annually and quarterly has been removed.
- For additional information, see *www.iaato.org- About IAATO* and click under *Bylaws* or *Join IAATO*. IAATO is in the process of reorganizing the website to take into account the amendments in the Bylaws. We appreciate your understanding through the transitional period.

2. 2007-2008 Statistics

2.1 Overview of Tourist Numbers

IAATO endeavors to include all tourist numbers from both IAATO operators and non-IAATO operators where the information is readily available and verifiable. From October 2007 to April 2008, estimated numbers of different types of tourism have been determined as follows:

- 31,941 passengers/tourists landed in the Antarctic on 50 commercially organized expedition vessels (IAATO and non IAATO),
- 257 passengers/tourists participated in an air/cruise program,
- 438 air/land-based tourists flew, skied, climbed, camped or participated in multi-day or overnight trips to Antarctica,
- 13,015 passengers/tourists travelled on 7 cruise only/ large vessels (IAATO and non IAATO),
- 613 passengers/tourists participated in air over-flights to Antarctica,
- 13 Sailing or Motor Yachts operated outside of IAATO,*
- 3 air/land-based companies operated outside of IAATO.*

A total of 70 vessels ranging in size from 6 passengers to 2500 passengers operated in the Antarctic during the 2007-2008 season.

* To date IAATO has received little or no information and no Post Visit Report Forms on the activities from these operators.

For detailed information and an overview of the Antarctic tourism industry see the ATCM XXXI IP 85 *IAATO Overview of Antarctic Tourism 2007-2008 Antarctic Season and Preliminary Estimates for the 2008-2009 Season.*

3. Participation in Organized Meetings during 2007-2008 and IAATO 18th and 19th Annual Meeting

IAATO members participated in several internal IAATO and external international meetings, liaised with National Antarctic Programs, government agencies of the sub-Antarctic island groups, and scientific and environmental organizations.

3.1 IAATO Annual Meetings

Since ATCM XXX (2007), IAATO has held 2 annual meetings.

IAATO held its 18th Annual Meeting at the CCAMLR Secretariat office in Hobart, Tasmania, June 25-29, 2007. IAATO appreciated the participation of 134 people including IAATO Members, governments, observers and expert groups to the ATCM and non-governmental organizations. The following governments, organizations and others were represented at the meeting: Antarctic Institute of Uruguay, Umweltbundesamt (Federal Environmental Agency-Germany), Australian Antarctic Division, United Kingdom Foreign and Commonwealth Office, British Antarctic Survey, United Kingdom Overseas Territory, United Kingdom Antarctic Heritage Trust, New Zealand Antarctic Heritage Trust, Royal Australian Hydrography, Quarantine Tasmania, Macquarie-Tasmanian Parks and Wildlife, South Georgia Heritage Trust, Tourism Tasmania, International Polar Year (IPY) organizers, Birdlife International, COMNAP, CCAMLR, and ACAP.

Notable action points from this meeting included discussions on membership growth, the future of tourism and IAATO, marine related issues, staff training, participation by members in IPY projects

such as CAML and Aliens in Antarctica, IAATO's Wilderness Etiquette Policy, IAATO Recommendation on Outboard Engine Use, and Waste Management Policy (See Appendix D). IAATO's 2007 adopted waste management policy exceeds MARPOL requirements.

IAATO held its 19th Annual Meeting in Punta del Este, Uruguay, April 28-May 2, 2008. More than 110 participants came from IAATO companies, plus a number of Government representatives from Germany, Peru, and Uruguay. Additional participants came from the Port of Ushuaia, Argentina and the United Kingdom. The focus of this meeting was to address IAATO's internal requirements given its notable membership growth during the 2007-2008 season, the changes in IAATO Bylaws, restructuring proposals, marine issues, accreditation, and site guidelines. The agenda for this meeting is on the IAATO website.

Typically at each of IAATO's annual meetings, the topics discussed include internal structure of the organization, membership applications, yearly operating procedures, seasonal incidents, and site guidelines, among other timely subjects. Policies are agreed and or developed or revisited, and obligations set forth by the Antarctic Treaty System are addressed and how they may affect IAATO operators. Information can be found on *www.iaato.org* under Information Papers.

IAATO's 20th Annual Meeting is tentatively proposed for mid-late June, 2009 in Torino, Italy. Interested parties that would like to attend or participate should contact IAATO at *iaato@iaato.org*.

IAATO sent a representative to the COMNAP XIX Meeting in Washington D.C. 2007. IAATO appreciates the opportunity to work cooperatively with COMNAP where mutual interests lie in both air and ship operations. IAATO supports further cooperation between operators to ensure there is little or no disruption to science or station activities.

IAATO was pleased to send a participant to the International Hydrographic Organization/ Hydrographic Commission on Antarctica (IHO/HCA) Meeting in Buenos Aires, Argentina in October 2007. IAATO strongly 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. This is the 5th year where IAATO has sent a representative to this meeting and appreciates the cooperative working relationship with the HCA.

SCAR's Southern Ocean Observing System (SOOS) meeting in Germany in October 2007 was attended by an IAATO representative. IAATO appreciates the interaction with SCAR and the invitation to join meetings of such importance.

IAATO was pleased to participate in the meeting organized by the United Kingdom at Wilton Park, United Kingdom in October 2007. Meetings of this nature are extremely valuable and enable interesting and creative discussions on current issues on tourism.

IAATO organized a 2-day meeting for IAATO Marine Operators, held in Los Angeles, California (February 4-5, 2008), to review the implications and lessons to be learned from the maritime incidents that occurred during the last two seasons. Twenty-one participants attended, including IAATO members and invited experts. See ATCM XXXI IP 81 *Summary Report and Outcomes of IAATO's Marine Committee Meeting on Vessel Operations and Safety* for the conclusions and action points.

IAATO sent a representative to the International Maritime Organization (IMO) Design and Equipment Subcommittee 51st meeting in February 2008 in Bonn, Germany. IAATO participated as a member of the Cruise Lines International Organization (CLIA) delegation.

IAATO hosted a 3-day Meeting on the *Future of Antarctic Tourism* in Miami, Florida, March 17-19, 2008. Thirty-nine participants attended, including nine governments, IAATO members, ASOC and invited experts. See ATCM XXXI IP 19 *Chairman's Report from the Miami Meeting (March 17-19, 2008) on Antarctic Tourism.*

Numerous other meetings took place between IAATO Members, IAATO Committees and their representative governments throughout the year. IAATO continues to maintain a policy of availability for discussions on topics of tourism with Treaty Parties and others.

4. Field Coordination

IAATO compiles seasonal documents including vessel call data, a comprehensive ship scheduler, emergency contact information, expedition leader schedules, and important instructional procedures for responsible operations. In addition there are over 150 files hosted on the IAATO website per season providing Members with appropriate guidelines and standard operating procedures in a single, easily accessible database.

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.

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 note concerns about potential environmental impacts, etc. At 1930 hrs local time expedition staff monitors agreed-radio frequencies to change itineraries if needed or report on ice conditions, weather or wildlife sensitivities. This constant cooperation and coordination between members is a key part of the IAATO Emergency Contingency Plan.

Details on IAATO's Emergency Medical Evacuation Response plan (EMER) have been presented at previous ATCM's. IAATO has had an effective plan in place since 1998.

5. Environmental Impact Assessment and Advance Notification

All IAATO members are required to submit either Environmental Impact Assessments (EIA's), Advance Notification and or operational documents that substitute for EIA's to their national authorities pending each countries legal processes. Not all governments require EIA's or yearly updates. IAATO is aware of operators this year that have neither submitted Environmental Impact Assessments, nor filed Advance Notification or Post Visit Reports.

A comparison of the various EIA's and the level of EIA's that individual operators are required to submit to their respective governments reflect some notable inconsistencies amongst documents and requirements. IAATO, however, endeavors to bridge gaps in documentation for ship-based Members, in particular to ensure there are mitigation measures and procedures in place to avoid environmental impacts.

As noted in all previous reports to the ATCM's, IAATO remains concerned about non-IAATO operator activities. The Association urges Contracting Parties to ensure that obligations of the Environmental Protocol are being met, Environmental Impact Assessments are being submitted, and detailed mitigation measures are included. IAATO is concerned that once the paperwork process is completed by non-IAATO operators to their respective governments (if at all), there is no supervision of management or follow-up to ensure that non-IAATO operators are following the requirements of activities specified by the Treaty Parties.

In the Environmental Impact Assessments of some non-IAATO operators, it is noticed that IAATO's documents are frequently referenced. IAATO encourages Parties to contact IAATO for verification when these occasions occur. It is not possible for non-IAATO operators to adhere to IAATO's Bylaws or have the breadth or understanding of the numerous operating strategies that IAATO has developed over the years. This is a service that IAATO provides for its member's operations.

6. Procedures to Prevent the Introduction of Alien Organisms

For the past 8 seasons, IAATO's Boot and Clothing Decontamination Recommended Guidelines and Translocation of Diseases Protocol have been in place and have proven to be effective.

7. Reporting of Tourism and Non-governmental Activities and Data Base

As noted previously in this paper, IAATO requires its Members to submit the ATCM's approved Post Visit Reports on conclusion of their activities.

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. IAATO would welcome information on the16+ non-IAATO operators who worked in Antarctica in the 2007-2008 season.

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.

IAATO is very concerned about tourists traveling on non-IAATO-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.

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, a presentation consisting of the IAATO 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 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 (crew) 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.

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 more. See ATCM XXXI IP 83 *Regulation of Antarctic Tourism—A Marine Perspective.*

9. Emergency Response Action and Contingency Planning

At IAATO's 18th General Meeting (Hobart, 2007) the IAATO Emergency Contingency Plan was reviewed. No changes were made, as the plan still proved to be effective during the 2007-2008 season. Following the incident involving the *M/S Explorer* the IAATO Emergency Contingency Plan is undergoing a further assessment and review.

The IAATO EMER plan has been in place for at least the past eleven 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.

Marine Incidents 2007-2008: Following the incident involving *M/V Fram* and loss of the *M/S Explorer*, IAATO is committed to ensuring that effective lessons can be learned from these incidents which will serve to enhance safety for all vessels operating in Antarctic waters. IAATO welcomes the synopsis produced by the Republic of Liberia, Bureau of Maritime Affairs which provides information on issues being considered under the investigation. IAATO notes that this synopsis addressed to the Antarctic Treaty Secretariat is not a preliminary report, nor does it bind the Liberian Administration to a final report. Additional information regarding the events surrounding both the loss of *M/S Explorer* and the incident involving *M/V Fram* can be found on *www.iaato.org.*

With respect to the loss of *M/S Explorer*, and understanding that consideration of many issues will need to be deferred until after the final report from the Republic of Liberia, Bureau of Maritime Affairs has been completed, IAATO has confined its discussions of the incident to issues related to the IAATO-wide response and consideration of potential enhancements to current management practices. It is recognized that while the IAATO Emergency Contingency Plan worked exceptionally well, there are always important lessons which can be learned from any such event. To this end, a meeting of IAATO marine operators took place in February, 2008 to discuss the IAATO response to the *M/S Explorer* incident and other issues related to vessel operations and safety. The report and outcome for this meeting are detailed in ATCM XXXI IP 81 *Summary Report and Outcomes of IAATO's Marine Committee Meeting on Vessel Operations, Safety and Related Issues* which summarizes the immediate steps which have been taken and the longer term steps which are under consideration. In addition to these deliberations, IAATO's Marine Committee will be analyzing in detail the final investigation report from the Liberian Administration, once completed, with the intention of assessing any further steps which may be taken to enhance vessel safety.

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 2007-2008 season, scientists, support personnel and equipment for 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.

Specific requests for logistic or other support can be made directly with Members or via 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, but updates continue to be received.

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 2007-2008 season IAATO appointed 4 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 had updated the "Checklist for Observers" form (version October 2007) for use last 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. With Thanks — Cooperation with National Programs, the Antarctic Treaty Parties and all Stakeholders

IAATO appreciates the opportunity to work cooperatively with Antarctic Treaty Parties, COMNAP, SCAR, CCAMLR, IHO/HCA, ASOC and others towards the long term protection of Antarctica. In particular we appreciate being able to contribute towards the ATCM agreed ICG's, other intersessional meetings etc.

The following provided assistance and operational guidelines to IAATO during the 2007-2008 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 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 Aerovias DAP and to Bellingshausen Station for accommodation and taking last minute requests during medevacs.
- 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.
- Chile, Russia, and Uruguay, United Kingdom (HMS *Endurance)*: for assisting by air, land and sea with regard to the *M/S Explorer* incident.

Appendices

A. Partial list of Donations for 2007-2008

B. Partial List of Science Support and Transport by IAATO Vessels in 2007-08

C. IAATO Membership List

D. Agreements from IAATO's 18th Annual Meeting

Appendix A

2007-2008 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. 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	$9,280 USD			$1,640 USD Allied Whale
Aurora Expeditions			$AUD 6,300	$AUD 19,000 Mawson's Hut Foundation. £500 Rockhopper Workshop
Celebrity Cruises/RCCL				£5000 Rockhopper Workshop
Elegant Cruises		$11,000 USD		
Hapag Lloyd Kreuzfahrten		€ 35,000	€6,902	€2,950 for South Georgia Heritage Trust, €2,100 Antarctic Research Trust, Switzerland £500 Rockhopper Workshop
Lindblad Expeditions				Oceanites USD $105,335
G.A.P Adventures		$8,689 USD		
Heritage Expeditions			$2,400 USD	Sealion Reasearch (Dr Martin Cawthorn) TBA
Hurtigruten ASA		*see note		*A total $30,166 USD was raised to be divided between Save the Albatross, South Georgia Heritage Trust and New Island Trust.
Cheesemans' Ecology Safaris		$2,882 USD		$3,332 American Bird Conservancy. $65 USD South Georgia Heritage Trust.
Peregrine Shipping		*see note		*$151,412 USD raised to Peregrine's *"Protect our Poles Fund"*. These funds are being dispersed to albatross related projects.
Quark Expeditions		$9,572 USD		$10,000 USD to South Georgia Heritage Trust, James Caird III replica
Polar Star Expeditions		$5,575 USD		
Saga Shipping Company			UK Antarctic Heritage Trust £6450.05 (revenue from onboard sales of AHT merchandise).	£14,502.15 for Hand in Hand Trust.
Fathom Expeditions				Conservation Alliance $500 USD
Pelagic Expeditions				Oceanites $250 USD

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 worthy of donations. 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 Reported as of May 2, 2008

Total Amount in USD= Approximately $510,000 USD (pending if and when it was converted to USD).

Break down by currency include:

USD 352,098

Australian dollars 25,300

Euros 46,592

British Pounds 26,452

Appendix B

Partial list of Science Support and Transport by IAATO Operators in 2007-2008

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	20 in total. 3 BAS personnel from Stanley to Grytviken 2 UKAHT personnel from Lockroy to Ushuaia 1 USAP personnel from Ushuaia to Palmer St. 2 USAP personnel from Palmer St. to Ushuaia 5 SGHT personnel from Ushuaia to S. Georgia 1 BAS researcher from Stanley to Grytviken 3 UKAHT personnel from Lockroy to Ushuaia 3 SGHT personnel from Grytviken to Stanley **See Acronym list below
Hapag Lloyd Kreuzfahrten	Transported three persons from New Island to Stanley. Transported two persons from Bellingshausen to Ushuaia.
Heritage Expeditions	Transport provided for 5 members of Tasmanian National Parks and Wildlife/Australian Antarctic Division & 4 members from the Department of Conservation. Provided transport for engine spares for a ship in the Ross Sea.
Lindblad Expeditions	Oceanites scientists are funded assisted and transported on all departures in the Antarctic. Ten persons in total were carried during the season.
Hurtigruten ASA	1 personnel Polish Antarctic Institute Ushuaia-Arctowski 5 personnel Polish Antarctic Institute Arctowski-Ushuaia 1 BAS scientist from King Edward Point (South Georgia) to Stanley 4 Norwegian personnel, South Georgia Heritage Trust Husvik-Stanley 2 Oceanites personnel Petermann Island-Ushuaia
Peregrine Shipping	7 members of Inspire/ 2041 and their gear from Ushuaia to Bellingshausen Station. Transported 2 Oceanites scientists and their equipment from Ushuaia to Petermann Island. 2 vessels participated in the “Aliens in Antarctica Program”.
Polar Star Expeditions	One BAS contractor from Grytviken to Stanley. Norwegian Polar Institute observer on board for PSE19NOV2007.
Quark Expeditions	One personnel transported from South Georgia to Stanley BBC videographer transferred from Ushuaia to Pleneau Island, to rendezvous with the yacht ‘Golden Fleece’. One member of base personnel from Arctowski to Ushuaia.
Fathom Expeditions	One berth provided for a US marine mammal scientist for cetacean research in affiliation with Dr Robert Williams and his field work.

Member	Program or Personnel Assisted
Aurora Expeditions	Re-supplied the Polish station of Arctowski for the Polish Academy of Science. At end of season returned to Arctowski to collect several scientists and equipment, returning them afterward to Poland. 9 scientists from the Australian Antarctic Division taken to Macquarie Island. One member of the Department of Conservation New Zealand transported from Sandy Bay, Enderby Island. One scientist from the Australian Antarctic Division from Bluff to Macquarie Island. One scientist returned to Hobart.
Cheesemans' Ecology Safaris	2 BAS geologists from the Barff Peninsula, South Georgia to Grytviken and back British Admiralty Marine Surveyors required assistance with their landing craft at Whalers Bay.
Oceanwide Expeditions	One member of BAS personnel from Stanley to Grytviken/Bird Island.
Hansa Kreuzfahrten GmbH	16 IPY-students from Bellingshausen Station, King George Island to Punta Arenas, Chile. 2 Scientists from University of Greifswald one voyage
Plantours and Partner GmbH	1 Argentine & 3 Russian scientists transported from Punta Arenas to Bellingshausen Station, King George Island.
Saga Shipping	Transported 6 large propane gas cylinders from Southampton to Port Lockroy, at the request of UKAHT.

Adventure Network International/Antarctic Logistics and Expeditions Science Support

Organization	No Aircraft	No. Visits	No. Personnel / Crew	Notes
BAS	6	7	11 / 9	Logistic support Lake Ellsworth Project; fuelling; accommodation; ITN Film crew
CECS	1		15 / 2	Science Traverse / Recovery Lakes radar
DGAC/International Police	1		2	Visit Patriot Hills
Edinburgh University / NERC		1	2	Shackleton Range Geological Survey
Ejército de Chile (Chilean Army)		1	3	Repair/Remove Army vehicles
FACh		1	2	Visit to Parodi Base
KORDI		1	5	Meteorite survey
NSF	7	9	13 / 41	LC-130 cargo flight; G-079 Science Group; Twin Otter support

Acronyms

BAS	British Antarctic Survey (United Kingdom)
CECS	Centro de Estudios Cientificos (Chile)
DGAC	Dirección General de Aeronáutica Civil de Chile
Ejército de Chile	Chilean Army
FACh	Fuerza Aérea de Chile
KORDI	Korean Polar Institute
NSF	National Science Foundation (United States)
NERC	National Environmental Research Council (United Kingdom)
SGHT	South Georgia Heritage Trust
UKAHT	United Kingdom Antarctic Heritage Trust
USAP	United States Antarctic Program

Appendix C

Membership List

The following is a list of IAATO Members during the 2007-2008 season and upcoming 2008-2009 season as of May 2, 2008. If a vessel is operating both in 2007-2008 and in 2008-2009 it is not noted. Notations are only made if it is either one year or the other. Due to changes in IAATO Bylaws the levels of membership have been noted for both operating seasons.

*Note below that Abercrombie and Kent operated the vessel *Explorer II*. During specific departures the name changed to either *Minerva* or *Alexander Von Humboldt*. It is the same vessel with different names all organized under Abercrombie and Kent's operation. During 2008-2009 the vessel will operate as *Minerva*.

In addition the *Fram, Nordnorge and Saga Ruby* occasionally carried less than 200 passengers on some departures. See ATCM XXXI IP 85 *Overview of Antarctic Tourism 2007-2008 Antarctic season and the Preliminary Estimates for 2008-09 Antarctic Season* for additional information.

	Nationality	Name of Company	Membership Level 2007-2008	Membership Level 2008-2009	Vessel (s), Aircraft or other
1. Operators of Ships that carry less than 200 passengers					
1	United States	Abercrombie and Kent	Full	Member	**Explorer II (2007-2008)* *Minerva (2008-2009)* *Minerva (2007-2008)* *Alexander Von Humboldt (2007-2008)*
2	Chile	Antarctic Shipping	Full	Member	*Antarctic Dream*
3	Argentina	Antarpply Expeditions	Full	Member	*Ushuaia*
4	Australia	Aurora Expeditions	Full	Member	*Polar Pioneer* *Marina Svetaeva*
5	United States	Clipper Cruise Line	Full	no longer operating	*Clipper Adventurer (2007-2008)*
6	United States	Cheesemans' Ecology Safaris	Full	Member	*Polar Star*
7	France	Compagnie Des Iles Du Ponant	Full	Member	*Le Diamant*
8	United States	Elegant Cruises	Full	Member	*Andrea*
9	Canada	Fathom Expeditions	Full	Member	*Ushuaia*
10	Canada	G.A.P Adventures	Full	Member	*Explorer & Polaris (2007-2008), TBA for (2008-2009)*
11	United Kingdom Overseas Territory	Golden Fleece Expeditions	Full	Member	*S/Y Golden Fleece*
12	Germany	Hapag Lloyd Kreuzfahrten	Full	Member	*Bremen*
13	New Zealand	Heritage Expeditions	Full	Member	*Spirit of Enderby*
14	United Kingdom	High Latitudes Limited	Provisional	Associate B1	*S/Y High Latitudes* *Billy Budd, Lady M*
15	France	Kotick Charters	Provisional	Member	*S/Y Kotick*
16	France	Latitude Ocean	Provisional	Member	*S/Y Vaihere*
17	United States	Lindblad Expeditions	Full	Member	*Nat. Geographic Endeavour* *Nat. Geographic Explorer (2008-2009)*
18	Argentina	Le Sourire Expeditions	Provisional	Member	*Le Sourire*
19	Australia	Moir Holdings Australia	Provisional	Associate B1	*Sarsen*
20	Australia	Ocean Expeditions	Full	Member	*Australis, Philos*
21	Netherlands	Oceanwide Expeditions	Full	Member	*Grigoriy Mikheev* *Aleksey Maryshev* *Professor Molchanov* *Professor Multanovskiy*
22	Germany	Oceanstar	Provisional	Associate B1	*Hanse Explorer*
23	Australia	Orion Expeditions	Full	Member	*Orion*
24	Canada	One Ocean Expeditions	n/a	Associate B1	*Professor Multanovskiy*
25	United Kingdom	Pelagic Expeditions	Full	Member	*S/Y Pelagic Australis* *S/Y Pelagic*
26	Australia	Peregrine Shipping	Full	no longer operating	*Akademik Ioffe* *Akademik Sergey Vavilov*
27	Norway	Polar Star Expeditions	Full	Member	*Polar Star*

Nationality		Name of Company	Membership Level 2007-2008	Membership Level 2008-2009	Vessel (s), Aircraft or other
1. Operators of Ships that carry less than 200 passengers					
28	United States	Quark Expeditions	Full	Member	*Kapitan Khlebnikov Lyubov Orlova* *Ocean Nova* *Akademik Shokalskiy* *Clipper Adventurer* *Akademik Ioffe (2008-2009)* *Akademik Sergey Vavilov (2008-2009)*
29	Netherlands	Rederij Bark Europa	Full	Member	*Bark Europa*
30	Chile	Sea, Ice and Mountain Expeditions	Provisional	Member	*S/Y Santa Maria*
31	Australia	Spirit of Sydney Expeditions	Provisional	Member	*S/Y Spirit of Sydney, S/Y Paratii 2 (2008-2009)*
32	United States	Silversea Cruises Ltd.	n/a	Associate B1	*Prince Albert II*
33	United States	Sterna Corporation	Provisional	Member	*S/Y Seal*
34	Canada	Students on Ice	Provisional	Member	*Ushuaia, Shokalskiy (2007-2008 only)*
35	Netherlands	Tooluka	Provisional	not planning to operate	*S/Y Tooluka (2007-2008)*
36	United States	Travel Dynamics International	Full	Member	*Corinthian II*
37	New Zealand	Waterline Yachts	Provisional	Associate B1	*S/Y Tiama*
38	Australia	Xplore Expeditions	Provisional	Member	*S/Y Xplore*
39	Netherlands	Waterproof Expeditions	Associate	Associate B1	*Grigoriy Mikheev* *Alexey Maryshev*
40	United States	Zegrahm Expeditions	Full	Member	*Clipper Adventurer (2007-2008), Le Diamant (2008-2009)*
2. Operators of Ships that carry 200-499 passengers					
1.	Netherlands & Germany	Club Cruise/Phoenix Reisen	n/a	Associate B1	*Alexander Von Humboldt (2008-2009)*
2	Germany	Hansa Kreuzfahrten	Full	Member	*Delphin*
3	Norway	Hurtigruten ASA	Full	Member	*Fram*
				Ship not operating	*Nordnorge (2007-2008)*
4	Germany	Peter Deilmann Reederei	Full	Member	*Deutschland (2009-2010)*
5.	United States	ResidenSea	Full	Member	*The World (2009-2010)*
6	United Kingdom	Saga Shipping	Full	Member	*Spirit of Adventure*
7	Germany	Plantours and Partner	Full	Member	*Vista Mar*
8	Germany	Transocean Expeditions	n/a	Associate B1	*Marco Polo*
9	United States	Voyages of Discovery	n/a	Associate B1	*Discovery*
3. Operators of Cruise Only Vessels that carry over 500 Passengers					
1	United States	Crystal Cruises	Full	Member	*Crystal Symphony (2008-2009)*
2	United States	Holland America	Full	Member	*Rotterdam (2007-2008)* *Amsterdam (2008-2009)* *Prinsendam*
3	United States	Princess Cruises	Full	Member	*Star Princess, Golden Princess (2008-2009)*
4	Japan	Peaceboat/Japan Grace	Provisional	Associate B1	*Topaz (2007-2008)* *Clipper Pacific (2008-2009)*
5	United States	Celebrity Cruises/RCCL	Provisional	Associate B1	*Azamara Journey (2007-2008)*
6	United Kingdom	P&O Cruises UK	Provisional	Associate B1	*Artemis (2007-2008)*
4. Organizers of Land-Based Operations					
1	United States	Adventure Network International/Antarctic Logistics and Expeditions	Full	Member	various aircraft
5. Organizers of Over-Flights					
1	Chile	Lan Airlines	Associate	Associate B2	Boeing 737-200
6. Organizers of Air/Cruise Operations					
1	Chile	Antarctica XXI	Full	Member	*Grigoriy Mikheev*

	Nationality	Name of Company	Membership Level 2007-2008	Membership Level 2008-2009	Vessel (s), Aircraft or other
7. Travel Companies in Support of Antarctic Tourism					
1	Australia	Adventure Associates	Full	Member	various
2	United States	Expeditions Inc./Polar Cruises	Full	Member	Various
3	Netherlands	Thika Travel	Full	Member	Various
4	United States	Adventure Life Journeys	Associate	Associate B2	Various
5	Australia	Antarctic Horizons	Associate	Associate B2	Various
6	Argentina	Antarctica Expeditions	Associate	Associate B2	Various
7	Argentina	Antarctica Ushuaia Turismo	Associate	Associate B2	Various
8	United States	Amazing Cruises and Travel, Inc.	Associate	Associate B2	Various
9	Belgium	Asteria Expeditions	Associate	Associate B2	Various
10	Netherlands	Beluga Expeditions & Adventures BV	Associate	Associate B2	Various
11	Chile	DMC Chile S.A.	Associate	Associate B2	BAE 100, day flights to King George Island with landings
12	United Kingdom	Exodus Travel	Associate	Associate B2	Various
13	Sweden	Expeditionskry-ssningar	Associate	Associate B2	Various
14	United States	Expeditiontrips.com	Associate	Associate B2	Various
15	United States	Galapagos Travel	Associate	Associate B2	Various
16	France	Grand Nord-Grand Large	Associate	Associate B2	Various
17	Australia	Intrepid Travel	Associate	Associate B2	Various
18	United Kingdom	Journey Latin America	Associate	Associate B2	Various
19	Germany	Kontiki Saga Reisen	Associate	Associate B2	Various
20	United States	Mountain Travel Sobek	Associate	Associate B2	Various
21	Australia	Natural Focus Safaris	n/a	Associate B2	Various
22	United Kingdom	Noble Caledonia	Associate	Associate B2	Various
23	Italy	Patagonia World s.r.l	Associate	Associate B2	Various
24	Australia	Peregrine Adventures	Associate	Associate B2	Various
25	Sweden	Polar Quest	Associate	Associate B2	Various
26	Sweden	Pura Adventura	Associate	Associate B2	Various
27	United States	Rannoch Adventures	Associate	Associate B2	Various
28	United States	Regent Seven Seas Cruises	Associate	Associate B2	Various
29	Argentina	Sintec Tur	Associate	Associate B2	Various
30	United States	Travel Wild Expeditions	Associate	Associate B2	*Ushuaia*
31	United Kingdom	Tucan Travel Pty Ltd	Associate	Associate B2	Various
32	United States	Victor Emanuel Nature Tours	Associate	Associate B2	Various
33	United States	Wilderness Travel	Associate	Associate B2	Various
34	United Kingdom	WildWings	Associate	Associate B2	Various
35	Australia	World Expeditions	Associate	Associate B2	Various
8. Ship Agents, Suppliers, Ground Operators-Types of Services					
1	Chile	C&O Tours	Associate	Affiliate	Ship and Ground Agent Services
2	United Kingdom Overseas Territory	The Falkland Islands Co. Ltd	Associate	Affiliate	Ship and Ground Agent Services
3	United States	Global Marine Networks LLC	n/a	Affiliate	Marine Communication Services-vessel tracking
4	Argentina	Navalia s.r.l. Port Agents and Ship Suppliers	Associate	Affiliate	Ship and Ground Agent Services
5	United Kingdom Overseas Territory	Sulivan Shipping Services	Associate	Affiliate	Ship and Ground Agent Services
6	Argentina	Tamic S.A.	Associate	Affiliate	Ship and Ground Agent Services
7	United States	Ship to Shore, Inc.	Associate	Affiliate	Clothing and Equipment for Expedition Travel
8	United Kingdom Overseas Territory	West Point Island	Associate	Affiliate	Landing Site
9	Argentina	Wouk Logistics	Associate	Affiliate	Ship Agent
10	Argentina	Sealand s.r.l Ship Agents and Suppliers	Associate	Affiliate	Ship Agent
11	New Zealand	ID Tours New Zealand	Associate	Affiliate	Ground Services and visitor information
9. Government, Tourism Offices, Heritage Trust					
1	Australia	Antarctic Tasmania	Associate	Affiliate	Assistance with planning, departures from Hobart
2	United Kingdom Overseas Territory	Falkland Islands Tourism	Associate	Affiliate	Assistance with planning visits
3	United Kingdom	UK Antarctic Heritage Trust	Associate	Affiliate	Heritage Trust
4	United Kingdom Overseas Territory	Falklands Conservation	Associate	Affiliate	Conservation

Appendix D

Partial list of Agreements from IAATO's 18th Annual Meeting, Hobart, Tasmania, 2007

1. IAATO Statement on Waste Management

The meeting discussed waste management practices in marine areas adjacent to the area of the Antarctic Treaty and agreed that:

1. For IAATO Member operated vessels, the restrictions on discharge into the sea from vessels that apply in the Antarctic Treaty area, pursuant to the Protocol on Environmental Protection to the Antarctic Treaty and MARPOL 73/78, should be extended northward to apply everywhere south of the Antarctic Convergence (Polar Front);*
2. the location of the Antarctic Convergence shall normally be deemed to be the line defining the northern limit of the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) set forth in Article I, paragraph 4 of the Convention,* unless measurement of variation in sea water temperature clearly establishes its location as further north;
3. with the long term objective of preventing any discharge of waste by IAATO Member operated vessels on Antarctic voyages, all such vessels capable of doing so are strongly urged to retain all waste on board for appropriate shore-side disposal; and
4. IAATO open lines of communication with the appropriate authorities in gateway ports aimed at promoting expansion of environmentally sound waste reception facilities.

2. IAATO Recommendation on Outboard Engine Use

In order to help preserve the quality of the environment, IAATO recommends that tour operators using spark ignited marine outboard engines in Antarctica comply with California emission standards, star label 3 and above.

See website: *http://www.arb.ca.gov/msprog/offroad/cert/cert.php*

Engines meeting this standard should be phased in over a three-year period as older engines need replacement.

3. Agreed General Statements

1. To relieve pressure on heavily visited sites, where practicable, operators should be encouraged to minimize direct reference to specific landing sites (e.g. Deception Island) in marketing material.

* The Antarctic Convergence shall be deemed to be a line joining the following points along parallels of latitude and meridians of longitude: 50°S, 0°; 50°S, 30°E; 45°S, 30°E; 45°S, 80°E; 55°S, 80°E; 55°S°, 150°E; 60°S, 150°E; 60°S, 50°W; 50°S, 50°W; 50°S, 0°.

2. Members are discouraged from digging swimming holes along the shores of Port Foster, Deception Island. If doing so then holes should only be dug in the littoral zone, and filled in immediately afterwards.
3. IAATO encourages its Members to start to consider their carbon footprint with a view to measuring carbon footprint and to look for ways to reduce our emissions.

Report by the International Hydrographic Organization (IHO) on "Cooperation in Hydrographic Surveying and Charting of Antarctic Waters"

Introduction

The International Hydrographic Organization (IHO) appreciates the opportunity to brief the 31st 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 since ATCM XXX.

The IHO has continued to make great efforts in conjunction with several other international organizations to raise awareness on the importance of improving the priority assigned to conduct hydrographic surveys in Antarctica. It has to be noted the strong support received from these international organizations in this endeavour.

Antarctica continues to be of high concern to the IHO and therefore its Hydrographic Commission on Antarctica has been tasked to do its best in coordinating and cooperating with all principal actors, aiming at safety of life at sea, safety of navigation, the protection of the marine environment and the progress in marine scientific research in Antarctica.

The IHO Hydrographic Commission on Antarctica

The 7th Meeting of the IHO Hydrographic Commission on Antarctica (HCA) took place at the Centro Naval in Buenos Aires, Argentina, 3-5 October 2007 organized by the Servicio de Hidrografia Naval.

The Chairman, Capt Gorziglia (IHB Director) opened the meeting welcoming the 13 HCA Member States present (Argentina, Australia, Brazil, Chile, Ecuador, France, Germany, Greece, India, Italy, Norway, United Kingdom and USA) and observers from Peru, Antarctic Treaty Secretariat, COMNAP, IAATO and SCAR. It has to be highlighted that since the last ATCM, Peru and USA have signed the Statutes of the HCA and therefore have become full members of the Commission, the total number of which is now 19. (Annex A)

At the meeting, the Commission considered different matters including the issue of membership; the status of the action list agreed at the last meeting; the outcome of ATCM XXX; the IHO 5 Year Work Program approved by the XVII International Hydrographic Conference in May 2007 and the status of nautical charting.

Taking advantage of the venue, the AT Executive Secretary offered an excellent presentation on the activities and work coordinated by the Secretariat and hosted a social event for all HCA participants at the ATS headquarters.

1. HCA Membership

The Commission, after reviewing the situation, decided to invite those IHO Member States that are not yet HCA members and that comply with the requisites, to consider joining the HCA, especially those under the condition of "pending confirmation of membership". That is the case of Japan, Rep. of Korea, Poland, Ukraine and Uruguay.

It is reminded that according to HCA Statutes, "Membership of the Commission is open to any IHO Member State whose government has acceded to the Antarctic Treaty and which contributes resources and/or data to IHO INT Chart coverage of Region M (south of parallel 60°S) and which becomes a signatory to the Statutes of the Commission".

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.

One of the topics that generated an interesting discussion was the Application of SOLAS Convention, Chapter V, Regulation 9, in Antarctic waters. It seems that this is an ongoing matter, as the report submitted to ATCM XXX seeks the ATS position as regard to who assumes the obligation/ responsibility for the provision of hydrographic services in Antarctica, an issue that does not seem to have been discussed in this forum. The Commission has been discussing the applicability of SOLAS V Regulation 9 in the Antarctic Treaty area that requires contracting governments to arrange for the provision of hydrographic services. A better understanding is only expected after some precisions are made by the ATCM. See Annex B.

3. Outcome of the 30th ATCM

In brief, the IHO report was very well received at the 30th ATCM and the proposal for a seminar to be organized during the 31st ATCM to raise awareness on the importance of hydrographic activities in Antarctica was welcomed. The HCA paid close attention to this initiative and its Members have been working hard in the preparation of this event, the program of which is provided in Annex C. It will be held on Monday 09 June.

Following comments provided by SCAR emphasizing that high quality bathymetric maps are needed not only for navigation but also for science it was 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. This is strongly supported by the IHO, and the HCA is exploring ways to improve coordination in this sense, mainly through the IBCSO.

Also COMNAP stressed that accurate charts are essential and that there was an urgent need to uphold, and where necessary clarify, responsibilities of both government and private sector operators. Several Parties agreed that the work of this IHO HCA Commission was particularly important and that resources and funding should be provided to undertake hydrographic charting in Antarctica.

It was made clear that it was urgent to assign a high priority to hydrographic survey activities.

4. IHO 5 Years Work Program

The HCA examined the approved IHO 5 Years Work program an fully agree with the plan to have HCA meetings each year as it was felt vital to keep the pressure on the coordination required to improve the availability of INT charts covering Antarctica.

The HCA also noted that the plan considers not only the provision of the above mentioned seminar, but similar events in association with COMNAP and IAATO in the following years, 2009 and 2010, respectively.

5. Status of Nautical Charting

The Commission reviewed the progress made on INT chart scheme and production in Region M, where out of the 100 charts which form the scheme, 59 had been published as of April 2008. Especial attention was given to the 33 charts for which there was no information on the progress so far reached. On one side we have experienced that some HOs have Antarctic INT Charts in a very low priority and on the other, we have some charts for which there are no volunteers to compile and produce them. The HCA is taking some actions in order to solve these shortcomings.

The Commission approved a draft ENC scheme submitted by the IHB for small scales in Antarctica. The producer HO will normally be that of the INT chart on which the ENC has been based. Also a medium scale ENC scheme was examined that today is in the revision process before its adoption. Finally the Commission agreed on the need to develop a large scale ENC scheme, task that is in progress at the IHB. See Annex D.

6. Next HCA Meeting

Following the kind invitation from the Directorate of Hydrography and Navigation from Brazil, the Committee decided to accept the invitation and agreed to have the 8th HCA meeting in Niteroi, Brazil, 06-08 October 2008. We take this opportunity to invite the Executive Secretary of the Antarctic Treaty Secretariat to attend the HCA Meeting.

Conclusions

1. There is a good reciprocal understanding between the IHO HCA Members and other international organizations interested in Antarctica. The ATS needs to consider adopting some coordination at a governmental level aiming at assigning a much higher priority to hydrographic survey activities and chart production. Also consideration should be given to the appropriateness of adopting the SOLAS V Regulation 9 concept, so that hydrographic and cartographic activities progress not only on a voluntary basis.
2. There has been a very low progress in the production and availability of INT Charts, mainly due to the lack of new surveys. The only way to revert this process is enhancing the priorities of hydro-cartographic activities.
3. The IHO through its HCA has prepared a set of special presentations in the form of a Seminar, aimed at sharing with the 31st ATCM Delegates the concern of the hydrographic community derived from the low or almost non existent hydro-cartographic activity in Antarctica.

Recommendations

It is recommended that the 31st ATCM:

1. To take note of the IHO Report.
2. To take action as regard to the conclusions in the report.

Monaco, April 2008.

Annexes:

A: HCA Membership Situation
B: Discussion on SOLAS V
C: Program of the Seminar
D: INT Chart Present Production Status

ANNEX A

HCA MEMBERSHIP SITUATION

(April 2008)

MEMBERS:

Argentina
Australia
Brazil
Chile
China
Ecuador
France
Germany
Greece
Italy
India
New Zealand
Norway
Peru
Russian Federation
South Africa
Spain
United Kingdom
USA

PENDING CONFIRMATION OF MEMBERSHIP:

Japan
Korea (Rep. of)
Poland
Ukraine
Uruguay

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

Discussion paper on SOLAS V

The Safe of Life at Sea (SOLAS) Convention), Chapter V "Safety of Navigation", Regulation 9 "Hydrographic Services" provides a clear rules to Contracting Governments to SOLAS on what it is expected from them as regard to the collection, compilation, publication, dissemination and keeping up to date nautical information required for safe navigation.

The text of Reg. 9 (provided as an Appendix) seems to refer to the geographic areas of which a Contracting Government is responsible for, let us say as an example, its own territorial sea, its ports, etc.

This Regulation clearly establishes the responsibility for the provision of hydrographic services with Contracting Governments that must undertake to arrange, cooperate, coordinate and ensure these services. It is evident that the preparation and issuing of nautical charts and other publications is the responsibility of the Contracting Governments, but how can this concept be applied in Antarctica where Contracting Governments to SOLAS do not own territorial waters, ports, etc.?

According to Reg. 9 Contracting Governments are urged to provide these services but due to the different nature of Antarctica, the provision of hydrographic services in that part of the world is based only on voluntary basis. Under this perspective we might find that nobody feels responsible for conducting hydrographic surveys and charting the Antarctic waters, and in fact all those executing surveys and producing charts have neither obligation nor a commitment to do so.

In the rest of the world we have a Contracting Government that shall undertake these activities, and the mariner is full aware of that, but what is the situation in Antarctica? Who is responsible for surveying Antarctic waters? Is there any body feeling to have the responsibility for the provision of nautical charts?

The IHO/HCA coordinates the efforts mainly to speed up the availability of INT Charts in Antarctica; avoid duplication and standardize the processes and final products. The result is that on voluntary basis some areas are considered, then surveyed and charted but is the HO's country that produced a nautical chart liable for this nautical chart? The dimension seems to be different whether somebody acts as "volunteer" or has the obligation to provide a service. The fact that there is no clear indication on who shall provide hydrographic services in Antarctica is a problem that needs to be addressed.

Just playing with words we can organize a couple of sentences to illustrate the situation. For example:

According to SOLAS Reg. 9, the responsibility for providing hydrographic services of the Port of Valparaiso is with the Contracting Government : Chile

According to SOLAS Reg. 9, the responsibility for providing hydrographic services of the Deception Island is with the Contracting Government : xxxxxx (there is none)

As in principle none of the AT Members feels obliged to provide hydrographic services for a particular area of Antarctica, it is likely that it will take too long before the INT Chart scheme is completed. But that is not the end, as charts need to be kept updated.

Can the Antarctic Treaty System take advantage of the concept under Regulation 9 in order to enhance the provision of hydrographic services in Antarctica?

Appendix

SOLAS CHAPTER V

Safety of Navigation

Regulation 9

Hydrographic services

1 Contracting Governments undertake to arrange for the collection and compilation of hydrographic data and the publication, dissemination and keeping up to date of all nautical information necessary for safe navigation.

2 In particular, Contracting Governments undertake to co-operate in carrying out, as far as possible, the following nautical and hydrographic services, in the manner most suitable for the purpose of aiding navigation:

- to ensure that hydrographic surveying is carried out, as far as possible, adequate to the requirements of safe navigation;
- to prepare and issue nautical charts, sailing directions, lists of lights, tide tables and other nautical publications, where applicable, satisfying the needs of safe navigation;
- to promulgate notices to mariners in order that nautical charts and publications are kept, as far as possible, up to date; and
- to provide data management arrangements to support these services.

3 Contracting Governments undertake to ensure the greatest possible uniformity in charts and nautical publications and to take into account, whenever possible, relevant international resolutions and recommendations.*

4 Contracting Governments undertake to co-ordinate their activities to the greatest possible degree in order to ensure that hydrographic and nautical information is made available on a world-wide scale as timely, reliably, and unambiguously as possible.

* Refer to the appropriate resolutions and recommendations adopted by the International Hydrographic Organization.

ANNEX C

Program of the Seminar
Importance of Hydrographic Activities in Antarctica
International Hydrographic Organization (IHO)
Hydrographic Commission on Antarctica (HCA)

Background

The Antarctic Treaty System has recognized the traditional role played by the International Hydrographic Organization (IHO) through its Hydrographic Commission on Antarctica, in contributing to the safety of navigation, the protection of the Antarctic environment and dependent and associated ecosystems, including scientific purposes.

The international cooperation and coordination between countries which undertake hydrographic surveys and nautical charting of Antarctic waters is absolutely necessary to provide mariners and scientists with data, information, products and services to minimize the risks associated with their activities.

However set against the increasing numbers of people visiting and working in the region for a range of different activities, the progress so far reached by Hydrographic Offices under the umbrella of the IHO/HCA in the production of a reliable and updated set of nautical charts is far from being appropriate. This is in terms of coverage and fidelity to modern survey standards.

In keeping with the Antarctic Treaty no single nation has specific responsibility for charting but all are stakeholders with an international commitment to the safety of life at sea (SOLAS). Accordingly assigning a higher priority to the hydrographic activities, at national levels in each office, monitored and supported by the IHO through the HCA has been identified as one of the most relevant measures that could contribute to improve safety to navigation in Antarctic waters.

ATCM XXX accepted the offer of IHO/HCA to organize and deliver a Seminar at the 31st ATCM to highlight the important role and contribution hydrography is called play as regard to the objectives of the Antarctic Treaty System.

Objective

To raise awareness at the politico-strategic level on the importance of hydrographic activity in the Antarctica, to achieve a better understanding in the ATCM of the risks presently attached to the mariner with the status of charting in the region and what the same data also contributes to scientific endeavour, and to seek support on ways to improve the situation.

Programme

The Seminar will be delivered on Monday 09 June 2008 for a period of two hours, as part of the Programme of the 31st ATCM.

The content includes Opening Remarks (5 minutes) and 5 Presentations of 20 minutes each, the details of which are provided in the Annex. There will be a 15 minutes period for questions from the audience.

A CD ROM with all Presentations will be provided to participants and to the AT Secretariat. ATS and IHO might wish to post Presentations in their respective websites to facilitate access by interested parties.

As an outcome of the Seminar it is expected that a concrete proposal/recommendation will be prepared and supported by several AT Member State and submitted to ATCM XXXI for consideration and approval.

Monaco, 06 February 2008

Hugo Gorziglia
Captain – Chilean Navy
IHB Director & HCA Chairman

Appendix

PRESENTATIONS

Opening Remarks: Hydrography in the Antarctica.
Speaker: Hugo Gorziglia, Captain Chilean Navy, former Chilean Hydrographer, Director IHB and Chairman HCA
Content: What is hydrography? Why we need hydrography? What are and why exist the IHO and HCA and what they have been doing. INT Chart Scheme. SOLAS and the Antarctica.

First Presentation: Hydrography in Antarctica.
Speaker: Ian Moncrieff, Rear Admiral, United Kingdom National Hydrographer, former Commanding Officer of HMS Endurance (the RN Antarctic Patrol Ships) and former Commander of British Forces in the South Atlantic.
Content: Antarctic Navigation and its risks. Extant of present coverage in and around the peninsula. Present UK approach to charting priorities based on observed routes of IATO vessels and support to BAS. Work done to date and future work plans. Case studies. Liabilities, Paucity of SAR. How hydrography knowledge reduces the risk

Second Presentation: Hydrography and its contribution to the protection of the marine environment in Antarctic waters.
Speaker: Manuel Catalán, Rear Admiral Spanish Navy, Scientist, Technical Secretary of the Spanish Polar Committee and Chairman of SHIPOPS. (Presentation as expert not institutional).
Content: Role of hydrography in Antarctic operations. Marine accidents and its impact on the marine environment. What is needed to operate with greater safety?

Third Presentation: Hydrography and its contribution to Antarctic Sciences.
Speaker: Dr Hans-Werner Schenke, Alfred Wagener Institute for Polar and Marine Research, Represent Germany, IOC/IHO GEBCO, SCAR at the HCA, Chairman of SCUFN and IBCSO.
Content: The connection between hydrography and science. Mutual benefit. Scientific projects supported by bathymetric and remote sensing data. Safe access to remote research areas. Data exchange and Data Centers.

Fourth Presentation: Hydrographic and Cartographic Status in the Antarctica.
Speaker: Yves Guillam, Ingénieur en chef des études et techniques d'armement, Head of Plans, Policy and External Relations, SHOM.
Content: The existing situation based mainly on S-55. Provision of conclusions and clear picture of the problem. Characteristics of the data and difficulties in improving chart production.

Fifth Presentation: Practical initiatives to improve hydrography and nautical cartography in Antarctica.
Speaker: Rod Nairn, Captain Australian Navy, Australian Hydrographer, Vice Chair of HCA.
Content: A resume of the problems based on previous presentations and the offer of conclusive measures that could be put in practice by ATCM to improve the situation. The role of ATCM and IHO, to finally offer a sound resolution for consideration and adoption by the 31st ATCM.

Monaco, 06 February 2008.

ANNEX D

INT Chart Present Production Status (April 2008)

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	*Not assigned*		
11	9000	Terra Nova Bay to Moubray Bay	500 000	IT		
12	9001	Cape Royds to Pram Point	60 000	NZ	2007	
13	9002	Scientific Stations McMurdo and Scott	5 000	NZ	2007	
14	9003	Approaches to Scott Island	75 000	NZ	Proj. 2008	
		Plan A – Scott Island	25 000			
15	9004	Terra Nova Bay	250 000	IT	2007	
16	9005	Da Capo Russell a Campbell Glacier Tongue	50 000	IT	2000	
17	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			
18	9007	Possession Islands	60 000	NZ	2003	2006
19	9008	Cape Adare to Cape Daniell	200 000	NZ	2003	2006
20	9009	Cape Hooker to Coulman Island	500 000	NZ	2004	
21	9010	Matusevich Glacier to Ob' Bay	500 000	RU	2000	
22	9011	Mys Belousova to Terra Nova Island	200 000	RU	2000	
		Plan A – Leningradskaya Station	1 000			
23	9012	Balleny Islands	300 000	NZ	2006	
		Continuation: Balleny Seamount	300 000			
24	9014	Approaches to Commonwealth Bay	25 000	AU	2002	
		Plan A – Boat Harbour	5000			
25	9015	Du Glacier Dibble au Glacier Mertz	500 000	FR	2004	

No.	INT No.	Name of the INT Charts	Scale	Producer	Status	
					Publication	N. Edition
26	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			
27	9017	De l'Ile Hélène au Rocher du Débarquement - Archipel de Pointe Géologie	20 000	FR	2002	
		Plan A – Archipel de Pointe Géologie	7500			
28	9020	Mill Island to Cape Poinsett	500 000	AU	1998	
29	9021	Approaches to Casey	50 000	AU	1999	Proj. 2010
		Plan A – Newcomb Bay	12 500			
30	9025	Davis Sea	500 000	RU	1999	
31	9026	Approaches to Polar Station Mirny	200 000	RU	1999	
32	9027	Road Mirny	10 000	RU	1999	
33	9030	Sandefjord Bay to Cape Rundingen	500 000	AU	1992	
34	9031	Cape Rundingen to Cape Filchner	500 000	AU	2002	
35	9032	Approaches to Davis Anchorage	12 500	AU	2003	
36	9033	Cape Rouse to Sandefjord Bay	500 000	AU	1991	Proj. 2008
37	9035	Magnet Bay to Cape Rouse	500 000	AU	1993	Proj. 2008
38	9036	Approaches to Mawson	25 000	AU	2007	
		Plan A - Horseshoe harbour	5000			
39	9037	Gibbney Island to Kista Strait	25 000	AU	Proj. 2009	
40	9040	Alasheyev Bight to Cape Ann	500 000	RU	2000	
41	9041	Alasheyev Bight	100 000	RU	1999	
42	9042	Approaches to Molodezhnaya Station	12 500	RU	1999	
43	9045	Vestvika Bay	500 000	JP		
44	9046	Eastern Part of Ongul	100 000	JP		
45	9047	Western Part of Ongul	10 000	JP		
46	9050	Sergei Kamenev Gulf to Neupokojevabukta	500 000	RU	1999	
47	9051	Approaches to Leningradbukta	200 000	RU	1998	
48	9055	Muskegbukta Bay to Atka Gulf	500 000	DE		
49	9056	Approaches to Dronning Maud Land	300 000	ZA	2005	
50	9057	*To be determined*	200 000	DE		
51	9060	Cape Roule to Farell Bay	500 000	RU	2000	
52	9061	Approaches to Halley Base	200 000	GB	2005	
53	9062	*To be determined*	200 000	*Not assigned*		

No.	INT No.	Name of the INT Charts	Scale	Producer	Status	
					Publication	N. Edition
54	9100	Isla Marambio	25 000	AR		
		Plan A – Base aéra Marambio	5000			
55	9101	Peninsula Trinidad	10 000	AR	Proj. 2013	
		Plan A – Base Esperanza, Caleta Choza	5000			
56	9102	Estrecho Bransfield, Rada Covadonga y Accesos	10 000	CL	2003	
57	9103	Gerlache Strait	50 000	CL		
58	9104	Gerlache Strait	50 000	CL		
59	9105	Bismarck strait, Approaches to Arthur Harbour	25 000	*Not assigned*		
		Plan A – Arthur Harbour	10 000			
60	9106	Argentine Islands and Approaches	60 000	GB	1996	
		Plan A – Argentine Islands	15 000			
61	9107	Pendleton Strait etc.	50 000	GB		
62	9108	Hanusse Bay to Wyatt Island	50 000	CL		
63	9109	British Antarctic Survey Base Rothera	25 000	GB	1999	
64	9110	Adelaide Island, South Western Approaches	30 000	CL		
65	9111	Bahía Margarita	25 000	AR	Proj. 2012	
66	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			
67	9113	Plans in Elephant Island		GB		
		Plan A – Cape Lookout	50 000			
		Plan B – Cape Valentine	10 000			
		Plan C – Point Wild	10 000			
68	9114	Antarctic Sound		*Not assigned*		
		Plan A – Fridtjof Sound	50 000			
		Plan B – Brown Bluff	10 000			
		Plan C – Gourdin Island	15 000			
69	9115	Active Sound	50 000	AR		
70	9116	Plans in Paulet and Danger Islands		GB ?		
		Plan A – Paulet Island	50 000			
		Plan B – Danger Islands	50 000			
71	9120	Isla Decepción	50 000	AR	2004	2006
		Plan A - Fuelles de Neptuno	12 500			

No.	INT No.	Name of the INT Charts	Scale	Producer	Status	
					Publication	N. Edition
72	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			
73	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			
74	9123	Caletas en Bahía Fildes		CL	2007	
		Plan A – Caleta Potter	10 000			
		Plan B – Caleta Ardley	10 000			
		Plan C – Caleta Marian	10 000			
75	9124	Bahia Fildes	30 000	CL	2007	
76	9125	Baia do Almirantado	40 000	BR & PE	Proj. 2010	
		Plan A – Ensenada Martel	20 000			
		Plan B – Estação Arctowski	10 000			
		Plan C – Ensenada Mackellar	15 000			
77	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			
78	9131	Crystal Sound	75 000	GB ?		75 000
79	9132	Grandidier Channel	75 000	GB ?		75 000
80	9140	Islas Orcadas del Sur	150 000	AR		
81	9141	Approaches to Signy Island	50 000	GB	2006	
		Plan A – Borge Bay and Approaches	10 000			
82	9142	Bahía Scotia	10 000	AR	2006	
83	9150	Islas Elefante y Clarence	200 000	BR	1999	
84	9151	De Isla De Jorge a Isla Livingston	200 000	CL	Proj. 2012	
85	9152	De Isla Livingston a Isla Low	200 000	CL	Proj. 2012	
86	9153	Church Point to Cape Longing including James Ross Island	150 000	GB & AR	1999	2004
87	9154	Joinville Island to Cape Ducorps and Church Point	150 000	GB & AR	1996	2002
88	9155	Estrecho Bransfield - Rada Covadonga a Isla Trinidad	150 000	CL	2003	
89	9156	Archipiélago de Palmer, de Isla Trinidad a Isla Amberes	150 000	AR	2007	
90	9157	Gerlache Strait	150 000	CL		

No.	INT No.	Name of the INT Charts	Scale	Producer	Status	
					Publication	N. Edition
91	9158	Anvers Island to Renaud Island	150 000	GB	2001	2003
		Plan A – Port Lockroy	12 500			
92	9159	Pendleton Strait & Grandidier Channel	150 000	GB	Proj. 2009	
93	9160	Crystal Sound	150 000	GB	Proj. 2009	
94	9161	Matha Strait to Pourquoi Pas Island	150 000	CL		
95	9162	Adelaide Island	150 000	CL	Proj. 2010	
96	9163	Marguerite Bay; Rothera	150 000	GB	Proj. 2008	
97	9164	Margarita Bay	150 000	CL	Proj. 2010	
98	9170	Islas Shetland y Mar de la Flota	500 000	AR	1997	
99	9171	Brabant Island to Adelaide Island	500 000	GB		
100	9172	Matha Strait to Rothschild Island	500 000	RU	1999	

Resume: 59 out of 100 INT Charts have been produced, as of April 2008, i.e. 59%.

Report Submitted to ATCM XXXI
by IUCN

The International Union for Conservation of Nature

IUCN extends its formal thanks to the Government of the Ukraine for hosting this 31st Antarctic Treaty Consultative Meeting (ATCM).

With its long standing interest in Antarctic conservation, IUCN welcomes the opportunity to assist Parties in their deliberations at this meeting. In this submission, IUCN focuses on a few areas of importance with respect to the conservation of the Antarctic environment.

(1) Antarctic and Southern Ocean Marine Protected Areas

IUCN again welcomes steps taken at recent meetings under the Antarctic Treaty System with respect to protected areas in general and Marine Protected Areas in particular. IUCN especially welcomes the progress made by CCAMLR and the CEP towards development of a scientific basis for the identification of representative areas for protection through the process of bioregionalization. Indeed, we believe that, Bioregionalisation will also assist Parties to the Protocol on Environmental Protection of the Antarctic Treaty to fulfil their obligation under Annex V, Article 3 of the Protocol.

The Workshop on Bioregionalization of the Southern Ocean held in Brussels, Belgium from 13 to 17 August 2007, hosted by the Belgium government, was a very important step in this process and we are pleased to see that CCAMLR-XXVI and the Scientific Committee have endorsed the results of the workshop. As observed by the Scientific Committee, the results from the Workshop are a primary foundation for understanding the biological and physical heterogeneity in the Southern Ocean, which can be used by CCAMLR and the CEP to inform spatial management.

IUCN welcomes the constructive input and support provided by the CCAMLR Scientific Committee last year to the management plan of the proposed ASMA for South-west Anvers Island and Palmer Basin, as this is a valuable example of the important cooperation between CCAMLR and the ATCM/CEP. IUCN further urges close and continued cooperation between ATCM-related and CCAMLR-related authorities to use the outcomes of the 2007 Bioregionalisation Workshop in developing protected areas and to achieve the conservation objectives of both CCAMLR and the ATCM/CEP.

At the same time, ATCM/CEP can and should continue to consider its own requirements and priorities for developing a scientific approach to the protection of the environment. Parties need to broaden the area of focus to address other areas of priority interest under the Annex V of the Protocol on Environmental Protection. Under Article 3.2 of Annex V, Parties are to seek to identify a range of areas as Antarctic Specially Protected Areas (ASPAs) within a systematic environmental-geographic framework. These are to include:

- areas kept inviolate from human interference so that future comparisons may be possible with localities that have been affected by human activities;
- representative examples of major terrestrial, including glacial and aquatic, ecosystems and marine ecosystems;
- areas with important or unusual assemblages of species, including major colonies of breeding native birds or mammals;
- the type locality or only known habitat of any species;
- areas of particular interest to on-going or planned scientific research;

- examples of outstanding geological, glaciological or geomorphological features;
- areas of outstanding aesthetic and wilderness value;
- sites or monuments or recognised historic value; and
- such other areas as may be appropriate to protect outstanding environmental, scientific, historic, aesthetic or wilderness values.

The Information Paper submitted by the United Kingdom (IP3) describes a very practical approach for identifying important marine areas for conservation, an approach based on a systematic conservation planning methodology. ATCM would benefit from endorsing this approach, welcoming the pilot study the United Kingdom plans to test this methodology. Other Members could conduct similar studies to contribute to the development of best practice guidance through identifying key decisions and datasets that would be required.

In addition to development of this methodology, there is also a need to continue actual identification and designation of sites where scientific information already exists or precaution dictates that action be taken to protect the important values identified in Article 3.2 of Annex V. The impacts of climate change are likely to increase the vulnerabilities of species, and make imperative in the interest of science the need for areas kept inviolate from human activities to enable future comparisons between direct human activities and those of climate change. Also, as fisheries, tourism, shipping, research and bioprospecting increase in area or effort, it is important to identify in advance areas of importance to ongoing scientific research, areas with important or unusual assemblages of species, unique or rare habitats, as well as areas of outstanding aesthetic and wilderness values. These areas may be extremely vulnerable to human impacts, and unlike representative areas, are neither replaceable nor substitutable.

At a global level, the IUCN World Commission on Protected Areas (WCPA) continues to work on promoting the establishment and effective management of worldwide, representative networks of marine protected areas. The WCPA-Marine program provides strategic advice to policy makers, and works to strengthen capacity and investment in protected areas. Regional networks within WCPA-Marine include a network for Antarctica, which aims to build communications between members worldwide, and to share knowledge on tools and information for protected area management. Further information on the work of WCPA-Marine can be found at: *http://www.iucn.org/themes/wcpa/biome/marine/marineprogramme.html*.

The development of MPAs as a management and conservation tool in Antarctica and the Southern Ocean would enable the next step towards true ecosystem management of one of the earth's last relatively pristine large marine ecosystems. This would promote the ATCM's role in preserving Antarctica for peace and science and could serve as perhaps the best model for other areas of the world's oceans.

(2) Climate Change

Climate change is now one of the major drivers of change in Antarctica and its surrounding marine ecosystems. IUCN welcomes the adoption of ATCM XXIX Resolution 3 (2007) on Long-term Scientific Monitoring and Sustained Environmental Observation in Antarctica which should help to increase the capacity to detect, understand and forecast the impacts of climate change.

Given the scale, intensity and rapidity of changes currently underway, and bearing in mind that some of the reports before us indicate that climate-induced changes in Antarctica and the Southern Ocean are occurring at a higher rate than one might expect from IPCC projections, IUCN urges that Parties act now to adopt an extremely precautionary approach to the management of human activities,

to reduce their own carbon footprints with respect of their Antarctic activities and also to begin to reflect on how it may be possible to speed up response times so that new information about the impacts of climate change can be rapidly incorporated into ATCM decisions on the management of Antarctic and its surrounding marine environment. IUCN suggests that as part of the process of self evaluation, the ATCM consider how it may best respond to these challenges.

It is important to note that with regard to climate change, actions to conserve the terrestrial environment should not be taken in isolation to the marine environment. Antarctic Climate monitoring should attempt to improve our understanding of the connections between changes in the physical environment of Antarctica and the Southern Ocean.

(3) Shipping

IUCN welcomes the decision of IMO MEPC to ask the Bulk Liquids and Gases (BLG) Subcommittee to prepare amendments to MARPOL Annex I with respect of heavy grade oil on ships in the Antarctic Special Area with a target for completion of work by 2010. IUCN invites governments to support this work and take steps themselves to require that expeditions organized in or proceeding from their territory avoid the use of heavy grade oil fuels within the Antarctic Treaty area.

IUCN notes however, that the decision regarding heavy grade oil is but one of a range of measures sought to address the increasing number of environmental and safety issues raised by growing maritime traffic in the region. It is time for Antarctic Treaty Parties to consider strengthening the restrictions on the discharge of sewage, graywater, discharges of oily substances and other wastes found in Annex IV of the Protocol and to work within IMO to establish additional mandatory rules for vessels operating in the Southern Ocean, including ice-strengthening standards, hull fouling; and establishment of vessel traffic monitoring and information system for Antarctic vessels. These issues are well laid out in the information paper on Southern Ocean Vessel Issues (MEPC 57/ INF.19) submitted by Friends of the Earth to the 57th session of MEPC in 2008.

In addition, IUCN remains of the view that it is time to review again 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. Again, 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.

(4) Tourism

The number of visits by tourists has continued to grow substantially in recent years, with the number of tourists landing almost tripling since the beginning of the decade. It is past time to review the impacts of tourism. Whereas the impacts of small numbers of tourists may have been minor or transitory, the overall increase and growing diversity of tourism may have impacts that are more than minor or transitory at certain sites or through certain activities. It is time to develop additional measures so that such impacts can be avoided or minimised and monitored.

Two areas may require priority consideration: 1) the construction or use of buildings or other permanent infrastructure for tourism in Antarctica 2) the impacts of large cruise ships and other large vessels.

The construction of any building or permanent infrastructure in Antarctica is by definition likely to 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. The conversion of science facilities into tourism facilities is another cause of concern.

As with all vessels, but especially with respect to cruise ships, it is vital that each Party 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 obligations under the Protocol and the Treaty. If vessels do not have the capacity to comply with these obligations, both tour operators and flag states, as appropriate, should ensure that such vessels do not travel to Antarctica.

As noted previously, any review of the impact of such 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 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. Also due to safety and emergency response consideration, IUCN again stresses the need to consider further steps to restrict the activities of large vessels in Antarctica in order also to protect human life, to safeguard the unique environment of Antarctica, to protect national programmes from having to divert resources from science to support visitors and to promote the values of the Antarctic Treaty System.

(5) Bioprospecting

IUCN welcomes the discussions of the Intersessional Contact Group (ICG) to examine the issue of biological prospecting in the Antarctic Treaty Areas. However, we regret that the ICG was not able to reach consensus on suggesting a way forward. Parties will need to agree on a working definition of the term "biological prospecting" as this has implications to where bioprospecting stops and on impacts that the bioprospecting activities might have, especially for marine organisms other than microbes. This is of particular importance given that 56% of the records in the Antarctic Biological Prospecting Database relate to organisms collected from the marine environment.

The issue of bioprospecting should rightly remain on the agenda of the ATCM. ATCM should adopt the ICG recommendation "to conduct a review of the existing Antarctic Treaty System, including CCAMLR, to see whether it already provides an adequate framework for managing biological prospecting activities in the Antarctic Treaty Area".

In the interest of informing the ATCM of discussions on the issue of bioprospecting in marine areas beyond national jurisdiction at the United Nations General Assembly *Ad Hoc* Open-Ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction ("Working Group"), New York, New York, 28 April - 2 May, 2008, IUCN provides some extracts from the draft Joint Statement by the Co-Chairpersons below. Despite diverging views on the relevant legal regime for marine genetic resources beyond areas of national jurisdiction

> *…some delegations were of the view that an elaborated regime was needed within the framework of UNCLOS in relation to marine genetic resources beyond areas of national jurisdiction. Other delegations stated that a new international regime may impede scientific research and innovation, and would be difficult to monitor and enforce. Several delegations highlighted the need for further consideration of intellectual property rights relating to marine genetic resources in areas beyond national jurisdiction.*
>
> *In that context, some delegations proposed focusing on practical short-term measures to enhance conservation and sustainable use of marine genetic resources. It was proposed that practical measures could address, among others, options for benefit sharing. In this regard, several delegates expressed interest in considering a proposal to use the Multilateral System developed under the International Treaty on Plant Genetic Resources for Food and Agriculture, as a possible reference point for discussions. While open to considering practical measures, others underlined the importance of also continuing the discussions on the legal regime of marine genetic resources beyond areas of national jurisdiction* [draft Joint Statement by the Co-Chairpersons 2 May 2008, para. 37-38].

There was agreement that the conservation and sustainable use of marine biodiversity is essential, and that research needs to be undertaken in accordance with the provisions of UNCLOS, and on the basis of the precautionary approach, in particular to ensure that extraction activities are undertaken in a sustainable manner.

IUCN reiterates that in the Antarctic-context, bioprospecting, as with any other activity, 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. IUCN remains of the view that 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.

(6) Introduction of Non-native Species, Parasites and Diseases

While we look forward to the results of the International Polar Year project on non-native species which 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, we remain concerned that the consideration of invasive species in the Treaty System has overlooked the marine side.

The main barrier to introductions of non-indigenous species in the Southern Ocean is the physical dissimilarity between donor ports and high latitude recipient environments. The likelihood of transport of invasive species into the Southern Ocean is increasing as a consequence of the growth of tourism, fisheries and scientific activities in the region. It is predicted that climate change impacts on the

oceans may increase the rate of successful establishment by reducing differences in environmental conditions between donor and recipient regions. Furthermore, if invasions do occur, a positive feedback mechanism may be triggered whereby established invaders increase the ability of other non-indigenous species to establish in an ecosystem.

To date, several recent studies document species introductions into Antarctic and Southern Ocean waters. Marine debris and shipping (mainly through hull fouling) are the two major vectors for marine species introductions into the Southern Ocean and deserve an increasing attention and regulation. A thorough consideration of this issue is urgently needed within the framework of the Treaty to prevent species introductions, particularly in the marine environment. In order to conserve the integrity of the unique Antarctic system, Parties need 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.

IUCN would like to inform the Treaty Parties that in July 2007, the Marine Environment Protection Committee of IMO adopted guidelines providing common guidance for vessels undertaking ballast water exchange in Antarctic waters. The guidelines call for ballast that will be discharged in Antarctic waters to first be exchanged before arrival in Antarctic waters (preferably north of the Antarctic Polar Frontal Zone or 60 degrees S, whichever is the farthest north) and at least 200 nm from the nearest land in water at least 200m deep. If this is not operationally possible, such exchange should be undertaken in waters at least 50nm from land in water at least 200m deep.

States should apply these Guidelines as soon as possible, as an interim measure for all ships entering the Antarctic Treaty area before the Ballast Water Management Convention comes into force. Parties to the Antarctic Treaty are further encouraged to exchange information on introduced and invasive marine species and consider undertaking risk assessment of species introductions through ballast water and hull fouling into the Treaty area.

IUCN Background

Created in 1948, the International Union for Conservation of Nature (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.