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Contents

SCAR Group of Specialists on
Environmental Affairs and Conservation
(GOSEAC)

Report of GOSEAC XII Meeting
College Station, Texas, United States, 24-27 April 2002



SCIENTIFIC COMMITTEE ON ANTARCTIC RESEARCH

at the

Scott Polar Research Institute, Cambridge, United Kingdom

SCAR Group of Specialists on Environmental Affairs and Conservation GOSEAC

Report of GOSEAC XII Meeting College Station, Texas, United States, 24-27 April 2002

The Dean of the College of Geosciences, Dr David B Prior, welcomed the members of the Group to Texas A & M University and outlined some of the impending developments at the College for environmental research and management. In replying on behalf of the Group David Walton thanked Dr Prior for the warm welcome to College Station and thanked Professor Chuck Kennicutt, Director of the Geochemical and Environmental Research Group, for invitation to meet in his department with its excellent facilities.

The following members of the Group were present:

D W H Walton (Convenor), E S E Fanta, M Fukuchi, M C Kennicutt, J Valencia.

J M Acero, P J Barrett, J E Haugland, H Miller and M Oehme were unable to attend. Dr J A Jatko (Environmental Officer, USAP) attended as an observer, and Dr R H Rutherford (President of SCAR) attended the last two days of the meeting. P D Clarkson (Executive Secretary) provided secretarial support for the meeting. The address list of participants and members is given in Appendix 1.

1. Adoption of Agenda and Appointment of Rapporteurs

The draft agenda was adopted with the addition of items on "Marine acoustic technology" (2.5), "Comments on Annex 2 of the Protocol" (4.3), and "Report on CCAMLR" under 11. Any Other Business. (See Appendix 2)

The Convenor proposed that participants should assist the secretary with writing the report as follows: Items 2 and 3 – M Fukuchi; Items 4 and 5 – D W H Walton; Item 6 – E S E Fanta; Item 7 – J Valencia; Items 8, 9 and 10 – M C Kennicutt.

2. Matters Arising from GOSEAC XI

The report of GOSEAC XI, July 1999, has been published in the *SCAR Report* series, No 18, January 2001.

2.1 South Georgia Environmental Management Plan

A copy of the *Environmental Management Plan for South Georgia*, compiled by Dr E McIntosh and Professor D W H Walton and published by the British Antarctic Survey on behalf of the Government of South Georgia and the South Sandwich Islands was tabled. The Convenor explained that the compilers of the document consulted widely, both in terms of published management plans for other sub-Antarctic islands outside the Antarctic Treaty Area, and in terms of the user constituency such as tour operators and university researchers. The plan will be revised on a

5-year basis. Copies of the report have been distributed to the user community, including all companies fishing in South Georgian waters, and all relevant tourist companies. Additional copies of the report may be purchased at £15.00 (USD 25.00) via the British Antarctic Survey. Further information can be found on the South Georgia website at:

<http://www.sgisland.org>

It was noted that the management plans for the French sub-Antarctic islands have still not been published but that management plans now exist for all the other subantarctic islands.

2.2 Wildlife diseases

The Convenor drew attention to the report of the CEP IV meeting, specifically paragraph 41, that "noted that the risk that human activities in Antarctica might introduce diseases was currently assessed to be very low. ...[and] agreed that the work of the intersessional contact group was now complete." Australia offered "to compile best practice for prevention of diseases, particularly simple, effective, practical and low-cost measures, and report to a future CEP meeting." Thus SCAR has no further Treaty obligation on this topic.

2.3 Subglacial lakes

The report of the meeting of the Group of Specialists on Subglacial Antarctic Lake Exploration (SALE) held in Bologna, Italy, during December 2001 is now available on the SALE website at:

<http://salegos-scar.montana.edu/>

Concern was expressed at a Russian proposal to deepen the existing hole by a further 50 m that may have important environmental consequences. Consultations with appropriate experts have been initiated.

2.4 SCAR Review

The Convenor informed the Group that this would be the last meeting of GOSEAC. The re-structuring of SCAR will take effect at XXVII SCAR in Shanghai when GOSEAC and its functions will be replaced, at least in part, by a new Standing Committee, the Antarctic Treaty Standing Committee. The following information on the new committee is taken from the document *Implementation of the SCAR Review* that was circulated by the SCAR Secretariat.

SCAR GROUP OF SPECIALISTS ON ENVIRONMENTAL AFFAIRS AND CONSERVATION

Terms of Reference

1. To provide independent scientific advice and information to SCAR on scientific and technical matters relevant to the implementation of the Madrid Protocol:
 - CEP environmental issues (conservation, protected species, protected areas, review of the Protocol annexes);
 - scientific environmental research;
 - Interaction between tourism activities and field research;
 - Living resources;
2. Prepare documents or technical reports at the request of the Executive Committee on scientific and technical matters, such as listed on 1;
3. Identify upcoming issues on the agendas of the ATCM and CEP
 - other AT bodies;
 - pertinent international organizations.
4. Establish and maintain links with all Antarctic Treaty bodies, such as CCAMLR, CCAS, IWC, and CEP. (Positive interactions)
5. Report to the SCAR Executive Committee as appropriate.

Membership

1. The Antarctic Treaty Standing Committee shall have three members appointed by the Executive Committee.
2. Two of the members will be appointed Chief Officer and Deputy Chief Officer by the Executive Committee.
3. With the approval of the Executive Committee, the Chief Officer may co-opt additional members to a meeting where the expertise of the additional members will be relevant to the issues for discussion.

The Group was not convinced that replacing GOSEAC with the new Committee would easily allow the quality and diversity of outputs to be maintained. It did, however, recognize the value of co-opting individuals with specific expertise relevant to the agenda of any meeting that would go some way towards meeting the challenge. It was felt that GOSEAC had been particularly effective over the years because it had varied its membership according to the priorities of the time, the members had been able to hold very open discussions not possible by e-mail, and the subjects had all been treated from an interdisciplinary point of view.

The Group agreed that the following key points should be brought to the attention of the Executive Committee:

1. SCAR must remain engaged with the ATCM both to protect its scientific functions and to ensure the provision of independent scientific and environmental advice regardless of that given by others.
2. The balance of expertise in the new Committee needs to be carefully addressed and it is essential that it maintains close contact with COMNAP,

SCALOP, AEON and CCAMLR. It should also be responsible for links with other outside bodies such as IUCN and UNEP.

3. It is not clear how the Committee will interact successfully with the Standing Scientific Groups on specific issues.
4. There is a need to ensure that all the functions provided by GOSEAC, particularly its interdisciplinarity and its ability to conduct interdisciplinary and inter-organizational consultation, are reflected adequately within the new system.

GOSEAC considers its key activities to include the following:

- a. assessment of protected and managed area plans and the development of the management plan handbook;
- b. development of scientific monitoring and the production of the handbook;
- c. development of the ecosystem/habitat matrices;
- d. conservation initiatives;
- e. education and training initiatives;
- f. environmental impact assessment – methodology and checklists;
- g. scientific advice to the Antarctic Treaty Legal Expert Group on liability issues;
- h. preparatory work for the State of the Antarctic Environment Report (SAER);
- i. preparation of papers for the ATCM and the CEP.

2.5 Marine acoustic technology

After XXVI SCAR, a workshop on this subject was held in Cambridge, United Kingdom, during September 2001, and the draft workshop report entitled *Impacts of marine acoustic technology on the Antarctic environment* was circulated for information. GOSEAC welcomed this report, particularly the comprehensive coverage of both the acoustic techniques employed and the range of marine biota that may be affected. It was noted that the report would also provide valuable insights for those working in non-Antarctic areas and should be made more generally available.

The final report of the workshop will be published in the *SCAR Report* series and will be tabled at CEP V (XXV ATCM). It was suggested that, due to the technical nature of much of the report, a good executive summary should be provided as well as a covering Working Paper with the report annexed to the paper.

3. External Environmental Activities

3.1 UNEP Report

The Executive Secretary reported on the current status of the SCAR contribution to the UNEP report on "Persistent Toxic Substances in the Global Environment". Dr J H Priddle

REPORT OF GOSEAC XII MEETING

(former Convenor of GLOCHANT) had undertaken the required literature survey of research on toxic pollutants in the Antarctic environment. A partially edited draft of the contribution was available for inspection. Dr Priddle will present the edited draft at a workshop in Montreal, Canada, during May 2002. The final version will be circulated through SCAR after the Montreal workshop. The final UNEP report is scheduled for completion during 2003.

It was noted that the literature survey could form a substantial scoping resource for the SAER (see Item 9.2).

3.2 *GIWA Meeting*

The Convenor reported on the background to the Global International Waters Assessment (GIWA) that has been initiated by UNEP with funding from the Global Environmental Facility (GEF). SCAR had been approached to provide a contribution for the Antarctic region. The SCAR Executive Committee had agreed that SCAR should contribute within its competence but that many of the aspects relating to the Southern Ocean, specifically to fisheries, should be referred to CCAMLR. Dr Saburenkov of the CCAMLR Secretariat is liaising with GIWA. COMNAP would also need to be involved in some specific subject areas. There needs also to be interaction with SCOR to ensure integrated coverage.

The Group discussed how SCAR might progress this matter and suggested that a single international workshop of invited participants with access to the relevant data might be the most effective way to prepare a draft contribution from SCAR. E S E Fanta offered to host the workshop in Curitiba, Brazil. The Group agreed to recommend this proposal to the SCAR Executive Committee.

4. ATCM reports

4.1 *Report of XII ATSCM at The Hague in 2000*

The report by the SCAR observers of the Eleventh Antarctic Treaty Special Consultative Meeting and the CEP III meeting was tabled. The Convenor drew attention to the action items for SCAR and noted that those still outstanding are on the agenda for the current GOSEAC meeting.

4.2 *Report of XXV ATCM at St Petersburg in 2001*

The report by the SCAR observers of the Twenty-fourth Antarctic Treaty Consultative Meeting and the CEP IV meeting was tabled. The Convenor drew attention to the action items for SCAR and noted that these are on the agenda for the current GOSEAC meeting. Concern was also expressed at the possibility of siting any new stations on King George Island or in close proximity to any existing stations.

4.3 *Comments on Annex II to the Protocol*

The Convenor reported that, at CEP IV, the Chairman of the CEP had proposed to undertake a rolling review of the Annexes to the Protocol, beginning with Annex II – Conservation of Antarctic Fauna and Flora. This had been

precipitated by the SCAR proposal that the species listed as Specially Protected Species in Appendix 1 to the Annex should be revised and the meaning of Special Protection should be clarified. In response to a general invitation for input to this process, the President of SCAR had asked that GOSEAC provide some comments on aspects off Annex II that might need revision.

The Group considered a list of comments that needed to be addressed. This produced a lively and useful discussion that elaborated various of the comments listed and identified some additional areas, particularly some that were inconsistent with other parts of the Protocol and other Annexes. The Convenor agreed to compile a paper in the light of the discussion and to circulate the paper to relevant groups in SCAR before submitting a final version to the SCAR Executive Committee for forwarding to the Chairman of the CEP.

5. Specially Protected Species

5.1 *Second SCAR response to the Intersessional Contact Group*

XXV ATCM Working Paper 5 Progress Report of the Inter-Sessional Contact Group on Specially Protected Species in Antarctica and the latest SCAR response to the Intersessional Contact Group on Specially Protected Species was tabled. The Convenor explained that Tito Acero is now preparing a new draft Working Paper for submission to the CEP V meeting at XXV ATCM in Warsaw, Poland, during September 2002. SCAR would need to consider how to respond to this.

5.2 *Proposal for SCAR mechanisms for providing advice*

The Convenor presented a draft paper indicating how SCAR and IUCN might coordinate their expertise to assess the conservation status of Antarctic fauna and flora. A paper on the application of IUCN Red List criteria at regional levels was also tabled. The proposed scheme is reproduced in Appendix 3 and requires further discussion with the appropriate SCAR committees.

6. Protected and Managed Areas

6.1 *Systematic Environmental–Geographic Framework*

XXV ATCM Working Paper 12 Systematic Environmental–Geographic Framework for Protected Areas under Annex V of the Protocol was tabled. Some Parties at the CEP IV meeting did see value in the paper but others were less than enthusiastic, although the CEP did encourage New Zealand to pursue the topic and consult with SCAR over relevant part of the report.

The SCAR Ecosystem Matrix (Lewis Smith, 1994) was developed for biological purposes and does not include many of the geographical criteria listed in the paper. Combining the matrix with a GIS database would

move some way towards the Framework that is being proposed. However, the Group considered that the Framework could encourage a “Noah’s Ark” or formalistic box-filling approach that could be counter-productive to good conservation. Conservation is a dynamic activity; protected areas should be under continuous review and, when the purpose for which they were designated has been served, they should be de-listed. The Group felt that holding a workshop on this in conjunction with SCAR meeting or symposium, as had been suggested, would not be appropriate.

It was suggested that it might be appropriate for SCAR to prepare a paper to ATCM on the science of conservation and how it has changed since the Agreed Measures were introduced. In this way a clearer view of best practice and present challenges could be presented.

Lewis Smith, R.I. 1994. Environmental–Geographic basis for the Protected Area System. In R I Lewis Smith, D W H Walton and P R Dingwall, (ed), *Developing the Antarctic Protected Area System*, Cambridge, World Conservation Union and Scientific Committee on Antarctic Research, 27–36.

6.2 *Managed Areas*

6.2.1 **Deception Island Plan**

A summary document by R Downie on the Management Plan for Deception Island was tabled. It described the strategy for the management of the island and reported on the international expedition to the island during February 2002. The expedition comprised 15 representatives from six National Antarctic Programmes and two NGOs, all of which have an interest in the island. The aims of the expedition included environmental audits, floristic reviews, clean-up requirements, tourist activities, an island-wide oil spill contingency plan, and the zoning categories for the island. It was noted that Brazil had current scientific activities at the island and, although not part of the expedition, should be included in all future discussions of the plan.

An Information Paper on these activities will be submitted to CEP V and a new draft management plan drawing on the findings of the expedition will be prepared.

6.2.2 **Larsemann Hills Plan**

XXV ATCM Information Paper 59 Report on Development of a Larsemann Hills Antarctic Specially Managed Area Management Plan was tabled for information. This is a joint undertaking by the Australian, Chinese and Russian National Programmes that was welcomed by the Group. The paper proposed that the draft plan will be submitted to SCAR for comment before submission to CEP VI in 2003.

6.3 *Specially Protected Area Plans*

The Group congratulated the originators of the eleven management plans on the standard of preparation, particularly of the maps that are a considerable improvement over many of the maps that have been adopted in the past.

It was felt that plans should contain more, rather than less, detail but that only essential information should be included in the plan; any additional information should be placed in an annex or an appendix.

The Group expressed concern that statements on poultry products occur in all the plans under consideration whereas there is, at present, no scientific evidence that Newcastle’s disease has been or can be transferred to the Antarctic avifauna. Under the precautionary principle the Group felt that the agreed treatment of poultry would be useful in all plans that are designated specifically to protect birds but was not clear why it should be included in other plans.

Detailed comments on each plan will be provided to the leaders of the two contact groups for assessing the plans; only general comments are given here.

6.3.1 **Dion Islands, Marguerite Bay (SPA 8)**

The Group questioned the reason for changing the title of the Area; noted a number of numerical errors; and some names missing from the maps.

6.3.2 **Green Island, Berthelot Islands (SPA 9)**

Some minor numerical errors and some minor language clarifications were highlighted; it was noted that a replacement Map 2 is being prepared.

6.3.3 **Ablation Point/Ganymede Heights, Alexander Island (SSSI 29)**

Some minor changes were proposed. It was also suggested that there should be a geological map because the geology is one of the reasons for designation.

6.3.4 **Mt Flora, Hope Bay (SSSI 31)**

Some minor revisions to the boundaries were suggested, including designating the glacier margins as the boundaries so that changes to the glaciers will not necessitate revision of the boundary descriptions.

6.3.5 **Cape Hallett, Victoria Land (SPA 7)**

Some minor changes were suggested. It was also suggested that an additional inset location map showing the Ross Sea region would be helpful.

6.3.6 **Cape Royds, Ross Island (SSSI 1)**

A revised description of one boundary was suggested. It was also suggested that an additional inset location map showing the Ross Sea region would be helpful.

6.3.7 Barwick & Balham valleys, Victoria Land (SSSI 3)

Some minor changes were proposed. It was also suggested that there should be a geological / geomorphological map because the geology and geomorphology are two of the reasons for designation, and that an additional inset location map showing the Ross Sea region would be helpful.

6.3.8 Cape Crozier, Ross Island (SSSI 4)

The extension of the terrestrial boundaries was discussed. It was suggested that an additional inset location map showing the Ross Sea region would be helpful.

6.3.9 Northwest White Island, McMurdo Sound (SSSI 18)

The difficulty of defining the coastline of the island, leading to a poor quality map, was recognized. It was suggested that an additional inset location map showing the Ross Sea region would be helpful.

6.3.10 Avian Island, Marguerite Bay (SPA 21)

The Group suggested that parts of 6 (i) now given in Annex 1 should be restored to the main body of the management plan. The value of a 100 m wide off-shore buffer zone was questioned.

6.3.11 Byers Peninsula, Livingston Island (SSSI 6)

The Group suggested that parts of 6 (i) now given in Annex 1 should be restored to the main body of the management plan. It was also suggested that there should be a geological / geomorphological map because the geology and geomorphology are two of the reasons for designation.

6.3.12 North Coronation Island (SPA 18)

The United Kingdom's attempt to revise the Management Plan for SPA no 18 has identified the fact that the original values for protecting this site are based largely on assumptions that cannot be substantiated by available data. Significant physical restrictions on access to the site, by both sea and air, make the collection of data extremely difficult.

Consequently, the United Kingdom had proposed three options on how best to proceed.

1. Maintain the status quo. Continue with protection of the site as an SPA without alteration of the values to be protected. Amend the Management Plan to meet the requirements of Annex V, whilst recognizing the severe limitations in knowledge about the site;
2. Continue with protection of the site as an SPA, but amend the values to be protected. Possibilities include, the potential usefulness of the area as a reference and/or wilderness site. But it would be important to recognize that insufficient data are currently available to adequately substantiate such an approach;
3. Terminate the designation of this SPA on the grounds that insufficient data are available to justify continued protection of the site.

The argument for keeping the site is that, as a pristine area, it should be used as a reference site. However, the counter argument is that if there are no baseline data (as in this case) it cannot be used as a reference site.

The Group proposed that SPA no 18 should be de-listed as there were no compelling scientific reasons to continue site protection.

6.4 Marine Protected Areas

6.4.1 Balleny Islands

XXIV ATCM Information Paper 19 The Balleny Islands – *Aide Memoire* was tabled for information. The Convenor reported that a revised management plan was still in preparation. The Group felt that a schematic outlining the steps necessary for consultations on the designation of protected and managed areas, especially those with marine components, was required (see Appendix 3). An informal discussion on marine protected areas will be held in Wellington, New Zealand, on 30 May 2002.

6.5 Management activities

XXIV ATCM Information Paper 30 Report on Management Activities at SSSI 25 was tabled. The site is protected for its Pliocene fossil content, particularly well-preserved vertebrate remains of fossil dolphins and probably at least one other vertebrate species. During a visit to the Site (summer 2001–02) the exposed fossils were found to be degrading due to natural weathering processes. The Australian Antarctic Division is taking expert advice on removal and/or *in situ* conservation of the material. This would appear to be a clear case of active conservation management, and as such is welcomed by the Group.

7. Environmental Monitoring

7.1 Station monitoring

The Group received the report of a 3-year monitoring project at McMurdo Station. The preliminary findings are based on extensive sampling of the terrestrial and marine environments. Now there is to be a database available on the evolution of the impact of human activities in the area. Preliminary recommendations contain the mitigation actions required. The main conclusions are that monitoring stations can generate best practice for management of support activities for science. There is an opportunity to identify impacts on different components of the ecosystem and, if necessary, suggest environmental remediation.

Monitoring at McMurdo has provided sufficient information for management decisions. Physical and chemical monitoring at present offer the most cost-effective alternative to deal with impacts of logistical and scientific research at stations on the time-scale that managers use.

The meeting discussed the new advances in biological monitoring and considered it was timely for a workshop on this topic. AEON and COMNAP would need to be

involved.

The meeting thanked Professor Kennicutt for his presentation and for providing copies of reports of this monitoring programme.

7.2 Cumulative impacts

The Group based its discussion on the report of the workshop held in La Jolla during June 2000 entitled: *Assessment of possible cumulative environmental impacts of commercial ship-based tourism in the Antarctic Treaty area*. This document is also available on the NSF website at:

<http://nsf.gov/cgi-bin/getpub?nsf02201>

This document collected all available information from the last 10 years of tourism in the Antarctic Peninsula area. The data included: numbers of tourist visits; passengers landing; relevant research; examples of possible cumulative effects, impact evidence and mitigation measures; and management measures.

Conclusions of the workshop indicate that there is a need for detecting, avoiding and mitigating cumulative adverse impacts of Antarctic ship-based tourism. Some of the needs are for site monitoring, coordination with related research and monitoring programmes, and improved management of visit timing and frequency at particular sites.

The available information is insufficient for prediction of how, and to what extent, the physical features and biota may be affected by recurrent seasonal visits. One of the difficulties is how to differentiate natural changes on the sites from the ones induced by human activities. The Group noted the limited scientific investigations in the field and considered more research would be helpful.

The Group thanked J Jatko for distributing and presenting the workshop report.

8. Bioprospecting

The utilization of Antarctic fauna and flora as a source of materials for the biotechnology industry continues to generate interest from commercial concerns. It appears that the Convention on Biodiversity does not apply to areas not under national sovereignty, thus there is no clear over-arching authority to respond to possible pressures on Antarctic resources other than through national programmes. Bioprospecting occurs at two levels:

1. study of genetic materials and determination of commercially important genetic codes and
2. harvesting of *in situ* organisms for extraction of biochemicals.

In the first case, the Convenor brought to the attention of the Group that a patent had been filed for a protein (marinomonin) isolated from a bacterium collected from an Antarctic lake sediment. The patent (WO 01/44275) had been filed by Unilever. Such patent efforts might well restrict the use of this knowledge by Antarctic scientists. While no current instance of harvesting for biotechnology

is known, there are obvious environmental ramifications of the taking of animals and plants as a commercial venture. No action is recommended at present, but it was felt by the Group that developments related to bioprospecting should be closely watched as they may develop into important pressures on Antarctic resources.

9. State of the Antarctic environment

The Group noted that the issue of production a State of the Antarctic Environment Report has been discussed for a number of years. It was also felt that little progress had been made toward the implementation and conduct of such an activity. The Group noted the utility of the report both from scientific and political standpoints. Concern was also expressed that the absence of a response by the community will result in a gap in the UNEP effort for a world-wide evaluation of the state of the environment. It is likely that this gap will be filled by UNEP by one mechanism or another.

9.1 Ross Sea report

The Ross Sea report was tabled. The Group congratulated the New Zealand programme for the development of an impressive document. The Group will follow developments related to the next steps to be taken by New Zealand to implement the report's recommendations.

9.2 Scoping paper

The Convenor tabled a draft working paper expanding on the previous suggested outline of one possible approach to a State of the Antarctic Environment Report. The content and framework for the report is consistent with other UNEP reports. The Group reaffirmed the utility of the suggested approach. The Group agreed to review the draft paper and provide the Convenor with comments for a final revision before the paper is presented to the Working Groups and the SCAR Delegates in Shanghai.

10. Liability Issues

10.1 Associated and Dependent Ecosystems

The joint SCAR–COMNAP paper to XXIV ATCM Working Paper 14 Response to XXIII ATCM Resolution 5 (1999) had been circulated for information. SCAR had been asked to provide an explanation of the scientific basis for the term “dependent and associated ecosystem” phraseology. The Group noted that this advice had been provided and no further action was required.

10.2 Worst case scenarios

The Executive Secretary reported on the current status of the discussions by the Legal Expert Group at the ATCM concerning the development of an annex or annexes on environmental liability. The Legal Expert Group had requested COMNAP, in consultation with SCAR, to advise on worst and lesser case scenarios for environmental impacts. In this context, COMNAP had asked SCAR to

REPORT OF GOSEAC XII MEETING

advise on a case where rats were introduced to an island in the South Shetland Islands and began breeding. The implicit assumption here is the effects of predation on native bird species.

The Group considered that rats would not be able to survive a winter in the South Shetland Islands unless they were able to find shelter and a food supply in a station complex. Rats are known to have escaped ashore in the South Shetland Islands in the past but there are no rats present today, indicating that they were unable to establish viable populations. Rats have survived on South Georgia by nesting in tussac grass and feeding on the plant roots but the winters are much less severe than farther south. Rat populations on South Georgia have been contained in some areas by glaciers and snowfields. A phanerogamic flora would be essential for their survival and this is absent from the South Shetland Islands.

The Group considered that a potentially more serious situation could be the introduction of disease into an Antarctic species that might be caused by diseased rats. In the worst case a species might be exterminated on the island; in a less than worst case the population might be

severely reduced until a natural immunity was developed and the species began to recover. The Group considered this to be extremely unlikely and it is offered only as an example.

11. Any Other Business

11.1 CCAMLR

E S E Fanta reported on the 20th meeting of the CCAMLR Scientific Committee, October 2001. She noted that the Working Groups on Ecosystem Monitoring and Management, and on Fish Stock Assessment had met previously and suggested that there should be closer collaboration and exchange of information between these two CCAMLR Working Groups, the CCAMLR Scientific Committee and SCAR. In particular, SCAR might become more actively involved with ecosystem monitoring through the CCAMLR Ecosystem Monitoring Programme. The existing linkage between the Bird Biology Subcommittee and the Group of Specialists on Seals and CCAMLR has been very productive. Problems still exist in reviewing protected areas and clearer information on the reviewing procedure is needed (see Appendix 3).

Appendix 1

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REPORT OF GOSEAC XII MEETING

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Appendix 2

Agenda

- 1. Adoption of Agenda and Appointment of Rapporteurs**
- 2. Matters Arising from GOSEAC XI**
 - 2.1 *South Georgia Environmental Management Plan*
 - 2.2 *Wildlife diseases*
 - 2.3 *Vostok Lake*
 - 2.4 *SCAR Review*
 - 2.5 *Marine Acoustic technology*
- 3. External Environmental Activities**
 - 3.1 *UNEP Report*
 - 3.2 *GIWA Meeting*
- 4. ATCM reports**
 - 4.1 *Report of XII ATSCM at The Hague in 2000*
 - 4.2 *Report of XXV ATCM at St Petersburg in 2001*
 - 4.3 *Comments on Annex II to the Protocol*
- 5. Specially Protected Species**
 - 5.1 *Second SCAR response to Intersessional Group*
 - 5.2 *Proposal for SCAR mechanisms for providing advice*
- 6. Protected and Managed Areas**
 - 6.1 *Systematic Environmental–Geographic Framework*
 - 6.2 *Managed Areas*
 - 6.2.1 *Deception Island Plan*
 - 6.2.2 *Larsemann Hills Plan*
 - 6.3 *Specially Protected Area Plans*
 - 6.3.1 *Dion Islands, Marguerite Bay (SPA 8)*
 - 6.3.2 *Green Island, Berthelot Islands (SPA 9)*
 - 6.3.3 *Ablation Point/Ganymede Heights, Alexander Island (SSSI 29)*
 - 6.3.4 *Mt Flora, Hope Bay (SSSI 31)*
 - 6.3.5 *Cape Hallett, Victoria Land (SPA 7)*
 - 6.3.6 *Cape Royds, Ross Island (SSSI 1)*
 - 6.3.7 *Barwick & Balham valleys, Victoria Land (SSSI 3)*
 - 6.3.8 *Cape Crozier, Ross Island (SSSI 4)*
 - 6.3.9 *Northwest White Island, McMurdo Sound (SSSI 18)*
 - 6.3.10 *Avian Island, Marguerite Bay (SPA 21)*
 - 6.3.11 *Byers Peninsula, Livingston Island (SSSI 6)*
 - 6.3.12 *North Coronation Island (SPA 18)*
- 6.4 *Marine Protected Areas***
 - 6.4.1 *Balleny Islands*
- 6.5 *Management activities***
- 7. Environmental Monitoring**
 - 7.1 *Station monitoring*
 - 7.2 *Cumulative impacts*
- 8. Bioprospecting**
- 9. State of the Antarctic environment**
 - 9.1 *Ross Sea report*
 - 9.2 *Scoping paper*
- 10. Liability Issues**
 - 10.1 *Associated and Dependent Ecosystems*
 - 10.2 *Worst case scenarios*

**Proposed process by which
SCAR assesses conservation status of Antarctic flora and fauna**

1. SCAR establishes a group to review all species currently identified by IUCN as globally threatened in the IUCN Red List (ie. categories of Vulnerable, Endangered and Critically Endangered) which meet the Antarctic Treaty criteria for occurring in the Antarctic Treaty area, either as breeders or as summer migrants. This initial review to assess whether the species are also regionally threatened, with respect to the Antarctic Treaty area and the CCAMLR area. The criteria and approach to guide this evaluation should be those set out in the Gärdenfors *et al* (2001) and/or later versions as approved by IUCN.
2. The SCAR group would then discuss its recommendations with appropriate IUCN Red List Authority Groups (through some mechanism yet to be developed with IUCN) to ensure consistency of use and interpretation of criteria with the IUCN global assessment and/or with other regional assessments.
3. The SCAR group would then proceed to consider/review (in terms of their status in the Antarctic Treaty region and according to the above approaches and criteria) species identified in the IUCN Red List as globally Near Threatened or Data Deficient. It would follow this with a similar review of all species endemic (or near-endemic) to the Antarctic Treaty area.
4. The SCAR group would consult with appropriate IUCN groups in respect of any taxa which, in its opinion, might merit recognition under the IUCN categories of global threat and through this process suggest appropriate changes to the next annual revision of the IUCN Red List.
5. For species considered to meet the criteria for regionally threatened status, recommendations would be forwarded for consideration by the CEP. These recommendations should be accompanied by a brief indicative statement of the kinds of land-based management actions which might be appropriate to protect, or improve the status of, the species

concerned.

Mechanisms

The main review process would require SCAR to establish some new group with appropriate membership, including scientists involved in the categorization of threatened species and those with scientific knowledge of the species or species groups concerned. This group would need to function so as to produce an annual/regular review and report on an appropriate time frame for transmission to CEP and/or IUCN.

It seems likely that expert groups might be needed for birds, marine mammals, marine vertebrates, marine invertebrates, terrestrial invertebrates, plants (this might even require separate groups for lichens and mosses). It is possible that IUCN will not have established groups covering all of these fields. SCAR needs to recognize the fact that the scientific conservation issue needs to be addressed regardless of the competent legal authority for some of these groups.

For the review of species endemic to the Antarctic Treaty area (and what about the CCAMLR area?), a considerably larger advisory and/or correspondence group would need establishing, in order to ensure that all relevant groups of plants and animals received a consistent review. For this exercise, it may be appropriate to expand the membership of the main group in order to ensure a comprehensive evaluation.

An initial timetable could be for globally threatened species to be identified by 2003/04, near threatened by 2004/05 and endemics by 2005/06.

Reference

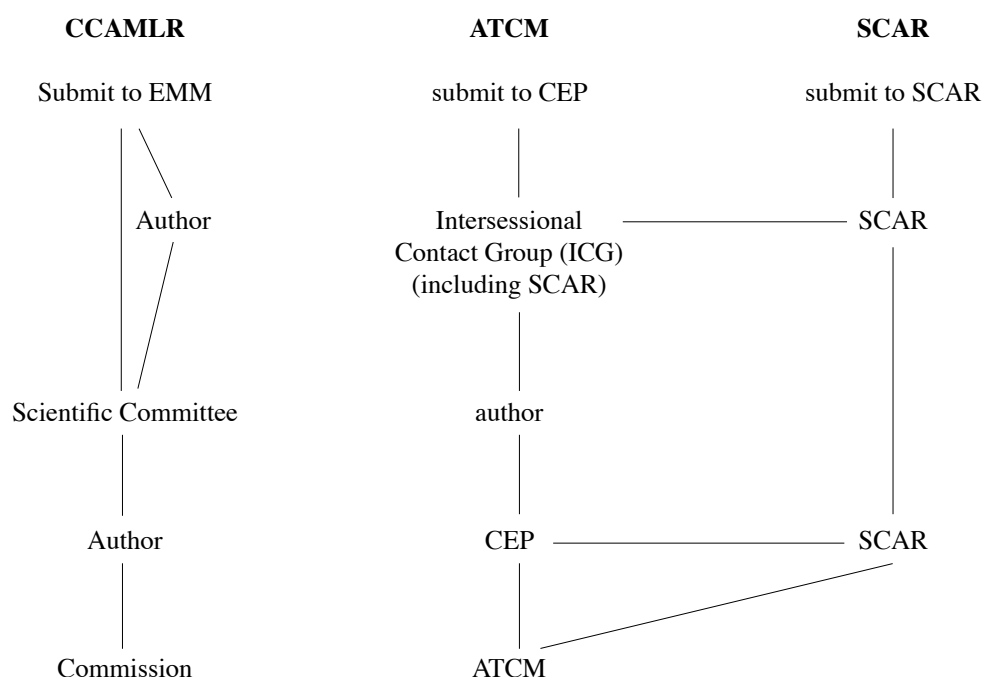
Gärdenfors U *et al.* 2001. The application of IUCN Red List Criteria at regional levels. *Conservation Biology*, **15**, 1206-1212.

List of Acronyms and Abbreviations

AEON	Antarctic Environmental Officers Network		
AT	Antarctic Treaty	ICG	Intersessional Contact Group
ATCM	Antarctic Treaty Consultative Meeting	IUCN	World Conservation Union
ATSCM	Antarctic Treaty Special Consultative Meeting	IWC	International Whaling Commission
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources	NGO	Non-Governmental Organization
CCAS	Convention for the Conservation of Antarctic Seals	NSF	National Science Foundation
CEP	Committee for Environmental Protection	SAER	State of the Antarctic Environment Report
COMNAP	Council of Managers of National Antarctic Programmes	SALE	Group of Specialists on Subglacial Antarctic Lake Exploration
GEF	Global Environmental Facility	SCALOP	Standing Committee on Antarctic Logistics and Operations
GIWA	Global International Waters Assessment	SCAR	Scientific Committee on Antarctic Research
GLOCHANT	Group of Specialists on Global Change and the Antarctic	SCOR	Scientific Committee on Oceanic Research
GOSEAC	Group of Specialists on Environmental Affairs and Conservation	SPA	Specially Protected Area
		SSSI	Site of Special Scientific Interest
		UNEP	United Nations Environment Programme

Review of Management Plans

The current procedure for reviewing management plans for protected areas is given in the following table.



SCAR GROUP OF SPECIALISTS ON ENVIRONMENTAL AFFAIRS AND CONSERVATION

Postscript

At the XXVII SCAR meeting in Shanghai, China, during July 2002, the Delegates agreed to close the Group of Specialists on Environmental Affairs and Conservation (GOSEAC). Many of the functions of GOSEAC will become the responsibility of a new Standing Committee on the Antarctic Treaty System. The membership of this

Committee will be Professor D W H Walton (Chief Officer), Professor M C Kennicutt II and Professor D M Stoddart. They will draw on the knowledge and expertise of the wider SCAR community as appropriate to develop papers for SCAR to submit to the Antarctic Treaty Consultative Meetings.

SCAR Report

SCAR Report is an irregular series of publications, started in 1986 to complement SCAR Bulletin. Its purpose is to provide SCAR National Committees and other directly involved in the work of SCAR with the full texts of reports of SCAR Standing Scientific Groups and Group of Experts meetings, that had become too extensive to be published in the Bulletin, and with more comprehensive material from Antarctic Treaty meetings.

SCAR Bulletin

SCAR Bulletin, a quarterly publication of the Scientific Committee on Antarctic Research, carries reports of SCAR meetings, short summaries of SCAR Standing Scientific Groups, Action Groups and Groups of Experts meetings, notes, reviews, and articles, and material from Antarctic Treaty Consultative Meetings, considered to be of interest to a wide readership.