

**REPORT OF THE TWENTY-FOURTH MEETING ON THE COMMISSION FOR THE
CONSERVATION OF ANTARCTIC MARINE LIVING RESOURCES
(Hobart, Australia, 23 October to 3 November 2006)**

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Introduction

1. The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) is an intergovernmental organisation established by an international convention. The Commission is assisted by the Scientific Committee, which is responsible for developing measures necessary for the conservation of the marine life of the Southern Ocean surrounding Antarctica. In turn, the Scientific Committee is assisted by various working groups, sub-groups and workshops that meet intersessionally. Controlled harvesting is permitted under the convention, provided it is carried out in a rational manner while taking into account the potential effects on the marine ecosystem. Targets for fishery are mainly krill, toothfish, and icefish, and on a smaller scale, squid and crabs. For the purpose of managing target species, as well as dependent and related species, the Commission meets annually and decides upon Conservation measures and other recommendations. SCAR is an Observer to the meetings of the Commission.

2. The twenty-fifth annual meeting of the Commission was held at the CCAMLR headquarters in Hobart, Tasmania, Australia, from 23 October to 3 November 2006. The meeting was chaired by Prof. Seo-hang Lee (Republic of Korea). After the opening of the meeting, the Commission typically adjourned for the first week to allow the Scientific Committee to first conduct its activities and report back to the Commission. The Scientific Committee met between 23 and 27 October and was Chaired by Dr Edith Fanta (Brazil). The meeting of the Commission resumed on 31 October. Prof. Lee's term as Chair of the Commission ended at the conclusion of CCAMLR-XXV. The Commission elected Namibia as Chair of the Commission from the end of this meeting to the conclusion of the 2008 meeting (CCAMLR-XXVII). Dr Fanta was re-elected to the Chair of the Scientific Committee for a second term (2007 and 2008).

3. The Commission was attended by all of the 24 members: Argentina, Australia, Belgium, Brazil, Chile, European Community, France, Germany, India, Italy, Japan, Republic of Korea, Namibia, New Zealand, Norway, Russian Federation, South Africa, Spain, Sweden, Ukraine, United Kingdom, United States of America and Uruguay. Observers also attended from four of the ten acceding nations, People's Republic of China, Mauritius, Netherlands and Peru. Bulgaria, Canada, Cook Islands, Finland, Greece, and Vanuatu did not attend. Observers attended from various non-contracting parties, and international organisations such as SCAR. Details about the Commission, its membership, committees, and working groups can be found at the www.ccamlr.org website.

4. SCAR was represented by myself and also by SCAR's Executive Director Dr Colin Summerhayes during the week of the Scientific Committee. Dr Summerhayes attendance at CCAMLR-XXV helped reinforce SCAR's commitment to working closely with CCAMLR.

5. A report on SCAR activities of relevance to CCAMLR was submitted in advance and was registered as Commission background document CCAMLR-XXV/BG/22. This report is available under "Partnerships and Links" on the following web page: <http://www.scar.org/researchgroups/lifescience/>. An additional report (CCAMLR-XXV/BG/23) was submitted reporting on SCAR's third international workshop on marine acoustic studies convened at the University of Cadiz, Spain in January 2006. This report was requested by CCAMLR. I gave a detailed report on SCAR activities to the Scientific Committee (SC) as part of a standing item on the SC Agenda - "Cooperation with other organisations, (i) Cooperation with the Antarctic Treaty System." Dr Summerhayes delivered the acoustics report during this item, drawing attention to the document that had been presented by SCAR to the ATCM in Edinburgh in June 2006, and which can be found at: (<http://www.scar.org/researchgroups/geoscience/acoustics/>). I reinforced key issues in a second presentation to the full Commission, again as a standing Commission Agenda Item - "Cooperation with other elements of the Antarctic Treaty System, (ii) Cooperation with SCAR".

6. This present report deals with CCAMLR activities of relevance to SCAR, plus comments, discussion and feedback on the SCAR report to CCAMLR, mentioned in (5) above, which should also be read in conjunction with this report.

EBA, CAML, CPRAG, SCAR-MarBIN Activities

7. Progress in the developments of the EBA, CAML, and SCAR-MarBIN projects and the development of the new Action Group on Continuous Plankton Recorder research (CPRAG) was presented. The Commission was advised on the value of these activities to CCAMLR in relation to providing information on the status of the marine biodiversity of the region, which will contribute to monitoring studies, resource management, bioregionalisation and the development of MPAs. These projects will provide information on natural variability in the ecosystem as well as on responses to environmental changes, which CCAMLR will require to meet its objectives. CCAMLR was encouraged to participate fully in these projects, and opportunities for collaboration between CAML and CCAMLR's IPY krill survey were emphasised. I further suggested that CCAMLR could enhance SCAR-MarBIN by contributing their metadata records to it.

8. In order to facilitate better collaboration and exchange of data between SCAR and CCAMLR, I advised CCAMLR that the SCAR-MarBIN Management will invite CCAMLR's Data Manager Dr David Ramm onto the SCAR-MarBIN Scientific Steering Committee. SCAR-MarBIN looks forward to Dr Ramm's attendance at the next SCAR-MarBIN SSC Meeting in Poland in June 2007. Similarly, CCAMLR was advised that CPRAG was also interested in having a member from CCAMLR on the action group. CCAMLR is likely to be major client of data produced by the Southern Ocean CPR Survey. CCAMLR welcomed the initiatives and is keen to participate.

9. Dr Volker Siegel (EC & Convener of the CCAMLR-2008-IPY Survey Steering Committee) was an invited expert to the CAML Scientific Steering Committee in Bremerhaven, Germany, in June 2006. I reported to CCAMLR that his involvement was greatly appreciated and he has continued to work with CAML to incorporate proposed CCAMLR sampling protocols in CAML protocols so that data may be shared. The CAML SSC intends to invite Dr Siegel to the next planning meeting in Poland in June 2007.

10. Dr Constable (Australia) noted that many of the scientific research programs of SCAR are directed at terrestrial species but theoretical biological questions for marine species related to climate change would be of more interest to CCAMLR. This includes how Antarctic marine species may respond to climate change or how their ranges may alter. I assured CCAMLR that marine research is a significant component of SCAR's research, especially in EBA and particularly in CAML as a key component of EBA. The Oceanography Expert Group and Southern Ocean Observing System (paragraph 12) also addresses climate change issues and will assist CCAMLR.

11. The issue of climate change effects on the Antarctic marine ecosystem was mentioned a number of times in the Commission and Scientific Committee, specifically how the effects of fishing might be distinguished from the effects of climate change. CCAMLR has requested that members consider how climate change effects could be assessed and provide submissions on this item to the next meeting of WG-EMM. SCAR can play a role here in providing information on climate change effects, as well as natural patterns of variation.

Expert Group on Birds and Seals

12. CCAMLR noted the possible merger of the seal and bird groups, which is expected to lead to enhanced expertise in quantitative numerical analyses and modelling, and waits to see how the new group will work with CCAMLR and its Working Group on Ecosystem Monitoring and Management WG-EMM.

SCAR-SCOR Oceanography Expert Group

13. CCAMLR noted the development of this new group and that one of its tasks is the development of the Southern Ocean Observing System (SOOS) which will provide information on the effects of climate change useful for CCAMLR. Dr Stephen Nicol (Australia) is a member of the expert group and will be a useful link with CCAMLR. Dr Summerhayes and I are on the organising committee of the next SOOS workshop. CCAMLR was asked to join in the discussions at that workshop.

Future SCAR Meetings

14. CCAMLR was advised of the next SCAR XXX meeting and 3rd Open Science Conference scheduled for St Petersburg, July 2008. CCAMLR was also advised that the 10th SCAR Biology Symposium is scheduled for 2009 in Sapporo, Japan, and Prof. Mitsuo Fukuchi is coordinator. Both the 3rd OSC and the 10th SCAR Biology Symposium are expected to have a strong IPY focus, and CCAMLR's involvement in both meetings would be welcomed. **Recommendation:** SCAR will again invite the Chair of the Scientific Committee of CCAMLR to be an observer at SCAR-XXX.

Marine Protected Areas and Bioregionalisation

15. The Co-Conveners of the Bioregionalisation Steering Committee, Drs Penhale (USA) and Grant (UK), presented a report on development of the 2007 CCAMLR Workshop on Bioregionalisation. This workshop is scheduled for 13-17 August 2007 in Brussels, Belgium. The Workshop will focus on the technical development of methods for bioregionalisation of the Southern Ocean. The aim will be to provide advice on bioregionalisation and if possible the fine-scale subdivision of biogeographic provinces.

16. The workshop steering committee noted the Commissions comments from CCAMLR-XXIV (2005) to the effect that there was a strong need for collaboration at technical and policy levels to further develop the MPA concept in the Southern Ocean, and that participants from key elements of the Antarctic Treaty System should be involved - this includes SCAR. The workshop will invite appropriate observers and technical experts, and will be looking for appropriate datasets to assist in the analyses. SCAR-MarBIN will be important for the latter. SCAR will be invited to the workshop. **Recommendation:** When invited, we should nominate Dr Bruno Danis, Scientific Coordinator of SCAR-MarBIN, who is based in Brussels and I am willing to attend in order to maintain continuity (see paragraphs 18-20). Note: Dr Danis is likely to be invited directly by the workshop convenors.

17. The Scientific Committee noted that bioregionalisation analysis may need to consider the effects of climate change, and the results will need to be updated if and when new information becomes available. SCAR can play a role here in providing such information.

18. Dr Andrew Constable (Australia) presented a report on the independent Experts Workshop on Bioregionalisation of the Southern Ocean held in Hobart, September 2006. The workshop was hosted by WWF-Australia and the Antarctic Climate and Ecosystems Cooperative Research Centre (Hobart), and supported by Peregrine Adventures, a tourist operator. Some members of the CCAMLR Bioregionalisation Steering Committee and CCAMLR Secretariat were able to attend. I attended as the SCAR Observer and also as an expert on zooplankton and the pelagic ecosystem in the Indian Ocean sector.

19. The aim of the Experts Workshop was to develop a "proof of concept" for a broad-scale bioregionalisation of the Southern Ocean that would aid CCAMLR in its bioregionalisation work. The workshop mainly used physical environmental data and chlorophyll concentrations derived from satellite data, but data sourced from SCAR-MarBIN and CPR data were also used. New and quite innovative quantitative analytical techniques were applied during this workshop. The report of this workshop was launched during CCAMLR-XXV and is available at www.wwf.org.au/publications/bioregionalization-southern-ocean.

20. The Commission noted the success of the independent Experts Workshop in demonstrating the feasibility of a broad-scale bioregionalisation analysis as an early step towards the identification of MPAs. My assessment is that the methods developed at this workshop will also be of use to EBA and CAML. Further CAML and SCAR-MarBIN will be essential for the ultimate development of MPAs.

CCAMLR-IPY Krill Survey

21. Dr Volker Siegel (Convenor of the CCAMLR-IPY Survey) advised the Scientific Committee that there had been no progress in the development of the survey. Member States had not been able to commit ship time to the project, with the exception of Peru, an Acceding State. Consequently, it will not be possible to obtain a revised estimate of krill biomass in Area 48 (Antarctic Peninsula, Scotia Arc region) in 2008 as a contribution to the IPY.

22. A new CCAMLR-IPY Steering Committee was formed, with Mr Svein Iversen (Norway) and Dr Edith Fanta (Brazil) as convenors, to develop a modified acoustic research project on krill and other species, making use of other vessels operating in Antarctica during IPY. CAML is in a position to assist. Many of the ships in the CAML fleet are expected to have acoustics system and krill sampling

nets appropriate for a krill survey. Subsequently, I have been invited as a member of the steering committee to provide a link with SCAR and CAML, with the agreement of Prof. Michael Stoddart CAML Administrator, as well as for my expertise in krill surveys. Other members are Drs V. Alder (Argentina), M. Azzali (Italy), M. Gutierrez (Peru), S. Hanchet (New Zealand), N. Sanjeevan (India) and D. Ramm (CCAMLR Data Manager). Note: Dr Siegel resigned as convenor as he believed that the new committee should be lead by a member whose country can participate in the new CCAMLR-IPY Survey. Dr Siegel's efforts in attempting to develop the survey were strongly commended.

23. The new CCAMLR-IPY SC will meet in Cambridge in early May 2007 in association with CCAMLR's Subgroup on Acoustic Survey and Analysis Methods (SG-ASAM). SG-ASAM has been tasked with developing the acoustic sampling protocols for IPY 2008. **Recommendation:** I will attend the workshop then convey the protocols and the research plan set for CCAMLR-IPY to the CAML SSC to be incorporated into CAML where possible.

US AMLR Research and Monitoring Program

24. Dr Rennie Holt (USA) advised the Scientific Committee of the difficulties the US Antarctic Marine Living Resources (AMLR) Program is experiencing in securing an appropriate budget and vessel in order to continue its predator-prey ecosystem-based research. AMLR has been operating for 18 years. It provided invaluable data for CCAMLR, which led to the development of population models for krill in the southwest Atlantic. There are few long term continuous biological surveys in Antarctica and its potential closure should be a matter of concern for the whole Antarctic community.

25. AMLR has developed long term collaborations with Chile, Germany, the Republic of Korea and other nations. Cessation of the AMLR Program will probably affect the research of those nations. **Recommendation:** SCAR will need to assess if this will also have an impact on SCAR research activities and may also wish to consider if there is any support or action that may assist AMLR in securing support from its funding agency.

Next Meetings and Collaboration with CCAMLR

26. The next meeting of the Commission CCAMLR-XXVI will be from 22 October to 2 November 2007 at the CCAMLR Headquarters in Hobart.

27. As noted in my report last year on CCAMLR-IV (paragraph 25) CCAMLR's Scientific Committee values the contributions made by Observers in its work and considered ways to enhance expert contributions at future meetings of its working groups. The Scientific Committee agreed that invitations to Observers attending SC-CAMLR meetings could be extended to intersessional meetings of its working groups, subject to the following conditions:

- (i) all Observers participate at meetings in accordance with the Scientific Committee's rules of procedures;
- (ii) Observers with expert contributions submit meeting documents in accordance with the guidelines for the submission of meeting documents at working groups;
- (iii) the meeting convener and the Chair of the Scientific Committee would review each meeting document submitted by Observers and determine the scientific merit of the contribution and its relevance to the objectives of the meeting;
- (iv) subject to approval by the meeting convener and the Chair of the Scientific Committee, Observers who provided a significant scientific contribution (by way of a meeting document) would be invited to participate in the intersessional meeting.

28. SCAR is expected to be invited to the Bioregionalisation Workshop (paragraphs 15 and 16). SCAR may also be invited to the next WG-EMM Meeting, Christchurch, New Zealand July 2007, if we have a significant contribution. **Recommendation:** I will liaise with the WG-EMM Convenor Dr Keith Reid (UK) to ascertain the agenda of the meeting and determine if there is any information or input that can be offered by SCAR. SCAR or specifically SC-ATS may wish to consider other information or reports that should be brought to the attention of WG-EMM.

29. I believe significant progress has been made in the last year in developing stronger collaboration with CCAMLR. SCAR is actively developing joint research activities in addition to providing advice and information. The inclusion of CCAMLR as active members or observers on SCAR-MarBIN SSC, CPRAG and the CAML SSC, collaborative research during IPY, and SCAR's active participation in CCAMLR's Bioregionalisation Workshop will further strengthen links.

30. The Commission welcomed the reports presented by SCAR and the continued cooperation with SCAR.