

CCAMLR-XXV/BG/22

Original: English
Agenda Item No. 15
SC Agenda Item No. 9

**REPORT ON THE ACTIVITIES OF THE SCIENTIFIC COMMITTEE ON ANTARCTIC
RESEARCH (SCAR) 2005/06**

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Abstract

This paper reports on the various activities conducted by or involving SCAR that relate directly to CCAMLR or are of potential interest to CCAMLR. This includes a report on the SCAR XXIX Delegates Meeting and Open Science Conference held in Hobart in July 2006, progress with the new Evolution and Biodiversity in the Antarctic (EBA) and the Census of Antarctic Marine Life (CAML) projects. CAML has been developing links with the CCAMLR 2008 IPY Survey. The new SCAR-MarBIN data portal continues to gather information on marine biodiversity in Antarctic and SCAR has established a new Action Group on Continuous Plankton Recorder research CPRAG. Both SCAR-MarBIN and CPRAG can provide useful data for CCAMLR. The activities of the Expert Groups of Birds and Seals are summarised, as well as new research on Ocean-Ice-Atmosphere Systems and interactions. SCAR conducted its third international workshop on marine acoustic studies at the University of Cadiz, Spain in January 2006. A summary is provided in this report. A complete report of the Cadiz workshop is provided in the supplementary SCAR information paper CCAMLR-XXV/BG/23 "Report on the activities of the Scientific Committee on Antarctic Research (SCAR) 2005/06."

REPORT ON THE ACTIVITIES OF THE SCIENTIFIC COMMITTEE ON ANTARCTIC RESEARCH (SCAR) 2005/06

1. SCAR's Role

1. The Scientific Committee on Antarctic Research (SCAR) is an inter-disciplinary committee of the International Council for Science (ICSU). SCAR is charged with initiating, developing and coordinating high quality international scientific research in the Antarctic region, and on the role of the Antarctic region in the Earth system. The scientific business of SCAR is conducted by its Standing Scientific Groups in Geosciences, Life Sciences and Physical Sciences, which represent the scientific disciplines active in Antarctic research and report to SCAR. Each of the Standing Scientific Groups is supported by a number of sub-groups:

- i. Action Groups, Biological Monitoring, Census of Antarctic Marine Life (CAML), Continuous Plankton Recorder research (CPRAG), Marine Biodiversity Information Network (SCAR-MarBin);
- ii. Expert Groups, e.g. birds and seals;
- iii. Scientific Planning Groups;

2. These various groups contribute to one of more of five Scientific Research Programmes sponsored by SCAR:

- i. Antarctica in the Global Climate System (AGCS)
- ii. Antarctic Climate Evolution (ACE)
- iii. Subglacial Antarctic Lake Exploration (SALE)
- iv. Interhemispheric Conjugacy Effects in Solar-Terrestrial and Aeronomy Research (ICESTAR)
- v. Evolution and Biodiversity in the Antarctic (EBA)

EBA has the most immediate relevance to CCAMLR but research conducted by ACE and AGCS may also assist CCAMLR. The latter deals with the present and changing climate.

3. In addition to carrying out its primary scientific role, SCAR also provides objective and independent scientific advice to the Antarctic Treaty Consultative Meetings (ATCM) and other organizations on issues of science and conservation affecting the management of Antarctica and the Southern Ocean. In that role, SCAR has made numerous recommendations on a variety of matters, most of which have been incorporated into Antarctic Treaty instruments. Foremost amongst these have been the advice provided for the many international agreements which provide protection for the ecology and environment of the Antarctic.

4. SCAR elected a new President in July 2006, Professor Chris Rapley CBE (UK). The Executive Director is Dr Colin Summerhayes (UK) and the SCAR Observer to CCAMLR is Dr Graham Hosie (Australia, graham.hosie@aad.gov.au). The homepage of SCAR is www.scar.org and its strategic plan can be downloaded from www.scar.org/about/introduction/strategicplan/index.html.

2. SCAR XXIX and 2nd Open Science Conference

5. One of the major activities for SCAR this year was the biennial SCAR Delegates Meeting SCAR XXIX which was held in Hobart in July 2006 in conjunction with COMNAP XVIII. SCAR greatly appreciated the use of the facilities of CCAMLR's new offices. An invitation had been extended to the Chair of the Scientific Committee of CCAMLR to attend the SCAR XXIX meeting as an Observer. Unfortunately, at the last minute Dr Edith Fanta could not attend due to other commitments to the CCAMLR. SCAR will extend another invitation to CCAMLR to attend the SCAR XXX meeting which is scheduled for 2008 in St Petersburg, Russia.

6. The SCAR Open Science Conference (and the associated COMNAP meeting) in the week prior to SCAR XXIX attracted nearly 900 delegates from 32 countries. This was a multi-disciplinary conference addressing the five SCAR Scientific Research Programmes. Each SRP had a plenary speaker and Dr Edith Fanta (Brazil) was the key note speaker on EBA. Many of the 45 science themes of the conference addressed CCAMLR related issues or were led by CCAMLR member, e.g. Ecology of Krill and Marine Ecosystem Function themes led by Dr Stephen Nicol (Australia) and Dr Edith Fanta (Brazil), respectively. Nearly 700 papers were given at the Open Science Conference – 50% of these were posters.

7. The SCAR XXIX meeting and Open Science Conference provided an opportunity for a number of other satellite meetings including the SCALOP symposium, workshops on krill research, the Census of Antarctic Marine Life, the new Integrated Analyses of Circumpolar Climate and Ecosystem Dynamics in the Southern Ocean (ICED) programme, plus meetings to establish the International Antarctic Institute for Antarctic education and the Southern Ocean Observing System.

3. Activities of Standing Scientific Groups on Life Sciences (SSG-LS)

8. The Chief Officer of SSG-LS is Dr Ad H L Huiskes (Netherlands). The new Deputy Chief is Dr Gary Steel (New Zealand) and the Secretary is Dr Kathleen Conlan (Canada). The new homepage for SSG-LS is www.scar.org/researchgroups/lifescience.

3.1 EBA Activities

9. The Evolution and Biodiversity in Antarctica (EBA) programme is one of SCAR's new Scientific Research Programmes. The programme is attempting to:

- Explore the evolutionary history of modern Antarctic biota
- Examine the role of Antarctic biodiversity in present-day ecosystem function
- Predict the responses to future environmental change

EBA is seeking to address issues that are also be of interest to CCAMLR, and SCAR welcomes CCAMLR involvement in this programme. Three of the SSG-LS Action Groups, CAML, SCAR-Marbin and CPRAG provide the most opportunity for direct collaboration between SCAR and CCAMLR in scientific research and will be discussed below. Further details of the EBA programme in general can be found at <http://www.nioo.knaw.nl/projects/scarlsssg/eba/>.

3.2 CAML Activities

10. The Census of Antarctic Marine Life (www.cam.aq) is one of the major SCAR sponsored projects for IPY. CAML is aiming to investigate the distribution and abundance of Antarctica's marine biodiversity, how it is affected by climate change, and how change will alter the nature of the ecosystem services currently provided by the Southern Ocean for the benefit of humankind. It will provide a robust benchmark against which the effects of future change can be measured.

11. CAML has been progressing quickly and methodically towards its major field season in 2007/08 IPY when a circum-Antarctic survey is planned. Nearly 30 nations have expressed interest in participating in CAML, including nearly all CCAMLR nations and a number of Acceding States. Potentially, as many as 16 ships could be involved in the survey. Opportunities for collaboration between CAML and the CCAMLR 2008 IPY Survey were identified and noted in the SCAR Report to CCAMLR XXIV last year. The CAML Scientific Steering Committee subsequently invited Dr Volker Siegel (Convener, CCAMLR 2008 IPY Survey Steering Group) to attend the CAML Scientific Steering Committee (SSC) Meeting in Bremerhaven in June 2006 as an invited expert. His contribution was greatly appreciated. The development of common sampling protocols that would benefit both CAML and CCAMLR were discussed. Drs Siegel and Hosie, and other CAML invited experts on plankton/pelagic sampling have

continued to liaise in order to incorporate proposed CCAMLR sampling protocols for krill into the standard sampling protocols for CAML.

12. The next meeting of the CAML SSC will be in Poland in June 2007. It is hoped that Dr Siegel will be able to attend that meeting.

3.3 SCAR-MarBIN

13. The SCAR Marine Biodiversity Information Network (www.scarmarbin.be) compiles and manages existing and new information on Antarctic marine biodiversity by coordinating, supporting, completing and optimizing database networking. The network is also linked to larger biodiversity initiatives such as Ocean Biogeographical Information System (OBIS, www.iobis.org) - the information component of the Census of Marine Life (CoML, www.coml.org) and Global Biodiversity Information Facility (GBIF, www.gbif.org). SCAR-MarBIN data policy protocols align with the Antarctic Treaty (Art. III.1) and IPY requirements, as well as data management protocols of GBIF and OBIS. SCAR-MarBIN's web portal provides a single, easy access point to marine biodiversity information relevant to scientific research, conservation and sustainable management purposes.

14. SCAR-MarBIN has collated records from 24 databases to date. Data collected during IPY and in particular CAML will also be linked through SCAR-MarBIN. SCAR-MarBIN also has a Register of Antarctic Marine Species (RAMS) which has an online searchable species list, taxonomic links, distribution data and mapping tools to view the data. RAMS currently contains information on 5,800 species, mainly macro- and meiobenthic, but also data on zooplankton, seabirds and marine mammals. The intention is to complete the RAMS before the beginning of the IPY and to contribute to larger taxonomic initiatives.

15. SCAR-MarBIN should prove a very useful resource for CCAMLR, particularly for monitoring studies, and the purposes of bioregionalisation and development of MPAs. In turn, SCAR would welcome CCAMLR's contribution of metadata records to further enhance SCAR-MarBIN, acknowledging that CCAMLR has strict rules of access and use of the actual data. The network complies with ISO standards for metadata handling, facilitating exchange of information. The contribution of records from other sources is also welcomed. Details for submitting metadata or data sets are available at the SCAR-MarBIN website or from the Scientific Coordinator Dr Bruno Danis (bruno.danis@scarmarbin.be).

3.4. Action Group on Continuous Plankton Recorder Research

16. SCAR has a new Action Group on CPR research (CPRAG) to oversee the further development of the Southern Ocean CPR Survey and its database as a service to the Antarctic community. The group's specific Terms of Reference are:

1. Map the biodiversity and distribution of plankton, including krill life stages.
2. Use the sensitivity of plankton to environmental change as early warning indicators of the health of the Southern Ocean.
3. Serve as reference on the general status of the Southern Ocean for other monitoring programs.
4. Develop and maintain the SO-CPR Database and improve access for users.
5. Expand and enhance the SO-CPR Survey to include more ships and repeat transects around Antarctica.

17. The database is available to assist CCAMLR with its ecosystem monitoring programme by providing a reference for natural variability in the ecosystem as well as responses to other environmental changes. The data will also be useful for bioregionalisation studies. Zooplankton distributions can be viewed at the

CPRAG/SO-CPR Survey website (<http://aadc-maps.aad.gov.au/aadc/cpr/index.cfm>) or via the SCAR-MarBin website.

18. CPRAG is co-chaired by Dr Graham Hosie (Australia) and Prof. Mitsuo Fukuchi (Japan) and has two other members from Germany and New Zealand. The Group is seeking to expand the membership with appropriate expertise and would be interested in having a member from CCAMLR on board. SCAR Action Groups are usual short term groups established to address specific scientific topics. CPRAG is expected to be elevated to a more permanent Expert Group in the longer term.

3.5 Expert Groups on Birds and Seals

19. The SSG-LS and the Expert Groups of Birds and Seals (GEB and EGS), noted the letter From Dr Edith Fanta, Chair of CCAMLR Scientific Committee, advising that CCAMLR would not be formally requesting summary information on the status and trends of bird and seal populations, until such time that CCAMLR convenes a workshop to develop regional estimates of land-based predator abundance and to determine data requirements. SCAR welcomed the invitation from CCAMLR Scientific Committee for SCAR to participate that workshop. During SCAR XXIX, SSG-LS and the Expert Groups discussed how best to assist the workshop and has considered sending two representatives, one with detailed knowledge of the data and another with detailed ecological knowledge.

20. At the XXIX ATCM meeting in Edinburgh, CEP accepted the proposal by SCAR to delist the sub-Antarctic fur seal (*Arctocephalus tropicalis*) and the Antarctic fur seal (*A. gazella*) from Appendix A of Annex II “Antarctic Specially Protected Species” of the Madrid Protocol. The seals still retain full protection under the Protocol and CEP wishes to continue to look at mortality of the species in relation to the fisheries.

21. SCAR is now examining the status and trends of Ross seal population numbers for the purpose of submitting a recommendation to the ATCM on the future of the protected status of the species.

22. SCAR is also considering the listing of the Southern Giant Petrel as a Specially Protected Species. Evidence indicates that while the Southern Giant Petrel is increasing in numbers in northern waters, the species is declining in Antarctic waters. A joint SCAR-BirdLife International-IUCN workshop held at the British Antarctic Survey in March 2005 identified Southern Giant Petrels as Critically Endangered in the Antarctic, against IUCN regional criteria. Listing of this species would be on the basis of regional rather than global threats.

23. SCAR continued to maintain Observer status at ACAP (Agreement for the Conservation of Albatrosses and Petrels) and attended several meetings in 2005.

24. SCAR has been discussing the possibility of merging the birds and seals groups into a new Expert Group dealing with top predators. There is similarity in the way each group works, and their combination may facilitate the exchange of information, especially with other ATS organisations such as CCAMLR. A report on progress with these discussions will be provided to the next SCAR Executive Committee meeting in June 2007.

3.6 Acoustics and Marine Mammals (CCAMLR-XXV/BG/23)

25. In Cadiz, January 2006, SCAR held its 3rd meeting on Acoustics in relation to Marine Mammals to review the risks associated with marine acoustics in the Southern Ocean. The report was presented to ATCM as Working Paper 4a in Edinburgh, June 2006, and the full report is also provided to CCAMLR as the SCAR supplementary report CCAMLR-XXV/BG/23 “Marine Acoustic and the Southern Ocean”. This

report is an update to the one from SCAR's 2004 meeting on this topic, which was presented to the ATCM in Cape Town. The new report takes into account the latest scientific findings and how they are relevant to the Southern Ocean, plus the latest information from COMNAP on ship activities and acoustic equipment used in the Southern Ocean. Other major sources of information were the reports of the Marine Mammal Commission meetings, the National Research Council Report "Marine mammal populations and ocean noise" and scientific papers submitted to the IWC Scientific Committee.

26. The risk matrices developed in 2004 were reconsidered in the light of the equipment inventory. The Alfred Wegener Institute, Germany, provided an example of how national operators can make progress in this field by undertaking dedicated studies to improve predictive capabilities for particular configurations of acoustic scientific equipment. The wider aspects of marine acoustics were also discussed in terms of setting the potential impacts within a noise framework that recognises the level of background noise in the environment, the continuing limitations in Antarctic data as Parties have so far not developed any coherent research initiatives, and the importance of setting the correct management objectives before implementing control procedures. The probable effectiveness of mitigation measures was considered in the light of available data and suggestions for future work outlined.

27. The Workshop concluded that the risks of most scientific acoustic techniques likely to be used in the Antarctic were less than or comparable to shipping activities on their own. Even airgun seismic surveys were not considered a threat to populations although a temporary threshold shift (TTS) is certainly possible in some instances. Survey planning and mitigation measures could be used to reduce the risk to individual animals but some disturbance may be inevitable as it will not be possible to identify the presence of all marine mammals in the affected zone. Ship noise is not likely to be a problem for most Antarctic waters. However, parts of the Antarctic Peninsula are beginning to experience significant numbers of visits each year so that shipping noise needs to be considered.

28. The Workshop supported the conclusions of the first SCAR report that the best way of mitigating long term, unknown risks from scientific activities is to use data sharing and survey planning to minimize activities in consecutive seasons for higher risk activities such as airgun seismic reflection surveys. The natural background noise in the Southern Ocean needs to be adequately described. Without such a context it is difficult to place anthropogenic sounds in a robust framework. A preliminary noise map for the Southern Ocean could be constructed from ships tracks and marine geophysics data that would provide a reliable indication of the spatial and temporal components of anthropogenic noise. Research needs to be initiated in the Southern Ocean into acoustics and marine mammals if a sound scientific basis is to underpin any future management of ocean noise.

29. SCAR has subsequently attended the Umwelt Bundes Amt sponsored workshop on "Impacts of seismic survey activities on whales and other marine biota," held in Dessau, Germany, September 2006. This workshop considered the effects of seismic activity on fish and squid in addition to the effects on cetacean. A report on this will be submitted by Germany to XXX ATCM CEP.

3.7 MPAs

30. As an international body committed to scientific conservation SCAR has a strong interest in the issue of Marine Protected Areas, and is committed to working with CCAMLR in the future development of MPAs by providing appropriate experts to assist, as well as access to data as required. In support of this, Dr Hosie as the SCAR Observer participated in the September 2006 Hobart "Experts' Workshop on Bioregionalisation of the Southern Ocean", which was sponsored by the WWF (World Wildlife Fund) and the ACE-CRC (Antarctic Climate & Ecosystems – Cooperative Research Centre) and coordinated by Drs Andrew Constable (Australia) and Susie Grant (UK).

31. The workshop was long, reasonably intensive, but also very productive and progressive in the application of new methodologies. Initial application of these methods seemed quite effective at defining bioregions in the Southern Ocean and may also prove very useful for a number of SCAR projects such as EBA and CAML, in addition to helping define MPAs. Some data from SCAR-MarBIN were used during the workshop to test methods, including the SCAR CPR data. As noted above, SCAR considers SCAR-MarBIN as a useful resource for future analyses, especially as more data are acquired. SCAR is therefore keen to participate and collaborate in future bioregionalisation workshops and analyses.

4. Ocean-Ice-Atmosphere System

32. SCAR has begun preparing a comprehensive review on Antarctic Climate Change and the Environment. Analyses of climate change on different time scales will be a major part of this report:

- (a) between the Last Glacial maximum and the present;
- (b) over the past 200 years; and
- (c) over the next 100 years (based on climate models).

The first draft is due in 2008, at XXX SCAR.

33. SCAR and SCOR now co-sponsor an Oceanography Expert Group which is tasked with:

- finding and making available physical, chemical and biological ocean data currently 'hidden' in national files,
- stimulating interdisciplinary research in the Southern Ocean, and
- encouraging the development of a Southern Ocean Observing System (SOOS) (with partners such as CAML, POGO, CLIVAR, and CCAMLR).

Dr Steve Nicol (Australia) provides a link between this group and CCAMLR. The results of the work of this group may be useful to CCAMLR, particularly the proposed SOOS. It would be highly desirable, for the success of this programme, to obtain access to CCAMLR hydrographic and oceanographic data and to get those data into global ocean and Antarctic databases, e.g. the Antarctic Master Directory. On July 15, SCAR, CAML and POGO held a meeting to explore the requirements for a Southern Ocean Observing System (SOOS). It is intended to hold a meeting in 2007 to take forward the planning for a SOOS, and to include other partners such as CCAMLR to join the discussions.

34. SCAR and SCOR are also co-sponsors of the newly developing Integrated Circumpolar Ecosystems Dynamics (ICED) programme, which in effect replaces and combines Southern Ocean JGOFS and GLOBEC. There is now a draft ICED science plan, which can be accessed at (www.antarctic.ac.uk/Resources/BSO/ICED), on which comments from the community are requested. ICED will take a circumpolar interdisciplinary approach to understand climate interactions in the Southern Ocean and their implications for ecosystem function and feedbacks to biogeochemical cycles. It will involve circumpolar instrumentation and field studies, and will extend and further develop circulation, ecosystem and biogeochemical models. ICED themes include: (i) Southern Ocean climate-ice-ocean connections; (ii) circumpolar biogeochemistry and ecosystem structure; (iii) circumpolar ecosystem structure and dynamics; and (iv) sustainable management and ecosystem structure. It will involve data rescue and data recovery, and the development of circumpolar maps of biogeochemical and biological elements. We hope that CCAMLR will find ICED both interesting and useful and will want to contribute to its development.

35. The Oceanography Group meeting in Hobart identified the importance of undertaking biogeochemical studies in the Southern Ocean not least to assess the accumulation there of carbon dioxide and the resulting acidification of the Southern Ocean, which may have a deleterious effect on calcareous plankton such as coccolithophores and pteropods.

36. The “Antarctica in the Global Climate System” SRP is working with the SCAR/SCOR Oceanography group to develop a Southern Ocean database (OCEAN-READER) which can be found at: http://www.antarctica.ac.uk/met/SCAR_ssg_ps/OceanREADER/. The ASPeCT (Antarctic Sea Ice Processes and Climate) project has now been absorbed into AGCS but continues to develop a database for Antarctic Sea-Ice, which should be published by the end of 2006.

5. International Polar Year

37. The Southern Ocean oceanographic-related proposals accepted by the IPY Joint Committee, include those in the following table, which indicates to which SCAR project or to which other body they are related. Details can be found on the IPY web page: (www.ipy.org). Completion of these studies and interactions between them will go a considerable way towards improving understanding of the way the Southern Ocean works as an integrated physical, chemical, biological system and will improve the array of observing systems use to monitor its behaviour.

Area	No.	Short Title	PI	Body
SO	8	Synoptic Slope Study (SASSI)	K.Heywood	AGCS
	34	Climate and Coastal Communities	D.Abele	EBA
	53	Census of Antarctic Marine Life (CAML)	M.Stoddart	EBA
	66	Antarctic Benthic Deep Sea (ANDEEP)	A.Brandt	EBA, CAML
	70	Upper Ocean: Africa to Antarctica	A.Luis	CASO, AGCS
	83	Marine Biodiversity Information Network (MarBIN)	C. De Broyer	EBA, CAML
	93	ICEFISH	C. Verde	EBA, CAML
	131	Antarctic Marine Ecosystems (AMES)	V.Siegel	EBA, CAML, CCAMLR
	132	Climate-Southern Ocean (CASO)	S.Rintoul	AGCS
	137	Evolution and Biodiversity in the Antarctic (EBA)	G.Di Prisco	EBA, CAML, AMES
	141	Antarctic Sea Ice	S. Ackley	AGCS
	304	Drake Passage Seasonality	V.Alder	CAML, EBA
	329	Polar Ecosystems and Contaminants	W.Pollard	EBA
Bipolar	13	Sea level and Tidal Science	P.Woodworth	AGCS
	23	Atlantic Thermohaline Circulation	T. Gammelsrod	AGCS
	35	Tracer Chemistry (GEOTRACES)	H. de Baar	ICED
	52	Passive Acoustic Observations	J. Hildebrand	EBA, CAML
	71	Aquatic microbiology	G. Bratbak	EBA
	92	Integrated Climate and Ecosystems (ICED)	E. Murphy	EBA, CAML
	153	Marine Mammal Exploration	K Kovacs	CAML, EBA

6. Coordination With Partner Organisations

38. SCAR continues to cosponsor several elements of the WCRP’s (World Climate Research Program) including:

- the CliC (Climate and Cryosphere) Programme, which includes work on sea-ice,

- through CLIVAR/CliC, the work of the Southern Ocean Implementation Panel, which is currently focused on the implementation of the CASO IPY programme, and
- the International Panel on Antarctic Buoys (IPAB) which monitor the development and motion of sea ice around Antarctica.

39. Existing partnerships with SCOR are addressed above (section 4). SCAR is currently considering co-sponsoring with SCOR the development of a new SCOR working group to analyse the results of the various Fe enrichment experiments that have taken place in the past decade, several of them in the Southern Ocean.

40. SCAR is also in dialogue with global ocean programmes that have a Southern Ocean dimension, such as SOLAS (Surface Ocean Lower Atmosphere Study), looking at fluxes across the air sea interface, and with GEOTRACES, which aims to identify processes and quantify fluxes that control the distributions of key trace elements and isotopes in the ocean, and to establish the sensitivity of these distributions to changing environmental conditions.

7. Future SCAR Meetings

41. SCAR plans to hold the 3rd Open Science Conference with the SCAR XXX meeting in St Petersburg in July 2008, which will coincide with SCAR's 50th Anniversary celebration. This also occurs during the middle of the International Polar Year and the SCAR XXX Meeting and Conference will be held in conjunction with the International Arctic Science Committee (IASC), providing the opportunity for a bi-polar theme. SCAR will again invite the Chair of the Scientific Committee of CCAMLR to be an Observer at SCAR XXX.

42. The 10th SCAR Biology Symposium is schedule for Sapporo, Japan, in 2009. Prof. Mitsuo Fukuchi (Japan) is coordinating that symposium. Both the 3rd Open Science Conference and the 10th SCAR Biology Symposium are expected to have a strong IPY focus. SCAR welcomes CCAMLR's involvement in both meetings.

8. Concluding Remarks

43. SCAR continues to play a central role in the development of scientific understanding in the Antarctic region. This role will be enhanced by SCAR's involvement at the heart of the planning process for the International Polar Year and through its 5 Scientific Research Programmes (AGCS, ACE, EBA, SALE, ICESTAR) and through specific projects such as EBA, CAML, SCAR-MarBIN, and SO-CPR. Collectively, these will make a major contribution to, and will help to lead the development of, the International Polar Year in the region, and provide a number of opportunities for direct involvement and collaboration with CCAMLR. SCAR is keen to continue to play a major role as the scientific partner to other organisations with interests in the south polar region and the Southern Ocean, and in particular SCAR seeks to develop a strong mutual relationship with CCAMLR.