

REPORT ON THE ACTIVITIES OF THE SCIENTIFIC COMMITTEE ON ANTARCTIC RESEARCH (SCAR) 2004/05 TO CCAMLR

Graham Hosie
SCAR Observer to CCAMLR

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, e.g. Biological Monitoring, Census of Antarctic Marine Life (CAML);
- ii. Expert Groups, e.g. birds and seals;
- iii. Scientific Planning Groups;
- iv. Scientific Programme Groups, e.g. Evolution and Biodiversity in Antarctica (EBA).

2. 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.

3. The current President of SCAR is Prof. Dr Jörn Thiede (Germany), 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. SCAR has recently developed a new strategic plan for 2004-2010 which describes SCAR's vision and mission statements and the objectives to achieve its mission. A copy of SCAR's strategic plan can be downloaded from www.scar.org/about/introduction/strategieplan/index.html and CCAMLR and delegates are encouraged to consult this document.

2. Activities of Standing Scientific Group on Life Sciences (SSG-LS)

4. The Chief Officer of SSG-LS is Dr Ad H L Huiskes (Netherlands), Deputy Chief is Prof. Lawrence A. Palinkas (USA) and Secretary is Dr Kathleen Conlan (Canada). The new homepage for SSG-LS is www.scar.org/researchgroups/lifescience.

2.1 9th SCAR Biology Symposium

5. SCAR continues to have considerable generic involvement in marine biological science. From July 25-29, 2005, SCAR held the 9th SCAR International Biology Symposium (which is held every 4 years). This time it was held for the first time in South America (in Curitiba, Brazil), and organised by Professor Edith Fanta. A record 350 people registered. Many of the

papers and posters addressed marine biological topics. It is intended to publish the keynote papers and a selection of related papers as a Special Issue of the international journal *Antarctic Science*.

2.2 EVOLANTA and EBA

6. SCAR also carries out several specific marine biological activities that are relevant in one way or another to CCAMLR, and that provide the potential for links to CCAMLR, e.g. the Evolutionary Biology of Antarctic Organisms (EVOLANTA) programme, looking at the ways in which marine animals have evolved. EVOLANTA published the proceedings of one of their workshops as a special issue of *Antarctic Science* (**16**, no. 1, March 2004). As of this year, EVOLANTA has now been absorbed into the new SCAR EBA programme (Evolution and Biodiversity in the Antarctic). The scientific design of EBA is on the SCAR web site at: www.scar.org/researchgroups/lifescience. An Implementation Plan for EBA has been drafted and has been attached as Appendix I. The plan is also available via www.nioo.knaw.nl/projects/scarlsssg/eba/downloads. It will be finalised shortly. It may be possible to direct some of the research in EBA towards answering some of the fundamental science issues that relate to CCAMLR's interests, and CCAMLR and delegates are invited to participate in EBA.

2.3 CAML

7. SCAR is the leading sponsor of the Census of Antarctic Marine Life (CAML), which is a Southern Ocean contribution to EBA and to the global Census of Marine Life (CoML), supported largely by the US Sloan Foundation. CAML (www.caml.aq) has begun its work and will ramp up to a major investment phase during the IPY, 2007-08. It provides a lot of potential interest for CCAMLR, and we encourage CCAMLR's involvement. Specifically, there is an opportunity for CCAMLR to provide CAML with data and samples, especially for species identification, collected during CCAMLR activities, and similarly CAML has the potential of providing similar information on CCAMLR's target species, e.g. krill demographics and specimens, during CAML's circum-Antarctic survey. The data will be collected within the CoML database OBIS (Ocean Biogeographical Information System)(see www.iobis.org/Welcome.htm).

2.4 New Databases

8. As another contribution to EBA, SCAR is also developing a Marine Biological Information Network (SCAR-MarBIN), which will provide CCAMLR with useful references on general ecosystem activity (see www.scarmarbin.be). Data collected during CAML will also be linked through SCAR-MarBIN.

9. SCAR is keen to create a Southern Ocean Continuous Plankton recorder (CPR) Database as a service to the Antarctic community, including CCAMLR. The data can assist in addressing C-EMP's second objective of distinguishing harvesting impact from natural variability or other sources of variation in the Antarctic marine ecosystem. A proposal for SCAR sponsorship of the CPR database will be made to the formal meeting of the SSG-LS (8-11 July 2006, in Hobart).

2.5 EASIZ

10. The Ecology of the Antarctic Sea-Ice Zone (EASIZ) programme was successfully terminated with a closing symposium in September 2004 in Croatia. The proceedings will be published in a special issue of *Deep Sea Research*.

2.6 Expert Groups on Birds and on Seals

11. SCAR continues with the activities of its Expert Groups on Birds and on Seals, which have collected unique databases and are regularly called upon to provide CCAMLR with information. CCAMLR may be more interested in the future in getting the raw data from these groups rather than the reports analysing the data. SCAR is happy to provide whatever is needed, providing that SCAR receives clear specifications as to what exactly is required. SCAR has a standing obligation to report on the status of seals every five years, and another report is due this year. However, the data sets are currently incomplete or are still being analysed, and it would be imprudent to provide a report based on incomplete data. All analyses should be complete for a full report to CCAMLR in October 2006 (by then the APIS results should be finalised). In the meantime, we can refer CCAMLR to the latest report from the last SCAR Expert Group on Seals meeting in Curitiba at the EGS website (www.seals.scar.org/docs/scar.htm), as well as the Status of Stocks link at that site.

2.7 Acoustics and Marine Mammals

12. SCAR has an Acoustics working group that has already produced two papers for the ATCM on the links between scientific acoustic devices and marine mammals (the last of these papers was presented to ATCM in Cape Town in 2004). A workshop will be organised in Cadiz in January 2006 to assess the information published over the last two years and will provide a further report for the ATCM in 2006. We have now opened a dialogue with the International Whaling Commission on this topic to ensure better links with studies worldwide. CCAMLR may also have an interest in working with us on this topic, or in hearing about the results.

2.8 MPAs

13. SCAR and CCAMLR share an interest in the topic of Marine Protected Areas, an important current topic in marine conservation initiatives worldwide. . As an international body committed to scientific conservation SCAR suggests that it could provide advice or access to data to assist in the future development of MPAs, as SCAR has done previously with ASPAs at the ATCM. More recently, SCAR through its Expert Group on Birds has attended meetings of the Agreement for the Conservation of Albatrosses and Petrels (ACAP) as an Observer, providing advice and data on the distribution, abundance, population trends and regional conservation status of Southern Giant Petrels. In addition, SCAR is a member of two ACAP Working Groups (Status & Trends and Breeding Site Inventory). In 2006, SCAR will be providing ACAP with an Information Paper on the potential contribution of at-sea data to the selection of high seas MPAs. Such data may help to identify possible MPAs, because seabirds can be used as proxies for related biological activity (i.e. prey species).

3.1 Ocean-Ice-Atmosphere System

14. SCAR has a growing involvement in studying and forecasting the ocean-ice-atmosphere system of the Southern Ocean, on short, medium and long time scales. These studies include those on the behaviour of the Antarctic Circumpolar Current (ACC), and extend across the

full width of the Southern Ocean as far as the northern edge of the ACC. Studies and numerical models of this system provide the potential for close links with CCAMLR.

15. Many of these studies come together under the new SCAR Scientific Research programme, Antarctica and the Global Climate System (AGCS), which provides a study of the modern ocean-atmosphere-ice system, and develops and applies models of the way in which that system behaves. The AGCS Proposal can be downloaded from the SCAR web site (www.scar.org/researchgroups/physicalscience). An Implementation Plan is being developed.

16. The ASPeCT (sea ice) Expert Group has continued to develop its database of sea ice parameters from in-situ ship observations. Data from 81 voyages were added over the last two years. The data archive has been used in a number of studies, including comparisons with satellite ice edge location to determine seasonal variability in the reliability in the satellite estimates, comparisons with sea ice-ocean models and the development of a circumpolar climatology of area-averaged albedo. A comprehensive database should be available by year end. ASPeCT is now part of AGCS.

17. SCAR Expert Group on the International Bathymetric Chart of the Southern Ocean (IBCSO) will develop new compilations of bathymetric data for inclusion in the Chart.

3.2 International Polar Year

18. SCAR is involved in several of the leading research proposals for the IPY. The key SCAR-led Expressions of Interest (listed on the IPY web site www.ipy.org) are:

EoI 83: CAML. This has subsequently been selected as a lead proposal.

EoI 577: EBA. This was identified as the lead programme for a cluster. The proposal has yet to be submitted for the second phase.

EoI 9: SASSI (Synoptic Antarctic Shelf-Slope Interactions Study). This has subsequently been selected as a lead proposal.

EoI 109: CASO (Climate in Antarctica and the Southern Ocean). This was identified as the lead programme for a cluster. The proposal was submitted for the second phase before the September 30 deadline.

19. The potential exists for strong links between SCAR and CCAMLR within some of these proposals, and within the ICEFISH/CCAMLR proposal (EoI 533).

3.3 Developing Scientific Capacity

20. SCAR has drafted a strategy for capacity building (training and education). This includes the SCAR Fellowship Programme, which provides a small number of annual awards. Four have been awarded in 2005. The Joint SCAR-COMNAP Committee on Antarctic Data Management held a training workshop on Antarctic Data Management in Buenos Aires on September 12-16, 2005.

3.4 Coordination with partner organisations (SEE APPENDIX II).

21. SCAR carries out its work in coordination with a number of partner organisations. This is detailed in Appendix II.

3.5 SCAR Meetings (See Appendix III)

22. Key meetings involving SCAR in 2005 are listed in Appendix III.

3.6 XXIX SCAR Meeting and 2nd Open Science Conference

23. The next SCAR Meeting and 2nd SCAR Open Science Conference will be held in Hobart, Australia, from 9 to 19 July 2006. The SCAR XXIX is being jointly held with the COMNAP XVII meeting. The 2nd SCAR Open Science Conference will be from 12 to 14 July and the theme of the conference is “Antarctica in the Earth System”. Contributions to the conference from CCAMLR and delegates are welcomed. Details are available at www.scarcomnap2006.org and registration and submission of abstracts (by 31 December 2005) for the conference can be made through this site.

3.7 Concluding Remarks

24. SCAR continues to play a central role in the development of scientific understanding in the Antarctic region. This role will be enhanced in future by SCAR's involvement at the heart of the planning process for the International Polar Year. SCAR's five new Scientific Research Programmes

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

will make a major contribution to, and will help to lead the development of, the International Polar Year in the region. 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.

APPENDIX I

Evolution and Biodiversity in the Antarctic: the Response of Life to Change (EBA)

Implementation plan

The structure of this programme will be based around a series of five major unifying key questions that are addressed across the realms of terrestrial, limnetic and marine environments. These will form the Work Packages of the programme which will operate along the lines of a matrix of the key questions vs selected environments.

The EBA programme will bring together a wide range of disciplines to tackle a series of well focused questions. These disciplines include plate tectonics, climatology, glaciology, geophysics, oceanography, paleontology, molecular biology, taxonomy, biogeography, autecology, cellular and organismal-level ecophysiology, and community ecology.

The programme will run a series of workshops. There will be three types: a) thematical, fostering cross-disciplinary interaction, including joint workshops with the other SCAR programmes, particularly ACE and AGCS; b) interaction with non-polar experts in evolutionary biology; c) integrative, for the Antarctic community. The workshop timetable will be defined at the EBA workshop during the SCAR Biology Symposium in Curitiba in 2005.

Additional to the workshops will be national and international field programmes. Such programs will be wide ranging, including subantarctic islands, inland to the most remote nunataks as well as northward to the Magallanes, and stretching across the Southern Ocean down to the deep ocean as well as the shelves. This wide range will need significant support from COMNAP and national programs.

Scope

- To understand the evolution and diversity of life in the Antarctic.
- To determine how these have influenced the properties and dynamics of present Antarctic ecosystems and the Southern Ocean system.
- To make predictions on how organisms and communities are responding and will respond to current and future environmental change.

Work packages:

1. Evolutionary history of Antarctic organisms

Key scientific areas to be investigated will include:

1. Cryptic species: to what extent may we have underestimated the diversity of the Antarctic biota?
2. Radiations: when did the key radiations of the Antarctic taxa take place?
3. Impact of glaciation: on land (habitat modification/loss and isolation); at sea (evolutionary links between continental shelf and slope or deep-sea species).
4. Phylogeography: geographical structure and relationships in the Antarctic biome.
5. Evolutionary history of Antarctic micro-organisms.

2. Evolutionary adaptation to the Antarctic environment

Key scientific areas to be investigated will include:

1. Limits to organism performance: adaptation to the Antarctic environment constraining physiological performance.
2. Physiological and genomic adaptations that allow organisms to survive in the Antarctic: the extent to which these are special to the Antarctic or simply variants of more general adaptations exhibited by organisms elsewhere.
3. Ability of Antarctic organisms to cope with daily, seasonal and longer-term environmental changes.
4. Behavioural and morpho-functional adaptations.
5. Adaptation and plasticity (genotype and phenotype).

3. Patterns of gene flow within, into and out of the Antarctic, and consequences for population dynamics

Key scientific areas to be investigated will include:

1. Population structure and dynamics in the context of evolutionary biology.
2. Dispersal: immigration and emigration of organisms, intra-Antarctic dispersal, and the role of humans as vectors.
3. Genetic structure of populations: differences between Antarctic and non-Antarctic populations and the extent to which population structures reflect past evolutionary history.
4. The extent to which populations of Antarctic organisms exist as metapopulations.
5. The role of advective/transport processes in the gene flow and population structure of marine, limnetic and terrestrial Antarctic organisms.

4. Patterns and diversity of organisms, ecosystems and habitats in the Antarctic, and controlling processes.

Key scientific areas to be investigated will include:

1. Spatial and temporal variations in diversity: variation of diversity at different spatial scales within the Antarctic and within defined time frames.
2. Response to latitudinal and environmental gradients: local, regional and global.
3. Radiations: history of key evolutionary radiations in the Antarctic.
4. Unknown areas: patterns of diversity and biotic composition of unexplored but important areas (e.g. deep sea, inland nunataks, isolated islands, subglacial lakes).

5. Impact of past, current and predicted future environmental change on biodiversity, and the consequences for Antarctic marine, terrestrial and limnetic ecosystem function

Key scientific areas to be investigated will include:

1. Interactions between introduced and indigenous species in selected environments under climate change.
2. Effect of abiotic change on biotic response.
3. Modelling interactions between environmental change and organism responses in order to predict biotic change.
4. Application of research to conservation policy.

Links:

EBA will establish links with ICSU and other international programmes concerned with global physical change and the biological response. Of particular importance are bipolar connections.

Timeline

- **2005:** Planning phase including
 - a) Planning meeting in Cambridge in March to draft Implementation Plan.
 - b) SCAR Biology Symposium “Evolution and Biodiversity in the Antarctic”, Curitiba, Brazil.
 - c) International workshop on EBA where work package sub-committees will be appointed and specific milestones detailed.
 - d) IPY advanced planning, database construction and integration
 - e) Circulation of questionnaire about planned and anticipated research activities that will contribute to the aims of EBA in order to collect feedback from potential participants.
- **2006:** SCAR Open Science Meeting, Hobart. EBA begins. Workshop: Factors driving evolution in the Antarctic.
- **2007:** Second workshop: World View of Evolution. Miraflores, Spain.
- **2008:** SCAR Open Science Meeting, St. Petersburg. Evolutionary Biology-Biodiversity Joint Session.
- **2009:** SCAR Biology Symposium, possibly in Japan or Korea. Major EBA session and third workshop (integrative) one. Also mid-program review.
- **2010:** EBA-IPY activities: will be the SCAR Open Science Meeting where we will devote to IPY results.
- **2011:** last field season.
- **2012:** SCAR Open Science Meeting.
- **2013:** SCAR Biology Symposium – wrapup of results and last year of program.

Methodology

The EBA programme is wide-ranging and multidisciplinary. The RiSCC programme has developed a manual of methods and workshops will assist in standardising methods as appropriate. In many disciplines, methods are developing rapidly, so it is not feasible to list specific methodologies in detail. However, a few general points are worth emphasising.

1. The programme will use state-of-the-art enabling technologies in molecular biology, genomics/proteomics, ecophysiology, microbiology, taxonomy and organismal biology, all of which are established and proven at the highest level in various national groups contributing to the EBA community.
2. The programme will liaise with the relevant physical, geological and historical disciplines to ensure regular interaction and use of the most recent data and insights in interpreting the biological results.
3. The programme will necessarily involve fieldwork and laboratory work, both in the Antarctic and in home institutions. In particular, the study of latitudinal gradients requires extensive international collaboration (as was achieved for the recent Victoria Land Transect study, which involved international collaboration, the IBMANT collaboration between European and Latin American countries on evolutionary

connections between the Antarctic and South America, and ICEFISH 2004, a sub-Antarctic cruise with scientists from eight countries).

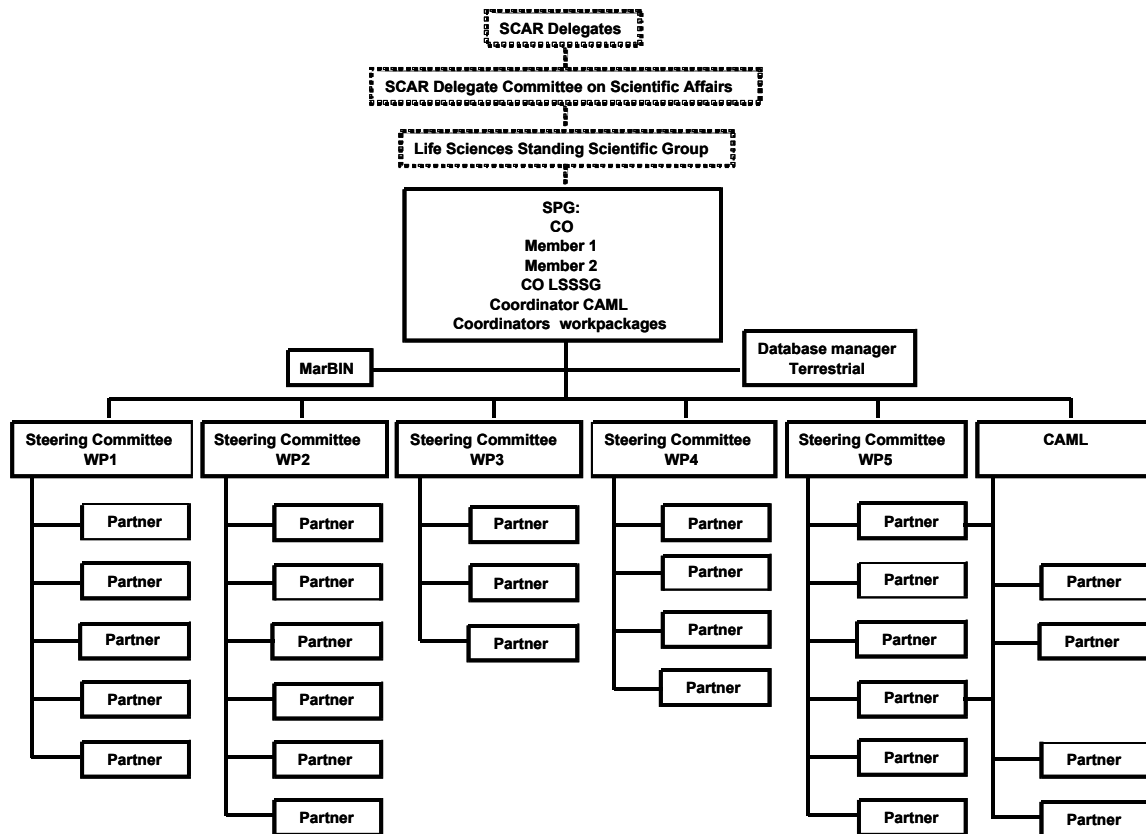
4. Exploration of some areas will require new technologies, for example, samplers for low densities of propagules in the atmosphere and sub-glacial lakes; benthic landers or remotely operated vehicles for the deep sea; autonomous underwater vehicles for work beneath ice shelves; and remote-controlled small aircraft for spectral sensing of terrestrial and limnetic environments.
5. Importance will be attached to spatial and temporal scales in studies of gene flow, population dynamics, disturbance ecology and biological diversity.

Relationship with IPY

The International Polar Year activities will fall within the timing of the EBA programme. EBA and IPY activities were conceived in parallel. The EBA Science Plan clearly shows that it will make a significant contribution to IPY activities by undertaking a focussed initiative elucidating the evolutionary response of organisms, populations and communities to environmental change. EBA will leave a legacy of evolutionary and biodiversity information which is the hallmark of IPY.

Programme management and governance

The EBA programme will be managed by a Scientific Programme Group. This group will comprise coordinators of individual work packages and Census of Antarctic Marine Life (CAML). The SPG will work by electronic mail but will also meet once a year. An important aspect will be liaison with other scientific disciplines. This will be achieved by a series of multidisciplinary workshops focussed on specific topics. Six steering groups will be formed to support each of the objectives as well as CAML. EBA will construct a website to present the Science Plan and to communicate with its members and the general public. EBA will also schedule workshops to monitor the progress of the programme. EBA will work closely with JCADM with regard to data management, with marine data being integrated into MarBIN and terrestrial data into the RiSCC Biodiversity database, as well as into relevant data centres and databases.



Milestones

- **2005:** Implementation of EBA: International workshop where work package sub-committees will be appointed and specific milestones detailed: “Evolution and Biodiversity in the Antarctic”, 9th SCAR Biology Symposium, Curitiba, Brazil.
- **2006:** EBA begins. Workshop “Factors Driving Evolution in the Antarctic”: 2nd SCAR Open Science Conference, Hobart.
- **2007:** Workshop “World View of Evolution”: Miraflores, Spain.
- **2008:** Evolutionary Biology-Biodiversity Joint Session: 3rd SCAR Open Science Conference, St. Petersburg.
- **2009:** Major EBA session, integrative workshop, mid-programme review and initiation of ideas for next LSSSG Programme: 10th SCAR Biology Symposium.
- **2010:** EBA-IPY activities: 4th SCAR Open Science Meeting.
- **2012:** 5th SCAR Open Science Meeting.
- **2013:** Synthesis of results, completion of EBA programme and preparation for start of next LSSSG Programme: 11th SCAR Biology Symposium.

Deliverables

The main output from the EBA programme will be a significant step forward in our understanding of the Antarctic biota and its evolution. There will also be important contributions to fundamental understanding in a number of disciplines.

Specific output will include the following:

- Primary literature publications and books
- Conference proceedings and publications from workshops
- Programme reports
- Website
- Input to databases
- Advisory reports to ATCM and others (e.g., CEP, CCAMLR, COMNAP)
- Input to, and feedback from, international programmes
- Synergies with other SCAR programmes (e.g., ACE, AGCS, SALE)
- Trained PhD graduates and post-doctoral research fellows
- Capacity development of students from developing Antarctic nations
- Outreach via National Programmes and in coordination with proposed SCAR Outreach Committee

National and International Involvement

It is anticipated that the majority of the SCAR nations will participate in this programme, that it will act as a major route for capacity building in new SCAR members and those with a comparatively reduced logistic and financial resource base, and that it will contribute to a wide variety of international programmes. Input from individual researchers and research groups will be solicited through a questionnaire. Researchers will be expected to register their anticipated contribution to the Programme through the EBA website.

APPENDIX II

Coordination with partner organisations.

- A. SCAR carries out its work on coordination with a number of partner organisations:
- (i) with SCOR through the (new) joint SCAR/SCOR Oceanography Expert Group;
 - (ii) with SCOR and others in co-sponsorship of the newly evolving IGBP biogeochemistry and ecosystems programme (ICED);
 - (iii) with SCOR for co-sponsorship of a session at the IAPSO/IABO/IAG Dynamic Planet meeting in Cairns (August 2005), on Interdisciplinary Research in the Southern Ocean
 - (iv) with the WCRP through the CLIVAR/CliC/SCAR Southern Ocean Implementation Panel;
 - (v) with the WCRP for joint sponsorship of the International Panel on Antarctic Buoys;
 - (vi) with GLOBEC for co-sponsorship of Southern Ocean GLOBEC;
 - (vii) with iAnZone, for affiliation to SCAR as well as SCOR;
 - (viii) with the IGOS Partners for co-leadership of the Cryosphere Theme, which addresses sea ice among other things;
 - (ix) with WCRP for co-sponsorship of the Climate and Cryosphere programme (CliC), which includes sea-ice among other things;
 - (x) with the Sloan Foundation for leadership; of the Census of Antarctic Marine Life (CAML), as part of the global Census of Marine Life (CoML);
 - (xi) with Italy for co-sponsorship of the Ross Sea Conference (Venice, October 10-14).
 - (xii) With COMNAP for co-sponsorship of SCAR's Joint Committee on Antarctic Data Management (JCADM).
 - (xiii) With IOC's IODE programme, on linkages between National Ocean Data Centres (NODCs) and National Antarctic Data Centres (NADCs).
- B. SCAR has assisted in the organisation of recent oceanographic meetings including:
- (a) hosting the recent Southern Ocean Implementation Panel meeting on Modes of Variability, at the Scott Polar Research Institute, Cambridge, UK (June 27-30, 2005);
 - (b) organising a meeting of the SCAR/SCOR Oceanography Expert Group in Venice (October 7-8, 2005);
 - (c) assisting SCOR with the session in Cairns (see 1.iii, above);
 - (d) assisting Italy with the Ross Sea meeting (see 1.xi, above).

APPENDIX III

SCAR Meetings

Key meetings involving SCAR in 2005 include:

- i. SCAR–COMNAP Workshop on Practical Biological Indicators of Human Impacts in Antarctica, 16–18 March 2005, College Station, USA; to assess biological indicators of human impact and advise on implementing meaningful monitoring programmes in Antarctica. The reports of this meeting are published and SCAR provide access to the reports on request.
- ii. Continental drilling 2005: A Decade of Progress and Opportunities for the Future; 30 March – 1 April 2005, Potsdam, Germany.
- iii. Climate and Cryosphere (CliC) 1st Science Conference; 11–15 April 2005, Beijing, China.
- iv. SCAR Workshop on Antarctic Conservation in the 21st Century, 23–25 May 2005, Stellenbosch, South Africa.
- v. Southern Ocean Implementation Panel Meeting; 27–30 June 2005 Cambridge, UK; to discuss modes of variability and the IPY.
- vi. SCAR IX International Biology Symposium; 25–29 July 2005, Curitiba, Brazil.
- vii. International Association of Meteorology and Atmospheric Sciences Meeting; 2–11 August 2005, Beijing, China; to discuss Climate 7. Variability and Change in the Polar Regions: Causality and Prediction.
- viii. SCAR will co-sponsor special IAG/IAPSO sessions on “Oceanography and geodesy in polar regions” and on “Ocean interactions with sea ice, polynyas, ice shelves, and icebergs” as part 8. of the IAPSO/IABO Symposium, 22–26 August 2005, Cairns, Australia, and co-sponsors with SCAR the session on Interdisciplinary Research in the Southern Ocean.
- ix. International Conference on Glacial Sedimentary Processes and Products; August 2005, Aberystwyth, UK.
- x. Third International Conference on the Oceanography of the Ross Sea; 10–14 October 2005, Venice, Italy.
- xi. International Symposium on Sea Ice; 4–9 December 2005, Dunedin, New Zealand
 - i.