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Report on the XXX Meeting of the SCAR Delegates

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at the

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**REPORT OF XXX SCAR DELEGATES MEETING,
MOSCOW, RUSSIA, 14–16 JULY 2008**

IN ATTENDANCE

Executive Committee: C.G. Rapley (President), M.C. Kennicutt (Vice President), S. Marensi (Vice President), A. Meloni (Vice President), C. Summerhayes (Executive Director), J. Thiede (Past President).

(Apologies from Z. Zhang (Vice President)).

(below indicates someone aside from the members of the Executive Committee who appears twice, i.e. having more than one function)*

Delegates: S. Marensi* (Argentina); V. Alder (Argentina); R. Vincent (Australia); M. Stoddart (Australia); H. Declair* (Belgium); C. De Broyer (Belgium); A. Rocha-Campos (Brazil); J. Simões (Brazil); C. Pimpirev (Bulgaria), N. Chipev (Bulgaria); S. Bigras* (Canada); S. Ommanney (Canada); L. Bravo (Chile); J. Retamales* (Chile); H. Yang (China); J. Bo (China); H. Moreano (Ecuador); M. Poutanen (Finland); R. Schlich* (France); Y. Le Maho* (France); K. Lochte (Germany); R. Dietrich (Germany); R. Ravindra (India); N. Khare (India); A. Meloni (Italy), C. Ricci* (Italy); T. Yamanouchi (Japan); S. Imura (Japan); B. Park (Korea); M. Park (Korea); A. Huiskes* (Netherlands); T. de Bruin* (Netherlands); C. Howard-Williams (NZ); B. Storey (NZ); H. Loeng (Norway); A. Gazdzicki (Poland); K. Jazdzewski (Poland); V. Kotlyakov* (Russia); M. Moskalevsky (Russia); S. Malinga (S.Africa); B. Archary (S.Africa); J. Lopez-Martinez (Spain); J. Galindo-Zaldivar (Spain); M. Friberg (Sweden); C. Hjort (Sweden); R. Wieler (Switzerland); V. Lytvynov (Ukraine); O. Kuzko (Ukraine); C.G. Rapley (UK); M. Siegert* (UK); M.C. Kennicutt* (USA); T. Wilson (USA); B. Grillo (Uruguay); J. Abdala (Uruguay).

(Apologies from J.-G. Winther (Norway); S. Chown (S.Africa); N. Owens (UK); J. Veerman (Peru); M. Espino (Peru)).

Union Members: Y. Le Maho* (IUPS); V. Kotlyakov* (IGU); R. Schlich* (IUGG); C. Ricci* (IUGS); A. Ashworth (INQUA).

(Apologies from J. Jost (IUPAC); M. Clilverd (URSI)).

Associate Members: A. Samah (Malaysia); H. Petersen (Denmark); M. Neves (Portugal).

(Apologies from M. Rabbani (Pakistan)).

Secretariat: C. Summerhayes (Executive Director); M. Sparrow* (Executive Officer).

Local Organising Committee: A. Klepikov (AARI), N. Zaitseva (Russian Academy of Sciences).

(Apologies from Y. Osipov, RAS).

Observers: S. Bigras* (IASC); G. Kaser (IACS); J. Retamales* (COMNAP); S. Mohd Nor (Malaysia); T. Negoita (Romania); J. Storey (IAU); H. De Cleir* (CEP); H. Oerter (Germany); C. Elfring (USA); K. Erb (USA); S. Shan (China).

(Apologies from E. Urban (SCOR); D. Miller (CCAMLR); N. Gilbert (CEP)).

SCAR Subsidiary Groups:

SSG-GS: A. Capra (Italy); ACE: M Siegert* (UK); SALE: M.C. Kennicutt* (USA);

SSG-PS: M. Candidi (Italy); AGCS: J. Turner (UK); ICESTAR: M. Candidi (Italy);

SSG-LS: A. Huiskes* (Netherlands); EBA: A Huiskes* (Netherlands);

SC-ATS: M.C. Kennicutt* (USA); JCADM: T de Bruin* (Netherlands); SC-AGI: M Sparrow* (Secretariat); SC-Finance: S. Marensi* (Argentina)

Explanatory Notes: (i) Papers for the meeting are available from the SCAR website: <http://www.scar.org/members/scarmeetingreports/xxxmoscow08/meetingpapers.html>

WP refers to Working Paper, IP to Information Paper.

Appendices:

Appendix 1: External Recommendations

Appendix 2: Resolutions

Appendix 3: Relationship of National Antarctic Gazetteers to the SCAR Composite Gazetteer of Antarctica

Appendix 4: Acronyms

1. OPENING BUSINESS

1.1 Welcome, and Opening Remarks [IP 1]

C Rapley, President of SCAR, opened the meeting at 0845. On behalf of the Russian Academy of Sciences, V Kotlyakov welcomed the delegates to Russia, Moscow, and the Academy. The President welcomed participants, and presented apologies from CCAMLR, SCOR, IUPAC, URSI, IUBS, SC-ATS, from Vice President Z Zhang (China), and from Pakistan and Peru.

Participants stood for one minute's silence to honour Edith Fanta of Brazil, the recent Chair of the CCAMLR Scientific Committee, who died recently, and the German pilot and Dutch scientist who died in the recent AWI helicopter crash.

The President summarised SCAR's main challenges and successes since XXIX SCAR met in Hobart, then laid out the main tasks and priorities for the current meeting.

1.2 Adoption of the Agenda and Timetable [WPs: 1, 2, 3, 4]

Delegates were asked to focus attention on Working Papers (WPs), rather than Information Papers (IPs). Delegates agreed that for the parallel sessions (see below) the national delegates should attend the administration and outreach sessions to deal with the agenda items regarding SCAR's organisation and finance. Delegates adopted the agenda [WP 01], the annotated agenda [WP02], the list of documents [WP03], and the timetable for the meeting [WP04].

Delegates approved the appointment of M C Kennicutt (USA) to chair the meetings of the Delegates Committee on Scientific Affairs, and of A Meloni (Italy) to chair the meetings of the Delegates Committee on Administration and Outreach.

2. MEMBERSHIP

In accordance with the Rules of Procedure, Delegates of Associate Members and Observers left the plenary session for this agenda item. Applicants had 3 minutes to make their presentation, and then left the session while their case was discussed in closed session.

2.1 Application of Malaysia for Full Membership [WP 5 i]

The Delegate from Malaysia, A Samah, presented the application. The Delegates recognised Malaysia's contribution to Antarctic science. After some discussion, Malaysia was admitted to Full Membership by acclaim.

2.2 Application of Romania for Associate Membership [WP 5 ii]

The Observer from Romania, T Negoita, presented the case. Delegates decided Romania should be admitted to Associate Membership.

2.3 Application of International Astronomical Union (IAU) [WP 5 iii]

The Observer from IAU, J Storey, presented the case for Union Membership. Delegates decided IAU should be admitted to Union Membership.

3. SCAR OFFICERS

3.1 Notification of elections

Delegates noted the need to elect a new President for the period 2008-2012 to replace C Rapley, who was retiring early after 2 years and will become Past-President for a term of 2 years, and the need to elect two Vice-Presidents to replace M C Kennicutt, and Z Zhang, who had completed their terms of office.

3.2 Revised election procedure (WP 6)

The revised election procedures [WP 06] were adopted as part of the revised rules of procedure. S Ommanney (Can), J Thiede (Ger) and C A Ricci (IUGS) volunteered to act as scrutineers for the elections. Delegates were reminded to submit nomination forms to the Secretariat by 1700 on the second day of the Delegates meeting.

3.3 Appointment of Standing Finance Committee

Delegates appointed T Wilson (USA) to replace M C Kennicutt (USA) on the Standing Committee on Finance, the current members of which were S Marensi (Chairman, Arg), and R Dietrich (Ger).

3.4 Appointment of XXX SCAR Finance Committee

Delegates appointed two additional volunteers (A Huiskes, Neth., and R Ravindra, Ind), to augment the Standing Committee on Finance and so form the XXX SCAR Finance Committee.

4. REPORTS, RECOMMENDATIONS AND REVIEWS OF SCAR SCIENCE GROUPS

M C Kennicutt introduced this item to the Plenary meeting following the meeting of the Delegates Committee on Scientific Affairs, noting that on Friday July 11 Delegates were sent electronic copies of the reports of the three Standing Scientific Groups (SSGs) that met between July 5 and 7, 2008 [WPs 7, 8, and 10], and that paper copies of those reports were available to each delegation.

The Delegates Committee on Scientific Affairs (DCSA) reviewed the progress and plans of each SSG and JCADM, as outlined below. Based on the recommendations of the DCSA, the Delegates decided to adopt the reports of the three SSGs and JCADM. Adoption of the reports includes approval of the structure, management and general business plan for each entity. Budget requests were addressed by the Finance Committee (agenda item 10).

Delegates agreed with the suggestion that SSG reports would be more useful to Delegates in future if a one-page 'Executive Summary' of scientific achievements, key points, issues and recommendations was provided. This suggestion highlighted the need for 'Guidelines' for SSG Chief Officers for the production of reports and formulation of recommendations. Given the shortness of time between the Business and Delegates meetings, shortened reports and clear statements of recommendations are essential. In addition, SSG reports should highlight issues and/or problems that might especially benefit from Delegates advice and experience. It is recommended that in future, when feasible, Delegates attend and observe the SSG Business meetings to improve interactions and communications.

Action D1: EXCOM, COs and Secretariat to produce guidelines for the production of SSG reports and recommendations.

Action D2: Secretariat to bring the internal and external Recommendations of the SSGs to the attention of the appropriate bodies.

4.1 Report of SSG Geosciences (SSG-GS) [WP 7; IP 1]

The Chief Officer, A Capra (Ita), presented the report [WP 7]. Elections resulted in A Capra remaining as Chief Officer, with P O'Brien (Aus) Deputy CO, and M Hambrey (UK) Secretary.

A Capra made the following key points about the SSG-GS meetings (for details see WP 7):

- (i) an Action Group on "GPS for Weather and Space Weather Forecasting" was created jointly with SSG-PS. It will use GPS data to compute ionospheric and tropospheric parameters. Leaders are to be appointed.
- (ii) a new Programme Planning Group on Solid Earth Responses and Influences on Cryospheric Evolution (SERCE) was created. A leader is to be appointed.
- (iii) SCAR should apply to be included in the IPCC process as an observer in IPCC Working Group 1 (Science).
- (iv) the SSG reinstated a request for national reports on geoscience activities (10 page limit).
- (v) a new Action Group, on "Cold Seeps and Hydrothermal Mounds" was created jointly with SSG-LS. It will be led by P O'Brien (Aus).
- (vi) the SIGE Action Group was changed to an Expert Group on Sub-Ice Geological Exploration (SieGE) under R Powell (USA), to liaise with ANDRILL.
- (vii) the 4-yearly SCAR ISAES Meeting (Santa Barbara, August 2007) was a great success and the conference volume has been published on line and in hard copy. There is a \$24k carry forward that will be retained by SCAR for the 2011 ISAES meeting.
- (viii) the SSG provided 7 internal recommendations, which were endorsed by the Delegates. Details can be found in the SSG-GS report [WP 7].

4.2 Report of SSG Life Sciences [WP 8; WP 9; IP 1; IP 2]

A Huiskes (Neth) presented the report [WP 8]. Elections resulted in K Conlan (Can) being the new Chief Officer, G Steele (NZ) the new Deputy CO, and D Karentz (USA) Secretary.

A Huiskes made the following key points about the SSG-LS meeting (for details see WP 8):

- (i) following extensive consultation, the Code of Conduct for Fieldwork [IP 2] had been amended with the help of national committees and COMNAP, and is now ready to be an Information Paper for the ATCM/CEP in 2009. Delegates agreed that it was important that wide consultation be conducted on all documents having significant ramifications for logistics, operations, and scientific activity in the field, in particular with COMNAP.
- (ii) the Seals and Birds groups merged into the Birds and Marine Mammals Expert Group [WP 09]. D Patterson (USA) is Chief Officer, and the Deputy

CO is M Bester (Sth Afr). The Group has 2 years to integrate the memberships of the previous expert groups on birds and seals. SSG-LS will review progress in 2010. The group will liaise closely with CCAMLR's top predators group.

- (iii) the Continuous Plankton Recorder (CPR) Action Group was changed to an Expert Group. It now includes 9-countries conducting substantial multi-year research programmes.
- (iv) the Expert Group on Human Biology and Medicine will follow up on Russian data on possible pathogenic microbiota. They will also look at seabirds as vectors for Lyme disease.
- (v) a code of conduct is needed for the conduct of research in subglacial aquatic environments; this should be devised by a cross-SSG action group.
- (vi) planning is progressing for the 10th Biology Symposium, Sapporo, Japan, 27-31 July 2009.
- (vii) SCAR MarBIN is now connected to the Global Biodiversity Information Facility (GBIF).
- (viii) the SSG-LS supported the proposal that SCAR obtain observer status with the IPCC.
- (ix) the SSG provided 4 internal recommendations, which were endorsed by the Delegates and are reproduced in the SSG-LS report. Recommendations XXIX-2, -3, and -5 (internal) can lapse.

Delegates decided to approve the following:

External Recommendations (see details in Appendix 1):

SCAR XXX-1 (SSG-LS-3): SCAR National Committees to urge their national funding agencies to consider contributing to SCAR-MarBIN funding for the period 2010-2014.

SCAR XXX-2 (SSG-LS-6): Concerning flipper bands on penguins - (Replaces Recommendation XXIX-4).

4.3 Report of SSG Physical Sciences [WP 10; IP 1]

The Chief Officer, M Candidi (Ita), presented the report [WP 10]. Other SSG-PS officers include D Bromwich (USA) Deputy CO and T Van Ommen (Aus) Secretary.

M Candidi made the following key points about the SSG-PS meeting (see WP 10 for details):

- (i) The International Partnership in Ice Core Sciences (IPICS) is now an Expert Group co-sponsored with IGBP's PAGES programme.
- (ii) ICESTAR will continue as a Scientific Research Programme (SRP) until the end of 2009, then become an Expert Group.
- (iii) the Antarctic Astronomy and Astrophysics Expert Group will become a new SRP in 2010. It will continue as a Program Planning Group through 2009. The leader is J Storey (IAU).
- (iv) a new action group on Polar Atmospheric Chemistry at the Tropopause (PACT) was created. A leader is to be appointed.

- (v) a new Action Group on GPS for Weather and Space Weather Forecasting was created jointly with SSG-GS. A leader is to be appointed.
- (vi) PAntOS (Pan-Antarctic Observations System Network) will contact biologists and others to develop an inventory of observing activities to identify gaps, and will work with the community to fill those gaps.
- (vii) the SSG provided 5 internal recommendations, which were endorsed by the Delegates. Details are available in the SSG-PS report.

Delegates decided to agree the following actions proposed by the SSG-PS:

Action D3: (i) provide more focus on chemistry, including on the SCAR web site; and (ii) acidification of the Southern Ocean is to be a key topic at the next OSC.

Action D4: Ask C Vanderveen to provide new Terms of References for ISMASS (the Ice Sheet Mass Balance and Sea Level Expert Group) in line with the new focus of the group on ice sheet modelling, for consideration at the EXCOM meeting in 2009 to include possible co-sponsorship by IASC.

Delegates decided to approve the following :

External Recommendations (see details in Appendix 1):-

SCAR XXX-3 (SSG-PS-6): Concerning continued support of existing geospace observatories (replaces SCAR XXVIII-6)

SCAR-XXX-4 (SSG-PS-7): Concerning Upper air and ionospheric observations along the Antarctic Peninsula (replaces XXVIII-9, XXIX-3, XXVIII-18 and XXIX-4)

SCAR-XXX-5 (SSG-PS-8): Concerning sea ice observations (Replaces SCAR XXIX-6)

SCAR-XXX-9 (SSG-PS-9): Concerning drifting buoys (replaces SCAR XXIX-7)

SCAR-XXX-10 (SSG-PS-10): Concerning meteorological observations for weather forecasting and the IPY (replaces SCAR XXIX-8).

4.4 Report on JCADM [WP 11 (i) (ii) and (iii); and IP 1]

T de Bruin (Neth), the former Chief Officer of the Joint SCAR-COMNAP Committee on Antarctic Data Management (JCADM), reviewed progress with JCADM, updating WP 11 (i) with a report of the proceedings of the JCADM meeting in St Petersburg during SCAR Science Week. He also referred to the positive review of JCADM by an independent review group [WP (iii)]. Officers elected in St Petersburg are K Finney (Aus) CO, and H Campbell (UK) and S Gordon (NZ) Deputy COs (SCAR's first all-female management team).

JCADM now has 31 member nations, there are now 4726 data set descriptions in the Antarctic Master Directory (of metadata) (AMD), and downloads of information from the AMD have reached 7000 per month and recently averaged 4000 per month (rising from 500 per month in March 2007). JCADM issued its first newsletter in June 2008, and is developing a new web site.

Delegates noted that COMNAP decided data management is not central to COMNAP's portfolio of interests and therefore will cease its contribution of

\$3300/year to the \$10,000/year provided by SCAR to the Global Change Master Directory to fund the activities of the AMD.

Delegates decided to accept and adopt the JCADM report [WP11 (i)], and to approve the recommendation of the Finance Committee to provide an extra allocation of \$3,300 to replace the COMNAP contribution. Delegates noted with satisfaction the positive external review of JCADM [WP 11 (iii)].

Delegates decided that, recognising the loss of COMNAP support, JCADM shall become a SCAR Standing Committee (SCADM) from 1 January 2008, and that it shall report to the Delegates Committee on Scientific Affairs.

T de Bruin then introduced the draft SCAR Data and Information Management (DIM) strategy [WP 11(ii)], which had been requested in the Strategic Plan (2004-2010). This is a first draft, and feedback from the wider community will be needed before it is adapted and adopted. It was noted that the present document mixes strategy and implementation, which need to be teased apart, and focuses unduly on JCADM and SC-AGI without sufficient attention to other SCAR data activities. Delegates thanked JCADM and SC-AGI for the comprehensive and thoughtful first draft, and decided to approve a set of actions for further developing the data and information management strategy.

Action D5: (i) An intersessional Action Group on SCAR Data and Information Management Strategy (AG-SDIMS) be formed to prepare the next version of the DIM strategy, and report on progress to EXCOM in 2009. The AG is to include representatives of the 3 SSGs, JCADM and SC-AGI. Once a revised strategy is agreed, the AG should prepare a phased implementation plan explicitly outlining resource implications. The context should include developments on data sharing within WMO and considerations of the IPY Legacy discussions. To keep costs down the group should meet in association with the Cross-SSG Workshop.

Action D6: Delegates will circulate the draft DIM strategy document for consultation within their national communities, and feed comments on and additions to the paper to the Secretariat by November 15, 2008.

4.5 Interdisciplinary Linkages Between SSGs and SRPs [IPs: 3a, 3b]

To help develop interdisciplinary scientific activities between SCAR's subsidiary bodies, the SCAR Chief Officers (usually of SSGs, SC-ATS and JCADM) met in association with the EXCOM meetings in Sofia, Bulgaria (July 2005), and in Washington, DC (July 2007) [IP 3a]. In addition, Cross-linkages Workshops are now held to bring together the COs of the SSGs and JCADM with the leaders of the Scientific Research Programmes (SRPs), to develop interdisciplinary linkages and projects. The first such workshop was held in Amsterdam (November 22-24, 2005), and the second in Rome (November 6-8, 2006) [IP 3b]. M Candidi reported that around 80% of the recommendations of the Rome workshop had been met, and several interdisciplinary collaborations had been developed as a result. The ACCE report developed out of the Amsterdam workshop, and involves ACE, AGCS and EBA. Delegates noted progress, decided to accept the report, and agreed there should be another Cross-Linkages Workshop either in late 2008 or early 2009.

Action D7: Organise Cross-linkages workshop in late 2008/early 2009.

4.6 King George Island Science [WP 12 (i) and (ii)]

A workshop to consider coordination of scientific research on King George Island (KGI) was held in St Petersburg in July 2008. The background to the topic is given in WP 12 (i), and the report of the workshop is provided as WP 12 (ii).

Delegates decided to accept and adopt the report, including:

External Recommendation (SCAR-XXX-11):

- (i) that KGI operators (perhaps operating collectively) support a KGI radiosonde programme;**
- (ii) that KGI operators collect a wide range of climate parameters at 3-hourly and 6-hourly intervals from all stations, and routinely exchanged the data.**
- (iii) that SCAR and COMNAP be asked to consider the proposal that a working paper on “Major scientific themes that could be addressed by a coordinated approach to KGI science” (or some such title) should be addressed to the COMNAP meeting in Punta Arenas (Aug 2009), as the basis for discussing how such coordination might be achieved, and by what means.**
- (iv) that SCAR recommend through COMNAP that consideration be given to applying the experience of Svalbard area science programme coordination for optimization of KGI investigations**

Delegates appreciated COMNAP’s willingness to put KGI science coordination on the agenda for their 2009 meeting, which could lead to a model for future cooperation between COMNAP and SCAR elsewhere – e.g. across the South Shetland Islands.

Delegates decided to approve the following actions:

Action D8:

- (a) the Chief Officers of the SCAR SSGs or their representatives be enrolled as part of the SCAR KGI Action Group to provide a close connection to SCAR science programmes.**
- (b) the SCAR KGI Action Group continue to compile information to complete the inventory of KGI science by XXXI SCAR.**
- (c) J Simões (Bra) to contact T Brito (Bra) to explore ways to integrate Admiralty Bay ASMA research and monitoring activities with those of the KGI Action Group, and to see to what extent the work of the AG could provide a model for other scientific activities across KGI.**
- (d) that national SCAR representatives be urged to disseminate widely the message that to the extent possible we need local (i.e. KGI) science to be devised in so as to make a significant contribution to SCAR science programmes.**

4.7 Progress Against XXIX SCAR Recommendations [WP 13]

Delegates at XXIX SCAR expressed concern about the increasing number as well as the utility of Recommendations, and asked that in future SSGs develop a relatively few substantive and important Recommendations, i.e. those with very high priority or relevance to SCAR’s mission. The Executive Committee called on the Secretariat to review past Recommendations and provide a report on their

status to Delegates. The Executive Director will report on this to the EXCOM meeting in 2009.

Action D9: Executive Director to report to EXCOM in 2009 on the status of recommendations, and EXCOM to recommend action for Delegates to consider at XXXI SCAR.

5. REPORTS ON AND REVIEWS OF SCAR SCIENTIFIC RESEARCH PROGRAMMES

M C Kennicutt introduced this item to the Plenary Meeting following the meeting of the Delegates Committee on Scientific Affairs, noting that scientific highlights for each SRP are available in WPs 14 through 19.

Delegates recognised the significant progress made by all 5 SRPs, and the high quality of the contributions of the SRPs to Antarctic Science. Delegates adopted suggested revisions to the SRP Steering Committees. The external reviews of the SRPs under agenda item 5.6 were considered as an element of this performance review.

Delegates decided to approve the ACE, AGCS, EBA and SALE programmes for 4 additional years subject to the SRP review procedures, including a 2-year internal and 4-year external review. ICESTAR was approved to the end of 2009, after which it will become an Expert Group.

SRP Budgets were revised by the Finance Committee and appear in its report.

Action D10: The Secretariat will (i) notify the Leaders of each SRP of the Delegates decisions regarding that SRP; (ii) send appointment letters to all new SRP members, noting their terms of appointment and (iii) send letters of thanks to those SRP members rotating off each SRP.

5.1 Report on ACE - Antarctic Climate Evolution [WP14; IP 1]

M Siegert (UK), former Co-Chair of the ACE Steering Committee, presented the ACE progress report and plans, and the revised membership of the ACE Steering Committee [WP14].

5.2 Report on AGCS - Antarctica in the Global Climate System ([P15; IPs: 1 and 4]

The Leader of the AGCS Steering Committee, J Turner (UK), presented the AGCS progress report and plans, and the revised membership of the AGCS Steering Committee [WP15].

J Turner also reported on progress with the AGCS-led Antarctic Climate Change and the Environment (ACCE) Review, with reference to IP 4. The draft ACCE document has been widely circulated for comment. Delegates recalled that this is intended to be a southern hemisphere equivalent of the recently completed Arctic Climate Impact Assessment. The first stage of this review addressed the physics of the Antarctic climate system, and was presented to the ATCM in 2007; it has been accepted for publication in *Reviews of Geophysics*. The second stage incorporates the biological effects of climate change, and was presented to the ATCM in June 2008. It is intended that the completed work will be published in an appropriate journal or as a book in early 2009. All three SSGs, are collaborating

on the text, together with ACE and EBA. Delegates welcomed the review, which will be a landmark volume.

Action D11: Delegates are asked to request National Committees to circulate the draft ACCE document for consultation within their communities, and to provide comments and feedback to the Secretariat by September 1.

To take forward the collaboration between SSG-PS and SG-LS on climate change and its effects, Delegates decided that a cross-SSG Action Group on Prediction of Changes in the Physical and Biological Environment of the Antarctic (SSG-LS and SSG-PS) should be formed with the following terms of reference:

- Assess our current ability to predict how the environment of the Antarctic will evolve over the next century;
- Determine the parameters needed from climate models to predict changes in the biosphere;
- Consider the issues involved in downscaling from the resolution of climate models to those required for prediction of biological systems;
- Produce improved predictions of selected physical parameters and estimate the changes to marine and terrestrial biota;
- Identify areas where future research is needed.

Action D12: SSG-LS and SSG-PS to establish a Cross-SSG Action Group on Prediction of Changes in the Physical and Biological Environment of the Antarctic (SSG-LS and SSG-PS).

5.3 Report on EBA [WP16; IP 1]

A Huiskes (Neth), a member of the EBA Steering Committee, presented the EBA progress report and plans, and the revised membership of the EBA Steering Committee [WP16].

5.4 Report on ICESTAR - Inter-hemispheric Conjugacy Effects in Solar-Terrestrial and Aeronomy Research [WP17; IP 1]

M Candidi (Ita), a member of the ICESTAR Steering Committee, presented the ICESTAR progress report and plans, and the revised membership of the ICESTAR Steering Committee [WP17]. Delegates approved the plan to convert ICESTAR into an Expert Group in 2010.

Action D13: The ICESTAR community should take comments by the external reviewers under advisement in proposing any future activities.

5.5 Report on SALE [WP 18; IP 1]

M C Kennicutt (USA), a member of the SALE Steering Committee, presented the SALE progress report and plans, and the revised membership of the SALE Steering Committee [WP18].

Action D14: An Action Group be formed with members from SALE and representatives from the 3 SSGs to develop a code of conduct for the exploration of subglacial hydrological systems. The recommendations from the US National Research Council report on environmental stewardship provide an excellent starting point. A preliminary draft of the code to be presented to the SCAR EXCOM in 2009.

5.6 External Reviews of SRPs [WP 19]

M C Kennicutt drew attention to the external reviews of the SRPs. As agreed when the 5 SRPs were launched at the Delegates Meeting in 2004, they were subject to a 4-year external review in 2008 [WP 19]. Delegates noted the high quality of the science being conducted by the SRPs, the significant progress over the past 4 years, and the very positive comments by the external reviewers.

Action D15: Each SRP is to provide EXCOM with a response to the external reviews, paying particular attention to identified shortcomings and including an explicit plan to address these issues. The next 2-year programme review is to specifically consider progress on these issues.

5.7 Proposals for new SRPs [WP 20 a and b]

J Storey (IAU) presented a report on the plans and the membership of the proposed Antarctic Astronomy and Astrophysics Scientific Research Programme (AAA-SRP) (WP 20a). Delegates decided that the AAA-SRP should be approved for 4 years beginning in 2010, be subject to the SRP review procedures including a 2-year internal and 4-year external review, and that the proposed AAA Steering Committee be adopted. In the interim, AAA would operate as a Programme Planning Group. Delegates noted that ICESTAR's proposal to change to an EG at the end of 2009 allows the programmes to be accommodated within SCAR budget constraints.

Action D16: The SCAR Secretariat will notify the Convener of the SRP AAA of the Delegates decision, and send appointment letters to the new SRP members noting their terms of appointment.

Delegates also decided to approve the plan for SSG-GS to create a Programme Planning Group for a SERCE SRP to incorporate what remains of SCAR's ANTEC Expert Group (see SSG-GS report above).

Delegates noted that Working Paper 20b on the proposal for a POLENET Programme Planning Group (PPG) had been superseded by a SSG-GS recommendation that converted the POLENET proposal into one for Solid Earth Responses and Influences on Cryospheric Evolution (SERCE), and approved the development of the SERCE PPG.

Action D17: Plans for SERCE as an SRP should be presented to XXXI SCAR.

6. SCAR, IASC AND THE IPY

6.1 Progress with the IPY

The SCAR President reviewed recent IPY developments, plans and likely directions. 45% of proposals got major funding; 28% got partial funding; and for 26% there was no data. National funding agencies provided US\$ 400 million in new funds - a significant success. There are problems, in developing the legacy for data: 59 projects have good DIM plans; 67 have not responded or have poor DIM plans.

Education and outreach has been a success. The “Polar Days” e.g. on “ice sheets”, on “land and life”, and involving schools around the world, have been highly successful. But, given the rapid decline in funds for the IPY Project Office (IPO), it will be hard to sustain the mechanism for managing the education and outreach legacy. One aspect of education and outreach will be sustained - the IPY youth activity - has become the Association for Polar Early Career Scientists (APECS), involving a large number of young people from 40 or so countries in an active network – this is an extraordinary and valuable legacy.

Given the likely difficulties in operating the IPY-Joint Committee or IPO past mid-2009, the community is looking to SCAR and IASC to maintain elements of the IPY legacy (see the BipAG report, below).

Delegates noted that WMO had proposed the idea of an International Polar Decade – it is not yet evident how that might happen in practice.

The IPY conferences will continue. SCAR and IASC are among co-sponsors of the second IPY conference (Oslo in June 2010; see <http://www.ipy-osc.no/>).

Action D18: EXCOM and the Secretariat, coordinating with other appropriate bodies, should pursue the question of how SCAR (with IASC) may take on responsibility for elements of the IPY Legacy in the post-IPY era including defining the financial ramifications and obligations, and advise Delegates in 2010 how to proceed.

Action D19: EXCOM should consider how SCAR might be involved with the International Polar Decade (IPD) as proposed by the WMO, depending on how the IPD develops.

6.2 The IASC/SCAR Bipolar Action Group [WP 21]

6.2.1 SCAR’s Role in Managing the IPY Legacy

SCAR has formed a Bipolar Action Group (BipAG) jointly with IASC to help to improve the way in which SCAR and IASC work together (see 6.2.2, below), and to advise IASC and SCAR on mechanisms to nurture the IPY legacy. BipAG met in St Petersburg and its report was available to Delegates as WP 21(ii). Delegates decided to approve the following BipAG actions regarding development of the IPY legacy:

Actions D20: EXCOM, IASC and the Secretariat and BipAG and IASC to implement the following actions as appropriate:-

- (i) establish links between SAON and PANTOS to ensure that they develop in a compatible way and learn from the best practice of each other;**
- (ii) SCAR and IASC to consider applying for observer status with the IPCC;**
- (iii) SCAR and IASC to prepare themselves as the existing polar coordination structures to take a prominent role in ensuring that IPY project data goes into national and international databases, to ensure the IPY Data Legacy;**
- (iv) charge JCADM with the responsibility for liaising with bipolar or Antarctic IPY programmes and national IPY committees to**

ensure that IPY data goes into appropriate databases (e.g. NADCs) and that metadata end up in the AMD;

- (v) keep IASC informed about the development of the SCAR data and information management strategy, with a view to the two adopting the same strategy so as to facilitate interoperability between the two hemispheres;**
- (vi) SCAR and IASC programmes to have a clearly specified data and information management plan that follows the IPY data policy of making all data eventually available to all, and a clearly specified education and outreach plan; and**
- (vii) support the development of open access data journals.**

6.2.2 *Developing links with IASC [WP 22]*

IASC was represented at the meeting by S Bigras (Can). Delegates complimented the SCAR and IASC Secretariats on taking the SCAR-IASC linkage forward. Delegates considered that the joint efforts in bipolar high latitude climate studies and in ice sheet modelling and sea level were good examples of how to develop joint approaches to research, and suggested that ISMASS needs to revisit its terms of reference and to consider adopting IASC as a co-sponsor (see SSG-PS Actions, above). Delegates noted that scientists from both poles are also working together in marine biodiversity and ice core studies.

Sweden asked if there might be a possibility of combining IASC's Arctic Science Summit week with the SCAR OSC.

Delegates applauded the development of joint MoUs with IASC (i) for co-sponsorship of APECS; (ii) for cooperation with IACS; and (iii) for cooperation with WCRP. These agreements tie all 4 ICSU polar bodies together and were signed at the Plenary in St Petersburg.

7. SCAR AND THE ATCM

7.1 Report of Standing Committee on ATS (SC-ATS) [IPs: 5 & 6]

The SC-ATS Reports were presented to both Delegates Committees. Delegates noted that SCAR's papers for ATCM/CEP had been very well received, as was the SCAR lecture, and noted with approval that the Chairman of the CEP had been invited to the Delegates meeting, where he was represented by H Declair (Bel). Delegates noted with appreciation the hard work by S Chown in preparing for the Kiev meeting, especially the convening of the Southern Giant Petrels workshop in Cambridge in May 2008, which had led to a successful outcome in classifying the species as Least Concern.

Delegates decided to approve SC-ATS's plans to provide papers for the 2009 ATCM/CEP on:

1. persistent organic pollutants;
2. biodiversity and environmental domains analysis;
3. alien risk assessment;
4. conservation planning assessment;
5. management plan considerations;
6. bioprospecting;
7. aliens in Antarctica;

8. climate change update;
9. SCAR annual report;
10. IPY report (on behalf of IPY-IPO)

Delegates agreed that it was necessary to have a high profile lecture and lecturer for the SCAR lecture to the ATCM/CEP in the USA in April 2009, which will celebrate 50 years of the Antarctic Treaty. Ideally the lecture topic should be on an exciting science topic relevant to the business of the ATCM/CEP. Future topics might include, for example:

- annual update across all the sciences on key science issues;
- highlights of some key IPY programmes;
- what is happening in bioprospecting (this could be difficult since most Antarctic national programmes do not seem to be doing this kind of research);
- 50 years of science within the Antarctic Treaty System - drawing on the content of the SCAR 50th Anniversary book;
- providing more lectures on biology (we only had one so far);
- CAML in 2010 (after it has produced its summary publication);
- Oceanography, ocean life and the role of the oceans in climate change, including ocean acidification.

J Retamales (Chile) and M C Kennicutt (USA) noted that because the ATCM/CEP meeting would occur in Easter week the agenda would be shortened, providing less time into which to fit a SCAR lecture. One solution might be to hold the lecture during the ATCM opening session, in Washington.

Action D21: Secretariat and EXCOM to work with USA to devise an appropriate lecture topic and speaker for Washington or Baltimore in April 2009.

Action D22: SCAR to consider preparing poster boards for the Baltimore convention centre to highlight different aspects of SCAR science.

The Executive Director reminded Delegates that there would also be a non-governmental "Antarctic Treaty Summit on Science-Policy Interactions in International Governance", in Washington in November 2009. SCAR has been involved in the discussions leading up to the summit, and will be expected to provide a paper for it.

7.2 Report on interactions with CCAMLR [IP 7]

Delegates noted and approved the report by the SCAR Observer to CCAMLR, G Hosie (Aus). Edith Fanta (CCAMLR) had been invited to attend the Delegates meeting, but unfortunately no replacement could be found for her after her untimely death earlier in the year. Delegates were pleased to see the growing links between SCAR and CCAMLR.

7.3 Report on Interactions with ATCM/CEP [WP 23]

C Howard Williams (NZ) reported on the work of the Action Group on SCAR and the ATS in the 21st Century (AG-SATC), which was formed to advise SCAR on alternative approaches to managing SCAR's advisory role to the ATS. The group met in Cambridge on May 22-23, 2008. Delegates agreed that the work of this group was very important, and that the report made some excellent recommendations on how to improve this important science-policy interface.

Delegates endorsed the report's key recommendations, subject to the consideration of the finance committee.

Action D23:

- (a) Increase funding to facilitate the provision of timely advice in key areas;
- (b) Prepare a paper for next ATCM/CEP on SCAR's role and capabilities;
- (c) Interact with CEP to establish how SCAR may respond to CEP plans, and hold regular discussions with CEP about upcoming issues;
- (d) Inform ATCM/CEP about SCAR's products and services;
- (e) Consider providing an annual Antarctic report card (especially on climate change and its effects);
- (f) Re-engage with evaluating the scientific aspects of management plans;
- (g) Urge national committees to connect with ATS national representatives regarding SCAR contributions and promoting links.

Action D24: to facilitate links between SC-ATS and the SSGs, the SSGs should develop lists of experts who could provide advice on key topics to SC-ATS in the development of papers for the Treaty Parties.

The Delegates concurred that in order to provide a higher level of advice to the CEP we need to understand the processes by which living organisms adapt to change. We may benefit from enlarging SC-ATS with the appropriate expertise, and may benefit from taking similar advice in the further development of the ACCE report and in the SCAR cross-linkages workshops.

Action D25: Y Le Maho to provide some appropriate language regarding fundamental biological advice on responses of organisms to change and limits of responses (for CEP, ACCE and SCAR Cross-Linkages).

7.4 Report on Marine Pollution Activities [WP 24]

Delegates noted with approval that as a response to the sinking of the M/S Explorer in December 2007, the Executive Committee formed the Action Group on Antarctic Fuel Spills [WP 24], so as to be ready to provide scientific advice on the possible trajectory and effects of an oil spill from the sunken vessel, and in other such instances that may occur.

8. SCAR BUSINESS

8.1 SCAR's 50th Birthday Celebration [IP 8]

As agreed at XXIX SCAR, D Walton and P Clarkson are co-editing a SCAR anniversary celebration book "Science in the Snow: 50 years of International Collaboration in Antarctica", which will have contributors from past SCAR scientists dating back to the IGY and will address scientific highlights and the development of SCAR as an organisation. An outline draft and some draft chapters were available in the meeting papers. Delegates were positively impressed by the initial output, and asked that the authors liaise with the SCAR History Action Group.

Action D26: D Walton and P Clarkson to seek input and feedback from national committees and delegates on each of the chapters of the proposed SCAR Anniversary book, and to consult with the Antarctic History Action Group. Feedback is to be provided by September 1.

Also to mark the 50th anniversary, the Executive Committee decided to inaugurate a special SCAR Lecture to open each of the SCAR Open Science Conferences; this will be called the Weyprecht Lecture to recognise the man who started the International Polar Year concept. The first Weyprecht Lecturer was R Bell (USA), who spoke on: "The Gamburtsev Mountains - an unexplored frontier". Her and other Keynote papers from the OSC will be published as a Special Issue of Antarctic Science, which can be billed as a SCAR 50th Anniversary Volume. Delegates decided to endorse progress, and recommended giving a higher profile to the celebration of the anniversary on the web page (see item 9.6.1).

R Schlich (Fra) requested support for an English version to be made of the French film "Enterres Volontaires", which described the adventures of three Frenchmen (J Dubois, a meteorologist, R Schlich, a geophysicist, and C Lorius a glaciologist) who occupied the Charcot Station, a hut buried under the ice near the South magnetic pole and located 320 km from the coast, from January 1957 to January 1958. Delegates decided to co-sponsor the English version of the DVD.

Action D27: Finance Committee and Secretariat to finalise details of co-sponsorship of the film "Enterres Volontaires" with R Schlich and C Lorius.

8.2 SCAR Awards [IP 9]

Advised by an Awards Committee, and based on inputs from national committees and SSGs, SCAR (through EXCOM) awarded three SCAR medals in 2008: (i) for Excellence in Antarctic Research (A Brandt, Ger), (ii) for International Scientific Coordination (C Lorius, Fra); and (iii) the President's Medal (V Kotlyakov, Rus).

Action D28: SCAR urges national committees to be more diligent in nominating candidates for SCAR medals.

Delegates decided that we ought to give the SCAR medals a much higher profile, for example with a biennial advert in a magazine like Eos, Nature or Science or New Scientist soliciting candidates. Posters could advertise each candidate and their achievements, associated with a press release. Recipients should be allowed a few minutes to respond to the award from the podium. Consideration should be given to inviting them to give a keynote lecture, and to publishing the medal citations and responses in the Antarctic Science Journal along with the keynote papers.

Action D29: The Secretariat and EXCOM to explore ways to make the SCAR medals more prestigious, and widely recognized, and increase the impact of the award for SCAR and the recipients. The Secretariat is to develop a plan for approval by EXCOM to elevate the SCAR medals and medal ceremony.

Delegates decided to award Certificates of Appreciation to retiring Vice Presidents M C Kennicutt (USA) and Z Zhang (China), and to past Vice

Presidents J Lopez-Martinez (Spa) and C Howard-Williams (NZ). A Certificate was awarded to D Lugg (IUPS representative and leader or member of Human Biology and Medicine for 30 years+) in St Petersburg.

8.3 SCAR Fellowships [IP 10]

Based on advice from the Fellowship Review Panel, EXCOM approved the award of four SCAR Fellowships for the 2007-2008 season, and three SCAR Fellowships for the 2008-2009 season [IP 10 i and ii]. Each was associated with one or other of the SSGs (as noted by the designation PS, GS or LS, below).

The Fellows for 2007-2008 were:

Inigo Coco (Ita) to USA; PS; male
 Delphine Lanuzel (Bel) to Aus; LS; female;
 Glen Phillips (Aus) to Ger; GS; male
 Stefanie Kaiser (Ger) to UK; LS; female

The Fellows for 2008-2009 are:

Wilhelmina Clavano (US-Philippines) to NZ; PS; female
 Marina Verducci (Ita) to Ger; GS; female
 Nicholas Demetras (NZ) to USA; LS; male

Delegates at XXIX SCAR decided that up to two of the annual SCAR Fellowships for the 2007-2008, and 2008-2009 seasons could be allocated to support fieldwork in Antarctica as a contribution to the IPY 6th Continent Initiative (6CI) programme, which is led by the International Polar Foundation with SCAR, IAI and UNEP as partners. An additional fellowship in 2008-9 will be supported by IPF under this IPY Project, at no cost to SCAR.

Delegates noted and approved these developments, but agreed that it was not possible to fund the full amount requested.

Action D30: Secretariat to examine the fellowship proposals, decide where cuts can be made, and notify successful and unsuccessful candidates.

Delegates decided to encourage national committees to support the fellowship programme financially (only South Africa has done this so far, giving \$2000 in 2007), and to focus on this topic as a means of raising external funds (which tend to be available for 'education').

Action D31: (i) encourage national committees to contribute extra resources to SCAR Fellowship programme; (ii) Secretariat to solicit external funds to support SCAR education programmes.

Delegates noted that the fellowship reports are available on the SCAR web page at <http://www.scar.org/awards/fellowships/>.

8.4 New SCAR Legal Status [WP 25]

The President introduced this item, noting that ICSU requires that all of its subsidiary bodies acquire independent legal status in the country where their secretariat is based. To establish SCAR as a legal entity with charitable status in the UK required that SCAR be transformed into a Company Limited by Guarantee, and approved by the Charity Commissioners. This required that the Constitution and some of the Rules of Procedure be converted into a

Memorandum of Association and Articles of Association. The task has been completed, with the assistance of an advisory group led by F Davey (NZ).

Delegates decided to approve **Special Resolution SCAR-XXX-1**, in **Appendix 2:-**

Action D32: Executive Director to inform all national committees about the change in the requirement for signature to the Memorandum and Articles of Association (Resolution SCAR-XXX-1).

Delegates also decided to approve **Elective Resolution SCAR-XXX-2** regarding the Annual General Meeting (see **Appendix 2**).

Delegates noted that if the Secretariat is moved to another country, the UK Company would be dissolved and a new Company established in the country to which the secretariat moves under that country's laws.

The Secretariat now has to formally transfer the assets from the old SCAR to the new SCAR before we will be ready for business as a Company and Charity, so at present our new status is 'dormant'. One key element in the transfer of assets is closing down the US bank account, which is proving time consuming and expensive to manage (see Finance Strategy – WP 35).

During a change in Officers (Officers are now both Directors of the Company and Trustees of the Charity), new Officers must sign the charity commission forms provided by the Executive Director.

The revised Memorandum and Articles of Association are on the SCAR web site at <http://www.scar.org/about/constitution/>.

Delegates noted and approved the new developments. However, the President noted that some Delegates had raised concerns about the new legal framework. Delegates agreed that these matters could be dealt with intersessionally by EXCOM and the Secretariat.

Action D33: EXCOM and Secretariat to work with Delegates in the intersessional period to explore constitutional procedural matters, in particular taking into account the letter from the South American delegations.

8.5 Rules of Procedure [WP 26]

Delegates noted the difference between the old and the new Rules of Procedure, and that the proposed changes were in the interests of greater clarity or efficiency. After making minor changes, Delegates decided to adopt the New Rules of Procedure, which are on the SCAR web site at <http://www.scar.org/about/constitution/>.

The Executive Director explained that there had not been time to finalise the draft Rules of Procedure for Subsidiary Bodies (RoPSS), which were originally presented as Working Paper 33 at XXVIII SCAR, and which Delegates had decided should be delegated to the Executive Committee to approve.

Action D34: Executive Director to present revised Rules of Procedure for Subsidiary Bodies to EXCOM in 2009 for approval.

8.6 Partnerships (including e.g. ICSU Unions, SCOR, SCOSTEP, IGBP, GEOSS, WCRP, and IPICS) [IP 11]

SCAR's links with ICSU and its subsidiary and related scientific bodies continue to increase. This helps to ensure that we gain maximum synergy from cooperative agreements with global science bodies having a local Antarctic interest, like IGBP, WCRP, SCOR and SCOSTEP. ISMASS, in collaboration with IASC, IACS and WCRP won a €30,000 ICSU grant for a 2009 summer school for ice sheet modelling. Delegates noted and approved progress.

9. SCAR REPORTING

9.1 Report on SC-AGI (Antarctic Geographic Information) [WP 27 a and b]

SC-AGI held its first meeting, in Buenos Aires, on 8-10 October 2007 (see WP 27) and its second meeting in St Petersburg during XXX SCAR. SC-AGI has shown a number of improvements since designation as a Standing Committee. The number of national representatives had increased to 25; there were now 19 people responsible for names, and 6 for GIS. More are needed to represent all SCAR Members (see WP 27a for a summary of Member contributions).

Action D35: Secretariat to work with Members to ensure that they nominate representatives from their countries to SC-AGI in order for SC-AGI to continue to make progress.

There were 2.8 million hits on the SCAR map catalogue in the past year, and up to 320,000 visits to a single map reference. The SCAR Gazetteer is now hosted at AAD. It is linked to the map catalogue, and to the biology databases, making it increasingly useful for GIS purposes. SC-AGI now has a joint project with GEBCO for undersea feature names. A new web site is needed. It was noted that there was some confusion as to the relationship between the SCAR Gazetteer and the national gazetteers and so a summary statement was provided for clarification (see **Appendix 3**).

Delegates noted the progress of SC-AGI and approved its continuance as a Standing Committee.

9.2 Report on History of Antarctic Research Action Group [WP 28]

The SCAR History Action Group has held four meetings: (i) Munich, Germany, July 2005; (ii) Santiago, Chile, October 2006; (iii) Columbus, Ohio, October 2007; and (iv) St. Petersburg, July 2008. The papers from these meetings have either been published or are in press (or will soon go to press from the last meeting).

Delegates considered a proposal for converting the group to an Expert Group with the aim of producing a synthesis volume on Antarctic Research History [WP 28]. They noted the excellent contribution by the group, but felt that it was more appropriate to continue it as an Action Group for a further 2 years. This decision will be revisited at SCAR XXXI.

In addition, Delegates recommended that the Group's objective should be Antarctic scientific research history through time, and not only during and after the IGY.

Action D36: Secretariat to communicate to the Action Group on History the Delegates' decisions about continuation as an Action Group for a further 2 years and about the group's objective.

9.3 Report of XXIX SCAR Meeting [IP 12]

The Report of the XXIX SCAR Meeting was provided as an Information Paper for reference purposes [IP 12].

9.4 Reports of (2) Executive Committee Meetings [IPs: 13, 14]

The Report of the SCAR Executive Committee meeting in Washington DC (July 2007) was provided for reference purposes [IP 13].

The draft Report of the SCAR Executive Committee meeting in St Petersburg (July 2008) was tabled for reference purposes [IP 14].

9.5 Report of XXX SCAR Science Week including the Open Science Conference, St Petersburg [IP 15; WP 29]

A Klepikov, Secretary of the Local Organising Committee (LOC), presented an informal report on holding XXX SCAR Science Week and the Open Science Conference (OSC) in St Petersburg (a full report will later be presented as IP 15). The OSC was co-sponsored by SCAR, IASC, ICSU and WMO and was the first official IPY conference. In parallel with the SCAR science week, workshops were held on ice sheet modelling, and on planning a Southern Ocean Observing System. There were also meetings of the IPY Joint Committee, an IPY Young Scientists Symposium and an IPY Open Forum.

The LOC was co-chaired by V Kotlyakov, I Frolov and A Frolov. An International Scientific Organising Committee (chaired by M C Kennicutt for SCAR and L Haquebord for IASC) arranged the science programme. The SCAR Executive Director visited St Petersburg and Moscow in September 2007 with E Sarukhanian (IPY-JC) to examine the facilities. A conference organising company (Monomax) was employed to facilitate the arrangements.

Although there were 1490 registrants, there were eventually 1150 attendees, including 97 accompanying persons. In the planning stage there had been 558 oral presentations, but this was adjusted down to 537 on the published programme, and the final number was 526. The initial plan held 671 posters, which ended up as 542. There were 29 thematic sessions altogether, including one on education and outreach, and up to 11 parallel sessions each day. The SCAR medals were awarded as part of the Opening Ceremony.

Delegates agreed the conference had been highly successful not only in its organisation but also scientifically. The local organisers had responded quickly and efficiently to the many small changes that had to be made as the conference programme evolved. Delegates complimented the LOC and the SOC on the success of the science week and the OSC.

Delegates identified some small problems that had arisen during the arrangements for the meeting, including with the submission of payments and abstracts.

Action D37: The local organisers will provide a comprehensive report on the OSC and SCAR Science Week, and will work with the Executive Director to identify the lessons learned.

The Executive Director presented paper WP 29 to stimulate discussion on standardising the arrangements for OSC, on lowering the cost of the registration

fee, and on the frequency of OSCs. Noting an e-mail submission from F Davey (NZ) regarding the 'excessive costs' of the recent OSC, Delegates agreed this was a very important topic that merited extended debate. R Schlich (Fra) noted that it had taken 3 years or so to develop an effective registration and abstract submission system for EGU, while J Lopez (Spa) noted that an effective system had been put in place without much difficulty for the 10th SCAR ISAES meeting in Santa Barbara, and observed that the ISAES meeting is more on the scale of typical SCAR meetings (between 300 and 1000 people), whereas the EGU system caters for around 10,000. Delegates noted that the EGU system can be used by others, for a fee. The Executive Director explained that WP 29 suggested that we need to examine a number of different systems to find one that would work for us with little or no adaptation.

Delegates agreed that it would be difficult, starting in 2009, to spin up a system ready for the OSC in 2010. 2012 is a more realistic target.

Delegates agreed with the paper's suggestion that full costings should be obtained from AWI, AAD and AARI so that it was clear to what extent the host organisation subsidised the three previous meetings in cash or in-kind (e.g. with staff), and how the registration fee had been used. These should form the basis for a revised paper for EXCOM in 2009.

Delegates agreed with the principle that SCAR could hire someone to manage the meeting registration and associated arrangements provided that this was self-sustaining and cost neutral. They also agreed that the registration fee could be set in such a way as to allow some small 'profit' element that could be used to invest in travel to the OSC by young scientists.

Delegates decided that plans for 2010 and 2012 should go ahead, and that the question of frequency of meetings should be resolved at XXXI SCAR so that those prepared to offer to host a meeting in 2014 would know what the extent of the commitment is.

There was general agreement that we must continue to focus on interdisciplinary sessions and limit the number of parallel sessions (in St Petersburg there were 11).

Action D38:

- (i) Secretariat should prepare more detailed plans for possible in-house management of OSCs, for EXCOM to examine in 2009 and national committees and Delegates to review in 2010;**
- (ii) A possible change in the cycle to 4 years should be put to the EXCOM in 2009, for consideration by the national committees and Delegates in 2010.**
- (iii) in parallel with this exercise, EXCOM should examine the major meetings structure to see if some alternative model might replace the pattern of OSCs interspersed with Biology and Earth Science symposia.**

9.6 Progress in Implementing the SCAR Strategic Plan [IP 16]

Delegates noted with approval that many achievements have been made already against the targets in the Strategic Plan [IP 16 ii].

Delegates noted that an external review of SCAR performance was called for in the Strategic Plan, that it should take place during 2009, and be reported to the Delegates at XXXI SCAR. This exercise should not be as elaborate as the review of 2000, which resulted in a major restructuring.

An ad hoc group comprising M Stoddart (Aus) and M C Kennicut (USA) plus representatives of the three SSGs was appointed to devise the terms of reference for the review of SCAR's performance, to consider an appropriate budget for the review, to suggest names for a possible small review team, and to report back to Plenary.

Action D39: (i) EXCOM to appoint a Review Panel with the following terms of reference:-

- (a) To report on the extent to which SCAR has, since 2004, achieved its objectives;**
- (b) To provide advice about what SCAR must do to achieve those objectives which remain unachieved;**
- (c) To provide such advice about the operation and management of SCAR as it sees fit, for the improvement of SCAR.**

(ii) The Review Panel should:

- (a) receive reports electronically from the 5 SRPs and SCAR's many science activities;**
- (b) participate in a 2-day meeting at SCAR in Cambridge during 2009;**
- (c) report electronically at least 2 months before the XXXI SCAR Meeting.**

It was suggested that EXCOM consider appointing as reviewers (i) an experienced geoscientist (EGU?); (ii) an experienced biologist (President IUB?); and (iii) an experienced atmosphere/climate scientist (EGU?). It was also suggested that reviewers should come from Europe to keep costs down to about \$2,500. Delegates approved the plan and asked EXCOM and the Secretariat to put it into effect.

Delegates noted that the SCAR Strategic Plan 2004-2010 is used as the basis for a biennial Implementation Plan. The Implementation Plan for 2006-2010 was provided for information as IP 16. It will be updated with the actions stemming from XXX SCAR.

9.6.1 Communications and Publications [IPs: 17, 18]

SCAR is now working under the guidelines of the SCAR Communications Plan published as SCAR Report 25. Delegates were asked to ensure that national committees use the plan, to the extent possible, as guidance for their communication with scientists and the public. National Committees have a vital role to play in passing on the SCAR message to the wider community at the national level.

To ensure that SCAR has a more uniform corporate image on the web site, the web pages for the three SSGs have now been migrated from their original sites to the SCAR web site. SCAR is now publishing all reports and bulletins electronically [IP 17]. SCAR is also using modern communication systems like Facebook, a resource used intensively by younger scientists and the general public.

A sign of the success of the communications strategy is the continuing rise in hits on and downloads from the SCAR web page. The average of web hits for 2008 was 125,000/month, about 30,000 higher per month than the average for 2006 in the run up to the Hobart meeting.

The Secretariats had arranged a Live Webcast of the SCAR/IASC IPY Conference - Opening Ceremony, with webstreaming available at:
<http://www.arcticportal.org>.

Delegates recommended giving SCAR's 50th anniversary a higher profile on the web page.

Action D40: Secretariat to give high profile to 50th anniversary on SCAR web page.

A key future publication will be the ACCE volume referred to under agenda item 5.4 [WP 17].

Delegates decided that more transparency about SCAR's activities was warranted on the SCAR Members web page. For instance, national reports could be moved to the public web page, along with links to national web sites. The papers for the Delegates meeting should be kept on the Members page until approved and finalised.

Action D41: Secretariat to consider what items need to be kept on the password protected Members page, and to make recommendations to EXCOM with the objective of making changes as appropriate prior to XXXI SCAR.

Action D42: Secretariat to arrange more prominent links to national committees' web pages.

Action D43: Secretariat and EXCOM to review web site to emphasize achievements and the contributions of science to the solution of major issues.

Delegates thanked A Meloni for arranging at no cost the design of the new SCAR brochure [IP 18], which was available in all OSC registration packs. It was printed on 100% recycled paper.

Action D44: Delegates may order copies of the brochure from the SCAR Office for distribution at national level.

Delegates noted the intention of the Secretariat to investigate more possibilities for merchandising, to add to the traditional ties and lapel pins (ties were available for sale in Russia).

Delegates note that there has been no time to do as suggested at EXCOM in 2007 and develop plans for producing popular publications on SCAR and Antarctic Science.

Action D45: Secretariat and EXCOM to continue developing ideas for popular publications in Antarctic Science.

One delegation suggested there was a need to review the web site to emphasise achievements; however, recent achievements were recently published as SCAR Report 29.

9.6.2 Capacity Building and Education (CBET) [WP 30]

The SCAR Capacity Building Education and Training (CBET) Strategy had been published as SCAR Report 27. The mainstay of the programme continues to be the Fellowship programme (agenda item 8.3). The International Antarctic Institute based in Hobart continues to make progress; SCAR is an Associate Member. Over the past year SCAR has assisted with the development of the Association of Polar Early Career Scientists (APECS), which has taken the place of the IPY Youth Group, and which SCAR now co-sponsors with IASC.

In 2007, SCAR supported the 3rd Malaysian International Seminar on Antarctica - "From the Tropic to the Poles" (21-22 March) and a joint ICSU-SCAR Forum in Malaysia on "Understanding the Implications of Rapid Warming in the Polar Regions to Earth Systems" (23 March).

Delegates noted that several discussions on CBET were held during the SCAR Science Week in St Petersburg, and applauded the agreement signed between SCAR, IASC and APECS, noting that there were no direct financial implications. Delegates agreed that APECS should be invited to send a representative to future Delegates, SSG and SRP meetings, that ideally the representative should come from the country where the meeting was to be held, and that if necessary some of the \$5000 set aside for capacity building could be used to cover the costs. Delegates decided that SCAR was unable to fund APECS travel (\$36k), nor an early career award.

Action D46: Secretariat to invite APECS to send an observer to XXXI SCAR.

Delegates agreed that increasing capacity building activities in the future, both for early career scientists and for countries with less well developed Antarctic Programmes, should be a priority, budget permitting.

9.6.3 SCAR Services and Products [IP 19]

SCAR has 19 different scientific products and services that serve the needs not only of the science community but also COMNAP, CCAMLR and the ATCM/CEP. SCAR services and products were displayed through posters at St Petersburg. Delegates agreed that the products and services were both useful and important and that we need to make better use of them in future.

Action D47: (i) Secretariat in consultation with COs and EXCOM to develop plans to review SCAR's products and services, (ii) to draft service level agreements for discussion with agencies, (iii) to make products and services more prominent on the web page. (iv) SSGs to review products and services annually.

9.7 Status of National Reporting to SCAR [IP 20]

In most cases the new SCAR Reporting Template is being used. 60% of Members provided annual reports on 2006-7, and 50% have so far provided national reports for 2007-8.

Action D48: Remind national committees who have not yet provided national reports for 2007-8 to do so, preferably by the end of August.

9.8 Activities of the Executive Committee (oral)

The President made a brief oral report on the activities of the members of the Executive Committee on SCAR business since XXIX SCAR.

9.9 Links with COMNAP [IP 21 & 22]

COMNAP was represented at the Delegates meeting by its President J Retamales (Chile), who reported on new developments in COMNAP, which include a new constitution and structure. The new structure offers the potential for closer liaison with SCAR in the future. He noted that with rising fuel prices all Antarctic research agencies will need to find ways of collaborating more closely in future.

The SCAR President noted that the recent joint EXCOMs meeting with COMNAP was very productive, and that we need to be working more closely with COMNAP in future, recognising the pressures imposed by changing fuel prices. SCAR is to provide COMNAP with a strategic view of where Antarctic science is going in the future through a paper for the next COMNAP meeting in August 2009.

Action D49: discuss with COMNAP the presentation of a paper on future directions in Antarctic science.

The Report of the joint meeting of the SCAR and COMNAP Executive Committee in Washington DC (July 2007) is provided as IP 21. The Draft Report of the Joint Meeting of the SCAR and COMNAP Executive Committees in St Petersburg (July, 2008) is provided as IP 22.

The SCAR and COMNAP Secretariats managed to arrange that the COMNAP and SCAR meetings in 2008 did not overlap, so enabling COMNAP representatives to attend the SCAR meetings should they so wish, and vice versa. The SCAR and COMNAP Secretariats met during a one-day session at the SCAR Secretariat in Cambridge on February 6, 2008. COMNAP provided significant input to the consultation on the Code of Conduct for Fieldwork.

Delegates were pleased to see the connection between SCAR and COMNAP being strengthened.

9.10 Activities of the SCAR Secretariat [IP 23]

In March 2006, M Kaczmarska (Pol) left the Secretariat to work in Svalbard and M Sparrow (UK) was recruited as the new Executive Officer, starting on July 1, 2007. Dr. Sparrow is a physical oceanographer and was formerly a Staff Scientist for the CLIVAR Programme Office. Mrs K Smith retired as Administrative Officer, and was replaced by Mrs R Nash on October 9, 2007.

10. FINANCE

S Marensi (Arg), the Chairman of the Finance Committee, introduce these items. In accordance with the Rules of Procedure, Observers left the plenary session for this agenda item.

10.1 Report of the XXX SCAR Committee on Finance [WP 31]

The report of the XXX Finance Committee was presented for discussion; the final report will be on the Members' web page at <http://www.scar.org/members/financial/financereports/>. The report took into consideration among other things the effect of the fall in the value of the US dollar, which was compounded by the fact that staff salaries are paid in pounds sterling. Delegates noted that this problem, combined with a decline in income from voluntary contributions and loss of the CAML programme management fee, meant that we would start depleting the cash reserve in 2009. In order to maintain a balanced budget with a healthy reserve sufficient to cover salaries for a year, Delegates agreed that in 2010 it would be necessary to move to the average \$/£ exchange rate for the past decade (0.6) so as to compensate for the fall in value of the dollar (see finance report for details). This change would be necessary in spite of increases in and upgrades to membership, to maintain a balanced budget. The matter would be drawn to the attention of national committees, for their consideration, by the Secretariat.

Delegates agreed to balance the budget in 2009 by making significant cuts to the science budget, and by keeping all other costs down, recognising that the effect on the science would be less than it might appear, because there would likely be a significant carry over of unspent science funds from 2008 into 2009. There would be no carry forward of administration funds. Delegates agreed with the Secretariat's proposal to save costs and time by closing the US bank account and taking all future subscriptions in pounds sterling.

Delegates were pleased to see that there were almost no arrears in contributions, and approved the report of the Finance Committee as modified in the finance report.

Action D50: (i) Secretariat and Finance Committee to finalise the Finance Committee Report for the SCAR finance web page; (ii) Secretariat to write to national committees regarding the proposal to change dues in 2010.

10.2 Financial Statements for 2006 and 2007 [WP 32 i and ii]

Delegates decided to approve the SCAR Financial Statements of Income and Expenditure for 2006 [WP32 i] and 2007 [WP32 ii], observing that the \$10,000 major symposia fund in 2007 was awarded to the International Symposium on Antarctic Earth Science (ISAES).

10.3 Revised Budget for 2008 [WP 33]

Delegates reviewed the 2008 budget as revised by EXCOM in 2007, made a number of cuts as noted in the Finance Report, and decided to approve the revised budget. The \$10,000 major symposia fund in 2008 was awarded to the ice sheet modelling workshop.

10.4 Budgets for 2009 and 2010 [WP 34 i and ii]

Delegates decided to modify and approve draft budgets for 2009 [WP 34 i] and 2010 [WP 34 ii] (finance report), noting that they will be adapted by EXCOM as appropriate as circumstances change.

10.5 Financial Strategy [WP 35]

Delegates appreciated the careful analysis of the forward look budget presented in the financial strategy [WP 35] and adopted a number of its recommendations in agreeing the report of the Finance Committee (see 10.1, above).

10.6 Ethics and Donations Policy [WP 36]

Delegates appreciated the thought that had gone into preparing the paper on ethical guidelines, noted that it needed a little more consideration, and asked EXCOM to review it for XXXI SCAR. In the interim the policy will be used in its present form so as not to impede progress in attracting contributions.

Action D51: EXCOM to review the Ethics and Donations policy and revise it as appropriate for presenting to XXXI SCAR.

11. FUTURE MEETINGS

11.1 SCAR Executive Committee Meeting (Punta Arenas, 2009)

Delegates decided to approve the plan for the SCAR EXCOM to meet in association with the COMNAP meeting to be held in summer 2009 in Punta Arenas. A joint meeting of the SCAR and COMNAP Executive Committees will be held during this time.

11.2 XXXI SCAR (Buenos Aires, 2010)

Delegates agreed that in all future SCAR biennial meetings, the SCAR Science Week, including business meetings and the Open Science Conference, would be held back-to-back with the Delegates meeting. The wording of Rule of Procedure 3.2.2 was revised accordingly.

S Marensi (Arg) described the arrangements for XXXI SCAR in Buenos Aires in 2010, and presented a short film on Buenos Aires. Arrangements will be made using the recently revised "Guidelines for Hosting a SCAR Meeting" approved at XXVIII SCAR, and available on the Members page of the SCAR web site. A conference organising company will assist with organising the meeting. Delegates approved the plans for XXXI SCAR.

Recognising that the IPY Science Conference in 2010 would take place on 8-12 June, Delegates agreed that XXXI SCAR should take place in late August or September 2010.

11.3 XXXII SCAR

The USA offered to host XXXII SCAR in 2012, with a venue to be established. Delegates thanked the USA for its offer, and approved the location of XXXII SCAR.

Spain offered to host XXXIII SCAR in Spain, and Malaysia offered to host a future SCAR meeting in 2014 or after. Delegates welcomed the offers and will consider them in due course; noting that at the XXXI meeting Delegates will discuss the overall future programme and frequency of SCAR meetings (see agenda item 9.5).

12. ACTIONS ARISING

12.1 Election Results

M C Kennicutt (USA) was elected President, and R Ravindra (Ind) and A Huiskes (Neth) were elected Vice Presidents. C G Rapley becomes Past-President for 2 years.

12.2 Progress against actions [IP 24]

IP 24 lists progress against actions arising from XXIX SCAR and meetings of EXCOM. Most of the actions have been completed. Several uncompleted items are ongoing requirements. Any unmet action will be added to the action sheet for XXXI SCAR. Delegates were pleased to see good progress being made in discharging actions as part of the ongoing work programme.

The Executive Director presented the draft list of actions, recommendations and resolutions from the current meeting, which was approved with minor modifications.

12.3 Other Business

The President presented the Certificates of Appreciation to outgoing Vice-Presidents (see agenda item 8.2).

On his retirement as Past President, J Thiede made a brief speech of farewell to SCAR.

The President thanked the Russian hosts for their hospitality and the excellent support of the meeting, noting that the Gala Dinner, attended by A Chilingarov, had been a great success. The assistance of N Zaitseva and M Gnedovskaya was very much appreciated.

Delegates awarded outgoing President C Rapley the distinction of Honorary Member, by acclaim.

13. CLOSURE OF THE MEETING

The President formally closed the meeting at 1730, and invited the new Executive Committee to hold a short meeting.

APPENDIX 1: External Recommendations

Note that SSGs may make recommendations for their own internal purposes (Internal Recommendations) or that are for action by SCAR and involve some external agency, which may include national committees (External Recommendations)

SCAR XXX-1 (SSG-LS-3): Concerning the future of the SCAR Marine Biodiversity Information Network (SCAR-MarBIN)

Recognizing the achievements and crucial usefulness of the SCAR-MarBIN network in terms of compilation, integration, accessibility and dissemination of Antarctic marine biodiversity data for research, management, conservation and monitoring purposes,

SCAR recommends to National Committees that they urge their national funding agencies to consider contributing to SCAR-MarBIN funding for the period 2010-2014.

SCAR XXX-2 (SSG-LS-6): Concerning the use of flipper bands on penguins - (Replaces Recommendation XXIX-4).

Noting the substantial and increasing scientific evidence for adverse, cumulative long-term (i.e. greater than one year duration) impacts of flipper bands, and recognising that banding studies of varying durations are still underway within some national programmes,

SCAR recommends to National Committees that they urge researchers to give careful consideration as to whether flipper bands should be used, and under what circumstances.

SCAR XXX-3 (SSG-PS-6): Concerning continued support of existing geospace observatories (replaces SCAR XXVIII-6)

Noting planned closures of instruments (e.g. SuperDARN radars, VLF receivers, magnetometers, riometers, and ionosondes), and downgradings in their maintenance,

SCAR recommends to national committees that they encourage national funding agencies to provide support for continued operation of these infrastructures and for reliable archiving solutions for the data that the systems are providing.

SCAR-XXX-4 (SSG-PS-7): Concerning Upper air and ionospheric observations along the Antarctic Peninsula (replaces XXVIII-9, XXIX-3, XXVIII-18 and XXIX-4)

Concerning Upper air and ionospheric observations along the Antarctic Peninsula SCARXXX- SSG/PS-7 (Originally SCAR XXVIII-9, plus SCAR XXIX -3 (replaced XXVIII-18) and XXIX-4)

Recognizing the importance of upper air observations for operational numerical weather prediction in the Antarctic Peninsula, a region of marked climatic change over recent decades,

SCAR recommends to national committees that (i) countries doing upper air observations along the Antarctic Peninsula, particularly at the tip of the peninsula, coordinate operation and optimize resources to secure continuous daily sounding until at least the end of the IPY, and preferably beyond, and that (ii) countries that have done ionospheric sounding over the Antarctic Peninsula, consider restarting observations, and those that are currently doing them upgrade their installations.

SCAR-XXX-5 (SSG-PS-8): *Concerning sea ice observations (Replaces SCAR XXIX-6)*

Noting that the Antarctic Sea Ice and Climate Program has developed a protocol for making standardised and quantified observations of sea ice properties from vessels operating in the Antarctic pack ice zone,

SCAR recommends that COMNAP urges national programmes to contribute sea ice observations made from their icebreaking research and supply vessels, and to train ship officers to make such observations.

SCAR-XXX-9 (SSG-PS-9): *Concerning drifting buoys (replaces SCAR XXIX-7)*

Noting that increased observations in the sea ice zone are needed for IPY and on the observing systems of the IPY legacy,

SCAR recommends to national committees that SCAR Members commit funding for one or more data buoys to be deployed through the logistic activities coordinated by the International Programme for Antarctic Buoys.

SCAR-XXX-10 (SSG-PS-10): *Concerning meteorological observations for weather forecasting and the IPY (replaces SCAR XXIX-8)*

Recognising that real-time surface meteorological observations from both land and sea are critical for providing accurate weather forecasts and are key data for studies of climate change.

SCAR recommends that: (a) All research and supply ships operating in Antarctic waters and traverse parties (using the MOBIL code) should contribute real-time meteorological observations to the WMO GTS; (b) Climatic data from land stations should be submitted to GCOS via the WMO GTS shortly after the end of each month; (c) COMNAP construct a web page listing intended ship movements; (d) Aircraft operating on long distance flights in Antarctica should be encouraged to report AIREPS.

SCAR-XXX-11: King George Island

Noting the need for improved coordination of science in support of SCAR programmes,

SCAR recommends to national committees:

- that support be provided (perhaps multi-operator) for a KGI radiosonde programme;
- that a wide range of climate parameters be collected at 3-hourly and 6-hourly intervals by all stations, and routinely exchanged.

And SCAR recommends that:

- SCAR and COMNAP be asked to consider the proposal that a working paper on “Major scientific themes that could be addressed by a coordinated approach to KGI science” (or some such title) should be addressed to the COMNAP meeting in Punta Arenas (June 2009), as the basis for a discussion on how such coordination might be achieved, and by what means.
- SCAR recommend through COMNAP that consideration be given to applying the experience of Svalbard area science programme coordination for optimization of KGI investigations

APPENDIX 2: Resolutions

Note that as a Company, SCAR may make Special Resolutions binding the Company to agreements or decisions requiring changes to or noting comments on the Memorandum or Articles of Association. Elective Resolutions may be passed to dispense with the holding of annual general meetings, or to dispense with the annual appointment of auditors.

Special Resolution XXX-SCAR-1, on Membership

“Given that all current Members, Associate Members and Union Members of SCAR have at some time or other applied in writing to be Members of SCAR, the Delegates concur that all those who are now Members in whatever category can be considered to have signed up also to the new legal status of the organisation, and will therefore be listed as Members of the organisation.

In making their applications for membership, new applicants will be required to confirm in writing that they will abide by the Memorandum of Association of Scientific Committee on Antarctica Research and Articles of Association of Scientific Committee on Antarctic Research. They will not be required to sign an application form.”

Elective Resolution XXX-SCAR-2, on the Annual General Meeting

In accordance with Article of Association 6.3, the Members resolve to dispense with holding an annual general meeting, and instead to hold a general meeting every two years, and failing that at least once every thirty months.

APPENDIX 3: Relationship of National Antarctic Gazetteers to the SCAR Composite Gazetteer of Antarctica

The SCAR Composite Gazetteer of Antarctica (SCAR CGA) is a product, compiled purely for the convenience of the SCAR community and has no legal authority or standing. It is a digital application that collects and compiles place names, locations of names and descriptions of names in Antarctica provided by the national names committees of nations active in Antarctica, for a range of purposes.

1. The SCAR CGA is a tool with content such that any contained place names can be:
 - incorporated into any Geographic Information System (GIS) or internet mapping service for map production purposes,
 - used for reference purposes in tasks that require a common understanding of location,
 - used for any purpose that requires a user to identify a place where individual nations have assigned different names to the same Antarctic feature.
2. To provide these services effectively requires that the SCAR CGA:
 - accurately portrays the information for names in any given national gazetteer,
 - uses database identifiers for the purpose of data management
 - reaches in due time a content with a known level of accuracy.
3. It should be noted that the National Names Committees:
 - are the sole authorities for names in Antarctica,
 - act as governing authorities for Antarctic place names,
 - direct the use of particular names on national mapping products,
 - confer any legal or statutory authority over the names in their national gazetteers,
 - assign preferred names to features.
4. The SCAR CGA acts only on the information provided by the National Names Committees.

APPENDIX 4: Acronyms

AAA	Antarctic Astronomy and Astrophysics Group
AAD	Australian Antarctic Division
AARI	Arctic and Antarctic Research Institute
ACCE	Antarctic Climate Change and the Environment
ACE	Antarctic Climate Evolution
AG	Action Group
AGCS	Antarctica and the Global Climate System
AG-SATC	Action Group on SCAR and the ATS in the 21st Century
AG-SDIMS	Action Group on SCAR Data and Information Management Strategy
AGU	American Geophysical Union
AIREPS	Meteorological reports appended to position reports on airplane flights (WMO)
AMD	Antarctic Master Directory
ANDRILL	Antarctic Geological Drilling Project
ANTEC	Antarctic Neotectonics
APECS	Association for Polar Early Career Scientists
ASMA	Antarctic Specially Managed Area
ATCM	Antarctic Treaty Consultative Meeting
ATS	Antarctic Treaty System
AWI	Alfred Wegener Institute for Polar and Marine Research
BAS	British Antarctic Survey
BipAG	Bipolar Action Group
CAML	Census of Antarctic Marine Life
CBET	Capacity Building Education and Training
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CEP	Committee for Environmental Protection
CliC	Climate and Cryosphere programme
CO	Chief Officer
COMNAP	Council of Managers of National Antarctic Programmes
CPR	Continuous Plankton Recorder
DCSA	Delegates Committee on Scientific Affairs
EBA	Evolution and Biodiversity in the Antarctic
EGU	European Geophysical Union
EXCOM	Executive Committee
DARN	Dual Auroral Radar Network
DIM	Data and Information Management
GBIF	Global Biodiversity Information Facility
GCOS	Global Climate Observing System
GEBCO	General Bathymetric Chart of the Ocean
GEOSS	Global Earth Observing System of Systems
GIS	Geographic Information Systems
GPS	Global Positioning System
GS	Geosciences
GTS	Global Telecommunications System
IACS	International Association of Cryospheric Sciences
IAI	International Antarctic Institute
IASC	International Arctic Science Committee
IAU	International Astronomical Union
ICESTAR	Inter-hemispheric Conjugacy Effects in Solar-Terrestrial and Aeronomy Research
ICSU	International Council for Science
IGBP	International Geosphere–Biosphere Programme

IGU	International Geographical Union
IGY	International Geophysical Year
INQUA	International Union for Quaternary Research
IP	Information Paper
IPCC	Intergovernmental Panel on Climate Change
IPD	International Polar Decade
IPF	International Polar Foundation
IPICS	International Partnerships in Ice Core Science
IPO	IPY Project Office
IPY	International Polar Year
IPY-JC	IPY Joint Committee
ISAES	International Symposium on Antarctic Earth Sciences
ISMSS	Ice Sheet Mass Balance and Sea Level
IUBS	International Union of Biological Sciences
IUGG	International Union of Geodesy and Geophysics
IUGS	International Union of Geological Sciences
IUPAC	International Union of Pure and Applied Chemistry
IUPS	International Union of Physiological Sciences
JCADM	Joint SCAR–COMNAP Committee on Antarctic Data Management
KGI	King George Island
LOC	Local Organising Committee
LS	Life Sciences
MarBIN	Marine Biodiversity Information Network
MOBIL	WMO code for upper air observations from a mobile land station
MoU	Memorandum of Understanding
NADC	National Antarctic Data Centre
OSC	Open Science Conference
PACT	Action Group on Polar Atmospheric Chemistry at the Tropopause
PAGES	Past Global Environmental Changes
PAntOS	Action Group on Pan-Antarctic Observations System
POLENET	Polar Earth Observing Network
PS	Physical Sciences
SALE	Subglacial Antarctic Lake Exploration
SAON	Sustained Arctic Observing Networks
SCADM	Standing Committee on Antarctic Data Management
SC-AGI	Standing Committee on Antarctic Geographic Information
SCAR	Scientific Committee on Antarctic Research
SC-ATS	Standing Committee on Antarctic Treaty System
SCOR	Scientific Committee on Oceanic Research
SCOSTEP	Scientific Committee on Solar Terrestrial Physics
SERCE	Solid Earth Responses and Influences on Cryospheric Evolution
SieGE	Expert Group on Sub-Ice Geological Exploration
SIGE	Sub-Ice Geological Exploration Action Group
SOC	Scientific Organising Committee
SOLAS	Surface Ocean Lower Atmosphere Study
SPRI	Scott Polar Research Institute
SRP	Scientific Research Programme
SSG	Standing Scientific Group
UNEP	United Nations Environment Programme
URSI	Union Radio Scientifique International
VLF	Very Low Frequency
WCRP	World Climate Research Programme
WMO	World Meteorological Organisation
WP	Working Paper