



WP 9b

Agenda Item: 4.2.2

Person Responsible: A Abu Samah

**XXXIV SCAR Delegates Meeting
Kuala Lumpur, Malaysia, 29-30 August 2016**

Delegate Scores and Comments on SCAR's Scientific Research Programmes' External Reviews

Executive Summary

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Important Issues or Factors:

Five of the six Scientific Research Programmes (SRP) were externally reviewed this year. The process can be found in WP 9a. Reviews are also part of the Delegates papers as WP 11b, 12b, 13b, 14b and 15b. They can be found here: <http://www.scar.org/meetings/34scar-papers>

Recommendations/Actions and Justification:

Delegates were asked to submit comments and a ranking for the SRPs which will help in determining continuation of the SRPs. Based on the scores received, Delegates are asked to approve the continuation of all the SRPs and to commend the groups for great progress.

Budget Implications:

SRPs are funded at ~\$20,000 per year.

Delegate Feedback Requests

Delegates were asked to read the reviews of the Scientific Research Programmes (SRPs) and provide a score based on the following system:

- A. The SRP is adding significant value to SCAR's portfolio of activities, and needs no significant revision. Good progress is being made. (4 points)
- B. The SRP is adding value to SCAR's portfolio of activities. Good progress is being made but there is a need for some minor revisions or clarifications. (3 points)
- C. The SRP does not appear to be adding significant value to justify SCAR's continued support or endorsement without significant revision. (2 points)
- D. The SRP does not appear to be adding any value to justify SCAR's continued support or endorsement, and funding should be withdrawn. (1 point)

Delegates from the following countries contributed comments:

Australia, Belgium, Canada, Finland, France, Germany, Iran, Japan, Netherlands, New Zealand, Portugal, Sweden, United Kingdom, United States

Overall Comments from Delegates:

- Overall, SCAR is achieving a great deal via the SRPs. We score them all in category A, with no specific comments other than to commend the SRP leadership in each case for an excellent job. We recognize that the level of resourcing to these SRPs is quite low relative to what they are achieving. The resourcing relative to the reporting requirements is a matter that requires some discussion at the Delegates meeting.
- Many reviewers suggested the need for greater participation of researchers from countries with small or less well developed Antarctic programs. We would be happy to promote greater involvement in the SRPs among our national Antarctic research community. To assist us in doing this, it would be useful to have an overview that we could circulate about the SCAR SRPs with brief information regarding objectives, key recent and planned activities, when and how often meetings occur and whether teleconferencing options are available, and who to contact to join or obtain more information.
- These reports have been seriously reviewed by specialists who have attested to the excellent work or progress made by each group. In addition, the authors of these reports have answered in detail and in a comprehensive manner to the questions and comments of reviewers. It is really a great work and we congratulate and thank all those who have done them.
- All the SRPs are excellent. Relationship between AntEco and AnT-ERA is not clear. And some steering committee members of these two programmes are overlapping.
- We have given a B grade to all Programmes as each one has aspects that can be improved by making minor changes that are recorded by the reviewers. The main concern is that it is not always obvious what additional value has been added by the SCAR programmes and what would have happened anyway; how much are they a collection papers that would have been written by the key players? Also, how far have we reached out to new players and new countries. These are issues for SCAR to help with and design forms and questionnaires that seek out these points. Data management is also a key issue for some programmes.
- I strongly support the general comments from the evaluation team 'Recommendations for all SRPs and/or SCAR as a whole'. We should discuss how the reporting can focus on what is important (e.g. having only the relevant publications) and ensure that the reporting is simple (not to waste peoples time). Though each of the SRPs performs extremely well, there needs to be a discussion on which areas of Antarctic research /SCARs scientific priorities that are not covered. To enable the launch new initiatives SCAR needs to find new resources or reallocate existing resources. The latter can be done in different ways, e.g.:
 - Close SRPs, though they are successful.

- Merge existing SRPs with similar focus.
- Lower the funding for the existing SRPs.
- They all have strengths (in different areas relevant to their programme) and minor recommendations for improvements. Some thought needs to be given to the publication lists that SRPs submit. A lot of the publications happen to be by SRP members (or sometimes not even members!) in their normal work schedule, rather than a direct output of the SRP network. Publications should be restricted to edited volumes or sets of papers directly related to SRP workshops etc.
- A general problem seems to be that the publications listed are not fully a SRP product, but often a combined product of national funding and SCAR. The question whether a publication would not have been published without SCARs support can simply not be answered. The suggestion is to ask the authors to mention SCAR in the acknowledgements when a paper is directly linked to SCAR.
- Some recommendations are being dismissed with a reference to too little funding available. This is certainly true and we have to make sure that the expectations towards the SRPs are realistic. Synthesis efforts based on SCAR supported workshops a probably the best value and most realistic product from the SRPs.
- The reviewers' remarks are correct and the answers given are convincing and therefore we agree to continue these SRPs. We do not find justified to introduce bibliometric indices for the publications, nor to imply that the publications are in too low impact journals. Many of the papers are published in journals read by the polar community that they are aimed at, and some with more global syntheses are published in very high impact journals. This is explained in the answers to comments.
- There is no logic in asking for the SRPs to be aligned with the questions of the SCAR Horizon Scan, because the latter came AFTER the strategic plans of the SRP were written. Of course, there are overlaps, but they should not become a priority over the strategic plan.
- The SRP leaders complain that they spend much time in administrative business and indeed, this should be kept light and minimal.
- As it is a recurring problem that it is difficult to judge whether or not the publications/activities presented in the SRP reports are genuinely the result of the SRP itself or merely a summation of member activities, we fully support SCARs recommendations to all SRPs to somehow document which of their achievements are directly resulting from the SRP and which would not have happened otherwise, and also to recommend to the SRP members to mention in publications that the paper is a contribution to the SCAR xxxxx SRP.
- "SCAR recognizes that the success of SRPs depends primarily on science carried out, funded and peer-reviewed within national and international programmes,..." Agree entirely but have some reservations it is being achieved through SRPs, e.g. are they achieving more than Standing Groups since activities are mostly networking? How close are we from achieving the full scientific potential for networking and collaboration (beyond small circles)? The feeling is that there is a core group but limited involvement of potential contributors to what could be a fully-fledged SCAR scientific programme. How can we widen and have more effective contribution from scientists in different countries, so as to get the best possible science? An important aspect is (synchronized) significant funding of the SRPs.
- To what extent would it be possible to adopt a ERA-Net structure by bringing together funding organizations to sponsor common projects in a competitive way, i.e. a common funding to facilitate open collaboration by those that contribute to the pot? . It could be an extremely interesting global coordination effort to achieve and probably would bring more commitment and involvement of responsible organizations in different countries.
- Basically, more active involvement beyond the core is desirable.

SRP Ratings and Delegate Feedback

Below are the average scores for each SRP as well as specific comments contributed by the Delegates.

AntClim21

Grades: A, B, A, A, B, B, A, A, B, B, A, A, A-B

- Excellent science and good support for early career researchers. However, the implementation plan is 4 years overdue. While the group notes that its completion is a priority, no timelines are provided.
- The work done is judged to be of high quality and highly relevant for Antarctic research. However there is still room for improvements:
 - An implementation plan must be presented
 - Better coordination with other initiatives in climate research
 - More focus on outreach
- The science quality of this group is excellent. The program has resulted in a number of publications in high quality journals. In addition, the workshop reports represent significant scientific contributions and this is a good mean to inform a broader scientific community. Most publications contain multiple members of the AntarcticClimate21 team. This suggests the establishment of an international network of experts built on multi-institutional collaborations.
- The stated objectives of this program are in keeping with the SCAR strategic plan.
- As mentioned by a reviewer, building bridges to the research community on ecosystems represent an original objective well in line with the general multidisciplinary vision of SCAR.
- A significant contribution to SCAR and valuable networking.
- This group has improved predictions on changes to the Southern Ocean and Antarctica through three major fields: quantifying variability, model verification and climate projection to 2100 and beyond. Science highlights have included relatively many excellent papers on the potential for Southern Hemisphere climate. The participation of young scientist should be supported more.
- Little attention was paid to the capacity building in the countries with less well-developed Antarctic programs and there are almost no SRP members from these countries in the appendix.
- Data archival and data access are difficult to evaluate.
- Although it is usually difficult to distill the real output of such programs from work that would have been done anyway, this program is well organized and has a clear scope and goal. The initial goals were somewhat adapted to include the biogeochemical community, which should be applauded. The same is valid for the concrete actions taken in the form of workshops and several shared publications with clear AntClim21 signature. No revision needed.
- Active programme; excellent synthesis publications emerging; excellent interdisciplinary activities with AntERA; involvement of scientists from more nations, and broader outreach and capacity building should be considered.
- Seems to be well coordinated and focused. Limited number of SCAR member countries participating.

AntECO**Grades: A, A, A, A, B, B, A, A, A, A, A, A, A**

- Excellent science to inform conservation and management. No major concerns.
- This is one of two ecosystem SRPs. The science it coordinates is excellent and particular the synthesis 'The Biogeographic Atlas of the Southern Ocean' is considered an important achievement. However, there is still room for improvements: More focus on education
- AntEco should consider cooperating with SOOS where appropriate, i.e. coordinating efforts in the Southern Ocean.
- If there is a need for two ecosystem SRPs, it is important that there is good cooperation/ coordination between them.
- The State of the Antarctic Ecosystem (AntEco) SRP has generated an impressive list of publication with many papers in high ranking journals. Key outputs listed deal with biodiversity, habitat, ecosystem function, and ecosystem and organismal response to climate change. In

addition, this SRP has contributed to the Biogeographic Atlas of the Southern Ocean, an outstanding contribution to Antarctic science and conservation which had a significant media impact. The program really contributed to scientific knowledge and is in accordance with the SCAR strategic plan. Remarks and recommendations were widely argued by the authors. The lack of funding is put forward to explain the weakness of the communication activities of the program. It seems that the biggest question would be the potential overlap with other programs especially with ANT-ERA, but the authors clarified the roles and goals of each. In addition, the links of AntEco with SC-ATS, SOOS and ANTOS programs should allow the establishment of a set of indicators for monitoring changes in the Antarctic ecosystem on a range of temporal and spatial scales.

- Important contribution to the SCAR's scientific activities. The comment that outreach, education issues and web pages should be centrally organized has to be discussed in ExCom.
- Recent science highlights have included the publication of the Biogeographic Atlas of the Southern Ocean as well as up to hundreds of peer reviewed publications over the last 3 years. Information and advice was also provided to the Antarctic Environments Portal. AntEco SRP has contributed significantly to advancing knowledge of Antarctic Ecosystems in accordance with the SCAR Strategic plan. The AntEco SRP has been value for money.
- AntEco stimulates excellent science, contributes to several outstanding review and position papers and is the main driver of the Biogeographic Atlas of the Southern Ocean, which is a landmark publication. Associated with the latter, an important database on species diversity has been produced which serves the whole community. Building a database of Antarctic biodiversity is a major output of this SRP and crucial for a sustainable management and conservation of the Antarctic Realm.
- Active programme; strong science outputs; actively providing advice to AEP.
- Some apparent overlap with Ant-ERA. Seems to be well-coordinated.

AnT-ERA

Grades: A, A, A, A, B, B, A, A, B, A, A, A, B-C

- Excellent science with contributions to SCAR's policy activities. No significant concerns.
- This is one of two ecosystem SRPs. The science outcome of the coordination action is excellent and highly relevant. However, there is still room for improvements: AntEco should consider cooperating with CCAMLR and CEP where appropriate, i.e. coordinating efforts in the Southern Ocean to address issues on marine stewardship.
- There is a need to secure the long-term data management.
- The science that has been produced is excellent. The Ant-ERA Scientific Research Program has contributed to a wealth of peer-reviewed publications. In addition, and in response to the reviewers, the authors have provided an important list of papers of the national programs which fell into the AnT-ERA scientific scope. All remarks and recommendations were widely argued by the authors so, we agree with the SCAR Executive Committee, Ant-ERA should be considered as an example project within the SCAR SRP initiative.
- A lot of work is done for very little financial support. Very good that they listed the contributions to the Horizon Scan themes.
- AnT-ERA is focused on ecology and climate impact rather than the evolutionary aspects, which relates to the other programme AntEco. However, there is joint AnT-ERA and AntClim21 publication and some overlap that should be solved. One valid approach for AnT-ERA is to superimpose the physical impact from past changes and look at projected changes.
- It is not clear from the report or website what percentage of funds has been spent for scientist from countries with less well developed Antarctic programmes.
- AnT-ERA is a very successful program, stimulating collaborative research amongst its members. It is well connected to other SCAR SRPs and other international initiatives. We especially acclaim AnT-ERA's role in stimulating discussions on new ideas and plans for future Antarctic interdisciplinary research, through the organization of (cross-program) workshops and sessions.

Activities within the SRP have resulted in several important collaborative papers.

- Active programme; productive workshops; excellent efforts to stimulate cross-disciplinary science, particularly in collaboration with the AntClim21 SRP.
- Some apparent overlap with AntEco. Very wide coverage which may have the potential for multidisciplinary collaboration (across levels of biological organization) but poses a coordination challenge. It is not clear that the potential cross-fertilization benefit is being. Activities largely concentrating on capacity building and in the future in dissemination. For a scientific programme, a scientific synthesis and strategic review would probably be expected (plans seem to be rather vague).

PAIS

Grades: A, A, A, A, B, B, A, A, A, A, B, A, A

- Quality of science is excellent with contributions to IPCC AR5 report. No significant concerns.
- PAIS support to data collection, modelling and drilling programs are judged to be very important. Also PAIS has active in providing input to policy documents in their field. However, there is still room for improvements:
 - Develop a better link to the other SRPs and other organizations in the field of regional climate modelling and model verifications.
 - Improve the representation of young researchers.
 - It is unclear how interested researchers can join PAIS.
- The report reflects a great dynamic of the group with publications in high quality journals, workshops, meetings and communication activities. Employing new talent is surely a good suggestion, especially in the steering committee and the next PAIS symposium in Trieste will effectively be a valuable opportunity for early career researchers to bring their research and ideas forward, and engage the emerging Antarctic programs.
- The work done by PAIS is highly relevant and of critical importance to society. We can only encourage all the teams involved in the PAIS program to continue in this way.
- An important part of SCAR's portfolio is addressed by PAIS in a very good way. Communication of their activities may have to be improved.
- PAIS looks to the historical record of tens of millions of years for comparable high-CO₂ and temperature conditions, and ice sheet response. The large group of geoscientists is developing a valid strategy for high latitudinal drilling to obtain a range of data for ice sheet and ocean interactions. This would specifically target areas considered to be vulnerable such as the West Antarctic Ice Sheet and Amundsen Sea, but also now the marine-based sectors of the East Antarctic Ice Sheet especially utilizing the large international scientific drilling programmes, such as IODP.
- It is not clear whether the programme contributed to the capacity building of the countries with less well developed Antarctic programmes or not.
- Reporting is less clear. The reader is flooded with information and results without clear PAIS label. This problem is clearly outlined by reviewer Domack. This is a general problem for these kinds of reports and efforts; the reporter must really make an effort to show the added 'SCAR' value, but that could be improved/clarified here.
- The strength of this programme is in coordinating and facilitating new paleoclimate initiatives, especially drilling for sedimentary archives. Would be good to see more activities actually led by the PAIS group – the first major PAIS-organized symposium planned for 2017 should go forward.
- Well-coordinated and focused.

SERCE

Grades: A, A, A, A, B, B, A, A, A, A, A, A, B-C

- Excellent science in high impact journals, with great training initiatives and support for early career researchers. Although the implementation plan is 4 years overdue, a draft outline is available and the group plans to complete it in July 2016. No other major concerns identified.
- SERCE is judged to have made valuable contributions to the understanding on the interaction between the cryosphere and the solid earth. It has fostered good links with researchers addressing this issue in other regions, notably Greenland. The training program is high-lighted as a success. However, there is still room for improvements:
 - SERCE need to improve the data access.
 - Also, there is a need to improve the communication from SERCE, e.g. the web site.
- The quality of the scientific highlights and of the science produced by this SRP is very good. The articles have been published in high impact journals such as Nature and Nature Geoscience and in a wide range of journals. The communication and coordination with international groups that are investigating the interaction between the solid Earth and the cryosphere have been greatly facilitated by the numerous symposium and workshops organized. SERCE has significantly contributed to SCAR's education mission by organizing two training schools.
- In our opinion, the major criticism comes from the SCADM who calls for a better data management. The authors emphasize the difficulty to harmonize and to integrate data provided by a multitude of national programs which have their own archiving protocol. By recognizing that the scientific objectives of the SERCE program require integrated data sets from across the continent (and beyond), the authors state that this topic will be addressed in priority at the SERCE business meeting in Kuala Lumpur.
- This programme aims to advance understanding of the interactions between the solid earth and the cryosphere to better constrain ice mass balance, ice dynamics. Integrated analysis is very demanding tasks and should be continued. Major activities have included many related symposia in international conferences, the GIA (Glacial Isostatic Adjustment) Modelling Workshop, the ISAES Autonomous Instruments Workshop, and also the GIA and Cryoseismology Training schools. The implementation plan has been developed to better shape during span of the programme.
- SERCE is contributing very well to SCAR's objectives and science.
- SERCE needs to present their data archiving activities in detail, particularly in defining what data have been made available and where and how SERCE efforts have influenced them.
- SERCE is a very successful program with excellent value for money. The scientific output is very good and they have been very successful in capacity building. There has been a delay in completing the website, but this has been dealt with and the website has now been substantially updated. There was some criticism concerning data management, but as responded "SERCE does not have a direct role in data archiving". It should be noted that SERCE has an objective to "facilitate the exchange of data" and plans for improving data exchange are on the agenda of the coming meeting KL.
- Strong capacity-building activities. Integration with initiatives within the global science community on glacial isostatic adjustment, ice mass balance and sea level change is good and strengthening. Should focus on output suitable for incorporation in the next IPCC assessment.
- Scientific activities (incl strategic workshops) rather limited for scientific programme