



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

Partnerships, MoUs and Other Agreements

Executive Summary

Authors: J. Baeseman and several others

Important Issues or Factors:

Over the past few years, increased interest in the polar regions has led to increased activity by international organizations. SCAR partnerships are critical to keeping SCAR's position as the leading science organization for Antarctica strong. SCAR has formal agreements with the following groups: APECS, IASC, IACS, IPA, EPB, and others. MoUs and other agreements can be viewed from the SCAR website at: <http://www.scar.org/partnerships/agreements>

This paper summarizes recent developments with regards to SCAR partnerships and provides recommendations for ExCom consideration.

Recommendations/Actions and Justification:

A review of external relationships may be warranted given many changes in the Global Change landscape and leadership. The MoU with IASC will be renewed at the Open Science Conference. A decision should be made as to whether the Cryosphere Organizations MoU is needed.

Budget Implications:

Co-sponsorship does involve some budgetary commitments. This is \$2000 for CliC (as previous) and \$3000 for other co-sponsorships such as CLIVAR/CliC/SCAR Southern Ocean Implementation Panel (SORP), IPICS and ICED. SORP and IPICS have now been moved under the SSG-PS umbrella, so their budget line should be reflected to reflect this. The SOOS SSC is also jointly co-sponsored with SCOR to the sum of \$10,000/year.

Partnerships, MoUs and Other Agreements

Partnerships with organizations with complementary skills, technologies and interests bring added value to SCAR's activities. SCAR partners with ICSU bodies, advisory bodies to the Antarctic Treaty System, organizations with a polar mission, and global programmes with polar interests. Partnerships support SCAR's goals to provide authoritative scientific advice to policy makers, expand its advisory sphere of influence on global issues, develop the capacity of students and early career scientists, and encourage cooperation with Arctic and cryospheric counterparts.

This paper summarises recent developments with regards to partnerships. For further information see: <http://www.scar.org/about/partnerships/>

Association of Early Career Scientists (APECS)

- Contributed by the APECS Executive Committee <excom@apecs.is>



The Association of Polar Early Career Scientists (APECS) has had a productive year, helping to create opportunities for Early Career Researchers (ECRs) and running events in a range of locations across the globe. Highlights for events organized in cooperation with and / or supported by SCAR were the [APECS World Summit 2015](#) in Sofia, Bulgaria (5 - 8 June 2015), Antarctica Day 2015 on 1 December where APECS National Committees on 5 continents participated, with 45 events registered on the APECS website, including the flag activity that sees children's artwork taken to Antarctica. The APECS President participated in the [SCAR - IASC "Arctic and Antarctic Think Tank" meeting](#) in Potsdam in February 2016 and APECS, SCAR and COMNAP joint efforts to organize a [webinar on the "Writing for Success! Preparing winning fellowship applications"](#) in May 2016 to provide advice for the preparation of the SCAR and COMNAP fellowship applications. Thanks to the support from [Antarctic Science Ltd.](#), APECS was also able to offer 13 travel awards in May / June 2016 for early career researchers to attend the upcoming 2016 SCAR Open Science Conference (OSC) in Kuala Lumpur and other upcoming Antarctic meetings and conferences. APECS has also been involved in selecting ECRs for a range of Antarctic roles. There are now ECR representatives on 8 of SCAR's groups (SCAR OSC ISOC, SSG-LS, EG-BAMM, AAA, ISMASS, SOOS, AntClim²¹ and HASSEG). Based on the great experience we have had with current representatives, APECS has proposed the creation of Junior Officer positions for SCAR. Other major organisational highlights over the past year were the first [Organisational Review of APECS](#) in 2015 and the release of the [2016-2020 APECS Strategic Plan](#) in March 2016. APECS also organized again Polar Weeks in September and March including a popular [photo contest](#), and in May 2016, the [2nd APECS International Online Conference](#), attracted more than 30 presenters and 150 participants with two awards given out for the best Antarctic and Arctic presentation. APECS also awarded for the first time in 2016 the [APECS International Mentor Award to Dr. Dave Carlson](#) (WCRP) to recognize and honor the efforts of our mentors within the international polar science community and acknowledge their time and energy in building a supportive community.

Planning is currently underway for the 2016 Antarctica Day and September Polar Week celebrations, and many members with an Antarctic research focus are preparing for the 2016 SCAR Open Science Conference (OSC) in Kuala Lumpur. A day-long APECS workshop will take place on August 21, immediately prior to the conference, with sessions focussing on topics such as networking skills, career paths, and how to foster interdisciplinary research. In addition, APECS is cooperating with SCAR and COMNAP on the organizing of a "SCAR and COMNAP fellowship mini symposium" on 23 August. Further developments over the coming year include the relocation of the APECS secretariat to a new host, and the celebration of 10 years of APECS in 2017.

WCRP Climate and Cryosphere Project (CliC)

- contributed by Lawrence Hislip, CliC Director <lawrence@climate-cryosphere.org>

The Climate and Cryosphere project (CliC) of the World Climate Research Programme (WCRP) collaborates with SCAR on a number of concrete activities. Discussions are ongoing about potential new projects and broadening opportunities that link Antarctic



and cryospheric research.

- *SCAR/IASC/CliC Ice Sheet Mass Balance and Sea Level (ISMASS)*
Since 2013, CliC has been co-sponsoring ISMASS with SCAR and IASC as an initiative to help estimate the mass balance of ice sheets and their contribution to sea level change. Annual workshops are held to facilitate coordination among the different international efforts focused on this field of research, to propose directions for future research in this area, and to integrate observations and modelling communities. <http://www.climate-cryosphere.org/activities/groups/ismass>
- *SCAR/CliC Antarctic Sea Ice Processes & Climate (ASPeCt)*
The ASPeCt expert group has the overall goal to understand and model the role of Antarctic sea ice in the coupled atmosphere-ice-ocean system. CliC supports this activity by sponsoring workshops that focus on building ship-based observation systems, databases for sea ice measurements taken by remote vessels (airborne and under ice), and generally improving understanding of the Antarctic sea ice zone through focussed and ongoing field programs. <http://www.climate-cryosphere.org/activities/groups/antarctic-sea-ice-processes-climate>
- *CLIVAR/CliC/SCAR Southern Ocean Region Panel (SORP)*
The SORP serves as a forum for the discussion and communication of scientific advances in the understanding of climate variability and change in the Southern Ocean. CliC is a co-sponsor of events and workshops and is providing support to the next SORP meeting to be held at the CLIVAR Open Science Conference in Qingdao in September 2016. <http://www.climate-cryosphere.org/activities/groups/sorp>

For a full update on 2015 activities, please review the CliC Annual Report that can be found here: <http://www.climate-cryosphere.org/media-gallery/1579-2015-clic-annual-report>.

Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)

- contributed by Aleks Terauds, SCATS Chair <aleks.terauds@gmail.com> and Keith Reid, Science Manager, CCAMLR <keith.reid@ccamlr.org>



SCAR, through the Standing Committee on the Antarctic Treaty System (SC-CAMLR), has been actively engaging with a range of CCAMLR stakeholders over the last 18 months. This has taken the form of discussion with the CCAMLR Science Manager (Keith Reid) and key SC-CAMLR participants. These discussions focussed on existing and potential SCAR-CCAMLR engagement, and in particular how relevant SCAR science could be effectively transmitted into appropriate CCAMLR fora.

These discussions highlighted that in some areas SCAR is already communicating effectively with CCAMLR, through co-sponsored programmes such as the Integrated Climate and Ecosystem Dynamic in the Southern Ocean (ICED) and the Southern Ocean Observing System (SOOS) who engage directly with both CCAMLR Working Groups and the Scientific Committee. It also became clear that SCAR could improve its engagement with respect to other scientific areas, for example the outputs of the Antarctic Climate Change and the Environment Expert Group.

SCAR's role in the provision of climate related science to both CCAMLR and the CEP was addressed in detail at the joint CEP/SC-CAMLR workshop that was held in Punta Arenas on the 19-20 May 2016 (see IP 17). This workshop, and the discussions preceding it, suggest that SCAR is well placed to continue, and further develop, the provision of relevant science to CCAMLR, and that if appropriately targeted, such advice has the potential to inform and assist in the formulation of CCAMLR policy and management decisions.

Council of Managers of National Antarctic Programs (COMNAP)

- contributed by Michelle Rogan-Finnemore, Executive Secretary <michelle.finnemore@canterbury.ac.nz>



COMNAP is an international association, established in September 1988, whose Members are the 30 National Antarctic Programs from the countries of Argentina, Australia, Belarus (welcomed to membership in August 2015), Belgium, Brazil, Bulgaria, Chile, China, Czech Republic, Ecuador, Finland, France, Germany, India, Italy, Japan, Republic of Korea, Netherlands, New Zealand, Norway, Peru, Poland, Russian Federation, South Africa, Spain, Sweden, Ukraine, United Kingdom, United States and Uruguay. The National Antarctic Programs of Portugal and Venezuela (August 2015) and the National Antarctic Program of Canada (August 2016) were each welcomed to a three-year term as COMNAP Observer organisations.

COMNAP's purpose is to develop and promote best practice in managing the support of scientific research in the Antarctic. Therefore, COMNAP continues to have a close working relationship with SCAR. Joint COMNAP/SCAR Executive Committee Meetings are held annually, the SCAR President is an invited expert observer to annual COMNAP meetings and the COMNAP Chairman is representing COMNAP at the SCAR Delegates Meeting this year. The Joint Expert Group on Human Biology and Medicine (JEGHBM) also meet regularly, including at the OSC in Kuala Lumpur, Malaysia.

COMNAP Highlights 2015/16 of particular relevance to SCAR Delegates

[COMNAP Antarctic Roadmap Challenges \(ARC\) Project - complete](#)

The COMNAP ARC project, a follow-on project from the SCAR Antarctic Science Horizon Scan, explored the technology, logistics, operations, funding and international collaboration challenges that will likely be encountered by the national Antarctic programs in the delivery of Antarctic science in the mid- to long-term. Over 1000 experts participated in the ARC project either by: responding to on-line surveys, participating in a workshop, contributing topical white papers and/or by providing expert review of the writing group reports or the ARC outcomes publication. It was a community effort and all involved are thanked, but, in particular, Mahlon C. Kennicutt II (Emeritus Professor, Texas A & M University) and Yeadong Kim (President, KOPRI) for co-convening the ARC project. ARC outcomes have now been published in hard copy or can be downloaded as a PDF from: www.comnap.aq/Projects/SitePages/ARC.aspx.

COMNAP Antarctic Research Fellowship - application round open

COMNAP established the Antarctic Research Fellowship in 2011 and since that time has awarded six fellowships, plus three jointly with SCAR. The Fellowship aims to assist early career researchers, technicians and engineers. The 2015 Fellowship was awarded to Alejandro Velasco Castrillon (University of Adelaide, Australia) to undertake travel to Antarctica in support of research on "A re-evaluation of the first discovery of limno-terrestrial microfauna of the McMurdo Sound region". Also, a joint COMNAP/SCAR fellowship was awarded to Inka Koch (University of Otago, New Zealand) to undertake research on "Detecting marine ice internal layers and thickness in an Antarctic ice shelf with airborne ice penetrating radar". The 2016 Fellowship round closed on 1 June 2016. Both SCAR and COMNAP are also working with CCAMLR to promote their scholarships. See <https://www.comnap.aq/SitePages/fellowships.aspx>.

In addition, this year COMNAP worked with SCAR and APECS to have a fellowship webinar to help better prepare applicants and to address questions and share advice from reviews and past recipients. More information can be found: <http://www.scar.org/fellowship/mentoring>.

European Polar Board (EPB)

- contributed by Renuka Badhe <r.badhe@nwo.nl>



The European Polar Board (EPB) is an organisation representing 27 Member organisations from 18 countries. The EPB identifies and promotes scientific priorities of common interest for its members in a foresight process and through specific working groups. It provides policy makers with strategic information, develops multilateral cooperation

and implements joint projects in collaboration with relevant scientific polar international organisations. In 2015, the EPB Secretariat moved from under the European Science Foundation umbrella, to become an independent legal entity in the Netherlands. The EPB Secretariat is hosted by the Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO) in the Hague.

One of the main activities the EPB members and Secretariat are involved in is the H2020 funded project EU-PolarNet. EU-PolarNet is the world's largest consortium of expertise and infrastructure for polar research. Seventeen countries are represented by 22 of Europe's internationally-respected multi-disciplinary research institutions, most of whom are EPB members. EU-PolarNet is tasked to develop and deliver a strategic framework and mechanisms to prioritise science, optimise the use of polar infrastructure, and broker new partnerships that will lead to the co-design of polar research projects that deliver tangible benefits for society. EU-PolarNet benefits from its close cooperation with the European Polar Board (EPB), as outcomes from EU-PolarNet will add long-term value to EPB activity in providing strategic science policy advice to the European Commission and other international bodies. A major benefit of the involvement and support of the EPB is that the legacy of EU-PolarNet will be reliably sustained by the Board into the future.

Both projects and partnerships support the EPB's goals to provide authoritative scientific advice to policy makers, and expand its advisory sphere of influence on bi-polar issues. In April 2014, EPB signed an MoU with SCAR and IASC for further co-operation in both the Arctic and Antarctic - the EPB looks forward to a successful implementation.

International Arctic Science Committee (IASC)

- contributed by Volker Rachold, IASC Executive Secretary <volker.rachold@iasc.info>



SCAR and IASC have a long history of strong collaboration. A Memorandum of Understanding between the two organizations was first signed in 2006. Since then SCAR and IASC have closely collaborated through a joint Bipolar Action Group (<http://iasc.info/action-groups/bipolar-action-group>) and later through joint meetings of the two Executive Committees. The MoU is up for renewal in 2016 and in light of the recently completed SCAR Horizon Scan and IASC's 3rd International Conference on Arctic Research Planning (ICARP III), a Think Tank meeting of the two Executives was held in Potsdam February 2016. The main outcome of the meeting was that SCAR and IASC will establish a small joint Polar Task Force to prepare a suggestion of a small number of overarching themes that would benefit from research concerning both polar areas.

A major upcoming event will be the second joint SCAR/IASC Science Conference POLAR 2018 to be held in Davos, Switzerland, June 2018. Under the overarching motto „Where the Poles come together“, the conference will include SCAR and IASC/ASSW Business and Satellite Meetings, an Open Science Conference, the SCAR Delegates Meeting and the fourth Arctic Observing Summit (AOS) (<http://www.polar2018.org/>).

International Association of Cryosphere Sciences (IACS)

- contributed by Charles Fierz <fierz@sif.ch>, IACS President



The **International Association of Cryospheric Sciences**, or **IACS**, is the eighth association of the International Union of Geodesy and Geophysics (IUGG). It was launched by the IUGG Council on 2007-07-04, developing from the International Commission of Snow and Ice of the International Association of Hydrological Sciences (IAHS) via the transitional Union Commission for the Cryospheric Sciences (UCCS). Formation of this new Association is recognition of the importance of the cryosphere in the study of Earth System Science, and particularly at a time of significant global change. Accordingly, cryospheric sciences is an umbrella term for the study of the cryosphere (not unlike atmospheric sciences, encompassing meteorology, climatology, and aeronomy); as an interdisciplinary Earth science, many disciplines contribute to it, most notably geology, hydrology, and meteorology and climatology; in this sense, it is comparable to glaciology. IACS has historic connections going back to the establishment of the Commission Internationale des Glaciers (International Glacier Commission) in 1894.

IACS has a 3-party MoU on collaboration with SCAR and IASC that was developed following the International Polar Year 2007-2008. SCAR, IASC, and IACS share a common interest in ice and snow on Earth (the cryosphere). Each are organizations affiliated with the International Council for Science (ICSU), which encourages the development of strong links between its subsidiary entities.

In the context of this MoU, which will be up for renewal in 2018, one can imagine a closer collaboration between the three bodies with respect to:

(a) the Snow in Antarctica (SnowAnt) Action Group: IACS sponsored the two first Snow Science Winter School and it is anticipated that IACS will continue to do so. A common support for this initiative would be well received by the promoters of the school and SnowAnt could lead to the organisation of such a school with more focus on polar snow (link through Martin Schneebeli). Second, out of the IACS Working Group MicroSnow, the idea of developing a Snow Community Model is emerging. SnowAnt could build the link to Antarctic snow if the initiative is started; and

(b) the Global Cryosphere Watch (GCW): IACS is actively involved in several Teams of this WMO initiative and provides also the IUGG liaison to GCW. In particular, the current priorities are (1) to operationalize CryoNet, the core GCW observation network, and (b) set up best practices and guidelines. IACS and SCAR should consider joining forces even more with respect to observations in Antarctica.

International Climate Cryosphere Initiative (ICCI)

- contributed by Pam Pearson, Executive Director <pam@iccinet.org>

INTERNATIONAL CRYOSPHERE
CLIMATE INITIATIVE

Cryosphere 2015, kindly supported by the Flora and Oak Foundations was a two-year science-policy effort aimed at bringing a better understanding of cryosphere science, and hence greater ambition, to the UNFCCC Paris Agreement. ICCI's many volunteer current and ex-diplomats worked closely with SCAR as well as the Arctic Council's AMAP and many individual IPCC scientists on Cryosphere 2015 activities, with seminars and presentations intensifying in 2015 and culminating in Paris itself in December. At the June 2015 Bonn negotiations, the concept of certain cryosphere dynamics as "irreversible" was introduced to negotiators and media for the first time; Bonn discussions also noted the need for an IPCC Special Report on these cryosphere risks, feeding into the IPCC's decision for an "Oceans and Cryosphere" effort in its next cycle.

Paris then saw the release of the "Thresholds Report (*Thresholds and Closing Windows: Risks of Irreversible Cryosphere Climate Change*), which analyzed the Paris commitments from a cryosphere perspective. Reviewed for accuracy by 30 researchers, 16 of them IPCC LA's/CLA's (and one former IPCC vice-chair), *Thresholds* was widely distributed in Paris, including at several side events. One of these, on December 1 was co-organized with SCAR; and moderated by new IPCC WG1 co-chair Valérie Masson-Delmotte, with a press briefing beforehand. Links to Thresholds and media reports arising from the SCAR-ICCI side event may be found at: <http://iccinet.org/thresholds> and <http://unfccc6.meta-fusion.com/cop21/events/2015-12-01-09-00-scar>.

Following on Paris, at the May ATCM meetings in Chile ICCI and researchers involved with Cryosphere 2015 also put forward a proposal for the ATCM to feed into the Oceans and Cryosphere, as well as the 1.5 degree IPCC Special Reports, potentially through an effort coordinated by the CEP and SCAR; to help ensure these efforts and others impacting future climate policies reflect the most up-to-date and accurate Antarctic science.

International Permafrost Association (IPA)

- contributed by Karina Schollaen, Executive Director <karina.schollaen@awi.de>



Recognizing that there is much to be gained from developing a synergy in permafrost research, in April 2014, IPA, IASC and SCAR renewed a tripartite agreement formalizing their relationship. SCAR, IASC and IPA agreed to combine their efforts in permafrost and/or polar activities (to be decided by mutual agreement) so as to raise the level of impact of all three organizations.

Activities

IPA Action Groups: Action Groups are meant to fund targeted groups working towards the production of well-defined products. (<http://ipa.arcticportal.org/activities/action-groups>)

- The InterFrost Evaluation Platform, Contact: Christophe Grenier
- Arctic Coastal Web Implementation: Circum-Arctic Coastal Erosion Database Publication in Anticipation of the Coastal Permafrost in Transition Side Meeting at the ICOP2016, Contact: Boris Radosavljevic
- A Frozen- Ground Cartoon: Explaining international permafrost research using comic strips, Contact: Frédéric Bouchard
- The Yedoma Region: A Synthesis of Circum-Arctic Distribution and Thickness, Contact: Jens Strauss
- Quality Control and Assurance of the active layer thickness and permafrost temperature variables within the GTN-P database, Contacts: Jean-Pierre Lanckman, Boris Biskaborn
- Permafrost and Culture (PaC): Integrating environmental, geo-, and social sciences to assess permafrost dynamics and indigenous land use, Contact: Mathias Ulrich, Otto Habeck
- Permafrost Research Priorities: A Roadmap for the Future, Contact: Hugues Lantuit

IPA Highlights

The international conference on permafrost is the premier event for permafrost research worldwide and took place in Potsdam, Germany on 20-24 June 2016 with 850 attendees. <http://icop2016.org/> At ICOP 2016, Professor Hanne H. Christiansen, Head of the Geology Department at UNIS, started her four year term as IPA President. This is the first time the IPA President comes from a Nordic country. It is the first time the IPA President is a woman. And it is the first time the IPA President lives on permafrost.

Major IPA Meetings

- **2nd Asian Conference on Permafrost 2017**, 2-7 July 2017, Sapporo, Japan, <http://acop2017.arc.hokudai.ac.jp/>
- **Regional Conference On Permafrost 2018 - 5th European Conference On Permafrost**, June 24- July 01 2018, Chamonix-Mont-Blanc, France

Polar Educators International (PEI)

- contributed by Gary Wesche, PEI President <polargary@gmail.com>



By fostering dialogue and collaboration between educators and researchers, Polar Educators International (PEI) aims to highlight and share the global relevance of the polar regions with the broader community. www.polareducators.org Working together, SCAR and PEI meet mutually complementary goals. In preparation for the SCAR Conference in Malaysia, one PEI member contacted each of the SCAR delegates suggesting they encourage their country's scientists to share their education and outreach (EO) strategies and programs with the international community. The result was a larger than usual submission of EO abstracts to the SCAR education sessions which will provide many ideas for replication in other countries. PEI members have provided Antarctic Treaty delegates with information about global polar science education initiatives and worked with SCAR scientists to make reports accessible to public audiences.

In celebration of the 25th anniversary of the Protocol on Environmental Protection to the Antarctic Treaty, PEI is creating a variety of lessons for use with students bringing attention to the Madrid Protocol. <http://polareducator.org/for-educators/resources/antarctic-treaty-madrid-protocol> PEI is a **vibrant network promoting polar education and research to a global community**, and is poised and ready to work with SCAR to bridge the gap between polar science research and classrooms around the world.

Scientific Committee on Ocean Research (SCOR)

- contributed by Ed Urban, SCOR Executive Director <ed.urban@scor-int.org>



The Scientific Committee on Oceanic Research (SCOR) was formed by ICSU in 1957. SCOR's activities are worldwide, from polar to tropics. Specific SCOR activities relevant to SCAR include the following:

- *Southern Ocean Observing System (SOOS)*—see separate report from SOOS
- *SCOR/SCOR Workshop on Ecosystem Essential Ocean Variables for the Southern Ocean*—SCOR and SCAR obtained funding from the International Council for Science (ICSU) to hold a workshop on Ecosystem Essential Ocean Variables for the Southern Ocean in March 2014. A peer-reviewed publication resulted from the workshop (see <http://dx.doi.org/10.1016/j.jmarsys.2016.05.003>).
- *Integrating Climate and Ecosystem Dynamics Project of Integrated Marine Biogeochemistry and Ecosystem Research Program*—see separate report from ICED
- *GEOTRACES*—GEOTRACES is a global project designed to measure trace elements and isotopes from the ocean surface to seafloor (see <http://www.geotraces.org/>). A set of GEOTRACES cruises were carried out in the Southern Ocean during IPY and the data are available at <http://www.geotraces.org/dp/idp2014>. Future GEOTRACES cruises will be conducted partially or wholly in the Southern Ocean.
- *Second International Indian Ocean Expedition (IIOE-2)*—The aim of this project is to stimulate new research in the Indian Ocean region, from the tropical north to Antarctica. It is co-sponsored by SCOR, the Intergovernmental Oceanographic Commission, and Indian Ocean Global Ocean Observing System (see <http://www.iioe-2.incois.gov.in/IIOE-2/index.jsp>).
- *SCOR Working Group 140 on Biogeochemical Exchange Processes at the Sea-Ice Interfaces (BEPsII)*—This group is completing its work under SCOR (see <https://sites.google.com/site/bepsiiwg140/home>), but will continue with other sponsors. The group has produced several peer-reviewed publications, including those in a still-open special section of *Elementa: Science of the Anthropocene* (see <https://home.elementascience.org/special-features/biogeochemical-exchange-processes-at-sea-ice-interfaces-bepsii/>).
- *Working Group proposal on Measuring Essential Climate Variables in Sea Ice (ECVice)*—SCOR will be considering this working group proposal relevant to SCAR interests at the annual SCOR meeting in Poland in Sept. SCAR is welcome to become a co-sponsor of this group, if funded, and/or to provide comments on the proposal.

Other partners

There are many other bodies that offer potential partnership opportunities. Partnerships support SCAR's goals to provide authoritative scientific advice to policy makers, expand its advisory sphere of influence on global issues, develop the capacity of students and early career scientists, and encourage cooperation with Arctic and non-Polar counterparts. SCAR could benefit from an updated view on its partnerships and areas where new collaborations could strengthen its status in the international landscape beyond the Polar community.

Recommendation: SCAR should review its external partnerships and relationships and identify areas where more activity or changes in current methods may be needed to improve SCAR's impact.

Formal Agreements

SCAR currently has 8 formal agreements (see table below). The agreement with IASC expires in 2016 and will be renewed at the Open Science Conference. SCAR has an agreement with the Scott Polar Research Institute (SPRI) on the hosting arrangements of the Secretariat. This agreement was set to expire in early August 2016, and has since been renewed by approval of the SPRI and the SCAR Executive Committee (more information on this can be found in WP 33, the Secretariat Report).

9 International cryosphere bodies signed an agreement in 2012 to enhance cooperation. This agreement has not been very effective to date. It may be strategic for SCAR to begin discussions as to whether a renewal is needed or if some activation energy is required to rejuvenate the coordination of activities and if it is worth pursuing.

In addition, discussions on a possible MoU or other agreement between SCAR and the Asian Forum on Polar Sciences (AFOPS) have begun.

Party or Parties	Signed	Expires
International Cryosphere Organizations	2012	-no date-
IACS and IASC	2013	2018
APECS and IASC	2013	2018
CliC and IASC	2013	2018
Scott Polar Research Institute (Secretariat hosting)	2016	2019
IPA and IASC	2014	2019
EPB and IASC	2014	2019
IASC (to be signed at the SCAR OSC in Malaysia)	2016	2021