



## Scientific Committee on Antarctic Research

# Membership Guide

As of 16 May 2017

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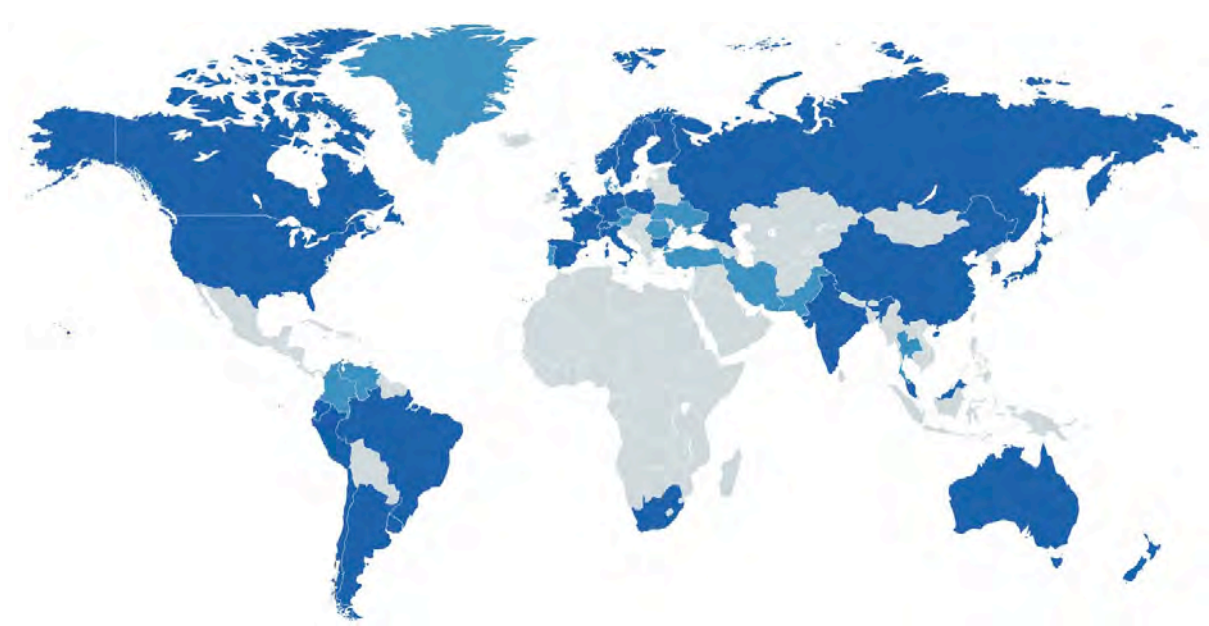


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## Introduction to SCAR

In 1958, the [International Council for Science \(ICSU\)](#) created the Scientific Committee on Antarctic Research (SCAR) as an interdisciplinary body to help coordinate international research in and about the Antarctic. ICSU is a non-governmental organisation with a global membership of national scientific bodies (122 Members, representing 142 countries) and International Scientific Unions (31 Members). SCAR currently includes 43 member countries and 9 ICSU unions and strives to include new members, as countries not yet engaged develop an increasing interest in Antarctic science.



Map of SCAR member countries in 2017 – **Full Members** are in dark blue, **Associate Members** in lighter blue.

Union members in 2017 are International Astronomical Union (IAU), International Geographical Union (IGU), International Union for Quaternary Research (INQUA), International Union of Biological Sciences (IUBS), International Union of Geodesy and Geophysics (IUGG), International Union of Geological Sciences (IUGS), International Union of Physiological Sciences (IUPS), International Union of Pure and Applied Chemistry (IUPAC and Union Radio Scientifique International (URSI)).

SCAR's mission is to advance Antarctic research, including observations from Antarctica, and to promote scientific knowledge, understanding and education on any aspect of the Antarctic region. To this end, SCAR is charged with the initiation and international co-ordination of Antarctic and Southern Ocean research beneficial to global society. In addition, SCAR provides independent and objective scientific advice and information to the Antarctic Treaty System and other bodies and acts as the main international exchange of Antarctic information within the scientific community.

SCAR's vision is to create a legacy of Antarctic research as a foundation for a better future. Through scientific research and international cooperation, SCAR aims to establish a thorough understanding of the nature of Antarctica, the role of the Antarctic in the global system, and the character and effects of environmental change and human activities on Antarctica. Members of SCAR benefit by being part of a global network of countries and ICSU unions which work together to advance Antarctic research, promote knowledge and

understanding of the Antarctic region, and provide independent and objective advice to policy-makers.

In 2014, SCAR sponsored the 1st Antarctic and Southern Ocean Science Horizon Scan. Through this activity, the Antarctic community was asked to submit research questions that should be considered over the next two decades. The world's leading Antarctic scientists, policy makers, leaders, and visionaries helped to distill the submissions into 80 of the most important questions that will or should be addressed by research in and from the southern Polar Regions. The results from this community based effort have been published in [Nature](#) and [Antarctic Science](#) and serve as a platform for future SCAR research planning and feed into science priorities for many national programmes.

The 2017-2022 Strategic Plan lays out high level objectives for the organization in the years ahead. It can be downloaded here: <http://www.scar.org/about/futureplans>. The Executive Summary is included as Appendix 2 in this document.

## The organisation of SCAR and how it works

The membership of SCAR comprises ICSU-affiliated national scientific academies or research councils (or the organisation designated by the national ICSU representative body) of countries that are active in Antarctic research, together with the relevant Scientific Unions of ICSU.

### SCAR Delegates

SCAR meets every two years, in the even years, to conduct its administrative business at the SCAR Delegates' Meeting. At these meetings, the members of SCAR, through their appointed Delegates, are responsible for formulating SCAR policy and strategy. They also elect an Executive Committee from among themselves to manage SCAR on behalf of its members. The [Executive Committee](#) comprises the President and four Vice-Presidents (each appointed for a term of four years), the immediate Past-President (appointed for a term of two years immediately following their presidency), and the SCAR Executive Director. The [SCAR Secretariat](#) is staffed by the Executive Director, Executive Officer and a part-time Administrative Assistant. The Secretariat is responsible for the day-to-day administration of SCAR and is responsible to the Executive Committee.

SCAR's policy and strategy is formulated by its members through their appointed delegates, and is decided by the voting members at the Delegates' Meeting. In addition to electing the Executive Committee, these powers include decisions on which research areas to cover, budget allocations, interactions with the Antarctic Treaty System and other bodies, and partnerships with other organizations.

### Research Groups

The work of SCAR in achieving its mission is carried out by its many and varied groups. SCAR is currently composed of three permanent, disciplinary Science Groups (Geosciences, Life Sciences and Physical Sciences), six flagship Scientific Research Programmes focusing on high priority topical areas, four Standing Committees to handle ongoing business of a permanent nature, and over 30 specialized subsidiary Expert and Action groups serving to address various scientific needs over a limited timeframe. All SCAR groups are allocated budgets for their activities and are governed by the [Rules of Procedure for Subsidiary Bodies](#). They are periodically reviewed to help focus SCAR outcomes on the most important priorities and products needed. The work of these groups

advances understanding of all aspects of the Antarctic region, may result in seminal publications and feeds into the advice given to the Treaty System and other policy makers.

Subsidiary Expert and Action groups are established by the main Science Groups, or in some cases by the Executive Committee, to address specific research topics of interest to the community. Researchers propose new groups when they identify areas where current research is lacking or more coordination is needed. Groups report to their parent Science Group and membership is open to any interested researchers from SCAR member countries. Action Groups address one specific issue and are short-term, usually with a lifetime of between two and four years. Expert Groups have a broader focus and a longer lifetime of around six to eight years, with the option of renewal. Current groups are listed in the Appendix with a brief description of their remit. More detailed information is available via <http://www.scar.org/science>.

In even years, prior to the Delegates Meeting, SCAR holds a major [Open Science Conference](#) to draw attention to Antarctic issues. Business meetings of the three Science Groups are also held, and subsidiary groups often take the opportunity to hold meetings or workshops. In the intervening (odd) years, [disciplinary symposia](#) are held – the International Symposium on Antarctic Earth Sciences (ISAES) and the Biology Symposium (in alternate years), and the History, Humanities and Social Sciences Conferences. More information about the various SCAR Meetings is available via <http://www.scar.org/scarmeetings>.

## Volunteers

SCAR could not function without its many experienced and enthusiastic volunteers. Apart from the Secretariat, all the work of SCAR is carried out by experts and specialists, from all areas of Antarctic research, who freely give of their time and expertise to achieve SCAR's mission and goals.

## Membership of SCAR

The rules governing SCAR membership are laid out in the [SCAR Articles of Association](#) and the [Rules of Procedure](#). The relevant clauses are summarised here.

### Full Members

A full member is a [national organization adhering to ICSU](#)<sup>1</sup>, or an organization nominated by the national organization adhering to ICSU (typically a polar research department or similar), representing the scientific community of that country. The country shall maintain an active and continuing independent programme of research in the Antarctic region and the national organization shall have formed a National Committee to communicate with SCAR. Associate members may apply for recognition as full members when they have established a continuing programme of scientific research in the Antarctic.

Full members appoint one permanent voting delegate and one non-voting alternate delegate to represent the National Committee. Delegates should preferably be scientists directly

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<sup>1</sup> A country that is part of the ICSU family is generally connected through its principal scientific academy, or its national research council, or any other institution or association of institutions. For more information on ICSU membership including the main contact organizations relevant for SCAR membership applications, please visit the membership section of the ICSU website: <http://www.icsu.org/about-icsu/our-members>

involved in Antarctic research. Members in arrears with their membership contributions are not entitled to vote at meetings.

## Associate Members

An associate member is a national organization adhering to ICSU, or an organization nominated by the national organization adhering to ICSU (typically a polar research department or similar), that desires to participate in SCAR for scientific reasons but does not qualify for full membership. Countries with no national organisation adhering to ICSU may become members, pending advice received from ICSU.

Associate members appoint one non-voting delegate representing the national organization adhering to ICSU or its nominee. The delegate should preferably be a scientist directly involved in Antarctic research. Delegates of associate members may attend all activities at the Meetings of Delegates except sessions for admitting new members. Associate members are not entitled to vote.

## Union Members

ICSU Unions wishing to participate in SCAR on a continuing basis may apply for union membership. Union members appoint one permanent voting delegate, who has the right to vote on all matters except finance.

# Benefits of Membership

As a member of SCAR, your scientists will be an integral part of:

- shaping future Antarctic research directions and priorities;
- promoting the importance of scientific research related to Antarctica and the Southern Ocean and the crucial role of this polar region in global environmental change;
- communicating Antarctic and Southern Ocean research to the wider scientific and policy communities;
- stimulating cross-disciplinary collaboration via the SCAR Scientific Research Programmes and specialized subsidiary groups;
- creating major syntheses of Antarctic data and scientific concepts that could not be achieved by one single nation;
- stimulating new ideas and ways of looking at scientific and societally-relevant issues, offering opportunities to learn from each other;
- engaging with SCAR's partner organisations with a polar focus or polar interests to build productive partnerships (visit <http://www.scar.org/partnerships> for details);
- encouraging international initiatives such as the Southern Ocean Observing System (SOOS) and Integrating Climate and Ecosystem Dynamics in the Southern Ocean (ICED);
- ensuring visibility and open access to data through the Antarctic Master Directory;
- sharing information through various communication channels, including access to online meeting facilities, mailing lists, newsletter, website, etc.;

- promoting the development and implementation of internationally recognized standards and quality control procedures for data collection and analysis;
- generating, improving and using community products such as the Antarctic Digital Database, Antarctic Map Catalogue and Composite Gazetteer of Antarctica;
- presenting their findings in international workshops, disciplinary symposia and the biennial Open Science Conference;
- working together to leverage new research funding;
- providing objective scientific advice to the Antarctic Treaty System, the United Nations Framework Convention on Climate Change (UNFCCC), the Intergovernmental Panel on Climate Change (IPCC) and other bodies;
- bringing emerging scientific issues of regional and global significance to the attention of policy bodies and national programmes;
- promoting your national activities to a variety of international entities.

Being a member of SCAR provides your scientists access to the following:

- seed funding to grow new science collaborations;
- travel funding to various SCAR meetings and activities;
- mentoring to help build an Antarctic research programme;
- international leadership roles;
- Visiting Professorship awards;
- Early-career Fellowships;
- international recognition through the SCAR Medals programme;
- career development;
- ... and many opportunities to develop new collaborations and partnerships.

## What SCAR expects of its Members

### National Contact Points and Group Representatives

On being granted membership of SCAR, the top priority for the member organization is to identify whom from their country will be their national contacts and communicate that information to the SCAR Secretariat (names and full contact details, including email and postal addresses, are essential). Full members must supply details of three contacts: the national committee contact, the permanent delegate and the alternate delegate. Associate members need to supply two contacts: the contact at the member organization and the delegate. These contacts are critical to the communication between SCAR and the researchers in member countries, so it is important that they understand their responsibility to respond to information requests and to relay information.

Full members shall nominate up to four national representatives to the three main science groups ([GeoSciences](#), [Life Sciences](#) and [Physical Sciences](#)) and to the Standing Committee on Antarctic Data Management (SCADM) and the Standing Committee on Antarctic Geographic Information (SCAGI). Associate Members are encouraged to do the same.

Members shall also encourage their researchers to join the Action and Expert Groups relevant to their work and participate in the Scientific Research Programmes. Current groups are listed in the Appendix with a brief description of their remit, and detailed information is available via <http://www.scar.org/science>.

## Membership Dues

SCAR's income comes mainly from the annual contributions paid by its members. There are three categories for full members and one category for associate members. Full members select their category according to their own assessment of the scale of their national scientific activity in the Antarctic. Associate members contribute at a level lower than full members.

### Membership Contribution Levels (as of 2018)

#### Full Members

- **Special Contributors - \$27,500**

At this level, countries demonstrate the importance of the Antarctic region to their national priorities, despite the size of their programme.

- **Well-Developed Programmes - \$21,200**

At this level, countries acknowledge that they have a multi-disciplinary and productive Antarctic research community. This can include having a base in Antarctica, logistical resources and an established community of scientists working together with the international community.

- **Initial-Stage Programmes - \$12,400**

At this level, countries are still growing their national programmes and developing resources needed for sustained activities. The goal of this category is to become a well-developed programme over time.

#### Associate Members - \$7,000

At this level, countries acknowledge their interest in establishing an Antarctic research programme. It is not expected that a large community of national Antarctic researchers exist for all areas of science. The goal for associate members is to move up to Initial-Stage Programmes in 5-6 years.

The contribution levels are decided by the voting members at the Delegates' Meeting, following the recommendation of the Executive Committee. A proposal to increase contribution levels is announced to National Committees at least six months ahead of the Delegates' Meeting where it will be considered. An increase approved at the Delegates' Meeting will be implemented in the January of the following year.

Each January, invoices for contributions are sent to designated national contacts and are due at the end of that calendar year, but ideally by October. New members will receive their first invoices in the January following the SCAR meeting when they are admitted as members. Reminders are sent in July and October to any members that have yet to pay for the year. Members are classed as "in arrears" if they fail to pay by the January one year following receipt of the invoice.



## National Reports

Full members are required to submit a National Annual Report to the Secretariat by the end of June each year, and associate members are also encouraged to do so. The reports should include contact points for the National Committee, Delegate and Alternate Delegate information, national representatives to the Science Groups and Standing Committees, as well as highlights of research activities from the previous year. A template for submitting national contacts can be found on the SCAR website (<http://www.scar.org/members-and-officers/nationalreports>). The major reason SCAR requests an update on national activities is to help build capacity in our new members and encourage international collaboration – two things central to our mission. Having information from members is essential for success. These highlights can be submitted via the national contacts template or by sending an electronic copy of a published report on activities (the report can be in the member's native language but they are encouraged to include a paragraph or two in English summarising the activities).

The SCAR Secretariat produces a monthly Newsletter featuring one or more member countries each month, as well as new research results, updates on SCAR activities, and helpful education resources. This is an opportunity for members to highlight their national programme. Members who would like to be featured are encouraged to send details to the Secretariat, giving a general history and an overview of national activities. Members are also encouraged to submit news items of interest to the wider Antarctic community.

## Applying for SCAR Membership

Applications for membership are submitted to the Secretariat and should be made after consultation with the Secretariat. Generally, new countries join as associate members and then, after a few years of building their programme, are expected to move to full membership, ideally progressing from developing programmes to developed programmes.

The written application need not exceed 1,000 words, but it must address specifically the points detailed and summarised below. Supporting documents may be sent with the application but should not include full literature papers. All applications should be submitted electronically to the Secretariat. Once received, applications are then sent to full members for consideration, and to associate members for information.

It is expected that a representative of the organization applying for full or associate membership will attend the relevant SCAR Delegates' Meeting to make a verbal presentation to the Delegates at the beginning of the first day of the meeting. All prospective applicants are reminded that the working language of SCAR is English and that translation and interpretation facilities are not provided.

### Principles of Protection of the Antarctic Environment recommended by SCAR

A country which has not acceded to the Protocol on Environmental Protection to the Antarctic Treaty must include in its application a statement agreeing to comply with the Principles of Protection of the Antarctic Environment recommended by SCAR:

*SCAR recommends and encourages that, in the absence of the new SCAR Member having acceded to the Protocol on Environmental Protection to the Antarctic Treaty, the Member adheres, to the best of its ability, to the requirements of the Environmental Protocol and its Annexes, and to the ATCM Resolutions and Measures that apply to environmental matters in the region.*

## Associate Membership

When applying for associate membership of SCAR, the national organization connected to ICSU must present a statement in writing of what it hopes to contribute to and/or gain from SCAR membership. If the national ICSU representative wishes to nominate another institute/entity to represent its interests in SCAR, a letter from the country's ICSU representative stating their preference for another national entity to represent their interest should be submitted with the application. Countries with no national organisation adhering to ICSU should contact the Secretariat as advice will need to be sought from ICSU.

## Full Membership

Associate members may apply to move to full membership when they have established an active programme of Antarctic research. When applying for full membership, the national organization adhering to ICSU, or the organization it has nominated, must present a short statement in writing of its achievements in and proposed continuing national programme of scientific research in the Antarctic. Its programme should not be restricted to a single field of scientific activity and it should support SCAR's mission and aims, including exchange and cooperation with other members. The application can include a list of publications in peer-reviewed journals and other recognised publications, but not the full journal papers. Applications for associate membership are usually expected to precede applications for full membership.

Applications for Associate membership or to move to Full Membership must be received at least six months before the SCAR Delegates' Meeting at which they will be considered. A decision regarding any application for membership is made by the voting delegates at the SCAR meeting.

## Summary of requirements for Membership Applications

- Applications must be submitted through the national organization adhering to ICSU or its nominee.
- Applications must be written and submitted electronically to the Secretariat at least six months before the SCAR meeting at which they are to be considered.
- Applications must include a statement:
  - for an associate member, of what it hopes to contribute and/or gain from SCAR, or
  - for a full member, of its achievements in and proposed continuing national programme of scientific research in the Antarctic.
- Countries which have not acceded to the Protocol on Environmental Protection to the Antarctic Treaty must also include a statement agreeing to comply with the Principles of Protection of the Environment recommended by SCAR.
- It is expected that a representative of the organization applying for membership will attend the relevant SCAR meeting to make a verbal presentation to the Delegates.

## Union Membership

When applying for union membership, the union must present a statement regarding the interest of the union in SCAR's activities and indicate potential ideas for collaboration.

## Termination of Membership

A member can resign by giving at least three months' notice in writing, provided that all contributions due by the member have been paid.

Any associate member that is in arrears in its contribution by two years or more may be deemed by the voting delegates at a SCAR meeting to cease to be a member.

Any full member that has not been active in the Antarctic for four years, or has not been active in SCAR for four years, or is in arrears in its contributions by two years, will be given written notice to choose whether it wishes to adhere as an associate member or to withdraw from SCAR. The member has the right to respond within three months of the date of notice and its delegate is entitled to speak at the Delegates' Meeting where the status of its membership will be discussed.

## Appendix 1 – SCAR Groups and Scientific Research Programmes

Full details of the rules governing SCAR groups are available in the [Rules of Procedure for Subsidiary Bodies](#).

### Disciplinary Science Groups (SGs)

These are permanent bodies representing the main Antarctic scientific disciplines which assist in the implementation of SCAR's mission and objectives:

- Geosciences (<http://www.scar.org/ssg/geosciences>)
- Life Sciences (<http://www.scar.org/ssg/life-sciences>)
- Physical Sciences (<http://www.scar.org/ssg/physical-sciences>)

Members nominate up to four representatives to each group. At the biennial business meetings (held in conjunction with the Open Science Conference and SCAR Delegates Meeting), the national representatives elect a Chief Officer, Deputy Chief Officer and Secretary from among them who must be from three different members. Officers are elected for a four-year term, renewable for up to four more years. Each union member may also send one representative to the relevant Science Group meeting.

Science Groups take a strategic view of research requirements, share information on disciplinary research being conducted by national programmes and coordinate proposals for future research. They identify research areas or fields that might best be investigated by a SCAR Scientific Research Programme and establish Action and Expert Groups to address specific topics.

### Scientific Research Programmes (SRPs)

Scientific Research Programmes are established by the three permanent Science Groups to focus efforts on high priority topical areas. They are large, overarching programmes in scope, are often multi-disciplinary and have a lifetime of around eight years. There are currently six SRPs:

- **Astronomy and Astrophysics from Antarctica (AAA)**  
<http://www.scar.org/srp/aaa>  
Aims to coordinate astronomical activities in Antarctica in a way that ensures the best possible outcomes from international investment in Antarctic astronomy, and maximizes the opportunities for productive interaction with other disciplines.
- **State of the Antarctic Ecosystem (AntEco)**  
<http://www.scar.org/srp/anteco>  
Aims to increase the scientific knowledge of biodiversity, from genes to ecosystems that, coupled with increased knowledge of species biology, can be used for the conservation and management of Antarctic ecosystems.
- **Antarctic Thresholds - Ecosystem Resilience and Adaptation (AnT-ERA)**  
<http://www.scar.org/srp/ant-era>  
Aims to provide a platform for the exchange of knowledge and for the support of research on biological processes at ecological time scales especially related to environmental change.
- **Antarctic Climate Change in the 21st Century (AntClim21)**  
<http://www.scar.org/srp/antclim21>  
Aims to deliver improved regional projections of key elements of the Antarctic

atmosphere, ocean and cryosphere for the next 20 to 200 years and to understand the responses of the physical and biological systems (through multi-disciplinary collaboration) to natural and anthropogenic climate drivers.

- **Past Antarctic Ice Sheet Dynamics (PAIS)**

<http://www.scar.org/srp/pais>

Aims to improve understanding of the sensitivity of East, West, and Antarctic Peninsula Ice Sheets to a broad range of climatic and oceanic conditions and to improve confidence in predictions of ice sheet and sea level response to future climate change and ocean warming.

- **Solid Earth Responses and influences on Cryospheric Evolution (SERCE)**

<http://www.scar.org/srp/serce>

Aims to advance understanding of the interactions between the solid earth and the cryosphere to better constrain ice mass balance, ice dynamics and sea level change in a warming world.

## Action Groups (AGs) and Expert Groups (EGs)

Action and Expert Groups are established by the permanent Science Groups, either individually or jointly, to address specific topics of interest to SCAR. The proposal for new groups come from the science community at large and are typically grassroots efforts. Membership is open to any interested researcher from a SCAR member country or Union. New Action and Expert Groups may also be established by the Delegates Meeting for non-scientific purposes or for research areas outside the three permanent Science Groups.

- **Antarctic Climate Change and the Environment – ACCE** (Physical Sciences EG)

<http://www.scar.org/ssg/physical-sciences/acce>

Aims to review research into our current understanding of past and possible future climate-related changes in the physical environment of the Antarctic and Southern Ocean, and the impact on the terrestrial and marine biota. The group is responsible for preparing an annual update on Antarctic climate and impacts for the Antarctic Treaty Consultative Meeting.

- **Antarctic Clouds and Aerosols – ACA** (Physical Sciences AG)

<http://www.scar.org/ssg/physical-sciences/aca>

Aims to organise an international large scale campaign to investigate clouds and aerosols in Antarctica through a series of special observing periods when intensive ground-based measurements would be made at the same time as in-situ measurements using instrumented aircraft.

- **Antarctic Digital Magnetic Anomaly Map Project – ADMAP** (Geosciences EG)

<http://www.scar.org/ssg/geosciences/admap>

Aims to compile and integrate all existing Antarctic near-surface and satellite magnetic anomaly data into a digital database.

- **Antarctic Near-shore and Terrestrial Observing System – ANTOS** (joint Life Sciences, Physical Sciences and Geosciences EG)

<http://www.scar.org/ssg/life-sciences/antos>

Aims to establish a biologically focussed, integrated and coordinated Antarctic-wide observation system, to identify and track environmental variability and change at biologically relevant scales, and to use this information to inform biological, physical, and earth science studies.

- **Antarctic Permafrost, Soils and Periglacial Environments – ANTPAS** (Geosciences EG)

<http://www.scar.org/ssg/geosciences/antpas>

Aims to develop an internationally coordinated, web-accessible database and monitoring system on Antarctic permafrost and soils.

- **Antarctic Sea-ice Processes and Climate – ASPeCt** (Physical Sciences EG)  
<http://www.scar.org/ssg/physical-sciences/aspect>  
Aims at improving our understanding of the Antarctic sea ice zone through focussed and ongoing field programmes, remote sensing and numerical modelling.
- **Antarctic Volcanism – AntVolc** (Geosciences EG)  
<http://www.scar.org/ssg/geosciences/antvolc>  
Aims to promote the study of Antarctic volcanism, facilitate regional correlations and work towards establishing Antarctica as a high profile site for studying volcanic processes, especially but not solely petrology and glaciovolcanism.
- **Biogeochemical Exchange Processes at the Sea-Ice Interfaces – BEPSII** (Life Sciences AG)  
<http://www.scar.org/ssg/life-sciences/bepsii>  
Aims to support and further develop an international community on sea-ice biogeochemistry, to stimulate the interaction between experimentalists and modellers working on this topic, and to help the community articulate research priorities and identify optimized and cost-effective approaches and research platforms in internationally resource-limited times.
- **Connecting Geophysics with Geology – CGG** (Geosciences AG)  
<http://www.scar.org/ssg/geosciences/cgg>  
Aims to identify highest-priority areas where lineaments and/or apparent tectonic block boundaries intersect with outcrops, provide improved geological maps, improve connections to adjacent continents within Gondwana/Rodinia and project the knowledge of these into Antarctica, and identify worthy drill sites for basement recovery and connect to other Antarctic drilling communities.
- **Expert Group on Antarctic Biodiversity Informatics – EG-ABI** (Life Sciences EG)  
<http://www.scar.org/ssg/life-sciences/eg-abi>  
Aims to foster the application and development of biodiversity informatics (computationally-driven biodiversity science and information processing) in the SCAR community. It does this by coordinating and participating in a range of projects across the SCAR biodiversity science portfolio.
- **Expert Group on Birds and Marine Mammals – EGBAMM** (Life Sciences EG)  
<http://www.scar.org/ssg/life-sciences/bamm>  
Tasked with providing expert knowledge and research leadership in all matters related to birds and mammals in the Antarctic, in order to support research that will quantify the role of birds and marine mammals in the Antarctic marine and terrestrial ecosystems.
- **Forum for Research into Ice Shelf Processes – FRISP** (Physical Sciences EG)  
<http://www.scar.org/ssg/physical-sciences/frisp>  
Aims to coordinate the community engaged in research on the glaciological, oceanic and atmospheric processes governing the behaviour of ice shelves that are key to the ice sheet contribution to sea level change.
- **Geodetic Infrastructure of Antarctica – GIANT** (Geosciences EG)  
<http://www.scar.org/ssg/geosciences/giant>  
Aims to oversee the development of geodetic infrastructure across the Antarctic Continent to facilitate the monitoring of its physical processes and help coordinate various infrastructure associated with earth monitoring techniques such as the Global Navigation Satellite System (GNSS), gravity meters as well as the installation of tide gauges to monitor sea level change.

- **Geological Heritage and Geoconservation – GeoHeritage** (Geosciences AG)  
<http://www.scar.org/ssg/geosciences/geoconservation>  
 Aims to develop a policy paper for the ATCM detailing research, protection and ongoing management on and in areas of geological, geomorphological and paleontological significance within the Antarctic.
- **Geological Mapping Update of Antarctica – GeoMap** (Geosciences AG)  
<http://www.scar.org/ssg/geosciences/geomap>  
 Aims to facilitate an international effort to gather both rock and surficial deposit information and compile it into a GIS framework that will underpin studies of glacial dynamics and climate change.
- **GNSS (Global Navigation Satellite System) Research and Application for Polar Environment – GRAPE** (joint Geosciences and Physical Sciences EG)  
<http://www.scar.org/ssg/physical-sciences/grape>  
 Aims to build and coordinate a robust network of international collaborations to address a variety of weather and space weather related needs at high latitudes and the polar regions (Arctic and Antarctica), through ad hoc data sharing and models development.
- **History Expert Group** (Humanities EG)  
<http://www.scar.org/othergroups/humanities/historygroup>  
 Aims to obtain insight into the development of how Antarctic research was institutionalized, to study to what degree research in Antarctica has been driven by scientific criteria and to what extent compromises were made in the light of political barriers and logistical limitations.
- **Humanities and Social Sciences Expert Group – HASSEG** (Humanities EG)  
<http://www.scar.org/othergroups/humanities/hasseg>  
 Aims to bring together researchers in the humanities and social sciences with an interest in the Antarctic region, facilitate the exchange of news, publications and research ideas, organize regular conferences and workshops, and organize research projects around different topics.
- **Ice Sheet Mass Balance and Sea Level – ISMASS** (Physical Sciences EG, joint group with IASC and CliC)  
<http://www.scar.org/ssg/physical-sciences/ismass>  
 Aims to promote research on the estimation of the mass balance of ice sheets and its contribution to sea level, facilitate coordination among the different international efforts focused in this field, propose directions for future research, integrate the observations and modelling efforts, as well as the distribution and archiving of the corresponding data, and contribute to the diffusion, to society and policy makers, of the current scientific knowledge and the main achievements in this field of science.
- **Integrated Science for the Sub-Antarctic – ISSA** (Life Sciences AG)  
<http://www.scar.org/ssg/life-sciences/issa>  
 Aims to provide a comprehensive overview of past and current sub-Antarctic science, to identify pressing science questions for current and future work based on national priorities, strengths, and the 1st SCAR Horizon Scan questions, identify key lessons for science, conservation, and policy across the region, and develop a network of scientists across the region, including support for early-career researchers.
- **International Bathymetric Chart of the Southern Ocean – IBCSO** (Geosciences EG)  
<http://www.scar.org/ssg/geosciences/ibcso>  
 Aims to design and implement an enhanced digital database that contains bathymetric data available south of 60S latitude, leading to the design of a consistent bathymetric chart of the Southern Ocean.

- **International Partnership in Ice Core Sciences – IPICS** (Physical Sciences EG, supported by SCAR, PAGES and IACS)  
<http://www.scar.org/ssg/physical-sciences/ipics>  
 Aims to coordinate international collaboration between ice core scientists, engineers, and drillers to aid in providing information about past climate and environmental conditions on timescales from decades to hundreds of millennia.
- **Joint Expert Group on Human Biology and Medicine – JEGHBM** (Life Sciences EG, joint group with COMNAP)  
<http://www.scar.org/ssg/life-sciences/jeghbm>  
 Aims to coordinate knowledge and international experience of physicians, psychologists, human physiologists and biologists who are actively engaged in medical support of Antarctic activity, as well as biomedical research in the Antarctic. This effort includes active linkages and integration to work in human biology and medicine in the Arctic, Space missions, and other extreme, remote and austere environments.
- **Operational Meteorology in the Antarctic – OpMet** (Physical Sciences EG)  
<http://www.scar.org/ssg/physical-sciences/opmet>  
 Aims to establish and nurture links between groups working in the area of operational meteorology in Antarctica, such as the Antarctic Meteorological Observation, Modelling, and Forecasting Workshop Group, and the WMO EC-PHORS (Panel of Experts on Polar and High Mountain Observations, Research and Services), helping to facilitate monitoring of the meteorological observations that come from Antarctica.
- **Remote Sensing** (joint Life Sciences and Physical Sciences AG)  
<http://www.scar.org/ssg/physical-sciences/remotesensing>  
 Aims to develop a satellite-based, Antarctic-wide, remote sensing approach to monitor bird and animal populations.
- **Snow in Antarctica – SnowAnt** (Physical Sciences AG)  
<http://www.scar.org/ssg/physical-sciences/snowant>  
 Aims to improve the knowledge on depositional and metamorphic processes in Antarctic snow and its feedbacks to the climate system, develop a snow classification for Antarctica, protect pristine snow areas, and implement a database to document disturbed areas, historic snow profiles, accumulation data from AWS, stake farms, surface radar profiles, shallow firn – snow cores.
- **Southern Ocean Acidification** (joint Life Sciences and Physical Sciences AG)  
<http://www.scar.org/ssg/physical-sciences/acidification>  
 Aims to produce an assessment of the ocean acidification in the Southern Ocean including the fields of marine carbonate chemistry, global and regional modelling, marine ecology, ecotoxicology/physiology and paleoceanography.
- **Southern Ocean Continuous Plankton Recorder Database – SO-CPR** (Life Sciences EG)  
<http://www.scar.org/ssg/life-sciences/cpr>  
 Established to assist the development and expansion of the CPR research in the Southern Ocean and Antarctic waters, the group now focuses on the Quality Assurance and Quality Control (QA/QC) of the data and maintaining the highest methodological standards in CPR sampling and taxonomic methodology across the SO-CPR Survey laboratories.
- **Southern Ocean Region Panel – SORP** (CLIVAR/CliC/SCAR – Physical Sciences EG)  
<http://www.scar.org/ssg/physical-sciences/sorp>  
 Aims to coordinate the discussion and communication of scientific advances in the understanding of climate variability and change in the Southern Ocean, and advise CLIVAR, CliC, and SCAR on progress, achievements, new opportunities and impediments in Southern Ocean research.



- **Sun Earth Relationships and Antarctica – SERAnt** (Physical Sciences AG)  
<http://www.scar.org/ssg/physical-sciences/serant>  
Aims at quantifying the effects of the solar activity on the near-Earth environment (Geospace) and the planet's geomagnetic, plasma, and atmospheric domains.
- **Tropical Antarctic Teleconnections – TATE** (Physical Sciences AG)  
<http://www.scar.org/ssg/physical-sciences/tate>  
Aims to examine climate processes linking the Tropics to Antarctica.

## Standing Committees

Standing Committees handle ongoing business of a permanent nature to help SCAR fulfil its mission. Membership of the committees and the governances of them are included in the SCAR Rules of Procedure.

- **Standing Committee on Antarctic Data Management (SCADM)**  
<http://www.scar.org/scadm>  
SCADM is responsible for fostering the development and maintenance of a network of National Antarctic Data Centres; facilitates co-operation between scientists and nations with regard to scientific data; and advises on the development of the Antarctic Master Directory (AMD), the largest directory of Antarctic research data in the world. All SCAR members are encouraged to have national representatives on this committee.
- **Standing Committee on Antarctic Geographic Information (SCAGI)**  
<http://www.scar.org/scagi>  
SCAGI's main function is to manage and improve the geographic framework for Antarctic scientific research and for other activities including operations, environmental management and tourism. SCAGI actively develops and updates a range of geographic information products by bringing together national information into international syntheses for Antarctica.
- **Standing Committee on the Antarctic Treaty System (SCATS)**  
<http://www.scar.org/antarctic-treaty-system/scats>  
SCATS is tasked with coordinating and developing SCARs scientific advice to the Antarctic Treaty System. Most advice is provided to the Antarctic Treaty Consultative Meeting (ATCM) and its Committee on Environmental Protection (CEP) and to the Scientific Committee of the Conservation of Antarctic Marine Living Resources (SC-CAMLR). Submissions from SCATS to these bodies include emerging policy relevant issues, reviews of the state of knowledge and scientific and/or technical advice.
- **Standing Committee on Finance**  
<http://www.scar.org/finance>  
The SCAR Delegates appoint the three-member Standing Committee on Finance that is responsible for advising the Executive on financial matters. At each SCAR Meeting, the Standing Finance Committee is augmented by two further members who constitute the Finance Committee for that particular meeting. The principal task of this Finance Committee is to consider all applications for SCAR funds and to recommend to the SCAR Delegates' Meeting a budget for each of the two following years.

## Advisory Groups

- **Capacity Building, Education and Training (CBET)**  
<http://www.scar.org/outreach/cbet>  
SCAR's CBET Committee is currently charged with helping national members grow their research programmes, providing opportunities for international exchanges and career development, and assisting with sharing Antarctic education resources and tools.

- **Development Council**

<http://www.scar.org/donate/development-council>

The Development Council was formed to identify sources of external funds and develop a strategy to diversify SCAR's financial resources beyond membership fees.

## Co-Sponsored Activities

- **The Southern Ocean Observing System – SOOS**

<http://soos.aq/>

SOOS is an international initiative of SCAR and the Scientific Committee on Oceanic Research (SCOR). Its mission is to facilitate the collection and delivery of essential observations on dynamics and change of Southern Ocean systems to all international stakeholders (researchers, governments, industries, etc.), through design, advocacy and implementation of cost-effective observing and data delivery systems.

- **Integrating Climate and Ecosystem Dynamics – ICED**

<http://www.scar.org/othergroups/iced>

ICED is an international programme tasked with undertaking an integrated circumpolar approach to improve our understanding of change, the implications for ecosystems, and for ecosystem management in the Southern Ocean. A diverse range of multidisciplinary research is underway through core activities such as historical data rescue and synthesis, fieldwork, and modelling. ICED has been developed in conjunction with SCAR, the Scientific Committee on Oceanic Research (SCOR) and the International Geosphere-Biosphere Programme (IGBP), and forms a regional programme of Future Earth's Integrated Marine Biogeochemistry and Ecosystem Research (IMBER).

## Appendix 2

### – SCAR Strategic Plan 2017-2022 Executive Summary

SCAR's vision is to create a legacy of Antarctic research as a foundation for a better future. In line with this vision, through scientific research and international cooperation SCAR will establish a thorough understanding of the nature of Antarctica, the role of Antarctica in the global system, and the character and effects of environmental change and human activities on Antarctica. SCAR's work in the next five years will focus on five key objectives:

- a) To amplify its leadership in Antarctic research by further strengthening and expanding high-quality collaborative and visionary Antarctic research, including observations from Antarctica;
- b) To offer independent scientific advice to Antarctic Treaty Consultative Meetings and other bodies dealing with Antarctic and Southern Ocean matters;
- c) To enhance and grow research capacity in SCAR member countries;
- d) To enhance public awareness and understanding of Antarctic issues through communication of Antarctic research results in a timely and accessible manner; and
- e) To facilitate unrestricted and free access to Antarctic research data.

The full 2017-2022 Strategic Plan can be downloaded here:

<http://www.scar.org/about/futureplans>

