

FIVE DECADES OF COOPERATION AND COMMITMENT TO SCIENCE AND ENVIRONMENTAL PROTECTION



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Summary of the Annual Report for 2010 of The Scientific Committee on Antarctic Research (SCAR)

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1. Background

The Scientific Committee on Antarctic Science (SCAR) is a non-governmental, Interdisciplinary Scientific Body of the International Council of Science (ICSU), and Observer to the Antarctic Treaty and the United Nations Framework Convention on Climate Change.

SCAR's mission is to be the leading, independent, non-governmental facilitator, coordinator, and advocate of excellence in Antarctic and Southern Ocean science and research. Secondly, SCAR's mission is to provide independent, sound, scientifically-based advice to the Antarctic Treaty System and other policy makers including the use of science to identify emerging trends and bring these issues to the attention of policy makers.

2. Introduction

SCAR's scientific research adds value to national efforts by enabling national researchers to collaborate on large-scale scientific programmes to accomplish objectives not easily obtainable by any single country. SCAR's members currently include scientific academies of 36 nations and 9 ICSU scientific unions.

SCAR provides independent scientific advice in support of the wise management of the Antarctic environment, in partnership with the Antarctic Treaty Parties and other bodies such as the CEP, CCAMLR, COMNAP, and ACAP.

SCAR's success depends on the quality and timeliness of its scientific outputs, which in most cases are assessed through external peer-review. Descriptions of SCAR's research programmes and scientific outputs are available at www.scar.org and are summarised in this paper.

SCAR produces an electronic quarterly Newsletter highlighting relevant science and other SCAR related issues (http://www.scar.org/news/newsletters/issues2011/SCARnewsletter26_Mar2011.pdf). Please email info@scar.org if you would like to be added to the mailing list.

3. SCAR Past and Future Highlights

(i) SCAR Highlights for 2010:

1. SCAR published its new Strategic Plan 2011-2016 (<http://www.scar.org/strategicplan2011/>) "Antarctic Science and Policy Advice in a Changing World". SCAR's new Strategic Plan 2011-2016 aims to foster a sense of dedication and commitment in SCAR members and the community it serves to ensure realisation of the organisation's vision, mission and goals. The Strategic Plan guides collective decision-making about priorities and resource allocation.
2. In August 2010 SCAR held its Business meetings, Open Science Conference and Delegates' Meeting in Buenos Aires, Argentina. The Open Science Conference attendance was over 800 and it was particularly gratifying to see a large number of students and early career researchers attending.
3. Several new SCAR research groups were officially approved at the Delegates' Meeting in Buenos Aires, including the Scientific Research Programme Astronomy and Astrophysics from Antarctica (AAA), Action Groups on Southern Ocean Acidification, Multibeam Data Acquisition, and Antarctic Clouds and Aerosols. New Expert groups on Advancing TecHnological and ENvironmental stewardship for subglacial exploration in Antarctica (ATHENA) and Operational Meteorology in the Antarctic (OPMet) were also established. For further details see the full SCAR report or www.scar.org.
4. Planning for next generation of SCAR Scientific Research Programmes moved ahead in earnest with four new planning groups approved (State of the Antarctic Ecosystem (AntEco), Antarctic

- Ecosystems: Adaptations, Thresholds and Resilience (AntETR), Past and Future Change of the Antarctic Environment (PACE) and Solid Earth Responses and Influences on Cryospheric Evolution (SERCE) – For further details see the full SCAR report or www.scar.org.
5. Monaco became the latest country to join the SCAR family, having successfully applied to become an Associate Member of SCAR in 2010.
 6. Professor Helen Fricker was awarded the 2010 Martha T Muse Prize for Science and Policy in Antarctica. Professor Fricker is widely recognized for her discovery of active subglacial lakes. She has shown that these lakes form dynamic hydrologic systems where one lake can drain into another in a short period of time. She is also known for her innovative research into Antarctic ice shelf mass budget processes such as iceberg calving and basal melting and freezing.
 7. A Southern Ocean Observing System (SOOS) International Project Office was established in Australia, supported by the new Institute for Marine and Antarctic Studies at the University of Tasmania in Hobart (www.imas.utas.edu.au). This is a crucial step in implementing the SOOS.
 8. SCAR, with the Association of Polar Early Career Scientists (APECS), and the International Arctic Science Committee (IASC) were awarded funding from the International Council for Science (ICSU) for a project "Education and Outreach Lessons from the International Polar Year".
 9. The Ice Sheet Mass Balance and Sea Level: A Science Plan (ISMSS, http://www.scar.org/publications/reports/Report_38.pdf) was finalised. ISMSS is also now co-sponsored by the International Arctic Science Committee (IASC).
 10. The Census of Antarctic Marine Life (CAML, www.caml.aq), which has identified more than 1000 new species, officially ended in 2010. The final legacy of CAML is still being explored, with a follow-up workshop in 2011 in Aberdeen, Scotland.
 11. SCAR appointed a new SCAR Executive Officer, Dr Renuka Badhe. Renuka is from India, and holds dual Indian (OCI) and British citizenship. She is a marine biologist (PhD from the British Antarctic Survey) but with some policy background (Mphil from Cambridge University in Environmental Policy) and work experience with IUCN.
 12. Several important publications of note were completed in 2010, including the International Polar Year Summary Report (<http://www.arcticportal.org/ipy-joint-committee>); a new book on the 'History of the International Polar Years' (<http://www.springer.com/earth+sciences+and+geography/oceanography/book/978-3-642-12401-3>) and a book on Science Diplomacy: Antarctica, Science and the Governance of International Spaces (<http://www.scholarlypress.si.edu/index.cfm>) that was written as an outcome of the Antarctic Treaty Summit (www.atsummit50.aq). Printed copies of the Antarctic Climate Change and the Environment report are available on-line. For further details please email info@scar.org.

SCAR: Future Highlights

SCAR is involved in several major meetings over the next year (<http://www.scar.org/events/>), including:

- A Workshop on Antarctic Conservation for the 21st Century (31st May to 2nd June 2011), Nelspruit, South Africa – S. Chown will present a “non-paper” to the CEP, updating Parties on the preliminary outcomes of this workshop.
- ISAES XI - 11th International Symposium on Antarctic Earth Sciences 10 - 15 July 2011, Edinburgh, Scotland, UK (<http://www.isaes2011.org.uk/>)
- SCAR Executive Committee Meeting, 18 - 19 July 2011, Edinburgh, UK
- Symposium on Research Urgencies in the Polar Regions, 23 - 24 September 2011, Siena, Italy (http://www.mna.it/english/News/ICSU_symposium/)

The next SCAR science conference entitled “Antarctic Science and Policy Advice in a Changing World” will be in Portland, USA (July 16-19, 2012). This will follow the International Polar Year (IPY) Conference - "From Knowledge to Action" in Montreal, Canada (http://www.mna.it/english/News/ICSU_symposium/) (http://www.ipy2012montreal.ca/001_welcome_e.shtml).

Several other workshops are in the planning stages, for example on Ice Sheet Mass Balance and the relation to sea level and on Observing Systems in the Antarctic and Southern Ocean region.

For further details on SCAR activities see the full report, www.scar.org or email info@scar.org.