



INTERNATIONAL ARCTIC
SCIENCE COMMITTEE



SUMMER 2012

IASCPROGRESS

Latest Workshops supported by IASC

To initiate, encourage and support science-led international programs, IASC and its five Working Groups - Terrestrial, Marine, Cryosphere,

Atmosphere and Social & Human - offer opportunities for planning and coordination, including workshop support. The below workshops,

supported either by the IASC Working Groups or by IASC directly, were arranged during the last three months.

Vulnerability of Permafrost Carbon Workshop

The lead/co-lead meeting of the Vulnerability of Permafrost Carbon Research Coordination Network (<http://www.biology.ufl.edu/permafrost-carbon/>) took place in St. Pete Beach, Florida on May 17-18, 2012. The purpose of the meeting of the leadership was to review initial drafts of synthesis products and to identify remaining gaps for future cross-group synthesis opportunities. Short presentations by working group leads/co-leads on current progress were followed by feedback and discussion with the whole group.



Vulnerability of Permafrost Carbon Workshop, Florida (USA)

Remaining gaps were identified and a plan was developed to communicate these to the broader science community, both within and outside of the network, in order to inform members and to get new scientists involved in synthesis activities. Following this workshop, which was jointly supported by the IASC Cryosphere and Terrestrial Working Groups, leads/co-leads will update working group scoping documents and initiate new synthesis activities/opportunities by engaging additional RCN members. These new opportunities will be key aspects at our next annual RCN meeting at AGU in December 2, 2012.

Ice at the Interface: Atmosphere-Ice-Ocean Boundary Layer Processes and Their Role in Polar Change

"Arctic amplification" is the term given to the phenomenon seen in global climate models (GCMs) in which climate change in the high northern latitudes is enhanced relative to other areas of the world. Observational evidence supporting the model results is now becoming apparent. While the ice-ocean albedo feedback is a clear contributor to this phenomenon, other processes at the atmosphere-ice-ocean interface may play important roles also. The atmosphere-ocean boundary layer in which sea ice resides includes many complex processes that require a more realistic treatment in GCMs, particularly as models move toward full "earth system" descriptions. The primary purpose of the Workshop, which was held June 25-27 in Boulder, CO, was to define and discuss such coupled processes from both the observational and modelling points of view. The workshop was supported by the IASC Cryosphere Working Group and as one of IASC's cross-cutting initiatives.

Ice Sheet Mass Balance and Sea Level (ISMASS) Kick-off Workshop

The Ice Sheet Mass Balance and Sea Level (ISMASS) 2012 workshop was held in Portland OR on 14 July in conjunction with the SCAR Open Science Conference. This kick-off workshop was an activity of the renewed SCAR/IASC ISMASS expert group, which focuses on the mass balance of ice-sheets and their contribution to sea level changes. The workshop was co-sponsored by IASC, SCAR and various partner organizations, including a grant from the International Council for Science (ICSU). The workshop was attended by 60 people and included 7 invited presentations and 3 round tables on the main topics of the workshop. The focus was on understanding the discrepancies between different mass balance estimates and on analyzing the improvements needed in current ice-sheet models to better predict the ice-sheet response to climate changes. An ISMASS organizational section was also held.

For more information, visit the workshop website: <http://www.climate-cryosphere.org/en/events/2012/ISMASS/Home.html>

Multi-disciplinary drifting Observatory for the Study of the Arctic Climate (MOSAIC): Planning Activities and Workshops for organizing and defining the scientific need and producing science and implementation plans

This workshop, held on June 27-30 in Boulder, CO, followed meetings in Potsdam and Denver during the fall of 2011, and represented a key step for producing project documentation (a science and implementation plan) necessary to formally propose such an observatory to science directorates and funding agencies in the

participating countries. A second workshop is preliminarily planned for autumn 2012 to produce the final Science Plan and a draft of the Implementation Plan. The activity is supported by IASC's Atmosphere and Cryosphere Working Groups.

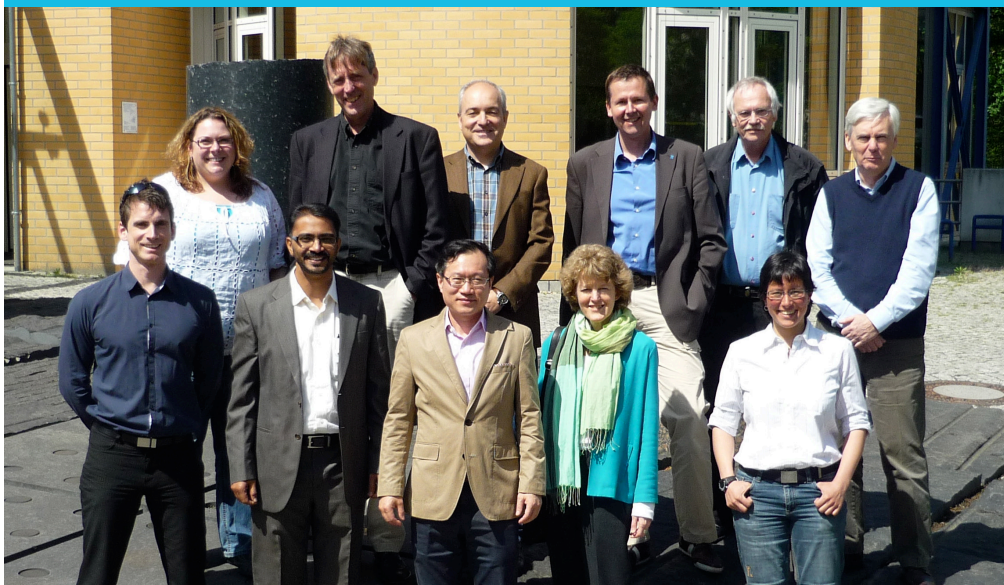
IASC Action Groups

The Second SCAR-IASC Bipolar Action Group (BipAG II)

SCAR and IASC are the major international scientific organizations with a focus on the Polar Regions. The Polar Regions are critical areas of the Earth, influencing ocean currents and regional weather patterns as well as hosting a unique biodiversity. Due to the effects of climate change, parts of these regions are now the focus of the most rapid environmental changes seen anywhere on the planet and contributing to global issues such as sea-level rise and greenhouse gas emissions. IASC and SCAR therefore have significant roles in organizing the vitally important science needed to understand what is happening in the Arctic and Antarctic and what it may mean for the rest of the world.

Both Polar Regions are cold and remote and share many common features (large ice sheets, extensive sea-ice in winter) but equally also show very many differences. Comparisons of the Polar Regions or research involving both the Arctic and Antarctica is termed bipolar science. This offers unique opportunities to better understand what is happening in these regions and how they impact on the rest of the world.

2nd Meeting of the SCAR/IASC Bipolar Action Group on Science Cooperation (BipAG II)
From left to right / **top row**: Jenny Baeseman, Mark Parsons, Francisco Navarro, Volker Rachold, Detlef Damaske, Cynan Ellis-Evans
bottom row: Mike Sparrow, Thamban Meloth, Sung-Ho Kang, Gail A. Fondahl, Angelika Renner



This is particularly relevant in an Earth System Science context. The Executive Committees of SCAR and IASC created a SCAR-IASC Bipolar Action Group (BipAG) that operated for two years (2008-2010) followed by a second BipAG for 2011 to 2012. The existence of a BipAG ensures that there is a group looking at opportunities for bipolar science, with the purpose of providing annual reports to the SCAR and IASC Executive Committees and recommending which

bipolar activities should be adopted by the organisations. The recommendations include not only science ideas but also opportunities for developing the next generation of polar scientists, suggestions for more effective science coordination and data management and ideas for better communicating the importance of the Polar Regions for Planet Earth. The BipAG reports are available at <http://www.iasc.info/index.php/home/groups/action-groups>.

IASC Data Policy Group:

IASC has strongly supported the IPY Data Policy, with its emphasis on ensuring security, accessibility and free exchange of relevant data that both support current research and leave lasting legacy. The IPY policy provided initial guidance for achieving this objective, but post-IPY there is still a need to continue supporting, creating and sustaining Arctic data management resources.

Although IASC has been involved in several data management activities, for example Sustaining Arctic Observing Systems (SAON) and the Polar Information Commons (PIC), IASC has not yet considered a formal data policy. Such a policy would establish a commitment to best practice in relation to repository management and related aspects of Arctic data systems.

To reinforce IASC's commitment to robust data management and sharing activities, IASC

Council decided to form a small advisory group of external experts and interested Council members that would develop and recommend a data policy, including steps toward implementation of the policy, that would provide guidance for IASC supported activities.

The IASC Data Policy Group will be chaired by Mark Parsons (US National Snow and Ice Data Center), who previously served as a co-chair of the IPY Data Subcommittee.

IASC Geosciences Action Group:

The five Working Groups (WG) Terrestrial, Cryosphere, Marine, Atmosphere and Social & Human are IASC's scientific core elements. The overall responsibilities of these WGs are to identify and formulate scientific content and foci, act as scientific advisory boards to the IASC Council and to assist IASC in the implementation of its science mission. The WGs are designed to cover the full breadth of Arctic research, but two years after their formation it became apparent that geological research is underrepresented in the current WG structure. To address this issue, IASC Council agreed to

form an Action Group on Geosciences (AGG) with the terms of reference to provide strategic advice to the IASC Council and WGs on both long-term opportunities and priorities in the field of Geoscience research in a broader sense. Since geosciences embrace a wide variety of scientific disciplines, emphasis is given to the overarching aspects of research.

AGG will particularly address emerging research questions in the field of: (i) Arctic solid-earth geoscience, including Arctic tectonic evolution and the exploration of the ridge systems; (ii) sedimentary records and climatic and environmental history obtained from marine and lake sediments, ice cores and perma-

frost deposits (iii) geologic and geochemical processes especially related to the stability of permafrost and of gas hydrate deposits known to underlie the continental slopes of the Arctic Ocean Basin; (iv) seismic risk of the Arctic regions.

The Geosciences Action Group will be chaired by Carlo Barbante (University of Venice, Italy) and report to IASC Council on emerging fields in Arctic geosciences, in order to better address, coordinate and prioritize the research efforts at national and international level.

Internship: IASC Secretariat

During June/July 2012 the IASC Secretariat offered a 2 month-internship to BA-Student Kate Recinos from Claremont McKenna College, California, US.

Kate was mainly part of the IASC Secretariat's support in Outreach and Communication. She prepared the IASC video clips, which are now online on Facebook and Youtube and helped updating the current Facebook page. Her internship resulted in a compilation entitled „A Summary of Environmental Strategies of the Arctic Nations“ which can be downloaded under <http://iasc.info/index.php/home/iasc/education-a-outreach>. The Potsdam Secretariat enjoyed having her in the team and wish her all the best for her future!

Upcoming Events

The **Third International Symposium on Arctic Research (ISAR-3)**, entitled „Detecting the change in the Arctic and searching the global influence“, will be held in **Tokyo** on 14-17 January 2013. (www.jcar.org/isar-3/)

The **Arctic Science Summit Week 2013** will be held in **Kraków, Poland** from 14 - 20 April, 2013. (<http://assw2013.us.edu.pl/>)

News from the other Pole

The XXXII SCAR and Open Science Conference took place in Portland OR last month. IASC contributed to some bipolar conference sessions and also participated in the SCAR Delegates Meetings.

Jerónimo López-Martínez, professor of Geodynamics at the Universidad Autonoma of Madrid, was elected the new SCAR President. He was a member (2004-2009) and co-chair (2009-2010) of the ICSU/WMO Joint Committee for the International Polar Year. SCAR also elected two new Vice-Presidents: Karin Lochte from the AWI in Germany, who is also the German IASC Council Member, and Bryan

Storey from the University of Canterbury, New Zealand. They will join Yeadong Kim (Korea) and Sergio Marensi (Argentina) as well as Mahlon „Chuck“ Kennicutt who will remain on the Executive Committee for two years as Past President. For more SCAR information, including the next generation of SCAR's Scientific Research Programs, please see <http://www.scar.org/news>.

IASC on Facebook & Youtube

Information, news and videos on IASC are now available on Facebook and Youtube. See us on Facebook: <http://www.facebook.com/groups/343786799008379/> or watch the newest videos on Youtube: <http://www.youtube.com/user/iascchannel/videos?view=0>



New WG Members from India

IASC is pleased to welcome the new Working Group Members from India:

Terrestrial WG: Manish Tiwari (NCAOR) and Ratan Kar (BSIP), **Cryosphere WG:** Arun Chaturvedi (GSI) and Parmanand Sharma (NCAOR), **Marine WG:** K.P. Krishnan (NCAOR), **Atmosphere WG:** Suresh Babu (SPL) and Nuncio Murukesh (NCAOR), **Social & Human WG:** D. Majumdar (DIPAS)

IASC Council

Country	Organization	Representative
Canada	Canadian Polar Commission	David Hik, President
China	Chinese Arctic and Antarctic Administration	Huigen Yang, Vice-President
Czech Republik	Czech Centre for Polar Research	Josef Elster
Denmark/Greenland	The Commission for Scientific Research in Greenland	Naja Mikkelsen, Vice-President
Finland	Delegation of the Finnish Academies of Science and Letters	Kari Laine
France	Institute Polaire Français	Yves Frenot
Germany	Deutsche Forschungsgemeinschaft	Karin Lochte
Iceland	RANNIS, The Icelandic Centre for Research	Thorsteinn Gunnarsson
India	National Centre for Antarctic and Ocean Research (NCAOR)	Rasik Ravindra
Italy	National Research Council of Italy	Carlo Brabante
Japan	Science Council of Japan	Tetsuo Ohata
The Netherlands	The Netherlands Organization for Scientific Research	Louwrens Hacquebord
Norway	The Research Council of Norway	Susan Barr, Vice-President
Poland	Polish Academy of Sciences, Committee on Polar Research	Jacek Jania
Russia	The Russian Academy of Sciences	Vladimir I Pavlenko
Republic of Korea	Korea National Committee on Polar Research	Byong-Kwon Park
Spain	Comite Polar Espanol	Manuel Catalan
Sweden	The Swedish Research Council	Magnus Friberg
Switzerland	Swiss Committee on Polar Research	Martin Lüthi
United Kingdom	Natural Environment Research Council	Cynan Ellis-Evans
USA	Polar Research Board	Jackie Grebmeier, Vice-President