



International Arctic Science Committee (IASC)

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

The Scientific Committee on Antarctic Research (SCAR) and the International Arctic Science Committee (IASC) are the major international scientific organisations 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 organising 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. 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 published on both SCAR and IASC websites.

IASC/SCAR Bipolar Action Group II
Potsdam, 14th May 2012, 0900-1800
IASC Secretariat

Attendees

Cynan Ellis-Evans - Chair	UK	Biology
Francisco Navarro	Spain	Ice sheets
Detlef Damaske	Germany	Geology
Sung-Ho Kang	Korea	Marine
Thamban Meloth	India	Ice cores
Gail A. Fondahl	Canada	Social Sciences
Mark Parsons	USA	Data
Jenny Baeseman	Norway	CliC Executive Director
Angelika Renner	Norway	APECS Vice President
Volker Rachold (ex officio)	Germany	IASC Executive Secretary
Mike Sparrow (ex officio)	UK	SCAR Executive Director

Apologies

Alexander Klepikov	Russia	Oceanography / Climate
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Outline Agenda

1. Opening
 - Welcome and housekeeping (Volker)
 - Introduction of the members (Cynan)
2. Objectives of this meeting (Cynan)
3. BipAG II recommendations from the first meeting
 - Progress with actions: IASC (Volker)
 - Progress with actions: SCAR (Mike)
 - Discussion of unaddressed recommendations
4. Feedback from IASC and SCAR
5. Brainstorming session
 - Discussion of other bipolar activities, not considered in the first report
6. BipAG II related future initiatives
 - International Polar Initiative (IPI), see enclosed concept paper
 - Possible joint SCAR/IASC Conference 2016
 - Future of BipAG II
7. Preparation of draft report to EXCOMs, including
 - Priority list of recommendations
 - Recommendation for the future of BipAG II

Objectives of the meeting

The Terms of Reference of the Bipolar Action Group II differ from those of its predecessor in that IPY legacy issues are now dealt with directly by IASC and SCAR Executive Committees.

The focus of BipAG II is to “to advise the SCAR and IASC Executive Committees on the development of instruments such as workshops, programmes and networks to address bipolar issues”.

Under the Terms of Reference the Action Group is convened for two years (2011-2012) and reports annually to both IASC and SCAR Executive Committees.

The main objectives of this second meeting were

- to review the recommendations of the first meeting and the progress with actions;
- to identify possible bipolar activities, not considered at the first meeting;
- to agree on a recommendation for the future of the joint Action Group.

Meeting Summary and Recommendations

The SCAR and IASC Secretariats presented the report of the first BipAG II meeting (see ANNEX 1) and the progress with regards to the recommendations (the presentation is given in ANNEX 2).

Generally, participants noted that many of the recommendations of the first meeting were implemented by IASC and SCAR and that the first BipAG II meeting was useful in terms of initiating activities to address bipolar issues. Members of the group acknowledged that in view of limited resources (both financial and human) it is not possible for SCAR and IASC to address all recommendations made by the Action Group.

Building on the recommendations listed in the first report (see ANNEX 1) and the progress with actions, members agreed to add or restate the following points.

(1) Ice Sheet Mass Balance (ISMASS)

DONE

(2) Social and Human Sciences

Members appreciated that the first step, i.e. building linkages between the social and human sciences communities of SCAR and IASC, had been taken and that a number of joint activities were implemented or are underway.

Recommendation: that (i) IASC should consider forming a History of Science in the Arctic group and (ii) both IASC and SCAR should look into establishing bipolar activity in this subject.

(3) Contaminants and Short-lived Climate Forcers

It was noted that contaminant work in the Arctic is a clear AMAP domain but members agreed that a closer cooperation with AMAP and the feasibility of bipolar contaminant research should be explored.

Recommendation: that SCAR investigates connections with AMAP on contaminants issues.

(4) International Partnership in Ice Core Science (IPICS)

Members of the group understood that due to limited resources and lack of ice core expertise in its membership, the IASC Cryosphere WG can not focus on ice core science. It was, however, agreed by the group that ice core studies belong to the domain of cryosphere research and should not be lumped together with geological research.

(5) Ocean acidification

Members noted that the IASC Marine WG would agree strongly with the need to hold a joint workshop after the AMAP assessment is completed and would be willing to work with SCAR and AMAP. The AMAP and SCAR initiatives are both led by Richard Bellerby.

(6) Ocean-atmosphere CO₂ exchange and CO₂ budgets:

It was noted that the IASC Atmosphere and Cryosphere WGs have initiated planning of a possible drifting ice station experiment looking at these exchanges. The possibility of building this into a broader bipolar activity will be discussed by SCAR's SSG on Physical Sciences in July.

Recommendation: that IASC should explore the possibility of including subsea permafrost and gas hydrates in its research agenda.

(7) Permafrost and Carbon

Members noted that IASC decided to co-sponsor (together with IPA and CliC) the Vulnerability of Permafrost Carbon Network. It was recognised that in the Antarctic permafrost carbon research is not a priority as there is little terrestrial organic accumulation. There was recognition that there was benefit in sharing knowledge on physical permafrost processes between both poles but that the IPA was addressing this effectively for now.

(8) Polar genomics

It was noted that IASC supported several early career scientists to participate in a bipolar session co-organised with APECS at the CAREX Conference on Life in Extreme Environments. However, members also noted that the main recommendation of the first meeting, i.e. more effectively tagging polar molecular data submitted to international databases, is still valid and had not yet been addressed.

Recommendation: that SCAR, IASC and APECS should make initial contact to those in charge of polar genomics databases and let them know what the community would require.

(9) Geology

DONE

(10) Observing Systems

Members noted the latest development of the Southern Ocean Observing System (SOOS) and the Sustaining Arctic Observing Networks (SAON) and restated that an exchange of experiences would be beneficial.

Recommendation: that representatives from IASC observing systems attend SCAR observing workshops and vice versa, for example, useful for an invitation for SOOS to attend the Arctic Observing Summit.

(11) Engaging the next Generation of Polar Researchers

It was noted that some of the recommendations of the first meeting have been implemented while others are still ongoing or pending. Unaddressed and new recommendations were further discussed under (14) General Recommendations.

(12) Data management

Members reiterated that data management is an essential element of any scientific activity and acknowledged IASC's initiative to establish a data policy group. It was noted that SCAR and IASC jointly nominated a candidate to the membership of ICSU's World Data Service.

Recommendation: that IASC should consult with SCADM and also consider issues of data publications when considering an IASC data policy.

See: http://www.scar.org/news/newsletters/issues2012/SCARnewsletter28_Apr2012.pdf

Recommendation: that SCADM and the new IASC data policy group should ensure interaction with ICSU's World Data System.

(13) International Polar Initiative (IPI)

BipAG II noted the development of the International Polar Initiative and discussed the draft concept note presented at the IPY 2012 Montreal Conference.

Recommendation: that (i) IPI will need to consider actively engaging COMNAP and FARO (ii) the draft document needs to be more focused (iii) Education and Outreach needs to be emphasised more.

(14) General Recommendations

Under this agenda item the group discussed ways to encourage further bipolar studies, to raise the awareness of ongoing SCAR/IASC bipolar activities and to involve the next generation of polar researchers. Members agreed on the following general recommendations.

Recommendation: that each IASC travel awardee should be asked to produce a FrostByte (30-60 second audio or video recording) which would be made available on the IASC website.

Recommendation: that SCAR and IASC should advertise the Cool Speakers Database (list of speakers with first hand Polar Regions experience and expertise) in their Newsletters etc. to build up the database.

Recommendation: that SCAR and IASC should discuss the renewal of their MoU with APECS.

Recommendation: that IASC should consider forming a Committee on Capacity Building, Education and Training (CBET) (including engaging Arctic Peoples).

Recommendation: that SCAR and IASC should consider a joint bipolar Conference in 2016, but that these events should not happen at less than six year intervals.

Recommendation: that SCAR and IASC should opportunistically attend each others WG/SSG meetings and present bipolar interactions.

Following the review of the recommendations of the first meeting, participants held a brainstorming session during which the following new recommendations, several reflecting IPY legacy, were agreed upon:

Recommendation: that SCAR/IASC/APECS revisit the IPY Education and Outreach report and consider the recommendations listed in the report.

Recommendation: that SCAR and IASC consider support of Polar Weeks in future, with the goals:

- To expand the IPY global networks of motivated and enthused educators;
- To raise the visibility of polar issues and polar organizations;
- To enhance the development of polar science educational materials; and
- To develop long-term education and outreach partnerships for polar science.

Recommendation: that SCAR and IASC further engage with the IPY Communications Officers' network.

Recommendation: that SCAR and IASC explore further engagement with the Polar Educators (e.g. utilise town hall meetings at AGU/EGU).

Recommendation: *that the coordination on issues regarding Polar Predictability (e.g. WMO's Global Integrated Polar Prediction System, GIPPS) which has started between IASC and WCRP should be intensified and expanded to also include SCAR and possibly other partners.*

Recommendation: *that SCAR and IASC send a joint letter to ICSU expressing interest in becoming more involved in ICSU's Future Earth program.*

Finally, the group had a discussion on the need and possible role of a future joint SCAR/IASC group for bipolar issues and agreed on the following recommendation to the SCAR and IASC Executive Committees:

Recommendation:

- (i) that the SCAR/IASC Bipolar Action Group continues but in a more advisory role, with no more than one face-to-face meeting every other year and utilising teleconferencing and email in between to facilitate communication*
- (ii) that the new group include more ex officio members from relevant organisations (APECS, CliC etc.) or invites particular experts when a bipolar topic of mutual interest is made apparent ;*
- (iii) that a pre-call go out to the community to ask for possible bipolar areas of cooperation and that the BiPAG consider the outcomes from such a survey;*
- (iv) that formation of an advisory BipAG be considered in light of the International Polar Initiative.*