



ANTARCTIC TREATY CONSULTATIVE MEETING 2006

IP 87

Agenda Item: ATCM 11

Presented by: SCAR

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SCAR's Involvement in the International Polar Year (2007-2009)

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- Along with IASC, SCAR is a member ex-officio of the IPY Joint Committee (JC) established by ICSU and the WMO on November 2004, for planning, coordination, guidance and oversight of the IPY.
- SCAR is well represented in the IPY-JC. The SCAR Executive Director (Colin Summerhayes) is member of the JC representing SCAR. One of the two co-chairs of the JC is a former SCAR National Delegate of Australia (Ian Allison). Another three members of the JC are also SCAR National Delegates: Vladimir Kotlyakov (Russia), Chris Rapley (UK) and Jerónimo López (Spain). A further three members of the JC are scientists very involved in SCAR: Robin Bell (USA), Edith Fanta (Brazil) and Eberhard Fahrbach (Germany).
- the Joint SCAR/COMNAP Committee on Antarctic Data Management (JCADM) is well represented within the IPY structure, in that the JCADM Chief Officer co-chairs the IPY Data and Information Sub-committee.
- SCAR and JCADM will work towards ensuring that during the IPY the goal of Article IIIc of the Antarctic Treaty that “*Scientific observations and results from Antarctica shall be exchanged and made freely available*” is achieved to the maximum extent possible.
- Of the 208 proposals approved by the JC, 97 were relevant to SCAR. 38 of these were Antarctic; 59 were Bipolar. This document focuses on these 97 proposals.
- The full texts of the 97 proposals can be found on the SCAR IPY web page <http://www.scar.org/events/internationalpolaryear/>, or alternatively on the ipy web page www.ipy.org.
- Of these 97 proposals, 75 were in the natural sciences (77%), 21 in education and outreach (22%), and 1 in data and information management (1%).
- The 97 proposals are listed in Annex 1. Analysing the distribution shows that:
 - (i) 24 are SCAR-led;
 - (ii) 27 are specifically linked to some SCAR group or groups;
 - (iii) 19 have a question mark against them indicating the potential to be linked to some SCAR group or other, in which case that group should contact the principal investigators to seek SCAR involvement;
 - (iv) 8 in the science categories (5 under atmosphere; 2 classed as logistics) do not appear related to SCAR's activities;
 - (v) 19 in the outreach and education category are not related to SCAR's activities.
- Excluding the data and the education and outreach proposals, SCAR leads or is directly involved in 68% of the natural science proposals.

Progress Against SCAR's Initial Recommendations, Approved at XXVIII SCAR (Bremerhaven, October 2004)

- SCAR has an ad hoc SCAR Advisory Committee on the IPY that exists:
 - (i) to advise the Executive Committee on the SCAR input to the IPY Science Plan;
 - (ii) to advise the Executive Committee on the SCAR role in IPY Implementation, and on the content of the IPY Implementation Plan;
 - (iv) to ensure that IPY is represented in the SCAR Scientific Research Programmes;
 - (iii) to work with COMNAP to realize IPY objectives for the southern hemisphere;
 - (v) to monitor the IPY process as it unfolds, and advise SCAR on how its contribution to the IPY should develop.

- Membership of the ad hoc committee comprises:

- (i) Chairperson (Colin Summerhayes)
- (ii) Standing Scientific Group Chairs for Life Sciences, Physical Sciences and Geosciences [*Members of programme planning groups should be consulted by SSG heads*]
- (iii) selected experts (Eberhard Fahrback (Germany); In-Young Ahn (R. S. Korea); Chuck Kennicutt (USA); Pedro Skvarca (Argentina))
- (iv) Ian Allison, the SCAR rep on the IPY Planning Group;
- (v) COMNAP representative (Anders Karlqvist);
- (vi) JCADM to advise on data management (Dean Peterson)

- Communication takes place by e-mail and meeting in the margins of other meetings (e.g. SCAR Open Science Conference; XXIX Delegates Meeting).

- Progress against the recommendations in SCAR's IPY Paper 41 has been as follows:

1. SCAR should participate at the highest level in providing advice for, and overseeing the execution of, the IPY. **Progress: Achieved** (see comment in second paragraph on page 1).
2. Develop a comprehensive data and information management strategy that facilitates easy access to data collected during the IPY. **Progress: The JC has formed a Data and Information Group to develop a data and information policy; the Chief Officer for JCADM (Taco de Bruin) is a Co-Chair of the Group.**
3. The IPY Plan should recognise explicitly the major SCAR activities that have been endorsed by the community. **Progress: The 5 SCAR Scientific Research Projects are all leading IPY proposals. In addition several proposals are led by SCAR Action and Expert Groups.**
5. Get complete coverage with radars for observing geospace as a contribution to SCAR's ICESTAR programme. **Progress: ongoing.**
4. Make traverses across Dome A during the IPY to assess the viability of that area for an eventual large diameter astronomical telescope. **Progress: ongoing.**
5. Establish a Circum-Antarctic Census of Marine Life (CAML) programme during the IPY. **Progress: CAML is an approved IPY proposal.**
6. Develop an integrated IPY Southern Ocean observing system. **Progress: this is the goal of the successful CASO proposal.**
7. Undertake a major bi-polar ice drilling programme. **Progress: several drilling proposals have been approved.**
8. Take a geological perspective on climate change, on time scales approaching the time resolution of ice cores but extending much further back into the past. **Progress: Several proposals addressing this issue have been approved.**
9. Support the Cryosphere Theme of the IGOS Partners to improve coordination of cryospheric observations. **Progress: Cryospheric observations are at the heart of several approved proposals.**
10. Focus geological attention on the subglacial highlands of the Gamburtsev Mountains. **Progress: A Gamburtsev Mountains proposal has been approved.**
11. Encourage intensive initial exploration of subglacial Antarctic lake environments. **Progress: Lake exploration is part of the approved programme.**

12. Develop a benchmark series of geological and geophysical maps. **Progress: None as yet.**
13. Create a network of autonomous geological and/or geophysical observatories across Antarctica and the Southern Ocean, to investigate systems-scale polar geodynamics and interactions with the cryosphere, hydrosphere and atmosphere. **Progress: A number of proposals have been approved for establishing or upgrading observatories. Efforts need to be made to integrate these into a network.**
14. Other recommendations included
 - (a) Promoting the development of a Cybercartographic Atlas of Antarctica, for public outreach. **Progress: approved as an IPY proposal;**
 - (b) Quantify human-transported invasive species entering Antarctica: **Progress: Aliens proposal approved.**
 - (c) Develop the marine biodiversity information network (MarBIN): **Progress: proposal approved.**
 - (d) Make a snapshot of human health in Antarctica: progress: **Proposal approved.**
 - (e) Encourage bird counts from ships: **No progress.**
 - (f) Encourage use of Continuous Plankton recorder from ships: **No progress.**
 - (g) Encourage ships to deploy disposable instruments (buoys, floats): **No progress.**
 - (h) Encourage ship operators to keep echo sounders switched on, and to make the data available: **Progress: Needs further discussion (should be in the Science Implementation Plan).**
 - (i) Develop syntheses of results. **Progress: will be written in to the Science Implementation Plan.**
 - (j) Organise meeting on “Space Observations and the Antarctic Region” (in concert with the IGOS Partners and CEOS (Committee on Earth Observing Satellites)). **No progress.**
 - (k) Organise meeting on “comparing the performance of climate models (global and regional) in polar regions”. **No progress.**

Next Steps:

- The JC will be holding an Open Forum on the IPY on July 8th 2006, in association with the XXIX SCAR meeting in Hobart, Tasmania. SCAR will participate in the Open Forum, to make a presentation on SCAR's role in the IPY.

- SCAR's role in the IPY, and refinements to the individual SCAR programme plans for the IPY, will also be the subject of discussion (i) among SCAR scientists meeting in Hobart during XXIX SCAR, and (ii) by the SCAR Delegates, who meet there between 17-19 July, 2006.

- The JC has yet to develop a Science Implementation Plan. SCAR should have a significant influence on the development of the plan. Therefore:-

1. The ad hoc SCAR Advisory Committee on the IPY should meet during SCAR Science Week in Hobart to provide XXIX SCAR Delegates meeting with such advice as seems warranted.

2. The Committee's terms of reference should be modified as follows:

- (i) to ensure that the SCAR input to the IPY Science Implementation Plan is comprehensive and effective;
- (ii) to advise the Executive Committee and Delegates on the content of the IPY Implementation Plan;
- (iv) to help the SCAR Scientific Research Programmes and other SCAR activities make as effective as possible a contribution to the IPY;
- (iii) to work with COMNAP to see that IPY objectives are realised to the maximum possible extent;
- (v) to monitor the IPY process as it unfolds, inform SCAR management bodies on progress, and recommend to SCAR management bodies how SCAR's contribution to the IPY should develop.

- The ad hoc Committee will consult widely within the SCAR family to solicit advice on the way forward throughout the IPY process.

- Proposed Membership:

- (i) Chairperson (Colin Summerhayes)
- (ii) Chief Officers of Standing Scientific Group Chairs for Life Sciences, Physical Sciences and Geosciences
- (iii) selected experts (Eberhard Fahrback; Chuck Kennicutt)
- (iv) Ian Allison
- (v) Jeronimo Lopez
- (v) COMNAP representative;
- (vi) JCADM representative (Taco de Bruin)

Annex 1:

APPROVED ANTARCTIC OR BIPOLAR IPY PROPOSALS SHOWING THEIR LINKS TO SCAR ACTIVITIES, AND THOSE THAT ARE SCAR-LED (20 April 2006)

Note – (i) Bipolar proposals are identified as ‘B’ numbers

(ii) A question mark (?) indicates where SCAR-SSGs need to check the potential for forming link, and inform the Secretariat of progress

Theme	Number	Short Title	SCAR Link
Earth	67	Gamburtsev province	ITASE, ACE, SALE
	109	West Antarctic Rift System	ANTEC
	256	Continental Margin Drilling (ANDRILL)	SCAR-led; ACE
	B77	Plates and Gates	ACE
Land	54	Antarctic Climate Evolution	SCAR-led; ACE
	73	Antarctic Oases	RiSCC
	97	Evolution of Central Antarctic Plate (ICECAP)	SCAR-led; ACE
	B33	Antarctic Permafrost and Soils (ANTPAS)	SCAR-led; PPE
	B50	Thermal State of Permafrost (TSP)	SCAR-led; PPE
	B55	Microbiology and Ecology (Merge)	EBA, SALE
	B59	Terrestrial Ecosystems (TARANTELLA)	SCAR-led; EBA
	B86	USGS-IPY	?ANTEC
	B113	Deep Permafrost Drilling	?PPE
	B138	Cold Land Processes	CLiC; ?PPE
	B172	BIRDHEALTH	Birds
	B185	Polar Earth Obs Network (POLENET)	ANTEC, GIANT
	B188	International Tundra Experiment	?SSG-LS
	B214	Vegetation Changes	?SSG-LS
	B373	Carbon Pools in Permafrost	?PPE
	People	170	Aliens in Antarctica
341		Taking the Polar Pulse	SCAR-led: Human Bio & Medicine
B10		Historical Industrial Exploitation	? History
B27		History of the IPYs	SCAR-led; History
B100		IPY Field Stations History	? History
Oceans	8	Synoptic Slope Study (SASSI)	Oceanog; AGCS
	34	Climate and Terrestrial Communities	?EBA; ?RiSCC
	53	Census of Antarctic Marine Life	SCAR-led; CAML
	66	Antarctic Benthic Deep Sea (ANDEEP)	SCAR-led; EBA/CAML
	70	Upper Ocean: Africa to Antarctica	SCAR-led; CASO; AGCS; Oceanog
	83	Marine Biodiversity Info Network	SCAR-led; MarBIN
	93	ICEFISH	EBA, CAML
	131	Antarctic Marine Ecosystems (AMES)	EBA, CAML

	132	Climate – Southern Ocean (CASO)	SCAR-led; CliC, Oceanog; AGCS
	137	EBA	SCAR-led; EBA
	304	Drake Passage seasonality	CAML, EBA, Birds, MarBIN
	329	Polar Ecosystems and Contaminants	? EBA
	B13	Sea Level and Tidal Science	Oceanog; AGCS
	B23	Atlantic Thermohaline Circulation	SCAR-led; CliC; AGCS; Oceanog
	B35	Tracer chemistry (GEOTRACES)	Oceanog; ICED
	B52	Acoustic observations	? CAML/EBA
	B71	Aquatic Microbiology	? EBA
	B92	Integrated Climate and Ecosystems	EBA, CAML, Oceanog
	B130	Bipolar Climate Machinery (BIPOMAC)	ACE
	B153	Marine Mammal Exploitation	Seals, CAML, EBA, Oceanog
Ice	41	CONCORDIA	Logistic support
	42	Subglacial Lakes	SCAR-led; SALE
	81	Iceberg Calving	? ISMASS, AGCS, EBA, ICED
	88	Accumulation and Ice Discharge	SCAR-led, ITASE; AGCS
	107	Ice and Climate in Antarctic Peninsula	? ACE, ITASE, AGCS, AntSDI
	141	Antarctic Sea Ice	SCAR-led; ASPECT, AGCS, CliC, CAML
	152	Trans-Antarctic Traverse	SCAR-led; ITASE, ISMASS, AGCS, SALE
	258	Amundsen Sea Ice Sheets	ITASE, AGCS
	313	Observatories (China)	Logistics support
	B16	Glacier Hydrosystems and Climate	? ISMASS, AGCS
	B20	Air-ice Chemical Reactions	?
	B105	State of the Cryosphere	AGCS, CliC, IGOS
	B117	Partnership in Ice Core Science (IPICS)	ACE, ITASE, AGCS
	B125	Mass Balance from GRACE Satellite	? ISMASS, AGCS, IGOS, CliC
	B367	Neogene Ice Streams and Sediments	? ACE, ISMASS, AGCS, CliC
Atmosph	180	Antarctic Climate and Atmospheric Circ	SCAR-led; AGCS
	267	Comprehensive Met Dataset	AGCS; Op Met
	B32	Aircraft to Study Climate, Aerosols etc (POLARCAT)	?
	B76	Atmospheric Monitoring for Pollution	?
	B99	Ozone and UV	?
	B171	Polar Aerosols	?
	B175	Contaminants in Polar Regions	?
Space	385	Astronomical Observatory at Dome C	AAA, PASTA
	B56	Solar Variability and the Atmosphere	ICESTAR, AGCS
	B63	ICESTAR	SCAR-led;

			ICESTAR
	B78	Polar Mesospheric Clouds	? ICESTAR
	B91	IPY Polar Snapshot from Space	IGOS
	B124	Astronomy from Polar Plateaus	AAA, PASTA
	B217	Evolution of Strat and Mesosphere and relation to Troposphere	? AGCS
	B372	Polar Information Centre	IGOS; SCAR Programmes
Data & Inform	B49	IPY Data and Info Service	SCAR-led: JCADM;
Outreach	110	Sailing ship voyage	
	116	Ship voyages	
	147	International Antarctic Institute	SCAR co-sponsor
	191	Fellowships in Antarctica	SCAR-led
	244	Antarctic Anthology (book)	
	451	Touring Exhibit	
	B51	Publications Database	
	B79	Polar Research Book Series	
	B80	Gdynia Aquarium	
	B96	Children's Museums	
	B135	Conference on Preservation of Bases	
	B158	Symposium on Ecosystem Changes	
	B168	Youth Steering Committee	
	B176	Polar Atlas	SCAR-led; EGGI
	B179	Undergraduate Earth Science Curricula	
	B296	IPY Museum and Virtual Exhibit	
	B328	Integrated Communication	
	B343	Youth Expedition	
	B397	Polar Information for Teachers	
	B405	National Geographic Film	
	B440	Book about the Poles	
	B441	Lecture Series	

Annex 2 Acronyms

AAA	Antarctic and Astronomy and Astrophysics
ACE	Antarctic Climate Evolution
AGCS	Antarctica in the Global Climate System
ANTEC	Antarctic Neotectonics
ANTSDI	Antarctic Spatial Data Infrastructure
ASPECT	Antarctic Sea Ice Processes and Climate
ATCM	Antarctic Treaty Consultative Meeting
CAML	Census of Antarctic Marine Life
CASO	Circum-Antarctic Southern Ocean
CEOS	Committee on Earth Observing Satellites
CLiC	Climate and Cryosphere Programme
COMNAP	Council of Managers of National Antarctic Programmes
EBA	Evolution and Biodiversity in the Antarctic
EGGI	Expert Group on Geographical Information
GIANT	Geodetic Infrastructure for Antarctica
IASC	International Arctic Science Committee
ICED	Integrated Analysis of Circumpolar Climate Interactions and Ecosystem Dynamics in the Southern Ocean
ICESTAR	Inter-hemispheric Conjugacy Effects in Solar-Terrestrial and Aeronomy Research
ICSU	International Council for Science
IGOS	Integrated Global Observing Strategy
IPY	International Polar Year
ISMASS	Ice Sheet Mass Balance And Sea Level
ITASE	International Trans Antarctic Scientific Expedition
JCADM	Joint Committee on Antarctic Data Management
MarBIN	Marine Biodiversity Information Network
PASTA	Plateau Astronomy Site Testing in Antarctica
PPE	Permafrost and Periglacial Environments
RiSCC	Regional Sensitivity to Climate Change in Antarctic Terrestrial and Limnetic Ecosystems
SALE	Subglacial Antarctic Lake Environments
SCAR	Scientific Committee on Antarctic Research
SSG	Standing Scientific Group
SSG-LS	SSG on Life Sciences
WMO	World Meteorological Organization