## SCARreport

No 40 September 2016

### SCAR / IASC Think Tank 24-25 February 2016



Scientific Committee on Antarctic Research

at the

Scott Polar Research Institute, Cambridge, United Kingdom





## Arctic and Antarctic Think Tank

24-25 February 2016

INSELHOTEL, Potsdam, Germany



#### Participants (Left to Right):

Josefine Lenz, Lucilla Spini, Martin Schneebeli, Ruth Vingerhagen, Heike Midleja, Jenny Baeseman, Larry Hinzman, Azizan bin Abu Samah, Chuck Kennicutt, Terry Wilson, Vladimir Pavlenko, Karin Lochte, Susan Barr, Jerónimo López-Martínez, Volker Rachold, Naja Mikkelsen, and Huigen Yang.

#### Background

SCAR and IASC have a long history of strong collaboration. As the Memorandum of Understanding between SCAR and IASC is up for renewal in 2016, it is an opportune time to revisit this agreement and further strengthen this collaboration. It is also important to note that the last full joint SCAR-IASC ExCom meeting was in 2013 and another one should be held soon.

SCAR recently completed a forward-looking vision of important Antarctic research questions. This is being complimented by the COMNAP follow up looking at logistics and technology needs. The past spring IASC went through the 3<sup>rd</sup> International Conference on Arctic Research Planning, which also produced forward-looking Arctic research needs. There are many overlapping issues that have arisen during these processes. To help advance Polar Science, efforts should be made to outline synergies.

In addition there are a number of other important factors for the two organizations to discuss. This includes the structure, composition, and goals of the 2018 POLAR conference to be held in Davos, Switzerland that need to be settled. The recent advances in the International Polar Partnership and in ICSU's Future Earth initiative should also be something discussed between these two leading international polar organizations. In addition, SCAR is undergoing a review by ICSU, and IASC is also undergoing an external review and a number of synergies that need addressing have resulted.

A 2-day brainstorming retreat was held in Potsdam, Germany the last week of February 2016 to begin to address these and other issues.

The Agenda is given in Annex 1.1

#### **Opening**

The SCAR President Jerónimo López-Martínez and IASC President Susan Barr opened the meeting and welcomed all participants. Bryan Storey sent apologies for not being able to attend.

Chuck Kennicutt presented an update on the 1<sup>st</sup> SCAR Antarctic and Southern Ocean Horizon Scan and the COMNAP Antarctic Roadmap Challenges.

The presentation is given in Annex 2.1

IASC Executive Secretary Volker Rachold presented an update on ICARPIII.

The presentation is given in Annex 2.2.

#### Discussion on overlapping ideas and plans for combining results

Reviewing the outcomes of SCAR's Horizon Scan and IASC's ICARP III, participants agreed that SCAR and IASC should create a mechanism for the two organizations to identify the top 5 most societally relevant questions of the changing polar regions, what the big limitations are for answering those questions and what is needed to address those limitations.

It was decided to establish a small joint SCAR/IASC Polar Task Force of a few strategic thinkers and doers to prepare a suggestion of a small number of polar (both Arctic and Antarctic) overarching themes that would benefit from extended international research coordination. The IASC Executive Secretary and SCAR Executive Director were asked to prepare Terms of Reference for the group, including a timeline of the activities. It was hoped

that the Task Force would be ready to meet for the first time at the upcoming SCAR Open Science Conference in August in Kuala Lumpur.

Further details on the terms of reference for the Polar Task Force are given in Annex 3.

#### SCAR and IASC Reviews – Synergies and Discussion

The SCAR Executive Director Jenny Baeseman reported on SCAR activities the current ICSU review of SCAR. The IASC Executive Secretary Volker Rachold updated the meeting on IASC activities and results from its recent external review.

The IASC Report is given in Annex 4.

#### **International Polar Partnership**

It was discussed that despite broad participation in the IPP Steering Committee the initiative did not receive strong support from the partner organizations. In particular, WMO and SCAR were not convinced that the initiative would be timely and needed. Hence it was decided to conclude IASC's participation in the IPP. It is agreed to present the decision to IASC Council and afterwards to partners. As the concept is already there, it was suggested that it might be worth revisiting the idea in ~5 years.

#### **POLAR 2018**

SCAR and IASC agreed to convene a second joint science conference "POLAR 2018", which will be hosted by the Swiss Committee on Polar and High Altitude Research in Davos, Switzerland on 15-27 June 2018. The Swiss IASC Council Member and SCAR Alternate Delegate, Martin Schneebeli, provided a short report. The ASSW 2018 and SCAR Delegates Meeting will be held before and after the main open science conference respectively. More information can be found at <a href="http://www.polar2018.org/">http://www.polar2018.org/</a>.

The presentation is given in Annex 5.

#### Discussion on conference format, chairs, goals

It was suggested that an effort should be made to make sure there are plenty of opportunities for SCAR and IASC groups with similar interests to meet and discuss future joint work. It was also suggested that the IASC Council might want to consider meeting after the Open Science Conference and before the SCAR Delegates meeting to allow for a possible joint session.

#### The Co-Chairs for Polar 2018 will be:

Local: Martin Schneebeli, IASC Swiss Council member/ SCAR SWISS Alternate Delegate

IASC: Huigen Yang, IASC Vice-Chair / SCAR Chinese Delegate SCAR: Karin Lochte, SCAR Vice-President / German IASC Delegate

#### **Polar Policy Activities**

The SCAR Executive Director presented a status report on the SCAR policy. The IASC Executive Secretary presented a status report on the IASC policy. It was decided that the two groups might want to consider working together with partners to form a more coordinated polar policy effort to maximize impact.

#### International Council for Science (ICSU)

Lucilla Spini, ICSU Head of Science Programs, presented an overview on ICSU. She suggested ICSU should organize a meeting with the Future Earth and ICSU Directors together with the SCAR Director and IASC Executive Secretary to better connect Arctic and Antarctic research activities to Future Earth and to discuss a way forward.

The ICSU presentation is given in Annex 6.

#### IPY Legacies, Outcomes from BiPAG and Joint Science Activities

The IASC Executive Secretary mentioned the achievements of the past SCAR/IASC BiPolar Action Groups. The meeting discussed whether a new BiPAG was needed and it was decided that at this time, with the Polar Task Force and the POLAR2018, another BiPAG was not necessary.

It was noted that the IPY Website has some issues with links, etc. The meeting decided that where IASC, SCAR and APECS share responsibility for the legacy of IPY, it is not within their current capabilities to take on the IPY website. However, it was decided that all 3 organizations should have a section on their websites about IPY 2007-2009 for historical purposes. It was also decided that the Wikipedia page on the IPY needs to be updated and that the 3 organizations would work together, with APECS leading, to update this page for the records. It was also decided that the IPY books "Polar Science and Global Climate: An International Resource for Education and Outreach" and "Understanding Earth's Polar Challenges: International Polar Year 2007-2008" should be featured highly as an important legacy products.

#### **Early Career Researcher Support**

Both organizations shared their efforts on supporting early career researchers. IASC has a Fellows program where early career researchers are selected to help manage the IASC working groups for a set period of 3 years (first year financially supported to attend ASSW and 2nd and 3rd year to stay in involved in working group activities) – giving them experience in science management and international coordination and helping IASC with administrative tasks. SCAR has a Fellowship program where funding for a research project is awarded for the fellow to travel to another SCAR member country and engage in research to help their career.

It was decided that APECS would assist SCAR in developing a SCAR Junior Officers Programme similar to that of IASC's Fellows to begin in 2018 or sooner.

The IASC Executive Secretary mentioned that the paper "Where are They Now" will be published soon on the ICARPIII website and in the Special Issue of Polar Science on ICARPIII. This is an analysis of how travel funding provided by IASC has impacted early career Arctic researchers.

It was suggested that IASC and SCAR should consider a Polar fellowship (similar to SCAR's fellowships) before or at 2018 conference or to have one for 2016 and 2017 and as the recipients to present at 2018 perhaps as a keynote. As Country membership is different between the two organizations, this would need to be considered when designing such a joint fellowship.

#### **Awards**

It was suggested to announce a joint SCAR/IASC Polar Award for the 2018 POLAR Conference and to continue the award every five to ten years when there are joint conferences/events.

Lucilla Spini introduced the UNSECO/L'Oréal award. UNESCO and the L'Oréal Corporate Foundation seek to recognize women researchers who, through the scope of their work, have contributed to overcoming the global challenges of tomorrow. The award ceremony will

be held on 23rd March. Lucilla Spini offered to hold a seat for the ceremony and mentioned to invite other organization to participate.

#### **Secretariats**

Both SCAR and IASC have small secretariats with high demands on staff. IASC has a distributed model with countries supporting full to part-time staff in their home country, but working for IASC. It was suggested that SCAR consider asking member countries to do something similar. The meeting also tasks the secretariats to make a list of tasks that could be shared between the two organizations — such as a joint Polar calendar, technical assistance for their Joomla! based websites, conference abstract system management, polar news feeds, etc.

It was also suggested that SCAR and IASC might consider a united approach to potential sponsors and foundations to raise additional funds, particularly for communication and policy related activities.

It was noted that APECS is looking for a host the Secretariat and IASC will also move from AWI at the beginning of 2017. SCAR's agreement for hosting at SPRI expires in August 2016.

#### **Continued Cooperation**

The IASC Executive Secretary and the SCAR Executive Director were asked to update the SCAR/IASC MoU and to circulate. The MoU will be presented to IASC Council meeting at ASSW 2016 and later signed in Kuala Lumpur at SCAR Conference.

#### Annex 1. Agenda

#### SCAR/IASC Arctic and Antarctic Think Tank 24-25 February 2016 Potsdam, Germany

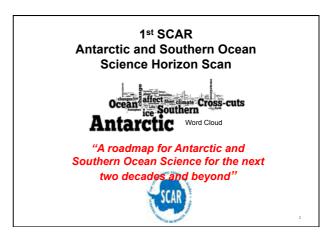
#### Wednesday, 24 February

13:00	Lunch			
14:00 – 14:15	Welcome and Introductions			
	- Jerónimo López-Martínez and Susan Barr			
14:15 – 14:20	Logistics and Housekeeping			
	- Volker Rachold			
14:20 - 14:50	Update on SCAR Horizon Scan			
	- Chuck Kennicutt			
14:50 – 15:20	Update on ICARP III			
	- Volker Rachold			
15:20 – 16:00	Discussion on overlapping ideas and plans for combining results			
16:00 – 16:30	Coffee break			
16:30 – 17:00	SCAR and IASC Reviews – synergies and discussion			
	- Jenny Baeseman			
17:00 – 17:10	International Polar Partnership Update			
	- Volker Rachold			
17:10 – 17:30	Discussion on International Polar Partnership – Is it needed?			
19:00 –	Dinner			

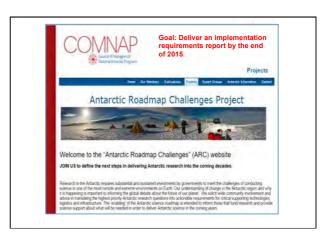
#### **Thursday, 25 February**

09:00 - 09:15	Proporations for POLAD 2019			
09.00 - 09.15	Preparations for POLAR 2018 - Martin Schneebeli			
00.45 40.00				
09:15 – 10:30	Discussion on conference format, chairs, goals			
10:30 – 10:45	Coffee Break			
10:45 – 11:00	SCAR Policy Activities			
	- Jenny Baeseman			
11:00 – 11:15	IASC Policy Activities			
	- Volker Rachold			
11:15 – 12:00	Discussion on potential joint policy related activities			
12:00 – 12:30	ICSU Update: Future Earth and other plans			
	- Lucilla Spini			
12:30 - 13:00	Discussion on ICSU Polar Activities			
13:00 - 14:00	Lunch			
14:00 – 15:30	IPY Legacies, Outcomes from BiPAG and Joint Science Activities			
	- Discussion lead by Volker Rachold and Jenny Baeseman			
15:30 - 15:40	SCAR Communication, Outreach, Education and Fellowships			
	- Karin Lochte			
15:40 – 15:50	IASC Communication, Outreach, Education and Fellowships			
	- Larry Hinzman			
15:50 - 16:50	Joint Communication and Outreach Activities Discussion			
16:50 – 17:00	SCAR Secretariat Plans			
	- Jenny Baeseman			
17:00 – 17:10	IASC Secretariat Plans			
	- Volker Rachold			
17:10 – 17:45	Joint Secretariat Function Discussion			
17:45 - 18:15	Any other business / ideas			
18:15 – 18:30	Resulting Action Items			
18:30	Closure of Meeting			
19:30 –	Dinner on your own			
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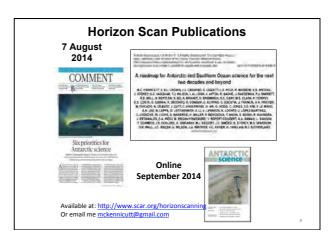




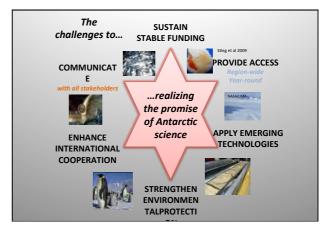


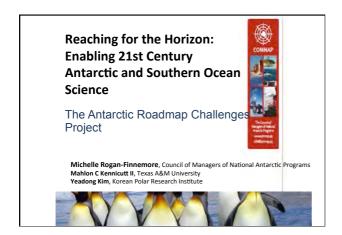














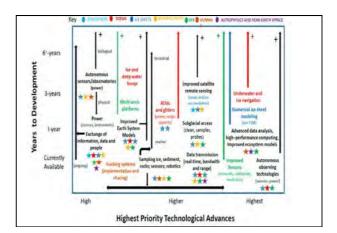
#### Cross-cutting Technology

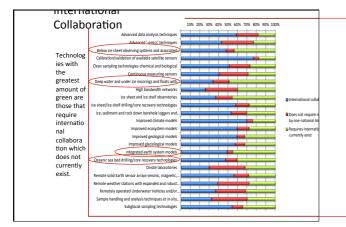
#### Priorities Improved bandwidth

HP Computing ('big data'; improved Earth system



- · Autonomous technologies (tracking, calibration, interoperability)
- Remote deployment/sensing (UAVs, manned aircraft, AUVs, satellite)
  - Payloads Sensors & Systems Coupled with ground-truthing
- · Low power consumption technologies coupled with renewable energy technologies with low/no emissions and operability unattended for 1-2 year periods (continent- and ocean-wide)
- Improved energy generation/storage technologies







#### Horizon Scan Cluster-specific Cluster 2: Southern Ocean and Sea Ice in a Warming World Requirements

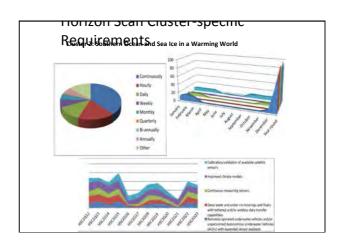
Increased <u>access</u> to the **deep sea and near-shore**, coastal Antarctica > Access to environments and **regions beyond the reach of current** 

- **Antarctic stations** can be provided **by remote** observation technologies, **unmanned** observatories and **mobile** research
- > High priority areas: sub-Antarctic islands, the Amundsen Sea, the western sector of Weddell Sea, Bellingshausen Sea, Eastern Ross

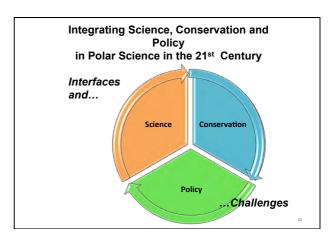
- Infrastructure and logistics were deemed highest priority:
   Continuity, coordination, and year-round access to research capable ice-breaker(s).
- Placement of ocean and sea ice observatories
- Data infrastructure (data sharing and data management systems).

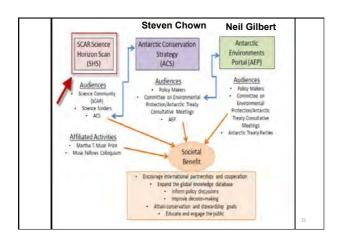
   Underwater docking ports to support AUVs, UAVs, gliders, and mooringsgreater automation.

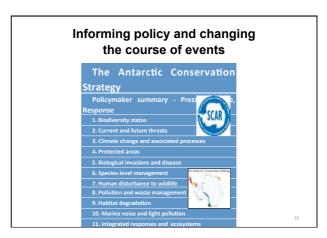
   Interoperable underwater docking ports should be explored. Such docking
- stations must be capable of data collection and transmission and the



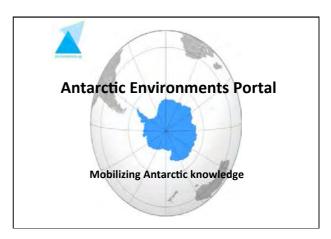




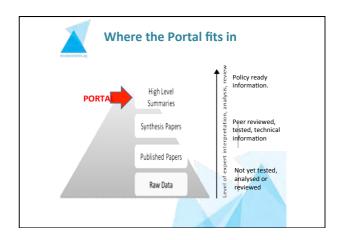














#### **Intended Outcomes**

- Informed management and governance
- Enhanced basis for addressing priority issues
- · Enhanced decision making
- Application of modern conservation and management approaches
- A sustainable Antarctica and Antarctic Treaty System











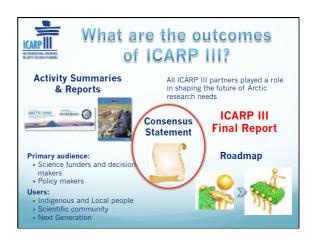


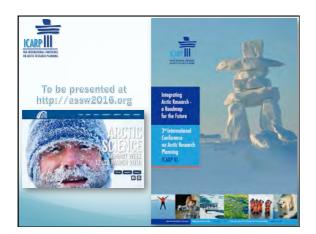


















#### Annex 3. Terms of Reference for SCAR/IASC Polar Task Force

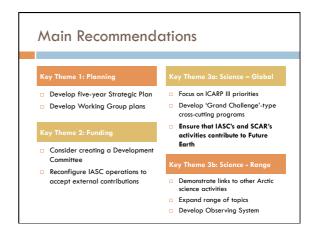
"Common Cause in the Pursuit of the Promise of Polar Science"

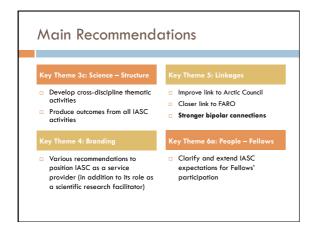
Create a Polar Task Force for a few strategic thinkers and doers with the following objectives:

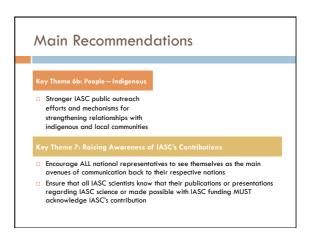
- identify top 5 (most societally relevant) impacts of the changing polar regions (small number, need to be selective can't do everything) (need overarching criteria on how to identify them, where do we make the biggest progress/biggest impact, short term and long term thinking)
- · identify what the big limitations are for answering those questions/understanding
- · identify what is needed to address those limitations
- what would be the result(s) if it happened
- plan what to do with this information
  - o who do we share it with (specific people/organizations)
  - o how do we package it
  - o what is needed to 'market' it
  - o who will do what, by when, how will 'success' be evaluated

It was agreed that Chuck Kennicutt would chair this group and that participations would be decided on by both the SCAR and IASC Executive Committees.

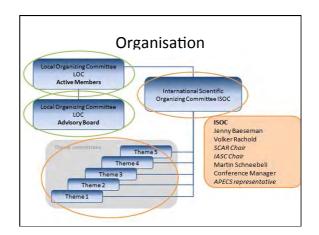












#### Simple Program

- 15 18 June 2018 SCAR and IASC/ASSW Business & Satellite Meetings (full conf. center)
- 19 23 June 2018 SCAR/IASC Open Science Conference (partial CC)
- 25 27 June 2018 SCAR Delegates Meeting (partial CC)

#### **Current status**

- Conference Center booked
- LOC is complete (Chair: Prof. Michael Lehning)
- · Advisory LOC is complete
- ISOC must be defined (Martin Schneebeli is link between LOC and ISOC
- An ISOC meeting should be scheduled in June 2016.

#### Registration fees

• comparable to SCAR-OSC 2016

Category	Fee	Details	assumed % of total registrations
Early bird	CHF 550	1 January - 31 March 2018	55
Regular	CHF 630	1 April - 25 May 2018	15
Student	CHF 330	enrolled at a tertiary educational institution, with valid ID	20
Late/on-site rate	CHF 730	26 May until on-site	5
Day-pass	CHF 280	on-site only	5
Accompanying person	CHF 120	Gives access to conference dinner (does not count for budget)	













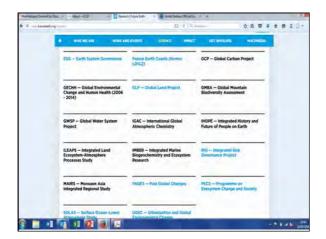


# Overview Introduction to ICSU Update on Interdisciplinary Bodies (e.g., Future Earth) Science-for-Policy: SDGs/GSDR Partnerships (Science International series) Planning ... ICSU Strategic Plan III & more























Annex 7. Meeting Participants

First Name	Last Name	Email Address	Role
Jerónimo	López- Martínez	jeronimo.lopez@uam.es	SCAR ExCom
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Heike	Midleja	Heike.Midleja@iasc.info	IASC Secretariat
Josefine	Lenz	josefine.lenz@awi.de	IASC Fellow
Martin	Schneebeli	schneebeli@slf.ch	Chair of LOC for POLAR 2018
Chuck	Kennicutt	mckennicutt@gmail.com	Chair of Horizon Scan / COMNAP rep to this meeting
Ruth	Vingerhagen	ruth.hindshaw@gmail.com	APECS President
Lucilla	Spini	lucilla.spini@icsu.org	ICSU

Note: FARO and Future Earth were also invited, but declined.