

1. Welcome and Introduction

1.1 Welcome

Urban introduced SCAR and SCOR and connections to SOOS. Then invited introductions from all Scientific Steering Committee (SSC) members.

Participants:

Stephen Ackley, Daniel Costa, Kim Finney, John Gunn, Jiping Liu, Mauricio Mata, Oscar Schofield, Bronte Tilbrook, Anna Wahlin, Tosca Ballerini, Andrew Constable, Ed Urban, Albert Fischer, Louise Newman

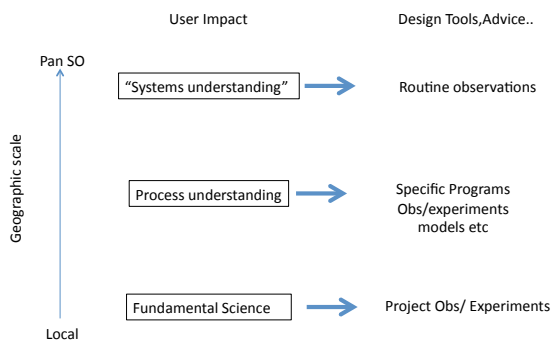
Regrets:

Angelika Brandt, Michael Meredith, Alberto Naviera Garabato, Mike Sparrow, Sebastiaan Swart, Steve Rintoul.

1.2 The role of the SOOS

The SSC discussed at length what they felt the requirements and key deliverables of a SOOS would be for the relevant scientific communities and programmes. Key points noted were the need for observations during the winter, under ice, and of sea ice thickness, data availability, and validation and calibration of data. The SSC agreed that the major gaps in observations needed to be identified to then enable clarification of how to best to progress.

Discussions then moved to cover the Framework of Ocean Obs of “levels of readiness” that must be achieved before components (e.g., ocean variables, observation platforms) can become part of a system (see diagram below). It was highlighted that there are many components of a SOOS that need to go through these steps of development and trial before they are ready to become part of a running system (particularly within the biological realm). The SSC agreed that this process is a useful one for communities to undertake, to identify “readiness” levels of key components. It was suggested that the SOOS should look at holding workshops for each of the key SOOS Themes, to identify what needs to be done to get variables and platforms from the concept stage, to the mature stage.



The SSC also briefly discussed what definition the SOOS would use for the northerly boundary of the Southern Ocean. It was agreed that, at least initially, this would not be strictly defined, due to the interconnectedness of many parameters. It was also agreed that at the southerly boundary, ice shelves would be included in the definition of the Southern Ocean.

1.3 The SOOS mission

The SSC then discussed the definition of the SOOS mission, highlighting the following points:

- 1) Advocate for an observing system
- 2) Identify gaps in collecting Southern Ocean data and work out how to fill them
- 3) Ensure data is available and discoverable (including access to existing resources and the development of new services where gaps are identified).
- 5) Develop observing standards – e.g., for equipment
- 6) Establish a set of baseline requirements for a sustained observing system

The SSC then discussed the 6 Scientific Challenges identified in the SOOS Science Strategy, and outlined the status of the science behind each. The important role of already active communities and programmes was highlighted, and the SSC all agreed that the SOOS should not duplicate effort but rather support and enhance those efforts already underway. The SSC decided that a number of thematic sub-committee would be developed from within the SSC, to help drive the science challenges forward.

The operating role of the SSC was then discussed. Members outlined the role they believed they would play during their membership, which included representing national and thematic communities, advocating for SOOS nationally, regionally and internationally, communicating SOOS to potential funding bodies (e.g., NSF, NOAA, EU Research Committee) and, where appropriate, governments.

The committee briefly discussed the letter on Benthic Observations that was submitted by Marc Eleaume. The SSC highlighted the difficulties of routine, sustained benthic observations that provide quantitative measurements. The need for new technologies in

this discipline was mentioned, as was the importance of benthic observations in addressing, for example, fundamental carbon cycle questions. It was suggested that the benthic community needed first to identify what the key questions are in benthic research, with sampling design structured around addressing these questions. Key issues, such as scale were also discussed.

The SSC then moved to discuss ecosystem observations in general, where it was agreed that much work was needed to get community consensus on the key questions and the essential variables required to address them. Modelling was highlighted as a key tool in informing this process. It was agreed that the SOOS would submit an application for a SCOR Working Group to address the issue of identifying key biological variables, and developing a biological observing strategy. Given the global nature of the issue, it was agreed that the Working Group would not be regionally restricted to the Southern Ocean, but would develop a general ocean strategy, through collaboration and the involvement of GOOS and other international communities.

Action: Constable, Costa and Schofield to develop proposal for SCOR Working Group

1.4 1-year Committee goals

Members discussed steps to be taken in the first year of the SOOS towards achieving the goals outlined in the SOOS Strategy. It was agreed that the committee would try to introduce the use of the Framework's "levels of readiness" concept into their communities.

Working within this Framework concept, the committee summarised the status of key communities (see Table 1).

Decision: SSC and SOOS governance documents approved with minor modification

Action – IPO to develop a mind map of the SOOS science plan and include existing programs/projects and where they contribute

Action – EXCOM to develop a set of objectives for SSC members to take to respective communities – including completion of EOVS table

Action – Mata to inform Swart and Bhaskar of Brazil/India/S. African Tri-lateral agreement

Action – SOOS EXCOM to write letter to key national representatives (from institutes, governments, funding agencies) about the SOOS

2. Programmatic, National and Disciplinary Links

2.1 Identification of key research programmes and communities

National contacts

The SSC discussed the merits of selecting designated national contacts for the SOOS. A number of members highlighted the potential importance of national representatives in reaching specific communities, particularly those that traditionally have different communication cultures. It was suggested that national representatives from the Antarctic Treaty committee could be an option but it was recognised that this may result in an intergovernmental network.

Decision: The SCAR/SCOR network of national representatives will be used for SOOS communication, with the note that a specific SOOS national network may be developed at a later date, as required.

Action: SCAR and SCOR to provide IPO with list of national representatives network

Key Communities

The SSC looked over the listed programmes.

Action: SSC to send IPO updates/changes on the programme list

2.2 Global Ocean Observing System (GOOS):

Fischer provided an overview of the Framework for Ocean Observations and updated the SSC on changes to the GOOS structure. He also commented on the similarities and differences between SOOS and GOOS Regional Alliances (GRAs), the need for SOOS requirements to be aligned with and feed into a global GOOS, and that SOOS is different to other GRAs, in that it has a predominantly oceanic focus and is based on global requirements.

The committee then discussed the relationship between SOOS and GOOS. It was agreed that the SOOS was likely to get stronger intergovernmental support by connecting with the Antarctic Treaty system, rather than becoming a GOOS Regional Alliance. The importance of linking with COMNAP representatives to ensure awareness of SOOS within the Treaty was also highlighted.

Decision: SOOS to remain independent of GOOS, but with close communication and connections to ensure directions remain aligned.

2.3 Association of Polar Early Career Scientists (APECS): <http://www.apecs.is/>

Ballerini (APECS ex-officio) informed the SSC of APECS communication and outreach activities, and highlighted potential ways to increase the involvement of early career researchers in the SOOS.

2.4 Indo Pacific Oceanography Reference Group (IPORG)

Newman outlined the proposal for SOOS to be involved in IPORG. The overall feeling of the committee was that little benefit was likely to be achieved through introduction of another level of organisation and coordination, and that many of the communities involved are not directly relevant to the SOOS. It was highlighted that the southern Indian Ocean was a particularly under-represented region in observations so connections to the IOGOOS could be beneficial. Given the limited capacity and resources of the IPO, the SSC recommended that the IPO make initial connections with the community, and maintain an overview of their activities, but that a lot of time and effort should not be directed towards this initiative

Action: IPO to attend initial IPORG meeting to make connections with relevant communities and gauge benefits to SOOS of further involvement

2.5 Atmospheric Circulation Reconstructions over the Earth (ACRE) Initiative:

Newman outlined the proposal for SOOS involvement in a Southern Ocean ACRE working group. The SSC agreed that this was an important initiative but that it was focussed on an area of relatively low priority for the SOOS. Given the limited capacity of the IPO it was agreed that support this initiative on a surficial level.

Decision: SOOS will not take a lead role in developing a SO ACRE working group

Action: IPO to notify Rob Allen of SSC decision

2.6 World Meteorological Organization Panel of Experts on Polar Observations, Research and Services (WMO EC-PORS):

Newman updated the SSC on the WMO EC-PORS group.

2.7 Partnership for Observations of the Global Oceans (POGO):

Urban informed the SSC on the support that POGO has given to the SOOS and highlighted the POGO Cruise database. Fischer informed all that NSF had funded a two-year position, whose role it will be to maintain this database.

2.8 Australia's Integrated Marine Observing System (IMOS):

Newman gave an overview on IMOS Southern Ocean activities and highlighted the support that IMOS has given to the IPO and SOOS in general. Newman also drew attention to the IMOS e-marine Information Infrastructure facilities.

3. Data Management

Finney presented the SSC with the proposed SOOS Data Management (DM) strategy, and highlighted common mistakes that projects make and how these often lead to failure of DM goals. She emphasised the need to provide guidance to researchers and groups on SOOS expectations for DM, and indicated that this needs to be done at an early stage of

implementation, before projects and programmes become endorsed by SOOS, so they can build the required standards into the project outputs from the start. Finney also suggested that SOOS needs to define a way to police or monitor the delivery of promised data products.

Finney then outlined the proposed TOR, membership and workplan for the DM Sub-Committee (DMSC) and suggested that each scientific community represented by the SOOS should have DM representatives in the DMSC. Steering Committee members suggested adding representatives from the National Snow and Ice Data Center and a national representative from China.

Decision: SSC approved the DMSC TOR and workplan

Action: SSC to send any suggestions for membership of the DMSC to Finney

Action: Finney and Newman to invite nominated DMSC members to participate and organise the first DMSC meeting

4. Communication Strategy

Newman summarised the structure and details of the proposed communications plan. The SSC discussed their preferred method of communication with the IPO. The SSC then discussed the development of a SSC secure section of the SOOS website with facilities for: the exchange and posting of documents, a discussion forum, sharing of unpublished data and products, and email lists for various key communities.

Other suggestions included solicitation of photos from the SSC, development of a generic SOOS slide pack and poster, and production of publications announcing the SOOS to e.g., Oceanography, EOS. The SSC then considered whether a SOOS newsletter was needed. It was agreed that this is not currently required, but that the idea should be re-visited at a later date.

Newman then showed the SSC the design and structure of the SOOS website that is being developed. Members were asked to comment on the website.

Decision: Draft Communication Strategy approved

Decision: SOOS not to develop a newsletter until the need arises

Action – SSC to send photos to IPO

Action – Newman to initiate production of publications

Action – SSC members to send IPO their thoughts on the key services/facilities they want from the website

5. Project and IPO Funding

5.1 IPO Funding

The SSC considered options for securing funding for the SOOS IPO. Suggestions included announcing an international call for interest to support IPO (e.g., through ATCM), national subscriptions, and approaching specific national funding agencies (e.g., NSF). It was agreed that a letter should be written not only announcing the SOOS, but also inviting interest to fund the IPO. This letter, in many cases, should be sent to the head of scientific or Antarctic agencies but SSC members highlighted that, in some countries, such requests are best approached through science ministries, rather than Antarctic Institutes. It was also suggested that a 5-year plan for field initiatives and required funding should be drafted, which would outline project cruise lines and deployments, and would enable SOOS to then “shop around” to identify funding avenues for specific activities.

Action – Schofield to initiate discussions with US NSF

Action – Wahlin to initiate discussions with SCAR/Norway

Action – EXCOM to draft a list of people to send letter to for SSC comment. Following this, EXCOM to draft a letter announcing the SOOS and inviting interest in funding of the SOOS IPO

Urban informed the SSC that although SCOR funding of SOOS SSC meetings cannot be guaranteed, it is relatively secure.

5.2 Funding of Scientific Activities

The SSC then considered funding options for scientific activities. Suggestions of topics for a EU FP7 bid were put forward and it was agreed that this avenue should be progressed. The potential of funding through Foundations was also discussed. The Moore Foundation was suggested as a potential source of support, and it was agreed that contact should be initiated, and that a representative should be invited to a key meeting (e.g., Sentinel). NOAA was highlighted as a potential funding source for long-term funding of data activities.

Action – EXCOM to draft an FP7 project outline for discussion by SSC

Action – Gunn to write to Jesse Ausubel to inform of SSC meeting

Action – Invite Moore Foundation to Sentinel meeting

Action – The SSC to produce a scoping large-scale white paper on vision of the SOOS to be available as soon as possible

5.3 Budget Overview 2011/2012

Decision: 2011/2012 budget approved

6. Endorsement Policy

6.1 SOOS Endorsement of individual research projects and research programmes

The SSC considered the pros and cons of SOOS endorsement of other projects and programmes. It was agreed that SOOS endorsement could be important to help leverage funding for national and international projects but that it could potentially be a lot of work for the SSC to review proposals. The criteria for endorsement and the Request for Endorsement Form were also discussed, and it was agreed that the endorsement letter should state that the full research proposal had not been reviewed but that the project outline fits within SOOS objectives. The SSC decided that there would be two levels of endorsement – that for individual research projects, and another for large, programmatic or coordination activities.

Action – SSC to send comments on the Endorsement application form to IPO

6.2 Endorsement of the SOOS

Not discussed

7. Upcoming SOOS activities and IPO plans

The SSC discussed upcoming meetings and the potential for SOOS outreach.

Action: SSC to send a list of meetings they will attend up until the next SSC meeting (May 2013) to IPO

8. Timing of the next SSC Meeting

Two suggestions were put forward for the location of the next SSC meeting 1) The Gordon Research Conference on Polar and Marine connections (California, March 2012), and 2) China. The SSC agreed to hold the meeting in China and it was suggested that a regional SOOS workshop be held alongside the SSC meeting, which would highlight Asian activities in the Southern Ocean and encourage discussions on further involvement of Asian countries in SOOS activities. It was also suggested that the IPO take a poll for the timing of the SSC meeting, to ensure maximum attendance.

Decision: The second SSC meeting will be held in China in 2013

Action: IPO to take a poll of the SSC to determine the timing of the next SSC meeting, and to liaise with Liu in organising the meeting and workshop