



SOOS

SOUTHERN OCEAN
OBSERVING SYSTEM

**5th SCIENTIFIC STEERING COMMITTEE
MEETING**

MINUTES

12-14 May 2016, San Diego, USA

Participants

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SOOS Scientific Steering Committee 2016 Meeting Minutes

SESSION 1 – INTRODUCTORY REMARKS

Welcome and Introductions

The Chairs welcomed all participants and thanked sponsors and hosts. The Chairs highlighted the key objectives of the meeting, including an overview of core activities and achievements since the 2015 SSC meeting.

SESSION 2 – IMPLEMENTATION PLAN REVIEW

SCAR/SCOR Review of Implementation Plan

SCOR Executive Director, Ed Urban, presented the background and summary of the SCAR/SCOR Review of SOOS progress and new 5-Year Implementation Plan.

The SSC discussed the summary statements and specific reviewer comments. Discussions included:

- Consideration of the suggestion to hold a SOOS Open Science Conference every 3 – 5 years, taking into account key community meetings that could be held concurrently.
- The need for the vision of SOOS to remain ambitious, while maintaining compelling, short-term implementation goals towards the vision.
- The need to clarify the role that the Working Groups and broader community will play in driving the implementation of SOOS
- Modifications to the objectives and Key Result Areas to streamline efforts
- A stronger connection to the Southern Ocean modelling community
- Partnership organizational structure and schematic

Action 1 – Development of a Models Task Team to drive community input into white paper on modelling requirements for feeding into EOVS development and statements on how EOVS meet the criteria for selection.

Action 2 - SSC to send specific comments on the review to Louise by 25 May, Louise to draft response and submit to SCAR/SCOR by 10 June.

SESSION 3 – IMPLEMENTING OBJECTIVE 1: DESIGN OF THE OBSERVING SYSTEM

Status, Recent Activities and the way forward

Objective 1: Facilitate the design of a comprehensive and multi-disciplinary observing system for the Southern Ocean

The Chairs updated the SSC on recent activities that contribute to Objective 1, including the efforts of the eEOV Working Group in publishing a key paper (Constable et al., 2016).

The SSC were also introduced to an EOv matrix table that was developed by EXCOM as a mechanism to better report on the status of an EOv, and to identify gaps or issues in development of an EOv towards maturity. The SSC agreed on the utility of such a table and suggested:

- A traffic-light system to indicate progress towards establishment of an EOv
- Structure of table must be able to include subtleties in EOv requirements, such as varying accuracies depending on the question
- Dividing the table into two – one about EOv progress and status (which is defined by finite activities and products) and the other about implementation (which is an ongoing effort, and will also need to be regionally specific)

The SSC then discussed how to best communicate EOv requirements to stakeholders, including a discussion on the best way to connect to the GOOS EOv effort. The SSC discussed the GOOS Specification Templates and made the following statements:

- It is important not to duplicate effort
- We need to identify how to produce a supplement to the GOOS Specification templates that shows if/when our requirements are different to GOOS statements, to ensure it is clear that we haven't duplicated, and that at a minimum, if they meet SOOS standards then they will also meet GOOS standards. The SOOS Supplement might just be a statement that the GOOS requirements also meet our needs.
- For SOOS EOvs not identified by GOOS, SOOS should use a similar template
- The GOOS Specification Sheet and SOOS Supplement should be kept as separate documents and should both be available from the SOOS website (or linked to GOOS website)

The SSC then discussed the next step forward. It was agreed:

- The following communities are key to have involved in discussions on EOv requirements:
 - o Sea Ice - ASPeCt
 - o Fluxes - SOFLUX
 - o Physical variables – CLIVAR-CliC-SCAR Southern Ocean Regional Panel
 - o Ocean-Ice shelf – FRISP
 - o Biogeochemistry – GO-SHIP, SOCCOM, BEPSII (sea-ice biogeochem)
- SOOS should approach key Southern Ocean communities and find out a) whether they are aware of the Specification Sheets, b) whether they already have a process in place for identification of EOvs (e.g., are our interests already covered?), and c) what in the GOOS Specification sheets would need to be modified for the purpose of SOOS (if anything)
- The need to remain focussed on phenomena rather than platforms
- The need to ensure that biophysical variables are covered and do not fall in the gap between the biogeochemical and biological communities

The SSC then discussed the need to feed EOv information into the Regional Working Groups to initiate actions towards establishment of the observing system (focused on phenomena) in a region. It was agreed that the West Antarctic Peninsula region is the most advanced and could act as a test-case to help direct focus and efforts of the less well-developed regions (*although it was also noted in hindsight that the WAP has several well-developed long-term observing systems that may be less flexible in their ability to take up SOOS recommendations, and that other regions with some infrastructure but less well-organised observing programs could be the best place to drive initial implementation of the observing system – e.g., Ross Sea*). The SSC agreed that SOOS should provide effort to fast-track WAP WG and facilitate their efforts.

It was agreed that SOOS required a clearer statement on the phenomena that each RWG would be trying to address with the regional observing system, how it is currently being achieved (EOvs), and

whether documented standards exist. The SSC also need to clarify what it is that we expect from RWGs, and what our measures of success of regional programs will be.

It was also agreed by the SSC that a core deliverable of the RWGs is to ensure that the science being done is made available to the broader community e.g., to underpin MPA proposal documentation.

Action 3 – IPO to work with EXCOM to finalise structure of matrix table and get SSC approval

Action 4 – IPO to contact key groups that were involved in identifying the Candidate EOVs for SOOS and get them to fill in the traffic lights of progress and then send to regional working groups to fill in the approximate coverage of each.

Action 5 – IPO to contact key communities to begin review of GOOS specification sheets for SOOS needs

Action 6 – Communicate to RWG the requirement for statements on phenomena that sustained observations will address and to use Specification Sheets to indicate how that will be achieved.

SESSION 4 – IMPLEMENTING OBJECTIVE 2: CAPABILITIES

No longer relevant following change to the 5-Year Strategic Plan and inclusion of this objective in other discussions.

SESSION 5 – IMPLEMENTING OBJECTIVE 5: DATA ACTIVITIES AND REQUIREMENTS

Status and way forward

JOINT SESSION OF THE SSC AND DMSC

SOOS Data Management Sub-Committee (DMSC) Co-Chair, Steve Diggs, provided the SSC with an update on recent DMSC activities, including efforts to enhance the SOOS NASA GCMD metadata portal; efforts to pull together international mooring data; and connection to SCADM.

The DMSC highlighted the need to include a requirement of endorsed projects to submit project data to the field project portal once it is developed.

The DMSC then posed the question to the SSC “what are your big data issues?”

The SSC highlighted the frustration with trying to merge different datasets that had been collected in different formats, and to jointly analyse them. It was highlighted that there may be datasets available that are easy to discover and that interoperability can be tackled, e.g., marry model outputs with observations of ocean acidification. The SSC agreed that resourcing the SOOS data effort continues to be a limitation to what can be achieved and that discoverability is the first step. It was suggested that the SSC should define some “big-ticket” requirements that could be included in the vision for the data objective of SOOS. The DMSC and SSC could jointly prepare prospectus for each requirement, highlighting the strategy, specifications and resources required to achieve them.

It was also proposed that SOOS should write a statement of support for data curation efforts that may be under threat of funding cuts e.g., CDIAC.

The SSC also highlighted the need to communicate data achievements e.g., new products or data streams, through the newsletter and other SOOS channels. Voyage coordination information could also be announced through the newsletter. The DMSC summarised that the ability to communicate between different communities about field activities is a priority, such as the Field Project database, ice edge product and data ingestion. It was also highlighted that ASPeCt community has access to ship tracks with sea ice thickness data on a map that could be put on the SOOS website

The SSC also raised the important issue of measuring progress. The DMSC will need to identify what the metrics are to show what is available and how SOOS has impacted this.

The SSC suggested that SOOS could provide a “SOOS Toolbox” on the website, that would include data ingestion tools, such as code to suck data up in one format and push it into software. The SSC suggested the DMSC develop a “Data Flow” schematic for the website, that would describe the flow of data from the field to the user and identify what role SOOS will play in each of the steps (Field activity – data repository – metadata record – portal to manage links from meta to data – facility to merge data – post processing toolbox to deliver products – method for delivering products (visualisations). The schematic should also highlight external communities currently working on aspects of the flow, and how SOOS will connect to their efforts.

Action 7 – IPO to update Endorsement requirement to include submission of project data to the SOOS Field Project database once it is operational

Action 8 – IPO to scope out plans for Vision document for objective 5, including prospectus for key requirements

Action 9 – EXCOM to consider SOOS’ role in making statements of support for important data curation efforts

Action 10 – Steve Ackley to work with Petra Heil to provide IPO with ship track and sea-ice thickness maps

The DMSC and SSC then formed a number of small breakout groups:

Mooring data discussion:

- Need to get all mooring datasets into one or two repositories
- Want access to raw data with metadata, as well as QC’ed data
- Filled in several gaps in the spreadsheet of mooring data, in terms of ownership
- This discussion perhaps provides the scientific impetus to OceanSites to change their policies

Action 11 – IPO and DMSC to investigate options for curating mooring datasets and improving their discoverability

Animal data discussion:

- Desire for a site that allows scientists to download subsets of location and parameters that are defined for an individual project (perhaps tools from Lamont Doherty and IMOS could be

expanded)

Action 12 – DMSC to investigate options for improving databases for data sharing

Data science discussion:

- We need discovery and data ingestion tools
- A single website that shows a geographic area, time slice, and variables. Do not want to follow up to other sites that use different data formats, so want a way to read all of these data easily
- From SOOS, would like to have a popup window on the metadata portal to show what tools are needed to read a given dataset

Action 13 – IPO and DMSC to investigate options for improving data sharing tools.

Action 14 – IPO + Mike Williams to develop a list of common data formats and the tools available to read those formats

Sea Ice discussion:

- NSIDC will develop a monthly average of the ice edge from the NIC's marginal ice product

Action 15 – Florence Fetterer to advise SOOS when the monthly average product is publicly available

SESSION 6 – IMPLEMENTING OBJECTIVE 3: FACILITATING OBSERVATIONS

No longer relevant following changes to 5-Year Strategic Plan and inclusion of this objective in other discussions.

SESSION 7 – IMPLEMENTING OBJECTIVE 4: REGIONAL IMPLEMENTATION

Objective 4: Unify and enhance current observation efforts and leverage further resources across disciplines, and between nations and programmes

The convenors provided an overview of the implementation groups for SOOS and asked whether the general Terms of Reference (TORs) for regional working groups (RWGs), developed from the 2015 SSC meeting, are still appropriate. The following suggestions were made:

- TOR 2 - It should be clear that sampling techniques and protocols will be common across regions and do not need to be specified by each unless unique regional requirements
- Key effort of the RWGs is to take stock of what exists and identify and prioritise gaps. They need to address the question “what is the most important set of missing data and how do we go about addressing this? What will be the most important in next 5 years?”
- Important for RWGs to establish close connection with capability working groups (CWGs) where appropriate
- WGs need to report to the SSC against their TORs
- RWG TORs need to highlight requirements of WG Chairs, SSC liaisons and expected terms of each.

Action 16 – IPO to modify TORs as discussed for EXCOM approval

Action 17 – IPO to notify all WGs of reporting requirements and timeline

With the majority of SOOS implementation now being driven by WGs, the SSC discussed the need to ensure that the activities of SOOS, current and projected, as well as the leverage it is achieving in the field and other resources, is well reported. To achieve this, EXCOM proposed to develop templates for standardising and then reporting on the following:

- Strategy from each WG on how they will address their terms of reference.
- GANTT chart for each WG (can show milestones) and add to overall SOOS plan on web page (more info on each WG on webpage)
- Funding strategy for each WG
- Support provided to WGs (meetings, field, data processing etc.)

As development of regional working groups could occur prior to a first meeting, the SSC also proposed a number of development activities to ensure engagement and information collecting prior to the meeting:

- i) develop contact list (help identify community to be involved) (will be useful in a SOOS register as well)
- ii) approach community to where we can go to find out national plans across physics, chemistry, and biology – use online form (stakeholders have indicated this is an urgent need)
- iii) assessment of existing coverage – summarise on maps
- iv) strategies for addressing terms of reference

Action 18 – IPO to draft a reporting template for WGs and coordinate development activities with existing RWGs

Regional Working Groups – Update

- West Antarctic Peninsula (<http://soos.aq/activities/regional-wg/wap>)

The SSC discussed the planned workshop for the WAP WG. It was agreed that the Royal Society of London funding for the workshop was a fantastic step forward in bringing some parts of the community together. The very specific and scientific focus (biogeochemistry) and relatively limited national representation at the workshop was also discussed, and it was agreed that this workshop will not likely address the key issues that SOOS needs for this working group, but will be a step in introducing the working group concept to some of the community. The SSC recommends that a second workshop be planned, that would include a broader community (invitations to all nations working in WAP), and would start to address the *Terms of References* of the working group.

The SSC reiterated the importance of the WAP as a test-case for the RWGs because it can make some very tangible progress against the SOOS objectives, but that the SSC needs to ensure that it is as inclusive as possible and that we do not miss the opportunity that this group represents. The SSC agreed that identifying another co-chair to broaden the national representation, connect with new WAP communities, and to help spread the workload, would be an important recommendation to make to the current WAP co-chairs.

Given the importance of the WAP as a test-case for RWGs, the SSC agreed to provide support to the WAP WG Co-Chairs and will develop the following:

- A contact list of key people/communities to invite to participate in the WG
- A survey to initiate community input and engagement on questions like “what observational activities are you already doing?” “What would you like to be doing?”

The WAP Co-Chairs can then use this information to build a regional view and start discussions around addressing the TORs of the WG.

Action 19 – EXCOM to communicate to WAP WG Co-Chairs on the importance of the WAP WG as a test case; the need for an additional strategically focussed workshop; the recommendation of an additional co-chair from South America; the proposed process of initiating enthusiasm through a contact list and survey

- Southern Ocean Indian Sector (<http://soos.aq/activities/regional-wg/indian-sector>)

Andrew Constable notified the SSC that this WG is not yet active. WG development activities had been planned around a proposed workshop run jointly by the Chinese and Australian Antarctic programs, but the workshop was delayed. More recently, a regional field campaign “Kerguelen-Axis” was achieved through leveraging existing voyages across many nations, and shows proof-of-concept for a coordinated effort in the region. Andrew highlighted that SSC input on potential co-chairs, and having 3 co-chairs running the group, will be a good step forward.

Action 20 – Andrew to solicit SSC input on potential SOIS co-chairs

- Ross Sea

Mike Williams notified the SSC that he would initiate the Ross Sea RWG this year, highlighting funding options for a workshop in NZ, potentially in alignment with other workshops or meetings. Giorgio Budillon indicated his enthusiasm to contribute to the WG efforts, and highlighted an upcoming workshop alongside the CCAMLR meeting in Italy, where Italian Ross Sea efforts would be discussed.

Action 21 – Mike to work with Giorgio on development of the Ross Sea WG

Capability Working Groups

- Censusing Animal Populations from Space (CAPS) (<http://soos.aq/activities/capability-wgs/caps-wg>)

Dan Costa (CAPS SSC liaison) provided an update on CAPS activities. The SSC highlighted the need to broaden the nationality of WG membership.

Action 22 – Dan Costa to communicate to CAPS the need to increase national representation in the CAPS WG, and the need to provide an annual report to SOOS in April each year, with progress against each of the TORs

- SO-FLUX (<http://soos.aq/activities/capability-wgs/soflux>)

Seb Swart (SO-FLUX SSC Liaison) provided an update on SO-FLUX activities, and requested final approval of the WG by the SSC. The group will push two key areas – defining requirements for flux EOVs/ECVs, and development of a pilot study to address flux issues based around existing flux mooring sites. SO-FLUX will develop 4 task teams to address key activities:

- 1) Defining requirements – paper

- 2) Addressing issues around EOVs –
- 3) Develop pilot study
- 4) Modelling capabilities and remote sensing retrievals to coordinate with in situ work and extend to full Southern Ocean

The SSC agreed that SO-FLUX has made great progress in a relatively short time period. Connections to the sea-ice community and actions on addressing fluxes in the sea-ice zone were highlighted as a gap in the WG. The SSC suggested that SO-FLUX could develop a long-term plan to consider issues in the sea-ice zone, while accepting that it is a big problem, it is also very important and cannot be ignored. BEPSII was highlighted as a potential group to connect to on this front.

The SSC recognised that several TORs were long-term, whilst others could be achieved in a relatively short time period. It was accepted that SO-FLUX may have scope to extend past the defined 5-year term, following a review by SOOS. The SSC suggested that the group include a TOR to review progress at the end of 5 years, and further include a reflection on changes in technology and capabilities over the 5 years to incorporate these enhanced capabilities in future plans.

Action 23 – Seb Swart to communicate to SO-FLUX the SSC final approval of WG, the need to consider sea-ice flux issues in scoping future activities for the WG, and the need to provide an annual report to SOOS in April each year, with progress against each of the TORs

- [eEOV \(http://soos.aq/activities/capability-wgs/eeovs\)](http://soos.aq/activities/capability-wgs/eeovs)

Andrew Constable updated the SSC on eEOV activities, including a new publication, plans for meeting at SCAR, and plans to identify a Co-Chair for the working group.

Action 24 – Andrew Constable to identify 1 or 2 Co-Chairs to help drive the eEOV initiative forward

- [OASIIS \(http://soos.aq/activities/capability-wgs/oasiis\)](http://soos.aq/activities/capability-wgs/oasiis)

Seb Swart updated the SSC on the successful proposal to POGO for an Under Ice working group. The SSC fully support this effort, and stressed the importance of including the ice-shelf community in the working group activities.

Action 25 – IPO to communicate to OASIIS Chair the importance of including the ice-shelf community

Task Team Update

- [Satellite Data Requirements Report \(http://soos.aq/activities/regional-wg/indian-sector\)](http://soos.aq/activities/regional-wg/indian-sector)

Louise Newman updated the SSC on the progress of this report, highlighting some delays but expected publication by August 2016.

- Field Project Database (as per discussion on Day 1 with DMSC)

SESSION 8 – OBJECTIVE 6: SUPPORT ACTIVITIES

Securing Sustained Resources for SOOS

The SSC discussed the growing requirements of the Executive Officer, and highlighted the limited capacity of the Executive Officer to carry out all task required to run the IPO and provide support to SOOS activities. The SSC were asked to consider how best to prioritise IPO tasks. The high level of reporting was noted and it was agreed that, where possible, SOOS would present one annual report that would be sent to all sponsors/stakeholders as required. SCOR Director Ed Urban agreed that SCOR would accept a standardised annual report from SOOS, and the Executive Officer will discuss this option with other sponsors. The SSC also discussed the need for WGs and TT to provide information to the IPO, to reduce the burden of chasing groups for updates. It was agreed that a hard deadline for all WG and TT annual reporting to the IPO should be defined, to feed into standardised annual report.

The SSC also highlighted that efforts to maintain website content should focus on WG activities and communicating ways for people to become involved in SOOS. The SSC also agreed that maps of activities, such as existing moorings, is very important.

Action 26 – Louise to discuss report format with other sponsors to streamline reporting requirements.

Action 27 – IPO to develop a fixed calendar of reporting expectations

The SSC then discussed funding for SOOS, and identified the need for a strategy beyond mid-2018, when existing IPO funding ceases. The SSC agreed that there needs to be more security in the ongoing funding and growth of the IPO. The SSC concurred that non-Australian support for an additional IPO staff to focus on communication activities is critical in support of SOOS growth, and that this person could be located outside of Australia if required.

It was agreed that a Task Team would develop a long-term funding strategy for SOOS. Options would include both national and international funding opportunities. Options for philanthropic funding should also be covered in the strategy. Five SSC members volunteered to form the Funding Task Team. The SSC then discussed potential funding sources from numerous national funding bodies.

Action 28 – Ed and Steve to discuss funding options with NSF

Action 29 – Louise and Ed to initiate Funding Task Team (Ed, Seb, Andrew, Mike W., Matt)

Connecting to International Efforts

- CLIVAR-CliC-SCAR Southern Ocean Region Panel (SORP)

Lynne Talley presented SORP to the SSC and highlighted a number of potential collaborative efforts between SOOS and SORP, including:

- 1) Southern Ocean polar predictability school - joint proposal to CliC
- 2) SOOS Representative on SORP
- 3) OOPC – joint advisory effort on EOVs and ECVs

- 4) National Representatives and national activity reports (SORP requires by June for Sept meeting)
- 5) SORP can provide advice and comments on SOOS documents
- 6) Joint SOOS-SORP sessions and workshops (e.g., Liege, AGU Chapman)

The SSC discussed the need for clarification on the connection between SOOS and SORP and how to better establish the connection whilst minimising efforts of shared members. The development of “official Partners” was proposed and will be further explored by the SOOS EXCOM

Action 30 – SOOS EXCOM to meet with SORP EXCOM to discuss developing relationship

Action 31 – SOOS EXCOM to consider requirements for written agreement of expectations with partners (e.g., SORP)

- Other Programs

The SSC then had a general discussion around how best to define relationships with other programs, highlighting in particular the need for continued communication on activities and products, to avoid duplication of effort. Tailoring the annual report of SOOS so that it provides outreach to the key communities was one suggestion. The relationship between SOOS and GOOS was mentioned, and given the regularity that this question is raised, the SSC suggested developing an official statement on the current relationship, as well as future aspirations. Connection to other groups was then discussed, including IIOE-2 and IQOE (<http://www.iqoe.org/>), ATLANTOS, EU PolarNet, CEP and POGO.

Action 32 – SOOS IPO to draft official statement on relationship with GOOS, for approval by EXCOM

Action 33 – Andrew to send information on cetacean passive acoustics group to Ed for connection with IQOE

Action 34 – IPO to coordinate SOOS comment on POGO strategy

Current Governance, SSC Terms, Requirements

The convenor highlighted the shifting responsibility of the SSC, from a previously implementation role towards a predominantly oversight role, with working groups taking on the responsibility of implementation. In sight of this, the TORs for the SSC likely need updating.

The SSC discussed the most efficient size for the committee, taking into account the cost of the annual meetings, the workload expected of the SSC, and the number of communities that SOOS needs to connect directly to. The SSC agreed that reducing SSC membership and increasing ex-officio members was not a way to combat the issues, as ex-officio status implied reduced commitment to SOOS activities, and therefore less engagement than required. It was agreed that the number on the SSC could be reduced by maybe one or two, but that gender, geographical and expertise balance needs to come first. The need for more involvement of mid-career researchers was also mentioned. It was recommended that the APECS rep be maintained as ex-officio (unfunded) position, and that only one of the DMSC Co-Chairs be funded to attend the SSC meeting.

The SSC also discussed the need for connection between WG chairs and the SSC, suggesting all WG chairs have observer status to the SSC meetings. Similarly, key partner organisations will also have observer status. National representatives will be encouraged to attend SSC meetings to help broaden the regional coverage of the SSC. An official invitation to the national program could be made where there is no existing representation. It was acknowledged that this additional participation would increase the cost of the SSC meetings, and the SSC agreed that charging a small registration fee for observers to cover catering would be appropriate. The EXCOM was tasked with considering how to best fund SSC meetings, taking into account not only attendance but also catering. It was suggested that this needs to be included in the funding strategy being drafted.

Action 35 – SSC to look at TORs for committee and provide feedback on any required changes

Action 36 – EXCOM to consider funding options for SSC meetings

Action 37 – IPO to identify a list of key nations not currently represented by SSC or National Representatives and prepare invitation letters to national programs for SSC meeting participation

2016 SSC Nominations and EXCOM members

The SSC identified the most efficient timing of the upcoming call for nominations, and discussed key gaps in gender, geographic representation and scientific expertise. The off-rotation of 6 members at the end of 2017 was discussed and it was agreed that this is not ideal. The SSC proposed that 3 members be kept on for an additional year and rotate off in 2018, to reduce the impact.

Action 38 – EXCOM to consider 2017 off-rotations and provide SSC with a list of possible solutions for their approval

Action 39 – IPO to release call for nominations in October

Action 40 – EXCOM to determine best process for identification of new EXCOM members and feedback to SSC for discussion

SESSION 9 – OBJECTIVE 9: SUPPORT ACTIVITIES...CONTINUED

Mapping/Communicating progress and needs

- End Users

The SSC discussed the questions “Who is going to use SOOS, and what would they use?”, “Who are our key end users?”. It was agreed that SOOS should have a document on end-users that identifies how to build and use relationships, and how to develop a concrete expectation between partners.

Action 41 – Andrew and Mike W to take lead on end-user document

Action 42 – IPO to circulate list of partners (including SO Drifter Buoy program)

- Engagement with partners at SSC meetings

The SSC considered how it might develop greater engagement with partners, observers and working groups with better integration across all efforts. They discussed the idea of an open science conference at 3-5 year intervals as an important opportunity for bringing the community together. EXCOM asked the SSC to consider that each year, all WGs need to provide a basic report of metrics against the TORs in a standard format. In addition to this, a two-year cycle of reporting and meetings with the following format:

- 1) Year 1 in cycle – An extended meeting of the SSC to provide an opportunity for all WGs and partners to attend, present on their activities and have discussions about progressing SOOS. The Annual Report of SOOS will be based on the metrics provided in the WG reports and a report from the SSC.
- 2) Year 2 of cycle – The Annual Report of SOOS will be based on the metrics provided in the WG reports, a report from the SSC, and a more detailed summary of activities and results from each WG

EXCOM proposed the extended annual meeting of the SSC could look like the following:

- 1) 1-day Science meeting (update from WG co-chairs, partners, national reps)
- 2) 1-day joint meeting of SSC-DMSC (+ WG co-chairs if they wish)
- 3) (a suggestion to increase interaction is to have a half day excursion)
- 4) 2 day SSC meeting (+ WG co-chairs if they wish) and, in parallel, 2-day DMSC meeting

- Newsletter for engagement

The SSC then discussed the utility of the SOOS newsletter in its current form. It was agreed that the 4 issues per year should be reduced to 3, to reduce IPO workload. The SSC suggested newsletter topics could be structured around WG topics (both RWGs and CWGs). Using this structure would enable greater input by researchers and help for IPO in developing it. The SSC suggested a structure of content focused on: RWGs, reports from recent meetings, other news, calendar.

- Reporting our Progress

The SSC considered how best to measure and report on progress, including progress in:

- i) observations
- ii) data
- iii) implementation
- iv) funding

EXCOM suggested that metrics could be derived by searching publications for acknowledgements of SOOS contributions. The SSC recommended that any acknowledgement requirement be made simple, such as “This project contributes to SOOS”. This will help identify those that contribute to SOOS, but how to measure SOOS impact is more difficult. Increased, direct searches for the SOOS portal, increased input of metadata to GCMD, and increased regional implementation and coordination were all highlighted by the SSC as key metrics of SOOS impact.

Action 43 – IPO to update endorsement requirements to include acknowledgement

2017 SSC Meeting

There are a number of Working Group meetings in 2017 that the SSC could run in parallel to. The SSC discussed options for the 2017 SSC meeting and it was agreed that consolidating connection to the AWI community was very important. In addition to this, SSC involvement in the Under Ice working group “OASIS” workshop, which is to be hosted by AWI, is also important.

Action 44 – EXCOM to initiate discussions with AWI re: hosting of 2017 SSC meeting