



IP **4**

Agenda Item: 2.5.2

Person Responsible: L Newman,
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EXCOM 2013

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Southern Ocean Observing System

2013

Executive Summary

Title: The Southern Ocean Observing System (SOOS)

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Introduction/ Background: The Southern Ocean influences climate, sea level, biogeochemical cycles and biological productivity on a global scale. Many of the most difficult and pressing issues faced by society—how to mitigate and adapt to climate change and sea-level rise, how to manage the effects of ocean acidification, and how best to conserve marine resources and biodiversity—cannot be addressed effectively without improved understanding of Southern Ocean processes and feedbacks and their sensitivity to change. The most urgent research challenges in the Southern Ocean often span traditionally separate scientific disciplines. The Southern Ocean Observing System (SOOS) provides the sustained, integrated, multi-disciplinary observations required to meet these challenges.

Recommendations/Actions and Justification: SOOS greatly appreciates the support provided by SCAR for the annual Scientific Steering Committee meeting, and requests that this support is continued for 2014.

Expected Benefits/Outcomes: Continuation of the support for the SSC meeting will ensure participation by all SSC members, which is imperative for planning and implementation of SOOS objectives.

Partners: SCOR also provides support for the annual SOOS SSC meeting. Additionally, SOOS has received 2 offers to host the 2014 SSC meeting (for locations in Australia and Norway). A decision on location will be made by the end of June. The level of support provided by the host is still to be determined and will be a contributing factor to the decision on meeting location.

Budget Implications: 8 000 USD are requested to support the 2014 SSC meeting.

The Southern Ocean Observing System

Background on SOOS

The Southern Ocean Observing System (SOOS) is a joint initiative of the Scientific Committee on Antarctic Research (SCAR) and the Scientific Committee on Oceanic Research (SCOR) and endorsed by the Partnership for Observation of the Global Oceans (POGO) and the Climate Variability and Predictability (CLIVAR) and Climate and Cryosphere (Clic) projects of the World Climate Research Programme.

SOOS was launched in 2011 with the mission *to establish a multidisciplinary observing system to deliver the sustained observations of the Southern Ocean.*

SOOS 2012 Activities

- In the last year:
 - o SOOS has published 7 articles, 3 of which were in peer-reviewed literature. All are available for download from the SOOS website product database (www.soos.aq/index.php/products/soos-products). The most recent publication, *The vision of the Southern Ocean Observing System* (COSUST, Meredith et al., 2013), provides an overview of the 20-year vision for SOOS and the steps required to achieve this vision.
 - o SOOS was presented at over 40 international meetings and workshops by the EO, members of the Scientific Steering Committee and representatives of SCAR.
 - o SOOS held a workshop that aimed to develop an international strategy for Under Ice observations (Hobart, Oct 2012). A strategic plan will be released by mid-2013.
 - o SOOS ran a Town Hall meeting alongside the American Geophysical Union Fall Meeting, with the objective of bringing together U.S. researchers, and informing them of SOOS activities and objectives.
 - o SCOR and SCAR were successful in their proposal to ICSU for funding of a workshop on "Identification of Ecosystem Essential Ocean Variables for the Global Ocean", led by Andrew Constable. The workshop will take place early 2014, and will be complementary to current activities by the Global Ocean Observing System (GOOS) steering committee on this issue. The workshop will contribute directly to SOOS goals and the SOOS Executive Officer will support this group.
- The operational prototype of the SOOS Data Portal was launched on 1 February 2013 (<http://soos.aodn.org.au/soos/>). The portal is hosted by the Australian Ocean Data Network (AODN), and will provide one-stop access to distributed data archives holding all SOOS-related data. In the coming year, the functions and utility of the portal will be under review by the Data Management Sub-Committee (DMSC), which will also work with international databases to increase the data harvested by the portal.
- The SOOS Scientific Steering Committee held its second meeting in Shanghai, China (20-22 May 2013). The meeting was sponsored by SCAR and SCOR, the Polar Research Institute of China (PRIC), and the State Oceanic Administration of China (SOA). Scientific discussions included development of the SOOS 20-year plan, and identification and priority rating of the key gaps in Southern Ocean observations, towards a structured implementation plan for filling these gaps. These results will be made publically available by the end of July 2013, and will be presented to COMNAP delegates at the SOOS/COMNAP workshop (see point below).

- The 2nd SOOS DMSC meeting was held on 23-24 May 2013 in Shanghai, China. Key discussions included the incorporation of Chinese, Korean and Japanese national databases into the SOOS Data Portal, leveraging of resources (human and infrastructure) for ensuring full functionality of the Data Portal, and development of a workplan and timeline for the next 2 years, in parallel with the development of the Thematic workplans of the SSC. This workshop was sponsored by the Australian Ocean Data Centre Joint Facility.
- SOOS held the 1st SOOS Asian Workshop, in Shanghai, China (23-24 May 2013). This workshop was sponsored by PRIC, SOA, the Institute of Atmospheric Physics Chinese Academy of Sciences (IAP CAS), SCOR, and Climate and the Cryosphere (CliC). Presentations were given by Chinese, Korean, Russian, Japanese and Iranian researchers. A key outcome of this workshop will be the development of a report highlighting current activities by Asian nations in the Southern Ocean, and an outline of future coordination activities and products.
- Planning is underway for the SOOS/COMNAP workshop in July 2013 (Seoul, Korea). The objective of this workshop is to coordinate and maximise operations support that COMNAP can provide towards SOOS objectives. Collaboration with COMNAP will be very important in the implementation of SOOS objectives.
- The Australian Antarctic Division, New Zealand Antarctica, the New Zealand Antarctic Research Institute, and the Institute for Marine and Antarctic Studies, all renewed their sponsorship of the SOOS IPO for 2013.
- SOOS is in the process of developing a Sponsorship Package to increase institutional and organizational sponsorship of the SOOS IPO and related activities. It is envisioned that this package will be sent to relevant research institutes and organizations by the end of 2013.