SOOS Data Management

Kim Finney
Chair, SOOS Data Management Sub-Committee
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SOOS Goals

• Design and implement a comprehensive and multidisciplinary observing system for the Southern Ocean
• Advocate and guide the development of new observation technologies
• Unify current observation efforts and leverage further resources
• Effectively integrate and coordinate national and international projects and programmes, across traditional disciplinary boundaries and between nations
• Facilitate and develop a data system that provides seamless access to essential data products for the Southern Ocean
Sampling/Observing Strategies

Plus... XBT, CTD, Fluorometry, Continuous Plankton Recorder, Surface microbes, Acoustics, Wildlife sightings, Water samples – ocean chemistry, Net tows, Land-based foraging, Diet and population studies.

SOOS Data Network

Will need to harness existing research programs and capabilities. The under-pinning Data Network will need to:

- Publish associated data in real, or near real time, or soon after processing and work-up,
- Make data publication simple for data providers,
- Provide easy but rich ways to discover and search for data of interest,
- Make the data accessible online (in well known formats),
- Provide dataset documentation, versioning and identification so that data can easily be re-used,
- Tell users what conditions are associated with data use (e.g. data citation obligations),
- Provide products – not just data,
- Standardise collection, description and processing methods to improve ability for data integration and modelling.
Strategy

Coordinating Web Site

Data Committee

Data Policy

Data Access Network

- Create Metadata Portal
- Recruit Data Providers
- Develop one or more data-centric portals

Data Committee

Kim Finney (Chair) - Manager, Australian Antarctic Data Centre (AADC) - Australia
Hannes Grobe, Editor-in-Chief of PANGAEA – Data Publisher for Earth & Environmental Sciences (AWI) - Germany
Taco de Bruin, Scientific Data Manager, NIOZ Royal Netherlands Institute for Sea Research - Netherlands
Steve Diggs, Data Manager, Scripps Institution of Oceanography - USA
Adam Leadbetter, Data Scientist, British Oceanographic Data Centre - UK
Margarita Conkright Gregg, Director, NODC - USA
Roger Proctor, Director, eMII, Integrated Marine Observing System, UTAS - Australia
Mathier Belbeoch, Argo Information Centre, JCOMMOPS - France
Florence Fetterer, NOAA Liaison, National Snow and Ice Data Center, Uni Colorado - USA
Kozyr, Alexander, Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory - USA
Benjamin Pfeil, Scientific Data Manager, University of Bergen/Bjerknes Centre for Climate Research - Norway
Takahiro Iida, Assistant Professor, National Institute of Polar Research, Japan
Lola Olsen, Director, Global Change Master Directory, NASA - USA
Parker Zhang, Director, Chinese Polar Data and Information Centre - China
Anton Van de Putte, Director, ANTABIF.Aq, Belgium
Data Policy

- Now in Draft awaiting approval from SOOS SSC.
- Policy encourages scientific norms of behaviour that engender ‘trust’, ‘collaboration’ and ‘verification’.
- Obligations of SOOS-affiliated projects include:
  - Submitting metadata and linked data to the SOOS (metadata) Portal using SOOS Metadata and Data guidelines,
  - Having an appropriately funded data management plan in place before field work begins, and
  - All data made accessible via the SOOS Portal carrying a persistent identifier for easy/efficient referencing and citation.

Data Access Network

Links back to SOOS web site

Portal hosted by GCMD (NASA). Metadata entered into central repository or harvested. Datasets linked to metadata – but served remotely by wide range of providers.
Data Access Network (http://www.soki.aq/)

Wiki – which will be citable. Place for discussion about research; knowledge syntheses; publication of methods (sampling, processing, quality control, analysis); tools and pointers to datasets (particularly for modelling).

SOKI Page Review Process

[Diagram showing the page review process]

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Data Access Network

- SOOS aware of shared information on planned, current and past voyages at http://www.pogooceancruises.org
- Wants to encourage Antarctic research managers to patronise system
- Already an Australian, European, USA project (ODIP) trying to enhance/expand system

How Can POGO Help?

- POGO previously endorsed participation of POGO partners in SOOS/data management activities (@POGO 14).
- POGO Partners can assist right now by using existing capability (e.g., data management staff and services) within partner agencies to:
  - actively push data into the SOOS Data Network,
  - help SOOS to refine/develop coordinating infrastructure, standards and guidelines.
POGO 14 Actions

Action 4.
SOOS: POGO to support the development of SOOS. Action: Secretariat and Members.

Action 7.
Regional Oceanographic Data: There is a need to increase the visibility of datasets, raise awareness of ongoing activities, and facilitate smoother access to key datasets by various parties. Action: Members to allow/enable data and metadata to be accessed by data portals and data discovery sites, to increase their visibility.