



## SCOR Newsletter

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*Bremen Rathaus*

### 2013 SCOR Executive Committee Meeting

The 2013 SCOR Executive Committee Meeting was held at the Royal Society of New Zealand on 25-27 November. Thirty individuals from national SCOR committees, partner organizations, and local institutions attended the meeting. The meeting was followed by an informative day of presentations about ocean science being conducted in New Zealand, providing an opportunity for meeting participants to interact with the local scientific community.



*2013 SCOR Executive Committee Meeting Participants*

Eleven working group proposals were considered. Based on written reviews by national SCOR committees and discussions at the meeting, two proposals were approved for funding to start in 2014. As with most approved groups, SCOR will request some modification to the terms of reference and/or the membership of the groups.

#### **Dissolved N<sub>2</sub>O and CH<sub>4</sub> measurements: Working towards a global network of ocean time series measurements of N<sub>2</sub>O and CH<sub>4</sub>**

This group will focus on improving the techniques for measuring oceanic methane and nitrous oxide through a variety of activities, including establishing standards, conducting an intercalibration exercise among time-series programs that measure these molecules, recommending analytical reporting procedures, and establishing a framework for an N<sub>2</sub>O/CH<sub>4</sub> ocean time-series network. The group will document its work in the peer-reviewed open-access literature. Herman Bange (Germany) and Sam Wilson (USA) were approved as co-chairs of the group. The group will hold its first meeting in conjunction with the Ocean Sciences Meeting in Hawaii in February 2014.

#### **Microbial Community Responses to Ocean Deoxygenation**

Many areas of the ocean appear to have decreasing levels of oxygen, which has significant implications for many ocean processes and for the ecosystem services provided by these areas. This group will document what is known about microbial processes that influence ocean deoxygenation, seeking to compare and develop standards for process rate and molecular measurements. This will make it possible to compare processes across different scales in model ecosystems. The group will prepare open-access publications presenting best practices for such techniques. Bess Ward (USA) was approved as the leadership coordinator for the group. Other working group members have been identified to lead different group activities.

#### **Future SCOR Working Group Proposals**

Working groups are a major aspect of SCOR's work. The record number of proposals for working groups that were considered at the SCOR meeting in Wellington led to a discussion about how the proposal process could be improved. Although there are instructions for working group proposals on the SCOR Web site, it is obvious that clearer instructions would be helpful to both proponents and reviewers

of the proposals. The SCOR Executive Committee has revised the instructions for groups, providing a template and required sections and setting a word limit for each section. This should make it easier for national SCOR committees and others to conduct proposal reviews each year. A link to the instructions has been placed on the front page of the SCOR Web site to make it easy for proponents to find the information.

**Symposia on The Ocean in a High-CO<sub>2</sub> World**—The SCOR Executive Committee has decided that SCOR will not play a leadership role in future symposia on The Ocean in a High-CO<sub>2</sub> World. These symposia place a significant demand on staff time for organizations involved. With SCOR's small scientific staff, the organization is not suited to convene such large scientific events on a regular basis. SCOR will seek, however, to identify ocean acidification topics that are not yet receiving adequate attention so that smaller focused workshops may be planned. Leaders of the ocean acidification research community have been informed of SCOR's decision and may find an alternative mechanism to plan future symposia, which the community considers to be valuable opportunities to share their latest research findings and discuss future work.

**Nominations for 2014 SCOR Elections**—A Nominating Committee was set up to manage the process for electing new SCOR officers in 2014. The Secretary position will be open, as will all three Vice-President positions (one Vice-President is eligible for re-appointment for another two-year term, but the other two Vice-President positions will need newly elected persons). The Nominating Committee will be chaired by the SCOR Past-President, Wolfgang Fennel (Germany). Other members of the committee will include Julie Hall (New Zealand), Bjørn Sundby (Canada), and Sinjae Yoo (Korea).

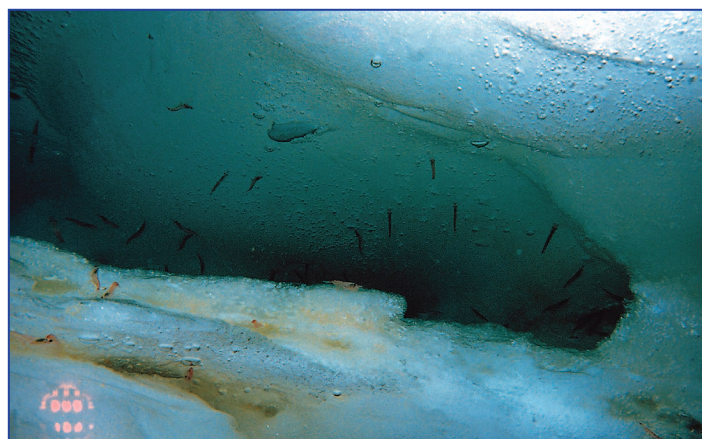
## SCOR Booth at 2014 Ocean Sciences Meeting

SCOR will have a booth (#10) at the 2014 Ocean Sciences Meeting in Honolulu, Hawaii on 23-28 February 2014. This will be the first time that SCOR has sponsored a booth. Please stop by to find out about the GEOTRACES Intermediate Data Product and to view posters and project information about SCOR and SCOR-sponsored research projects.

## News from Working Groups

**SCOR WG 137 on Patterns of Phytoplankton Dynamics in Coastal Ecosystems: Comparative Analysis of Time Series Observation**—The group held its fourth meeting in conjunction with the Coastal and Estuarine Research Federation 2013 Biennial Conference in San Diego, California, USA. In this meeting, participants discussed how to address and approach the research questions raised in the previous meetings and have take-home assignments for preparing papers. The participants presented their synthesized work and decided to publish a special issue for WG 137 research in *Estuarine, Coastal and Shelf Science* in 2014.

**SCOR WG 140 on Biogeochemical Exchange Processes at the Sea-Ice Interfaces**—The group has formed three task groups to conduct work on (1) methods, (2) data, and (3) modeling. The methods task group is working on a review paper and is identifying potential sites for field work. A key objective of the data task group is to produce new data inventories and datasets by collation of historic data. The data task group has initiated collation of Arctic and Antarctic datasets, with a special focus on sea ice chlorophyll *a* from both pack ice and fast ice studies.



*Krill grazes algae from the underside of the ice during winter (from Alfred Wegener Institute)*

PHOTO COURTESY OF HANS-PETER MARSCHALL, ALFRED WEGENER INSTITUTE

The modeling task group is preparing review papers on DIC/Alk separation during the freezing process, release and transfer of iron and other minerals, and parameterization of light transfer in sea ice. The modeling task group has also started work on intercomparison of one-dimensional models and publication of a review, working in conjunction with the Forum for Arctic Ocean Modeling and Observational Synthesis (FAMOS).

## News from the SCOR Committee on Capacity Building

SCOR contributed to the following publication that resulted from a workshop funded by the Asia-Pacific Network for Global Change Research:

Morrison, R.J., J. Zhang, E.R. Urban Jr., J. Hall, V. Ittekkot, B. Avril, L. Hu, G.H. Hong, S. Kidwai, C.B. Lange, V. Lobanov, J. Machiwa, M.L. San Diego-McGlone, T. Oguz, F.G. Plumley, T. Yeemin, W. Zhu, and F. Zuo. 2013. Developing human capital for successful implementation of international marine scientific research projects. *Marine Pollution Bulletin* 77:11-22.

The call for the 2014 SCOR Visiting Scholars program was made in early December and the SCOR Committee on Capacity Building is evaluating applications now.

SCOR will make extra funding available to working groups for approved capacity building activities related to their work.



## Ocean Carbon Activities

### SCOR/IOC International Ocean Carbon Coordination Project (IOCCP)

—The IOCCP Scientific Steering Group (SSG) will hold its 9th Session in Honolulu on Saturday, 22 February, immediately preceding the 2014 Ocean Sciences Meeting. The SSG meeting will focus on major on-going activities that include (but are not limited to): implementation of the Global Ocean Acidification Observing Network, coordination (with GO-SHIP) of efforts leading to the next global repeat of hydrographic sections, IOCCP's leading role in defining a set of biogeochemical Essential Ocean Variables for the next generation (mainly sensor-based) of the Global Ocean Observing System, and further development of automated data submission and data quality control procedures and interfaces for surface ocean carbon data. In addition, SSG members will spend time planning logistics and scientific context of the training course on use of autonomous sensors that IOCCP plans to run in 2015 (funding permitting).

## Southern Ocean Observing System

Members of the Southern Ocean Observing System (SOOS) Scientific Steering Committee and staff are leading planning for the Workshop on Ecosystem Essential Ocean Variables in the Southern Ocean. This workshop will be funded by the International Council for Science, SCOR, and SCAR. The workshop will be held 18-21 March 2014 at Rutgers University in New Brunswick, New Jersey, USA, and aims at a “review of potential Ecosystem Essential Ocean Variables (eEOVs) to be used in the Southern Ocean Observing System. Changes in ocean climate and acidification could result in altered dynamics of marine ecosystems which, in turn, will need to be considered in decisions about how to maintain ecosystem health, services, and robustness/resilience to future change. Sustainable marine ecosystem management will require indicators of the underlying status of marine ecosystems, and new means to monitor such indicators. This program of work, including an international expert workshop, will bring together experts in observing and assessing change in marine ecosystems to undertake and publish a series of reviews to underpin the development of marine observing systems, including SOOS and the Global Ocean Observing System.”

## Large-Scale Ocean Research Projects

The **GEOHAB** Scientific Steering Committee (SSC) held its final meeting in Barcelona, Spain on 3-7 December. The purpose of the meeting was to complete plans for synthesis of GEOHAB achievements and to begin discussions of future cooperative (non-research) activities between SCOR and IOC on harmful algal blooms. GEOHAB is planning to publish its synthesis papers in a special journal issue. A scientific summary for policymakers is also being prepared.

The SSC will use its final GEOHAB funding for the following activities, subject to development of co-funding:

- Climate change and HABS: GEOHAB will co-sponsor a workshop with ICES and PICES on how the abundance and distribution of HABS may change in response to climate change.
- A workshop to compare techniques related to measuring the germination of dinoflagellate cysts.
- A workshop on the connection of HABS with hypoxia, in upwelling and other systems.
- A workshop on cyanobacterial HABS.
- Training for developing country scientists on techniques related to benthic HABS, particularly those related to ciguatera.

Funding is being sought to continue HAB-related framework activities after completion of GEOHAB.



*Participants in 2013 GEOHAB SSC Meeting*

The **GEOTRACES** project is nearing completion of its first Intermediate Data Project (IDP). The product will include data that have been quality controlled by the GEOTRACES Standards and Intercalibration Committee and for which permission has been received from the data originators to provide open access to their data. The GEOTRACES IDP will be launched at the 2014 Ocean Sciences Meeting in Honolulu, with a Town Hall Lunch presentation and through animations of GEOTRACES data shown at the SCOR booth (see earlier). An example of the animations that will be available can be seen at <http://vimeo.com/69990808> for North Atlantic Thorium-230 data. The IDP will consist of a series of section plots and 3-dimensional animations combining the data from many laboratories that are part of the GEOTRACES project. The numerical data associated with these plots will also be made public through the GEOTRACES Data Assembly Centre Web site (see <http://www.bodc.ac.uk/geotraces/>) at the time of data release. In order to download the IDP digital dataset,

users will need to register at the GDAC web site and will be requested to commit to citation of all original publications when using the data. It is anticipated that this will be the first of several intermediate data products released during the life of the GEOTRACES project.

**The Surface Ocean-Lower Atmosphere Study (SOLAS) and Integrated Marine Biogeochemistry and Ecosystem Research (IMBER) project** are in transition periods. Both projects are in discussion with the Future Earth initiative regarding potential co-sponsorship and both projects are creating requests to extend the projects beyond their initial 10 years. IMBER will use its first open science conference (23-27 June 2014 in Bergen, Norway) to help plan its next phase. SOLAS held an early-career scientist conference in December 2013 to help plan the next 10 years of SOLAS research, involving two social scientists from the Plymouth Marine Laboratory to help define how SOLAS could contribute to themes being developed by the Future Earth initiative.

## International Indian Ocean Expedition-2

SCOR is participating in a variety of activities to mark the 50th anniversary of the completion of the International Indian Ocean Expedition and to promote the development of new research in the Indian Ocean region, particularly during an intensive period in 2016-2020.

SCOR has contacted its national committees to encourage development of national activities focused on the Indian Ocean. So far

- The UK SCOR Committee has obtained funding to convene a planning workshop in March 2014 (contact: Peter Burkill)
- German scientists have started an initiative for an Integrated German Indian Ocean Study 2015-2020 as a potential contribution to IIOE-2 (contacts: Hermann Bange and Martin Visbeck).
- A "Reference Group" for IIOE-2 has been led by Raleigh Hood (SIBER project) and Nick D'Adamo (IOC Perth Office) to scope out likely programmatic contributors to IIOE-2, which include SIBER, Indian Ocean GOOS, the Indian Ocean CLIVAR Panel, the GEOTRACES project, and others.
- The Indian National Institute of Oceanography is planning a symposium to celebrate its Golden Jubilee. SCOR's 2015 annual meeting will be held in conjunction with this celebration.
- Special sessions of interest to the Indian Ocean research community are being planned for the 2014 European Geosciences Union General Assembly (session on Understanding Indian Ocean System: past, present and

future) and the IMBER Open Science Conference (a workshop on **Eastern Indian Ocean upwelling research initiative planning workshop phase 3: physical dynamics and ecosystem responses** and a session on **Biogeochemical and ecological impacts of boundary currents in the Indian Ocean**).

## Future SCOR Annual Meetings

**2014**—SCOR will hold its 2014 General Meeting in Bremen, Germany on 15-17 September, with a special day of presentations on German ocean science following on 18 September. Proposals for new working groups will be accepted from 1 February until 15 April 2014.

**2015**—SCOR will hold its 2015 Executive Committee Meeting in Goa, India.

**2016**—SCOR will hold its 2016 General Meeting in Sopot, Poland.

**For additional information about SCOR activities, please see the SCOR Web site: <http://www.scor-int.org>.** To reach Secretariat staff, please send an email to Ed Urban ([Ed.Urban@scor-int.org](mailto:Ed.Urban@scor-int.org)).

## ACRONYMS

<b>Alk</b>	alkalinity
<b>CACGP</b>	Commission on Atmospheric Chemistry and Global Pollution
<b>DIC</b>	dissolved inorganic carbon
<b>FAMOS</b>	Forum for Arctic Ocean Modeling and Observational Synthesis
<b>GEOHAB</b>	Global Ecology and Oceanography of Harmful Algal Blooms project
<b>GO-SHIP</b>	Global Ocean Ship-based Hydrographic Investigations Program
<b>HAB</b>	harmful algal bloom
<b>ICES</b>	International Council for Exploration of the Seas
<b>IGBP</b>	International Geosphere-Biosphere Programme
<b>IMBER</b>	Integrated Marine Biogeochemistry and Ecosystem Research project (co-sponsored by SCOR and IGBP)
<b>IOC</b>	Intergovernmental Oceanographic Commission
<b>IOCCP</b>	International Ocean Carbon Coordination Project
<b>PICES</b>	North Pacific Marine Sciences Organization
<b>SCAR</b>	Scientific Committee on Antarctic Research
<b>SCOR</b>	Scientific Committee on Oceanic Research
<b>SOLAS</b>	Surface Ocean – Lower Atmosphere Study (Co-sponsored by SCOR, IGBP, WCRP, and CACGP)
<b>SOOS</b>	Southern Ocean Observing System
<b>SSG</b>	scientific steering group
<b>WCRP</b>	World Climate Research Programme
<b>WG</b>	working group