



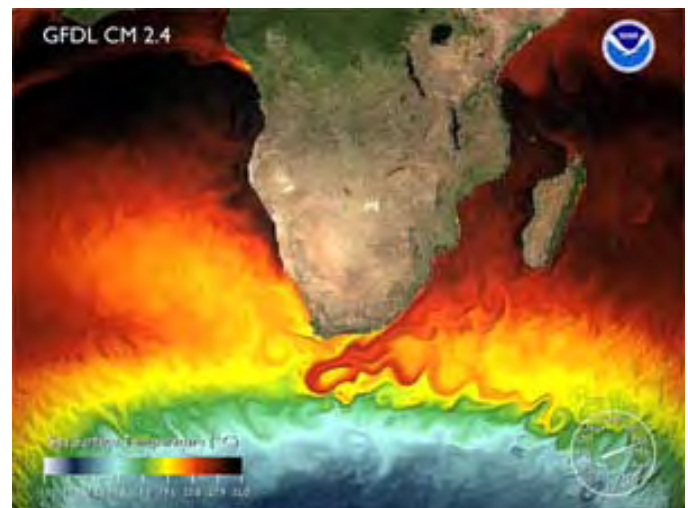
News from 2009 SCOR Executive Committee Meeting in Beijing

SCOR joined the China (Beijing) SCOR Committee in celebrating its 25th anniversary on 20 October 2009. China (Beijing) was accepted as a national SCOR committee in 1984 and invited SCOR representatives to visit Chinese institutions in 1985. Gerold Siedler (SCOR President), Konstantin Fedorov (SCOR Past President), and Elizabeth Gross (SCOR Executive Secretary) visited nearly all the academic and government oceanographic institutions existing at that time in China. The celebration in Beijing brought together many Chinese scientists involved in SCOR over the past 25 years (including Hu Dunxin, Li Haiqing, Su Jilan, and Yu Huming, who participated in the 1985 visits) and representatives from other SCOR national committees.



Following the anniversary celebration, SCOR held its 39th Executive Committee meeting. Meeting participants reviewed the progress of all SCOR activities and considered five proposals for new working groups. Two groups were approved:

SCOR/WCRP/IAPSO Working Group 136 on Climatic Importance of the Greater Agulhas System—This group will identify key components of the circulation that



deserve further study through physical/palaeo-observations and/or models, some of which may act as indices/proxies (through sustained observation) that can help describe the state of the Agulhas system on decadal to climate time scales. The group will write a review paper for publication in a peer-reviewed journal, which will highlight the importance of the greater Agulhas system in terms of global climate, reviewing the existing levels of both understanding and uncertainty as to how changes in the system come about, how they affect climate, and vice versa. Finally, the group will facilitate collaboration between existing and planned observational and modeling studies in the greater Agulhas Current system, to minimize the gaps in research, maximize scientific outcomes, and encourage estimates of the robustness of key findings (e.g., multiple model ensembles).

The co-chairs of the group are Lisa Beal (USA) and Arne Biastoch (Germany). The group is planning its first meeting in conjunction with the Ocean Sciences meeting

in Portland, Oregon in February 2010 and will plan a capacity-building activity in Africa in conjunction with one of its later meetings. The World Climate Research Programme and International Association for the Physical Sciences of the Ocean are co-sponsoring the group.

SCOR WG 137 on Patterns of Phytoplankton Dynamics in Coastal Ecosystems: Comparative Analysis of Time Series Observation—This group will compile global time series of coastal phytoplankton to examine the following issues:

1. What are the dominant scales of variability in phytoplankton biomass, abundance, floristic composition, species composition, and/or species diversity? Is there evidence for secular trends or regime shifts? With which criteria can we best differentiate long-term from episodic, seasonal, and interannual signals?



2. Is there evidence for external forcings of variability and change (e.g., effects of climate change, basin-scale oscillations, land-based inputs, atmospheric deposition, alien species)? Are changes coherent in space and/or time?
3. Are there consistent patterns among ecosystems in terms of relationships between environmental drivers, responses in phytoplankton biomass, and changes in species/floristic composition?

The co-chairs of this group are Kedong Yin (Australia) and Hans Paerl (USA). The North Pacific Marine Sciences Organization (PICES) has agreed to support the participation of one Associate Member of the group.

SCOR meeting participants also agreed to invest in access to a commercial system to make it possible to hold virtual meetings and to broadcast “webinars”. We hope that this system will help us reduce our carbon footprint and to help groups work together more

efficiently and effectively. It will make it possible for SCOR groups to meet for a few hours at a time without having to meet in person. SCOR projects, working groups, and other activities will have access to this service.

Several SCOR working groups reported that they will have special issues of peer-reviewed journals or books published in the coming year.

2010 Election for SCOR Officers

Nominations for the 2010 election for SCOR officers will open on 12 March 2010 and close on 12 May 2010. All three SCOR Vice President positions and the SCOR Secretary position will be open for nominations.

Symposia on the Ocean in a High-CO₂ World

The special issue of *Biogeosciences* with papers from the Second Symposium on The Ocean in a High-CO₂ World had 29 papers submitted, of which 12 have been accepted for publication so far (see http://www.biogeosciences-discuss.net/special_issue43.html).

SCOR, IOC, and IGBP will be co-sponsors of the Third Symposium, to be held in 2012. The committee will be selected in the next few months and will meet in late 2010 to begin planning the symposium.

SCOR Panel on New Technologies for Observing Marine Life



The Workshop on Ocean Biology Observatories was held in Mestre, Italy (near Venice) in Sept. 2009. About 60 biologists and specialists in observing systems and technologies came together to discuss ocean biology observatories that could address the challenges of observing ocean life and its response to global change. The presentations and breakout group summaries from the

meeting can be found at http://www.scor-int.org/OBO2009/OBO_Presentations_and_Reports.htm. The results of the workshop were reported out by John Gunn at the OceanObs'09 meeting in Venice the following week.

SCOR Visiting Scholars Program

The application period for 2010 SCOR Visiting Scholars is open until 31 January 2010. For more information,

please see http://www.scor-int.org/SCOR_Visiting_Scholars.pdf.

Working Groups

The 2010 Call for SCOR Working Group proposals will be issued around 15 January and the proposals will be due on 14 April.

SCOR/LOICZ WG 132 on Land-based Nutrient Pollution and the Relationship to Harmful Algal Blooms in Coastal Marine Systems—A very successful working group meeting was held in Beijing, China in October 2009, immediately before the SCOR annual meeting. The meeting began with a day of review of interim work by each WG member; regional syntheses of HAB events and HAB database availability were covered. Three specific accomplishments came from this meeting:

1. Using several databases that were developed for individual species, initial modeling efforts were undertaken to relate the data on nutrient loads, from the Global NEWS models, to these data. Thus, a structure was discussed and implemented for future data analyses. The HAB and nutrient database was advanced considerably with the addition of many new data sets.
2. Models of the effects of nutrient loads from aquaculture were advanced with specific data from China. These data show that the nutrient loads from Chinese fish aquaculture can be as great as those of the major rivers. A draft manuscript on these data was developed.
3. A proposal was submitted, and subsequently accepted, for funding for an additional WG group meeting in Chile in May 2010. Thus, the group will have an opportunity to work in person prior to the last meeting planned in October 2010.

To date, 6 papers have been submitted or drafted on the efforts from this working group.

WG 134 on The Microbial Carbon Pump in the Ocean—The first meeting of the working group was held in Xiamen, China during October 27-30, 2009. With the theme of "Bridging Biology and Chemistry in Ocean Carbon Sequestration" the meeting was composed of two sessions, the Open Science Meeting (Session I) and the Closed Workshop (Session II). Session I was aimed at multidisciplinary exchange regarding ocean carbon sequestration, and Session II was focused on the missions of the working group.

The Open Science Meeting included participation by 20 experts from 10 countries, plus more than 50 Chinese scientists and students. The presentations at the

meeting covered a broad range of relevant science, organisms, techniques, spatial scales, and time scales. Participants shared cutting-edge ideas about the conceptual framework of the microbial carbon pump, dissolved organic carbon (DOC) as a sink/source of CO₂, and transformation of DOC, as well as linkages between biological and abiotic processes in carbon cycling in the ocean.

The closed workshop included active discussions regarding issues related to the working group's terms of reference, and hypothesized that understanding the microbial carbon pump, with related abiotic processes, is central for the understanding of carbon cycling and sequestration in the ocean. Relevant scientific questions and techniques were reviewed. One of the concerns was the definition of RDOC (refractory/recalcitrant dissolved organic carbon) which is critical for "bridging biology and geochemistry in ocean carbon sequestration". Currently, different definitions by different disciplines have been used in the literature. In marine geochemistry, RDCO is referred as DOC with radiocarbon ages of 4000-6000 years, while in marine ecology and microbial oceanography, RDOC is referred to as the DOC that is resistant to biological utilization, regardless of its age. Panel members plan to write a few review papers on RDOC- and microbial carbon pump-related theories.

Another mission of WG 134 is to document state-of-the-art techniques and parameters addressing microbial processing of organic carbon, and establish and/or standardize key protocols for essential observations and measurements.

Recommendations for future research related to the microbial carbon pump in the ocean were also discussed. Collaborations among individual labs started at the meeting, which will be the basis for further development of collaborations at higher levels.

Large-Scale Ocean Research Projects

GLOBEC—The Global Ocean Ecosystem Dynamics (GLOBEC) project has had an eventful final year. The third GLOBEC open science meeting was held in June and attracted more than 300 participants from around the world. Elizabeth Gross from the SCOR Secretariat co-presented (with Roger Harris) a retrospective on the creation of GLOBEC. The meeting will result in a special issue of *Progress in Oceanography*. The SCOR Executive Committee issued a declaration of congratulations and thanks to GLOBEC for the project's achievements (see http://www.scor-int.org/2009EC/SCOR_Resolution_on_GLOBEC.pdf), which reflect well on SCOR and other co-sponsors.

Many of GLOBEC's subgroups have been busy finishing their synthesis projects and the GLOBEC synthesis book is receiving its final touches in the next few months, with an expected publication by Oxford University Press in time for the Ocean Sciences meeting in Portland, Oregon, USA in February 2010.

The final GLOBEC Scientific Steering Committee meeting was held at Dartington Hall, Devon, England, in early November. Meeting participants reviewed the wrap-up activities of all aspects of GLOBEC, the legacy, and the details of shutting down the International Project Office (IPO). The official closure of the project will take place on 31 March 2010, thanks to additional funding from the U.S. National Science Foundation and the UK Natural Environment Research Council. The meeting was also a celebration of GLOBEC's achievements and a thank-you to GLOBEC IPO staff, who contributed greatly to the success of the project.

GEOTRACES—The GEOTRACES SSC met in Washington, D.C. on 4-6 November and presented GEOTRACES to representatives of U.S. funding agencies. SSC members also discussed the status of the GEOTRACES Data Assembly Center, the International Project Office, intercalibration activities, and the onset of national GEOTRACES cruises. Although several GEOTRACES-related cruises took place as part of the International Polar Year (IPY), the major phase of GEOTRACES section cruises started as the SSC meeting was ending; a Japanese GEOTRACES cruise left port on 6 November for the Indian Ocean. The cruise phase of GEOTRACES will be launched officially at the Ocean Sciences meeting in February 2010, in conjunction with a special session reporting on the results of the GEOTRACES-related IPY cruises.

GEOTRACES will soon announce the appointment of the project Executive Officer. It is hoped that the IPO will open around 1 January 2010. The GEOTRACES Data Assembly Center continues to establish connections with national data centers and to enter IPY data. This center will interact with national data centers and GEOTRACES scientists to compile global data sets of trace elements and isotopes in the ocean.

GEOHAB—Planning continues for the GEOHAB Open Science Meeting on Benthic Harmful Algal Blooms, which will be held in Honolulu, Hawaii, USA, in June 2010. Details on registration will be broadcast to the SCOR and GEOHAB email lists as soon as these details are available.

Publications

Liu K.-K., L. Atkinson, R. Quinones, and L. Talae-McManus. 2009. *Carbon and Nutrient Fluxes in Continental Margins: A Global Synthesis*. Springer-

Verlag (see <http://cmtt.tori.org.tw/>). This book resulted from the work of the Continental Margins Task Team of the Joint Global Ocean Flux Study (JGOFS) and the Land-Ocean Interactions in the Coastal Zone (LOICZ) project.

SCOR Annual Meetings

2010—The 2010 SCOR General Meeting will be held in Toulouse, France on 13-17 September. The French SCOR Committee will put on a one-day symposium to showcase French ocean science activities.

2011—The Finnish SCOR Committee has invited SCOR to hold its 2011 Executive Committee meeting in Finland.

2012—The 2012 SCOR General Meeting will be held in Canada.

For additional information about SCOR activities, please see the SCOR Web site: <http://www.scor-int.org>.

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Photo sources:

Page 1: Sea surface temperature (SST) simulation from GFDL's high resolution coupled atmosphere-ocean model. As the animation focuses on various locations of the world ocean we see the major current systems, for example, the Agulhas current, Brazil current, Gulf Stream, Pacific Equatorial current, Kuroshio current. The small scale eddy structure is resolved and evident (Thomas Delworth and Anthony Rosati: <http://www.gfdl.noaa.gov/visualizations-oceans>)

Page 2: A large phytoplankton bloom was spreading in the Baltic Sea, coloring its surface waters turquoise. This Sea-viewing Wide Field-of-view Sensor (SeaWiFS) image taken July 3, 2001, shows the extent of the bloom. Image courtesy the [SeaWiFS Project](#), NASA/Goddard Space Flight Center, and ORBIMAGE (from <http://earthobservatory.nasa.gov/IOTD/view.php?id=1579>).