

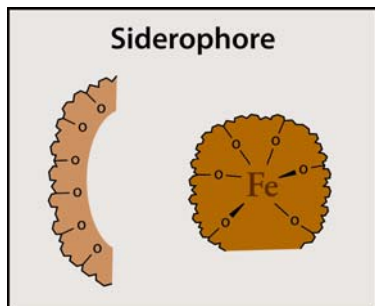


CSS Acadia—Canada's first hydrographic ship

News from the SCOR Executive Committee Meeting

SCOR's annual meeting considers proposals for new working groups, evaluates the progress of all SCOR activities, oversees SCOR finances, and provides an opportunity for the hosting SCOR committee to make presentations about the ocean science being conducted in its country. SCOR met in Helsinki, Finland on 12-15 September. Approximately 35 individuals from the SCOR Executive Committee and representatives from many national SCOR committees met in Helsinki.

Eight proposals for new working groups were considered and the SCOR Finance Committee recommended a 2012 budget that would allow two new groups to be funded. Through comments and rankings received in advance and discussions at the meeting, two proposals were determined to be important scientifically, timely, and ready for funding, with a few minor adjustments requested by SCOR in relation to membership and terms of reference.



The first new group is SCOR WG 139 on Organic Ligands – A Key Control on Trace Metal Biogeochemistry in the Ocean. This group will produce a summary of the scientific literature of ligands in the ocean; promote a ligand

intercalibration program; evaluate key analytical issues in ligand chemistry; explore how knowledge of ligand distributions and chemistry could be incorporated in biogeochemical models; evaluate sampling strategies and experimental approaches employed in laboratory and field efforts; and recommend future approaches to

ligand biogeochemistry. The work of the group will be disseminated in peer-reviewed journals, contributions to a ligand database, a Web page, and special sessions on trace metal-binding ligands at international meetings such as Ocean Sciences, the American Geophysical Union, and/or the European Geosciences Union. The work of the group will contribute to the SCOR GEOTRACES project, which is characterizing the distributions of trace metals and isotopes in the ocean and is seeking to understand what controls the observed distributions.



The second new working group approved at the SCOR meeting is WG 140 on Biogeochemical Exchange Processes at the Sea-Ice Interfaces (BEPSII). This group will evaluate available data related to important parameters affecting sea ice physics and biochemistry to make recommendations for further data collection needed for the validation of models. The group will also summarize existing knowledge on biogeochemical and physical processes at the ocean-ice-snow-atmosphere interfaces and within sea ice, and identify gaps in model parameterizations of these processes; examine how relevant sea-ice processes could be translated from small-scale models to global Earth System Models; and develop models to quantify our knowledge of the impact of sea ice biogeochemistry on climate and how climate change feeds back to sea ice processes. The work of this group will contribute to the Surface Ocean – Lower Atmosphere Study (SOLAS) that is co-sponsored by SCOR.

2012 Election for SCOR Officers—A Nominating Committee is being formed to manage the 2012 election of SCOR Officers. According to the procedures approved by SCOR in 1998, the committee is chaired by the SCOR Past President (Bjørn Sundby, Canada) and must be composed of SCOR members. The call for nominations will be made by the committee by April 22 and will close on June 22. The offices of SCOR President and all three Vice-Presidents are open for nomination; each of the current Vice-Presidents is eligible to serve another 2-year term.

New SCOR Executive Committee Members

SCOR selects new officers in even-numbered years, through a process that involves their election from among SCOR Nominated Members (see previous item). In addition to officers, the SCOR Executive Committee includes (as ex-officio members) the presidents of the International Association for Biological Oceanography (IABO), the International Association for the Physical Sciences of the Oceans (IAPSO), and the International Association of Meteorology and Atmospheric Sciences (IAMAS). SCOR established this arrangement several decades ago, at the suggestion of SCOR's parent, the International Council for Science (ICSU).

In mid-2011, new IAMAS and IAPSO presidents were elected at the quadrennial General Assembly of the International Union of Geodesy and Geophysics (IUGG), the parent of IAMAS and IAPSO.



Athena Coustenis was elected as the new IAMAS President. She works in the field of planetology and is Director of the CNRS Laboratoire d'Etudes Spatiales et d'Instrumentation en Astrophysique of Paris-Meudon Observatory, France. Dr. Coustenis' research is devoted to the investigation of planetary atmospheres and surfaces, with an emphasis on

Titan, Saturn's largest satellite. She has also contributed to an effort to uncover the nature of the atmosphere surrounding the newly discovered extra-solar planets. Dr. Coustenis has led many observational campaigns using large Earth-based telescopes and has used the Infrared Space Observatory to conduct planetary investigations. Coustenis' term as IAMAS President runs from 2011 to 2015.

Eugene Morozov has been the Head of Laboratory of hydrological processes at the Shirshov Institute of Oceanology (Russia) since 1993. His research focuses on internal waves and ocean circulation. Morozov is a field oceanographer, and his work includes field measurements, data collection, processing, and

analysis. His recent scientific activity has been related to the flows in the abyssal channels of the Atlantic Ocean: Vema Channel; Romanche, Chain, and Vema fracture zones; Kane Gap; and others. Since 1969, Morozov has led or participated in 38 cruises, in the Atlantic, Indian, Pacific, Southern, and Arctic oceans. Morozov's term as IAPSO President will run from 2011 to 2015. He was a Full Member of IAPSO/SCOR Working Group 121 on Ocean Mixing.



SCOR Working Groups

SCOR/IAPSO WG 127 on the [Thermodynamics and Equation of State of Seawater](#)—The Ocean Data View graphics software now includes new "Physical Properties (TEOS-10)"-derived variables to replace the previous EOS-80 based variables and adds more than 20 new physical oceanography variables (see <http://odv.awi.de/en/home/>).

SCOR/WCRP/IAPSO WG 136 on [Climatic Importance of the Greater Agulhas System](#) has received approval to hold an AGU Chapman Conference in South Africa as its final activity. Like the group's 2011 meeting in Mauritius, the Chapman Conference will have a significant capacity building component.



SCOR/IGBP WG 138 on [Modern Planktic Foraminifera and Ocean Changes](#) met on 29 August-2 September for the first time in Amsterdam, Netherlands. Fourteen Full and Associate members participated, together with several invited guests. The group refined its goals and deliverables. The meeting included a symposium for early-career scientists, which attracted 18 additional scientists from 6 different countries. The meeting created a foundation for future cooperation between working group members and younger scientists, helping to achieve one of the important goals of the group. WG 138 has documented part of its work using YouTube videos—http://youtu.be/xfZ_9UWcAB8 and

<http://youtu.be/6MakjP6MkdE>—the first SCOR working group to do so. The videos show how forams are collected and cultured, information about why it is important to study forams, and something about how ocean science works.

News from SCOR Committee on Capacity Building

SCOR changed the composition of its Committee on Capacity Building this year to ensure that the committee could meet each year in conjunction with the SCOR annual meeting. The committee met on 11 September and (1) approved the 2012 call for SCOR Visiting Scholars (see http://www.scor-int.org/SCOR_Visiting_Scholars.pdf), (2) recommended meetings to receive travel support grants, and (3) re-emphasized the need for working group proposals to be more specific in their plans for capacity building.

The SCOR Visiting Scholars program is proceeding well. The committee recommended that each future Scholar be requested to give at least one presentation about SCOR at the host institution or elsewhere in the host country, discuss with individuals at their host institution the host's interest in participating in a regional graduate network of oceanography, and provide a short report on their experience as a SCOR Visiting Scholar. The committee also recommended that the document on design principles for regional graduate networks of oceanography (see http://www.scor-int.org/RGSO_Design_Principles.pdf) be augmented with ideas for intermediate steps.

Through the capacity building meeting co-sponsored by SCOR in Izmir, Turkey in April 2011, new contacts have been made in the Middle East and North Africa. The King Fahd University of Petroleum & Mineral, Dhahran, Saudi Arabia has announced the availability of scholarships in its Environmental Master Program, with a focus on marine sciences and environment. Candidates applying for those scholarships must hold a Bachelor's degree in science or engineering; other requirements are given at <http://www.kfupm.edu.sa/gs/>. Accepted candidates will receive a full scholarship, including salary, housing, books, medical coverage, and air tickets. Interested candidates should apply through the Web site given above or can contact Dr. Assad Al-Thukair (thukair@kfupm.edu.sa) for additional information.

Ocean Carbon Activities

Registration is now open for the Third Symposium on The Ocean in a High-CO₂ World at <http://www.highco2-iii.org/>. Travel support will be available for early-career and developing country scientists (see Web site for details about applying).

The Surface Ocean CO₂ Atlas (SOCAT) version 1.5 was made publically available last month and can be

accessed at <http://www.socat.info/>. SOCAT has been created to improve access to global surface water CO₂ data and brings together, in a common format, all publicly available surface water fCO₂ (fugacity of CO₂) data from coastal seas and the global ocean. The database now contains 6.3 million measurements from 1,767 cruises run between 1968 and 2008 by scientists from more than 10 countries. From the International Ocean Carbon Coordination Project: "An ambitious timetable for SOCAT version 2 has now been set, with data submission until 31 December 2011, SOCAT quality control by the regional groups from June to September 2012 and a tentative date for the public release in late 2012. We kindly ask colleagues to submit their surface water fCO₂ data before **31 December 2011** via the Carbon Dioxide Information Analysis Center (<http://cdiac.ornl.gov/oceans/submit.html>). In particular, we target all coastal and open ocean data not already in SOCAT v1.5 and collected before 2011. More recent data are most welcome."

Large-Scale Ocean Research Projects

The [Third GEOTRACES Data-Model Synergy Workshop](#) will be held in Barcelona, Spain on 14-17 November 2011. The workshop will focus on ocean particles, with an emphasis on their role in the biogeochemical cycles of trace elements and isotopes (TEIs). The exchange with particulate phases is recognized as an important process in the oceanic budget of a large number of substances present in trace amounts in seawater, including that of key substances of relevance to GEOTRACES. The project has made it a priority to bring together modelers and scientists who collect TEI data to ensure that the data being collected will be useful in global models of TEI cycles, as well as models related to GEOTRACES process studies. GEOTRACES is also planning a regional meeting for Latin America, to be held in Brazil in November 2012. More details will be circulated as they become available.

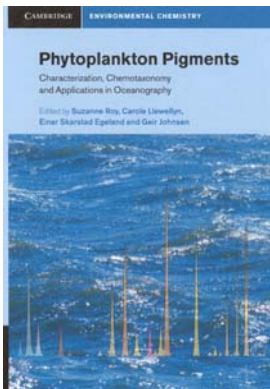
The 2012 SOLAS Open Science Conference will be held in Cle Elum, Washington State (USA) on 7-10 May 2012. Registration is now open through the meeting Web site at <https://www.confmanager.com/main.cfm?cid=2445&nid=15064>.

SCOR/POGO International Quiet Ocean Experiment

The International Quiet Ocean Experiment (IQOE) Open Science Meeting on 30 August-1 September 2011 attracted about 75 individuals from the academic community, navies, industry, and environmental groups. Participants were enthusiastic about the idea of a large-scale decadal project on the topic of sound in the ocean and its effects on marine organisms. The purpose of the open science meeting was to develop a Science Plan for the IQOE. This plan will include background information

to document the importance of the issue of sound in the ocean and its effects on marine organisms; identify information gaps; and describe research, observations, and modeling activities needed to fill these gaps. The plan will draw on background information and research priorities from previous documents, as well as from discussion papers submitted for the meeting and the results of the discussion sessions. The IQOE Science Plan will be ready for review by participants and the broader community later this year.

Publications



The SCOR-sponsored book, *Phytoplankton Pigments*, will be published this month by Cambridge University Press. The book provides new information since the highly successful 1997 book from SCOR WG 78 entitled *Phytoplankton Pigments in Oceanography*. The previous book has been cited more than 400 times and is still used in many laboratories worldwide.

Phytoplankton Pigments will be sent by SCOR to libraries in developing countries and some copies will be available for free distribution from the SCOR Secretariat. Additional copies can be purchased from Cambridge University Press (see www.cambridge.org/phytoplankton) and some of the data sheets from the book are freely available at this site.

SCOR/LOICZ WG 132 on [Land-based Nutrient Pollution and the Relationship to Harmful Algal Blooms in Coastal Marine Systems](#) has produced 4 publications based on its work so far:

1. Glibert, P.M. 2010. Long-term changes in nutrient loading and stoichiometry and their relationships with changes in the food web and dominant pelagic fish species in the San Francisco Estuary, California. *Reviews in Fisheries Science* 18(2):211-232.
2. Glibert, P.M. et al. 2010. Modeling of HABs and eutrophication: Status, advances, challenges. *Journal of Marine Systems* 83:262-275.
3. Bouwman, A.F. et al. 2011. Global hindcasts and future projections of coastal nitrogen and phosphorus loads due to shellfish and seaweed aquaculture. *Reviews in Fisheries Science* 19(4):331-357.
4. Harrison, P.J. et al. 2011. Geographical distribution of red and green *Noctiluca scintillans*. *Chinese Journal of Oceanology and Limnology* 29:807-831.

The group is still working on publications to complete its terms of reference and to tie together the series of papers they have produced.

SCOR Annual Meetings

2012—The 2012 SCOR General Meeting will be held in Halifax, Nova Scotia, Canada during the week of 22-26 October. The SCOR meeting will coincide with the 50th anniversary celebration of the Bedford Institute of Oceanography and a climate symposium. Part of the meeting will also be held at Dalhousie University.

2013—The location of the 2013 SCOR meeting has not yet been determined.

2014—SCOR has accepted an offer from the German SCOR Committee to hold its 2014 General Meeting in Bremen, Germany.

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) or Lora Carter (Lora.Carter@scor-int.org).

Acronyms:

BEPSII	Biogeochemical Exchange Processes at the Sea-Ice Interfaces
CNRS	Centre National de la Recherche Scientifique (France)
IABO	International Association for Biological Oceanography
IAMAS	International Association of Meteorology and Atmospheric Sciences
IAPSO	International Association for the Physical Sciences of the Oceans
ICSU	International Council for Science
IGBP	International Geosphere – Biosphere Programme
IQOE	International Quiet Ocean Experiment
IUGG	International Union of Geodesy and Geophysics
LESI	Laboratoire d'Etudes Spatiales et d'Instrumentation en Astrophysique
POGO	Partnership for Observation of the Global Oceans
SCOR	Scientific Committee on Oceanic Research
SOCAT	Surface Ocean CO ₂ Atlas
SOLAS	Surface Ocean – Lower Atmosphere Study
TEIs	trace elements and isotopes
TEOS-10	Thermodynamic Equation of SeaWater 2010
WG	working group

Acknowledgements of Figures:

Page 1 (top)—

<http://museum.gov.ns.ca/mmanew/en/home/whattoseedo/perm-anentexhibits/cssacadia/default.aspx>

Page 1 (left-hand column)— U.S. Department of Energy Genomic Science program and the website

<http://genomicscience.energy.gov>.

Page 1 (right-hand column)

<http://nyuad.nyu.edu/institute/workshop.statistical.physics.html>

Page 2 (right-hand column)— Photo courtesy Dr. Howard Spero of UC Davis (from

<http://oceanworld.tamu.edu/students/forams/forams5.htm>)