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SCOR Newsletter

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New SCOR Officers



New SCOR

President: National SCOR committees elected Marie-Alexandrine Sicre (France) as the first female President of SCOR and the first SCOR President from France. Dr. Sicre is Directrice de Recherche at CNRS (Centre National de la Recherche Scientifique). She

is a marine chemist by training and earned her PhD in Marine Sciences in 1987 at the Université Pierre et Marie Curie, Paris, France, on air-sea exchange of organic matter. Sicre was a postdoctoral fellow at the Woods Hole Oceanographic Institution (USA) from 1987 to 1988, where she participated in the US-SEAREX program with Dr. R. Gagosian until she was hired at CNRS in 1988. Sicre's current research interest is in paleoceanography. Over the past 10 years, she has been working on the calibration of climate proxies (biomarkers) and the role of the ocean in the last millennium climate, first in the Laboratoire des Sciences du Climat et de l'Environnement (LSCE) in Gif-sur-Yvette, France (1998–2014) and since 2014 in the Laboratoire d'Océanographie et du Climat: Expérimentation et Approches Numériques (LOCEAN), in Paris. Sicre served as vice-president on the review panel for the national program of marine biogeochemistry of CNRS for more than 10 years (2001–2012) and on the Images-France committee for 8

years. She has participated in more than 10 oceanographic and paleoceanographic cruises.

New SCOR Vice-President: National SCOR committees elected David Halpern as a new SCOR Vice-President. Dr. Halpern earned a Ph.D. in physical oceanography from the Massachusetts Institute of Technology. He is a senior research scientist at the NASA/California Institute of Technology Jet Propulsion Laboratory. Halpern analyses satellite and in-situ observations and simulations from ocean general circulation models constrained with observations to improve understanding of coupled ocean-atmosphere interaction and climate phenomena, such as El Niño and La Niña. He pioneered techniques to record long time series in-situ observations of near-surface meteorological and upper-ocean circulation variables in coastal upwelling and equatorial upwelling environments. Halpern has been an adjunct professor at the University of Washington, University of California at Los Angeles and California Institute of Technology. Currently, he is an Affiliate Researcher at the



Scripps Institution of Oceanography. Halpern is an editor of *Eos*. He was a member of SCOR WG 36 (Coastal Upwelling Processes) and SCOR WG 43 (GATE Oceanography) and chaired the physical panel of SCOR WG 56 (Equatorial Upwelling Systems).



New SCOR Co-opted Member:

The SCOR Executive Committee is able to appoint up to two Co-opted Members to improve the balance of the Executive Committee in terms of expertise, geography, or gender. To add expertise in marine geology and geophysics, Prof. Dr.

Colin Devey (Germany) was added to the SCOR Executive Committee for the period 2016–2018. Devey is Professor of Oceanic Volcanism in the Research Division “Dynamics of the Seafloor” at Geomar, Helmholtz Centre for Ocean Research in Kiel, Germany, a position he has held since 2004. He earned his PhD at Oxford University with a thesis entitled “*Structure and Composition of the Deccan Trap lava series, India*”. Devey served as Chair of the international InterRidge project from 2004–2006. His research focusses on understanding the thermal and chemical balances between Earth’s mantle and crust related to seafloor volcanism and the role of the oceanic lithosphere in the Earth System. He uses autonomous and remotely controlled vehicles for precise imaging and sampling of submarine volcanoes and their hydrothermal systems.

New SCOR Working Groups

The ad hoc SCOR Finance Committee advised meeting participants that SCOR could approve up to two working groups for a start in 2017. Eleven proposals were received and, based on comments received from national SCOR committees before the meeting and discussions at the meeting, the following two proposals were approved:

SCOR WG 151: Iron Model Intercomparison Project (FeMIP)

— With the recognition that the availability of iron (Fe) plays a central role in shaping biological activity in the ocean, most of the numerical models we rely on to test hypotheses and make projections of change represent this resource explicitly. This means that, for example, the projected impact of climate change on biological activity and the carbon cycle in iron-limited regions can be strongly controlled by how a given model represents the iron cycle. Moreover, due to the central role played by Fe, it is invoked as a potential driver of past changes to the global carbon cycle and as a regulator of both phytoplankton diversity and nitrogen cycling. These multifaceted roles for iron in regulating important components of the coupled ocean-terrestrial-atmosphere system requires that we have good quantitative constraints on its cycling in the ocean, which will raise confidence in the conclusions drawn from numerical models. However, despite the importance of Fe to ocean processes, a lack of widespread iron data (in both space and time) has hampered similar efforts to evaluate the skill of iron modelling. Fortunately, there has been a large increase in the availability of Fe measurements over recent years thanks to the GEOTRACES project.

The terms of reference for WG 151 include the following:

1. Identify best practices for minimum complexity representations of the iron cycle in models, with options given for more advanced aspects, and publish the guidance in a peer-reviewed paper.
2. Develop tools for a wide variety of platforms to validate global model results in a standardized way and make these available via a peer-reviewed publication and a website.
3. Facilitate a focused intercomparison of iron models to constrain the impact of varying residence times and a consensus dust deposition scheme and publish the results in a peer-reviewed journal.
4. Review how to represent biological interactions in the iron cycle, the linkages to key phytoplankton species and the interactions with zooplankton and bacteria, as well as broader connections with other biogeochemical cycles and publish the results in a peer-reviewed journal.

WG 151 is co-chaired by Alessandro Tagliabue (UK) and Stephanie Dutkiewicz (USA).

SCOR WG 152: Measuring Essential Climate Variables in Sea Ice (ECV-Ice)

— Observations over recent decades suggest that sea ice plays a significant role in global biogeochemical cycles, providing an active biogeochemical interface at the ocean-atmosphere boundary. However, a pressing need exists to perform methodological intercalibration experiments in sea ice in order to obtain reliable measurements of basic biogeochemical properties, including many of the Essential Climate Variables of the Global Climate Observing System. With newly emerging techniques, and pressed by the rapid changes in sea ice, the time has come to evaluate and improve our approach to studying sea-ice systems. An international working group is required to synthesize past intercalibration exercises and to design and coordinate new experiments.



Sea ice biogeochemistry group collecting samples during the AWECs (Antarctic Winter Ecosystem Climate Study) cruise in the Weddell Sea in July 2013. Credit: Bruno Jourdain

The terms of reference for WG 152 include the following:

1. Publish synthetic reviews compiled from measurements demonstrating large, unresolved discrepancies.
2. Design and coordinate intercalibration experiments to evaluate different methods for key parameters.
3. Design intercomparison studies to facilitate validation and adoption of new technologies for assessing the complexity and heterogeneity of sea ice at various spatial and temporal scales.
4. Create a guide of best practices for biological and biogeochemical studies in the sea-ice environment. This will be accomplished using a Web-based forum for compiling and disseminating the outcomes of past and new intercomparison studies.

WG 152 is co-chaired by Daiki Nomura (Japan), François Fripiat (Belgium), and Brent Else (Canada).

Other News from SCOR General Meeting

The SCOR Executive Committee approved a new format for annual reports from SCOR working groups to make the reports more uniform and more focused on how well each group is progressing toward fulfilling its terms of reference.

SCOR received the final review from the International Council for Science and the SCOR Executive Committee began discussions of the process to respond to the review. The Executive Committee will draft a response for review and comment by national SCOR committees and major financial sponsors.

SCOR and Social Media

SCOR is looking for new ways to use social media platforms to disseminate information about SCOR's activities and achievements. SCOR has been tweeting for the last few years (see @SCOR_Int). Recently, SCOR has started using a new email management system and has been increasing its email list as the central means to communicate with people interested in SCOR.

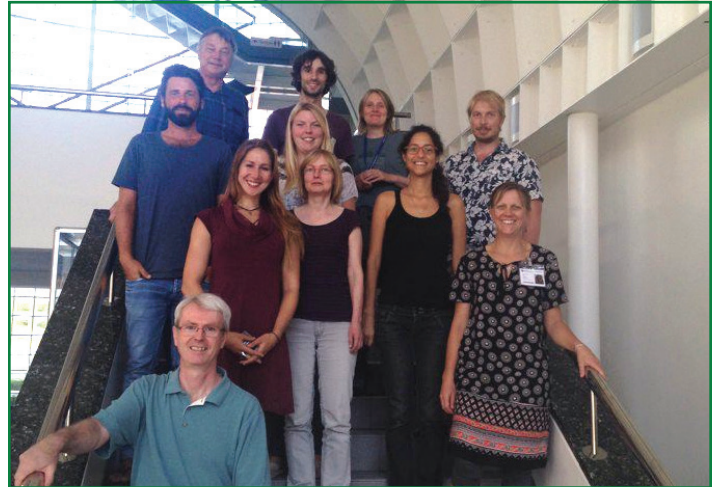
If you received this newsletter directly from SCOR, you are on the email list. Anyone not yet on the list can join by clicking on the "Sign up for SCOR Email Lists" link on the SCOR Web site.

SCOR now has a Facebook page to reach individuals in the SCOR community and beyond who use Facebook as their primary social media platform.

SCOR encourages projects and working groups to create videos explaining their work.

News from WGs and Large-Scale Ocean Projects

WG 150 on Translation of Optical Measurements into particle Content, Aggregation & Transfer (TOMCAT)— WG 150 met for the first time in September 2016 in Southampton, UK to begin work on its terms of reference. Meeting participants discussed the positive and negative aspects of the optical devices they had used, methods of translating optical measurements to flux estimates, comparisons of measurements made with optical devices and sediment traps, measurement standardization, data availability, and modeling. The group also began work on a review paper. The group's Web site is available at <https://tomcat-scor.org/>.



Participants in WG 150 Meeting in Southampton

GlobalHAB— GlobalHAB is continuing work on its Science Plan and is working on developing new working groups to implement GlobalHAB activities. The GlobalHAB SSC will meet next in March 2017.

SCOR/POGO International Quiet Ocean Experiment (IQOE)— IQOE is setting up working groups to implement IQOE science. The project is seeking funding for international and U.S. project offices. The IQOE Science Committee will meet next in London, UK in January 2017.

SCOR/Future Earth Integrated Marine Biogeochemistry and Ecosystem Research (IMBER)— IMBER is planning its 5th Imbizo for 6–10 October 2017 in Woods Hole, Massachusetts, USA on "Marine biosphere research for a sustainable ocean: Linking ecosystems, future states and resource management". As for past Imbizos, there will be three concurrent, but interacting, workshops. Gro van der Meeren has replaced Einar Svendsen as the Executive Director of the IMBER International Project Office.

GEOTRACES— The GEOTRACES Data Management Committee and Scientific Steering Committee met on 12–16 September 2016 in Toulouse, France. The meetings focused on ongoing preparations for release of the 2017 GEOTRACES Intermediate Data Project (IDP) in mid-2017 at the Goldschmidt Conference in Paris, France. The GEOTRACES

Data Assembly Centre, Data Management Committee, Standards and Intercalibration Committee, and International Project Office are all focused on acquiring, quality controlling, and compiling new data into the 2017 IDP.

SCOR/Future Earth/WCRP/iCACGP Surface Ocean – Lower Atmosphere Study (SOLAS)

— The SOLAS International Project Office (IPO) has welcomed Emilie Breviere back from maternity leave and bids goodbye to Stefan Konradowitz, who has served in the SOLAS IPO for 6 years. The SOLAS SSC will meet in Qingdao, China on 24–26 October 2016.

SCOR/IOC/IOGOOS Second International Indian Ocean Expedition (IIOE-2)

— The IIOE-2 Steering Committee will meet in Perth, Australia in January 2017 to discuss the work of its working groups and theme teams. Chairs have been selected for each working group and theme team, and the additional membership of each group is being selected.

Capacity Building

The membership of the SCOR Committee on Capacity Building has been rotated (see membership at http://www.scor-int.org/SCOR_CB_Committee.htm) and the committee will meet in 2017 to discuss ongoing SCOR capacity-building activities and to plan new ones. The committee will help SCOR working groups improve their efforts to involve scientists from developing countries.

The SCOR Committee on Capacity Building has issued a call for applications for the 2017 SCOR Visiting Scholar Program. Applications are due on 30 November. SCOR Visiting Scholars receive funding for airfares and some local expenses to teach and mentor in developing countries. For more information, see http://www.scor-int.org/SCOR_CB/Call_for_2017_SCOR_Visiting_Scholars.pdf. SCOR is particularly seeking applications for work in Indian Ocean countries as part of SCOR's contribution to the second International Indian Ocean Expedition, but will accept applications for service in any developing region of the world.

Publications

Culverhouse P.F., R. Williams, C. Gallienne, J. Tilbury, and D. Wall-Palme. 2016. Ocean-Scale Monitoring of Mesozooplankton on Atlantic Meridional Transect 21. *Journal of Marine Biology and Aquaculture* 2(1):1-13. – WG 130

Turner, D.R., E.P. Achterberg, C.-T.A. Chen, S.L. Clegg, V. Hatje, M.T. Maldonado, S.G. Sander, C.M.G. van den Berg, and M. Wells. 2016. Toward a Quality-Controlled and Accessible Pitzer Model for Seawater and Related Systems. *Frontiers in Marine Science* 3, Article 139 – WG 145

SCOR WG 141 on Sea Surface Microlayers has opened a Special Feature on “Sea-Surface Microlayer—Linking the ocean and

atmosphere” in the open-access journal *Elementa—Science for Anthropocene* (see <https://home.elementascience.org/special-features/the-sea-surface-microlayer/>). Submissions will accepted until February 2017. Please contact Oliver Wurl, co-chair of WG 141 (oliver.wurl at uni-oldenburg.de), with a title of proposed papers.

Future SCOR Annual Meetings

2017— The 2017 SCOR annual meeting will be held in Cape Town, South Africa on 4–6 September 2017. More details will be available soon.

2018— The SCOR Executive Committee accepted an offer from the UK SCOR Committee to hold the 2018 SCOR Annual Meeting in Plymouth, UK.

2019— SCOR has received offers from three countries for annual SCOR meetings in 2019 and beyond.

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).

ACRONYMS

GOOS	Global Ocean Observing System
iCACGP	International Commission on Atmospheric Chemistry and Global Pollution
IIOE-2	Second International Indian Ocean Expedition
IMBER	Integrated Marine Biogeochemistry and Ecosystem Research project (co-sponsored by SCOR and Future Earth)
IOC	Intergovernmental Oceanographic Commission
IQOE	International Quiet Ocean Experiment
POGO	Partnership for Observation of the Global Oceans
SCOR	Scientific Committee on Oceanic Research
SOLAS	Surface Ocean – Lower Atmosphere Study (Co-sponsored by SCOR, Future Earth, WCRP, and iCACGP)
WCRP	World Climate Research Programme
WG	working group