



2017 SCOR Meeting Participants

SCOR Newsletter

October 2017 • #35

60th Anniversary Edition

Twitter: @SCOR_Int

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SCOR's 60th Anniversary

On 28–30 August 1957, the Special Committee on Oceanic Research held its first meeting in Woods Hole, Massachusetts (USA) to launch the new organization. Fifteen of the leading oceanographers of that time formed the first plans of our organization, including the first SCOR working groups (WGs 1–5), the first large-scale international research project (the International Indian Ocean Expedition: IIOE), and the first capacity building as part of IIOE. These initial activities set a pattern for the following 60 years, up to today. SCOR has accomplished much in the past 60 years and the future offers additional scientific opportunities and challenges.

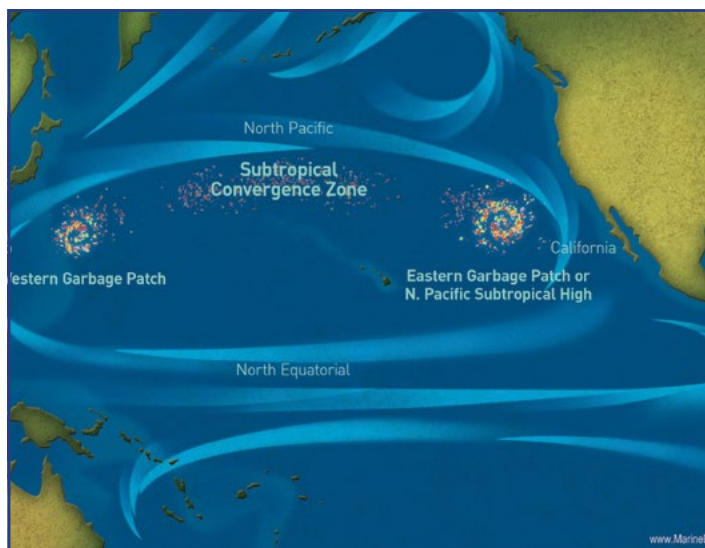
SCOR celebrated its first 60 years with a special symposium and dinner event at its 4–6 Sept. annual meeting in Cape Town, South Africa.

News from SCOR Annual Meeting in Cape Town, South Africa

SCOR held its annual meeting on 4–6 September 2017 at the Two Oceans Aquarium in Cape Town, South Africa. The South African SCOR Committee hosted the meeting and presented a session on the afternoon of 5 September highlighting research being conducted by South African scientists, particularly work by early-career scientists. The session was held in honor of Mike Lucas, a member of the South African SCOR Committee and professor at the University of Cape Town, who died during summer 2017.

SCOR meeting participants reviewed the status of all SCOR activities, as well as the 2018 budget for SCOR. Three new working groups were provisionally approved:

- WG 153: **Floating Litter and its Oceanic Transport Analysis and Modelling (FLOTSAM)**. The chair of this group is Stefano Aliani (Italy) and vice-chairs include Kara Lavender Law (USA), Nikolai Maximenko (USA), and Erik van Sebille (Netherlands).



Garbage patch illustration from NOAA
(see <https://marinedebris.noaa.gov/info/patch.html>)

- **WG 154: [Integration of Plankton-Observing Sensor Systems to Existing Global Sampling Programs \(P-OBS\)](#).**
This group is co-chaired by Emmanuel Boss (USA) and Anya Waite (Germany).
- **WG 155: [Eastern boundary upwelling systems \(EBUS\): diversity, coupled dynamics and sensitivity to climate change](#).**
This group is co-chaired by Ruben Escribano (Chile) and Ivonne Montes (Peru).

The final approval of these groups will depend on changes in their membership and/or terms of reference.

In addition to the decision to support three working groups, the 2018 SCOR budget also includes funding for two additional SCOR Visiting Scholars, adding to the three that will be supported with funding from the U.S. National Science Foundation. SCOR also approved funding for a redesign of the SCOR Website, which was recommended by the SCOR community through the survey of SCOR communication approaches. SCOR approved funding for a workshop with the InterRidge project, focused on the Indian Ocean and contributing to the second International Indian Ocean Expedition (IIOE-2).

Before the main session of the SCOR meeting, the SCOR Executive Committee met on 3 September to discuss the progress of actions designed to respond to the review of SCOR by its parent organization, the International Council for Science. The Executive Committee approved changes to the SCOR Constitution, which will be circulated to national SCOR committees before next year's annual SCOR meeting for ratification. The Executive also discussed two new documents, the SCOR Strategy and the SCOR Financial Strategy. SCOR will institute regular review of all of its activities and has developed a review schedule for activities that have not been reviewed recently.

SCOR at UN Ocean Conference

Four representatives of SCOR and its activities participated in the UN Ocean Conference on 5–9 June and made presentations in four different side events:

- Marie-Alexandrine Sicre (SCOR President) participated in a panel at the launch of the Ocean Knowledge-Action Network on 6 June.
- Marie-Alexandrine Sicre presented the relationship of SCOR to Sustainable Development Goal (SDG) #14 of the UN's Agenda 2030, in a side event on "A Healthy Ocean, A Protected Environment" on 7 June (see table on page 3).
- Ed Urban (SCOR Executive Director) presented on the Southern Ocean Observing System in a side event on "Alliances for Integrated Ocean Observing and Information Services Supporting the Implementation of Sustainable Development Goal 14" on 8 June.
- Ed Urban led a side event (with POGO and IODE) on

"Harnessing the Resources of International Ocean Science Organizations to Develop Capacity for Ocean Science in SIDS, LDCs and other Developing Countries" on June 9. Claudia Benitez-Nelson (Chair, SCOR Committee on Capacity Building; see below) served as Rapporteur for the session and Ratana Chuenpagdee (IMBER SSC) served as the Moderator for the discussion session. See http://www.scor-int.org/UN_Ocean_Conference_Side_Event.pdf.

SCOR has submitted a voluntary commitment for achievement of SDG 14 (see list at <https://oceanconference.un.org/commitments/>).



UN Ocean Conference

Credit: http://www.espa.ac.uk/files/espa/Oceans%20Conference%20grand%20plenary_0.jpg

SCOR at Ocean Sciences 2018

SCOR will have a booth (#502) at the Ocean Sciences 2018 meeting on 11–16 February 2018 in Portland, Oregon (USA). So far, the following SCOR-sponsored groups will be meeting in conjunction with Ocean Sciences 2018:

- WG 143: Dissolved N₂O and CH₄ measurements: Working towards a global network of ocean time series measurements of N₂O and CH₄
- WG 145 on Chemical Speciation Modelling in Seawater to Meet 21st Century Needs (MARCHEMSPEC)
- WG 147: Towards Comparability of Global Oceanic Nutrient Data (COMPONUT)
- WG 150: Translation of Optical Measurements into particle Content, Aggregation & Transfer (TOMCAT)
- WG 151: Iron Model Intercomparison Project (FeMIP)
- WG 154: Integration of Plankton-Observing Sensor Systems to Existing Global Sampling Programs (P-OBS)

This information will be updated in later newsletters.

SCOR and SDG #14

SCOR's mission is to provide mechanisms for the international ocean science community to increase fundamental knowledge of the ocean, remove barriers to research and improve measurement techniques, and to improve capacity for ocean science worldwide. SCOR does not have a specific mandate to apply scientific knowledge to policy. However, much of the work of SCOR is relevant to policy and should be of interest to policymakers. Many SCOR activities are relevant to Sustainable Development Goal #14 (Life Below Water) of the UN's Agenda 2030 (see table following).

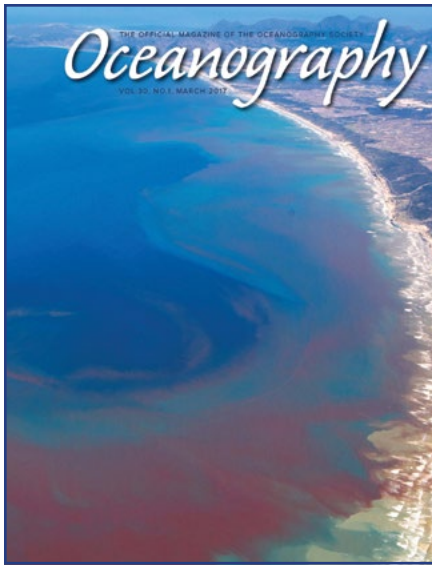


Goals of SDG 14		SCOR Activity
14.1	Marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	<ul style="list-style-type: none"> Support of GESAMP WG 38 on Atmospheric Input of Chemicals to the Ocean GEOTRACES project SCOR WG 143: Dissolved N₂O and CH₄ measurements SCOR WG 144: Microbial Community Responses to Ocean Deoxygenation SCOR WG 146: Radioactivity in the Ocean, 5 decades later (RiO5) SCOR WG 147: Towards comparability of global oceanic nutrient data (COMPONUT) International Quiet Ocean Experiment
14.2	Sustainable management of marine and coastal ecosystems	<ul style="list-style-type: none"> Integrated Marine Biosphere Research (IMBeR) project (with Future Earth)
14.3	Ocean acidification	<ul style="list-style-type: none"> SOLAS-IMBeR Ocean Carbon Working Group International Ocean Carbon Coordination Project (with IOC) SCOR WG 149: Changing Ocean Biological Systems (COBS): how will biota respond to a changing ocean?
14.4	Science-based fisheries management	<ul style="list-style-type: none"> Integrated Marine Biosphere Research (IMBeR) project (with Future Earth)
14.7	Sustainable management of fisheries, aquaculture and tourism in Small Island developing States and least developed countries	<ul style="list-style-type: none"> Integrated Marine Biosphere Research (IMBeR) project (with Future Earth)
14.a	Increase scientific knowledge, develop research capacity and transfer marine technology	<ul style="list-style-type: none"> All SCOR activities

Publications

Bullister, J.L., D.P. Wisegarver, and S.T. Wilson. 2017. The Production of Methane and Nitrous Oxide Gas Standards for SCOR Working Group #143. http://www.scor-int.org/Publications/SCOR_WG_143_Technical_Report.pdf – WG 143

Giering, S.L.C. 2017. Optical Sensors Can Shed Light on Particle Dynamics in the Ocean. *Eos* 98, <https://doi.org/10.1029/2017EO072123>. Published on 2 May 2017. – WG 150



Cover of special issue of Oceanography magazine

Kudela, R., H. Enevoldsen, and E. Urban (eds.). 2017. GEOHAB special issue. [International Cooperation in Harmful Algal Bloom Science](#). *Oceanography* 30(1):12–81

Morard, R., K.F. Darling, F. Mahe, S. Audic, Y. Ujiie, A.K.M Weiner, A. Andre, H.A. Sears, C.M. Wade, F. Quillevère, C.J. Douady, G. Escarguel, T. de Garidel-Thoron, M. Siccha, M. Kucera,

and C. de Vargas. 2015. PFR2: a curated database of planktonic foraminifera 18S ribosomal DNA as a resource for studies of plankton ecology, biogeography and evolution. *Molecular Ecology Resources* 15(6):1472–1485. – From SCOR/IGBP WG 138

Morard, R., G Escarguel, A.K.M. Weiner, A. Andre, C.J. Douady, C.M. Wade, K.F. Darling, Y. Ujiie, H.A. Sears, F. Quillevère, T. de Garidel-Thoron, C. de Vargas, and M. Kucera. 2016. Nomenclature for the Nameless: A Proposal for an Integrative Molecular Taxonomy of Cryptic Diversity Exemplified by Planktonic Foraminifera. *Systematic Biology* 65(5):925–940. – From SCOR/IGBP WG 138

Spezzaferri, S., M. Kucera, P.N. Pearson, B.S. Wade, S. Rappo, C.R. Poole, R. Morard, and C. Stalder. 2015. Fossil and Genetic Evidence for the Polyphyletic Nature of the Planktonic Foraminifera "Globigerinoides", and Description of the New Genus *Trilobatus*. *PLOS One* 10(5):e0128108. – From SCOR/IGBP WG 138

Wurl, O., W. Ekau, W.M. Landing, and C.J. Zappa. 2017. Sea surface microlayer in a changing ocean – A perspective. *Elementa: Science of the Anthropocene* 2017;5:31. DOI: <http://doi.org/10.1525/elementa.228>.

News from WGs and Large-Scale Ocean Projects

WG 146 on Radioactivity in the Ocean, 5 decades later (RiO5) met for the final time in Aix-en-Provence, France on 9–11 August 2017. The meeting focused on completing the [ASLO eLectures](#) on radioecology and on a “cookbook” of marine radiochemistry methods (45 “recipes” so far). The group hosted a one-day training workshop in conjunction with the Goldschmidt conference in August 2017 in Paris, France. Group members are also developing plans for a one-week course that would combine elements of the 2017 Goldschmidt lectures and the 2016 Xiamen training in lab and field sampling to give a more comprehensive introduction on ocean radioactivity to upper level undergraduates, graduates, early career, and perhaps even late-career non-specialists. This course would cover materials from radioactivity basics, to major applications of radiotracers, and radioecology concepts in ocean science with hands-on activities.

SCOR WG 149 on Changing Ocean Biological Systems (COBS): How will biota respond to a changing ocean? WG 149 recently met for the second time, in Villefranche-sur-mer, France on 15–16 June 2017. The meeting continued work on the development of a best practices guide (BPG) for multiple-stressor manipulation experiments on marine organisms (Term of Reference #4), as well as the other terms of reference of the group. A few members of WG 149 met in Gothenburg, Sweden on 22–25 June 2017 to finalize the development of the BPG Theme 2, the Web-based Virtual Marine Scientist 2. Work continues on a peer-reviewed paper to assess the current status of emerging research on multi-stressor effects.

Integrated Marine Biosphere Research (IMBeR)—IMBeR held its [fifth Imbizo open science conference](#) in Woods Hole, Massachusetts, USA on 2–5 October 2017.

The meeting consisted of three concurrent, interacting workshops, with joint plenary and poster sessions:

1. Critical Constraints on Projections
2. Metabolic Diversity and Evolution
3. Management Strategy Evaluation

The meeting was preceded by a session on how to use infographics as effective communication tools.



Ivan Martins (Brazil), winner of Best Student Poster at IMBeR Imbizo 5, with Carol Robinson, IMBeR Chair

Surface Ocean – Lower Atmosphere Study (SOLAS)

— The sponsors of SOLAS have approved Lisa Miller of the Department of Fisheries and Oceans–Canada as the next chair of the SOLAS Scientific Steering Committee, starting on 1 January 2018. Congratulations, Lisa!



Lisa Miller

GEOTRACES—

GEOTRACES released its second Intermediate Data Product (IDP 2017) on Wednesday, 16 August at the 2017 Goldschmidt Conference in Paris, France. An updated eGEOTRACES Electronic Atlas was distributed on a USB drive. The new product presents a more complete coverage of the global ocean and a larger range of biogeochemical parameters. (see <http://www.geotraces.org/dp/idp2017>).

GEOTRACES held its first Summer School on 20–26 August in Brest, France (see <https://geotraceschool.sciencesconf.org/>). It brought together more than 60 students and 20 leading international scientists. This summer school aimed at teaching the skills and knowledge necessary for a good understanding of the biogeochemical cycles of trace metals. It allowed Ph.D. students and early-career researchers to see how their work fits within the international community of GEOTRACES.

SCOR/POGO International Quiet Ocean Experiment (IQOE)

— IQOE has formed three new working groups to provide expertise to the project in relation to Data Management and Access, the Arctic Acoustic Environment, and Acoustic Measurement of Ocean Biodiversity Hotspots. A new IQOE Web site will be launched soon, with details about each of these groups.

International Indian Ocean Expedition Steering Committee meets for the first time

 (report from Peter Burkill)

Although the International Indian Ocean Expedition II (IIOE-2) was launched in December 2015, it was not until early 2017 that the Steering Committee met face-to-face for the first time. Until then, the IIOE-2 Co-Chairs (Vladimir Ryabanin of IOC, Satheesh Shenoi of IOGOOS and Peter Burkill of SCOR) have taken the project forward with the Joint Project Officers (Nick d'Adamo in Perth and Rajan Sivaramakrishnan in Hyderabad).

The Steering Committee that met in Perth, Australia from 2 to 4 February includes six Science Themes and seven Working Groups. The six Science Themes are responsible for research and built on the topics identified in the Science Plan:

1. Human Impacts (chaired by Ben Milligan of UK),
2. Boundary Current Dynamics (co-chaired by P. Vinayachandran of India and Yukio Masmoto of Japan),
3. Monsoon Dynamics (co-chaired by Adrian Matthews of UK and Joaquim Goes of USA),
4. Circulation Patterns (co-chaired by Jerome Vialard of France and Amit Tandon of USA),
5. Extreme Events (chaired by Chari Pattiarachi of Australia) and
6. Unique Features (chaired by Jerome Dymont of France).

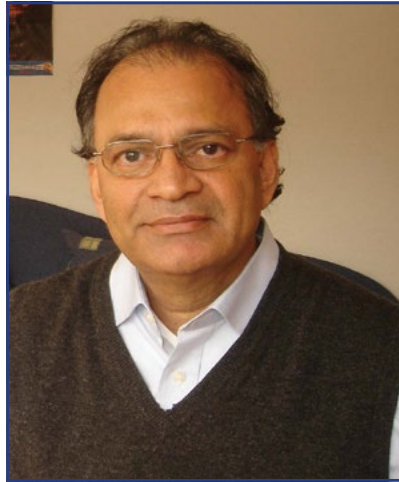
Co-ordination of research delivery rests with Working Group 1 (chaired by Hermann Bange of Germany). Also in Perth were representatives of each IIOE-2 National Committee (Australia, France, Germany, India, UK and USA) and an Early Career Scientist Network (coordinated by Danielle Su from Australia). The meeting focused on how the committee should deliver the Science Plan using the Implementation Strategy as a basis. Full details are available from the IIOE-2 website (www.iioe-2.incois.in).



2017 GEOTRACES Summer School Participants

SCOR Capacity-Building Activities

The SCOR Executive Committee has approved Prof. Claudia Benitez-Nelson of the University of South Carolina (USA) as the next chair of the SCOR Committee on Capacity Building. Prof. Benitez-Nelson has served on the committee since 2016 and will take over from Prof. Venu Ittekkot. Congratulations to Prof. Benitez-Nelson!



Prof. Venu Ittekkot

Thank you to Prof. Ittekkot for many years of service to SCOR and the international community to advance capacity building worldwide in working with SCOR and IOC.

4th African Research Discovery Camp— The 4th African Research Discovery Camp was held on 13 April–12 May in Henties Bay (Sam Nujoma Marine and Coastal Resources Research Centre) and Swakopmund (National Marine Information and Research Centre). It was a productive course with 13 participants from 8 countries, 5 from Northern Hemisphere countries and 8 from Africa. Venu Ittekkot and Ed Urban visited Namibia before the annual SCOR meeting to discuss the future of the program with partners in Namibia.

2017 SCOR Visiting Scholars— Three of the five 2017 SCOR Visiting Scholars have completed their assignments, with two more working in their host countries later this year.



Josep Pelegri's visit to Colombia as a SCOR Visiting Scholar to teach about coastal physical oceanography

The application period is open for 2018 SCOR Visiting Scholars. The deadline for applications is 15 November 2017

and information about the program can be found at http://www.scor-int.org/SCOR_Visiting_Scholars.htm

Future SCOR Annual Meetings

2018— The 2018 SCOR Annual Meeting will be held in Plymouth, UK on 4–6 September 2018.

2019— The 2019 SCOR Annual Meeting will be held in Toyama, Japan. The meeting dates will be announced later.

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).

Join SCOR Email List

ACRONYMS

GOOS	Global Ocean Observing System
iCACGP	International Commission on Atmospheric Chemistry and Global Pollution
IIOE-2	Second International Indian Ocean Expedition (co-sponsored by SCOR, IOC, and IO-GOOS)
IMBeR	Integrated Marine Biosphere Research project (co-sponsored by SCOR and Future Earth)
IOC	Intergovernmental Oceanographic Commission
IODE	International Oceanographic Data and Information Exchange
IQOE	International Quiet Ocean Experiment (co-sponsored by SCOR and POGO)
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