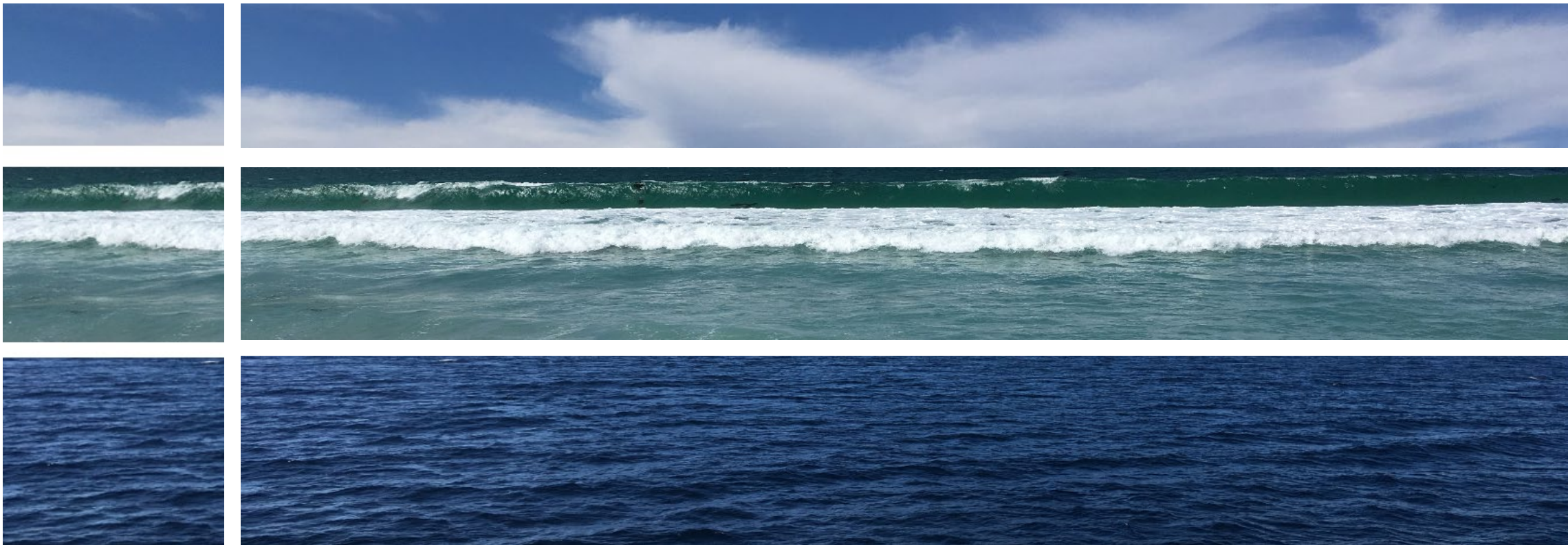


The Scientific Committee on Oceanic Research- SCOR

2020 Report of status and activities



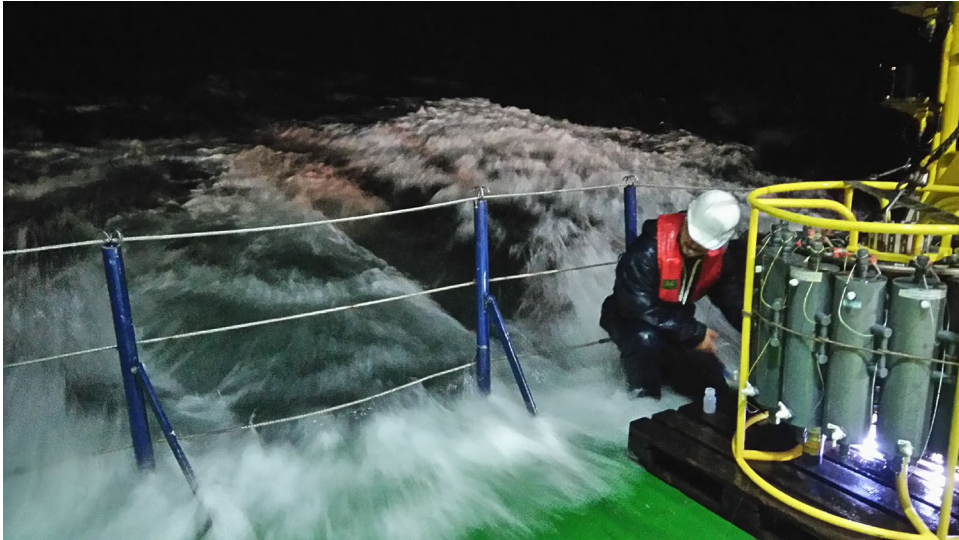
SCOR is about....

Advancing ocean sciences across disciplines and through international cooperation since 1957

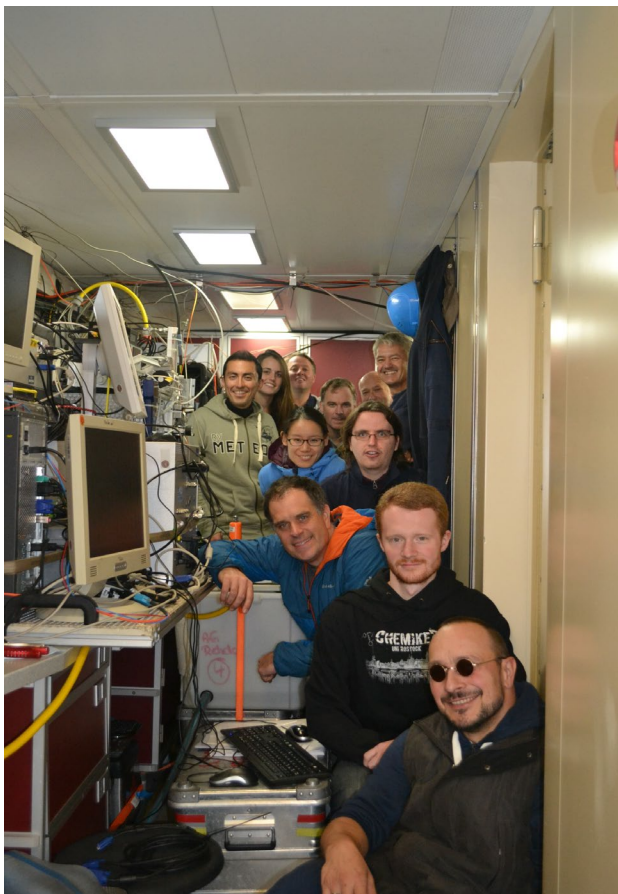


Goals

- Address **global ocean issues**
- Plan and conduct **research**
- Solve **methodological and conceptual problems**
- **Build capacity** in developing countries



Nighttime sampling – WG 143 on dissolved N₂O and CH₄ measurements: Intercomparison Cruise to the Baltic Sea on board the R/V Elisabeth Mann-Borghese, image by Damian L. Arévalo-Martínez.



Lab work onboard R/V Elisabeth Mann-Borghese, image by Michael Glockzin.

Approach

- Support international **Working Groups and large-scale Projects**
- Engage **SCOR National Committees** - more than 30 - which along with **funding agencies** and **foundations** provide **support** to SCOR
- **Develop capacity** - visiting scholar, fellowships, travel support
- **International collaboration and partnerships** - project offices supported by Australia, Canada, China, France, Germany, Japan, Netherlands, New Zealand, Poland, Sweden, UK, and USA

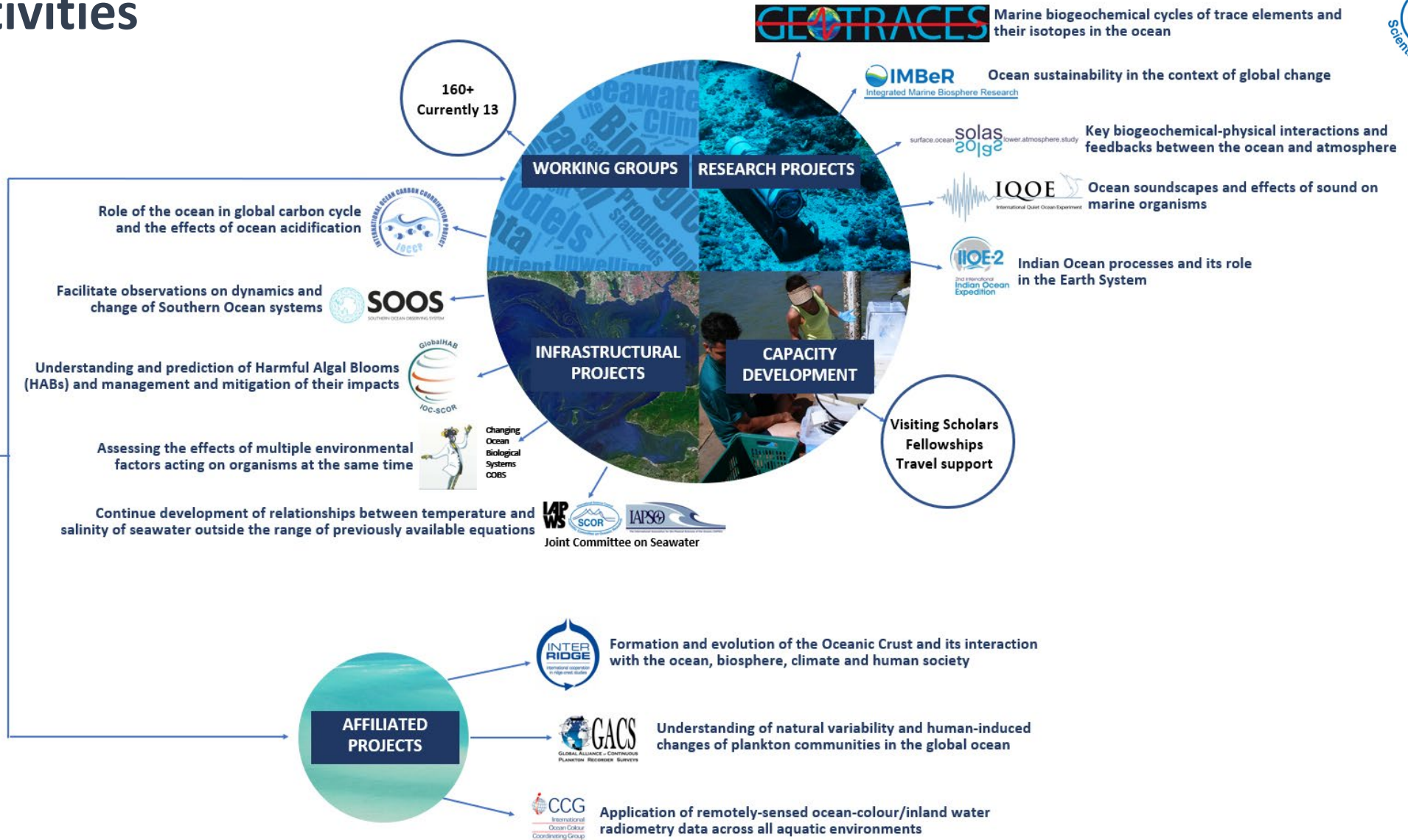


The Southern Ocean Carbon and Climate Observatory (SOCCO) scientists at work, image by Sandy Tomalla.

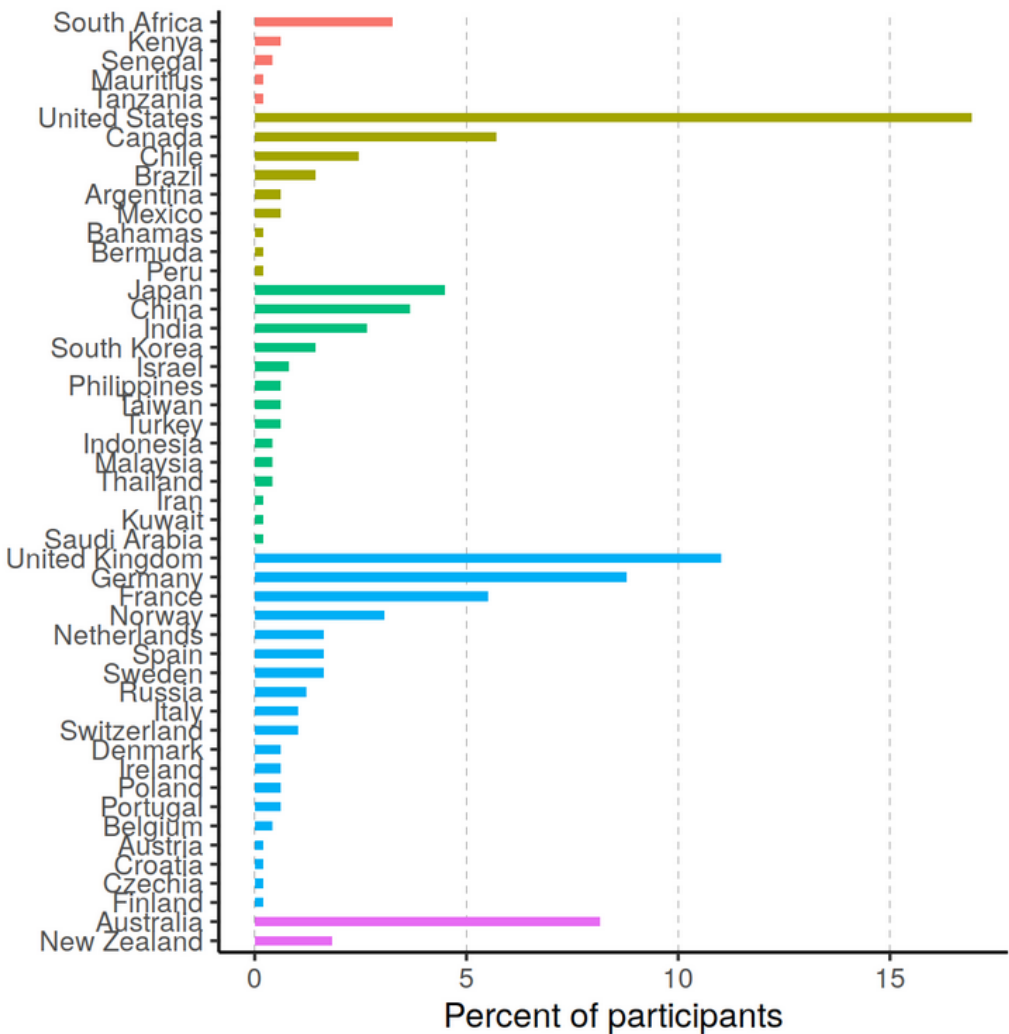
Engagement

- Promotes **equity, diversity, inclusion** in oceans sciences
- Encourages and supports involvement of **students** and **early career** scientists
- **Co-sponsor** of the **Ocean KAN** (Knowledge Action Network)
- **Contributor** to the **UN Decade of Ocean Science for Sustainable Development**
- Approved **observer** at the Intergovernmental Oceanographic Commission (**IOC**) and at the Intergovernmental Panel on Climate Change (**IPCC**)

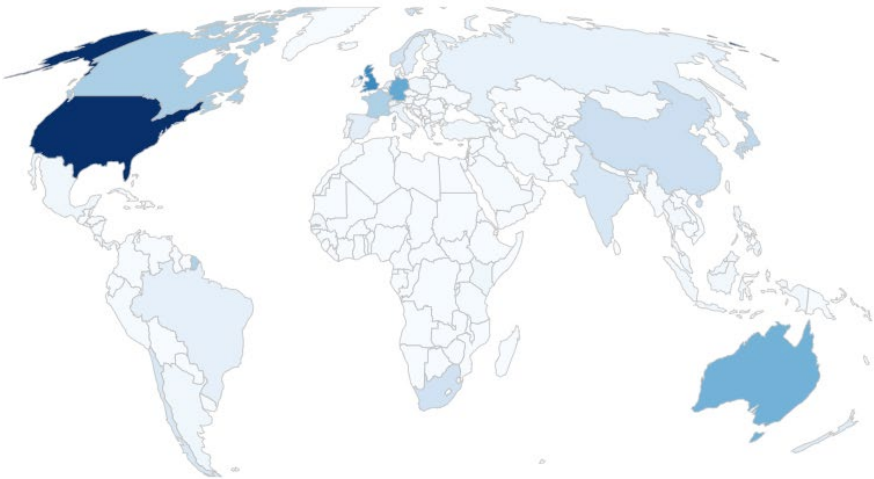
SCOR activities



SCOR community



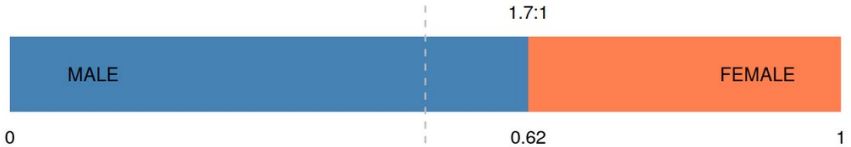
SCOR people 2019-2020



Total
Countries
49

F
M

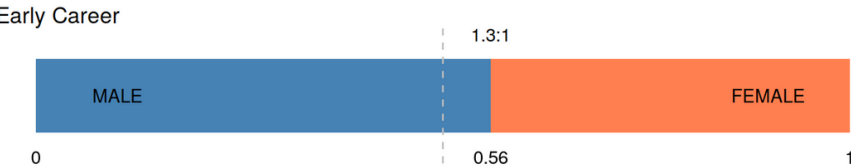
38%
62%



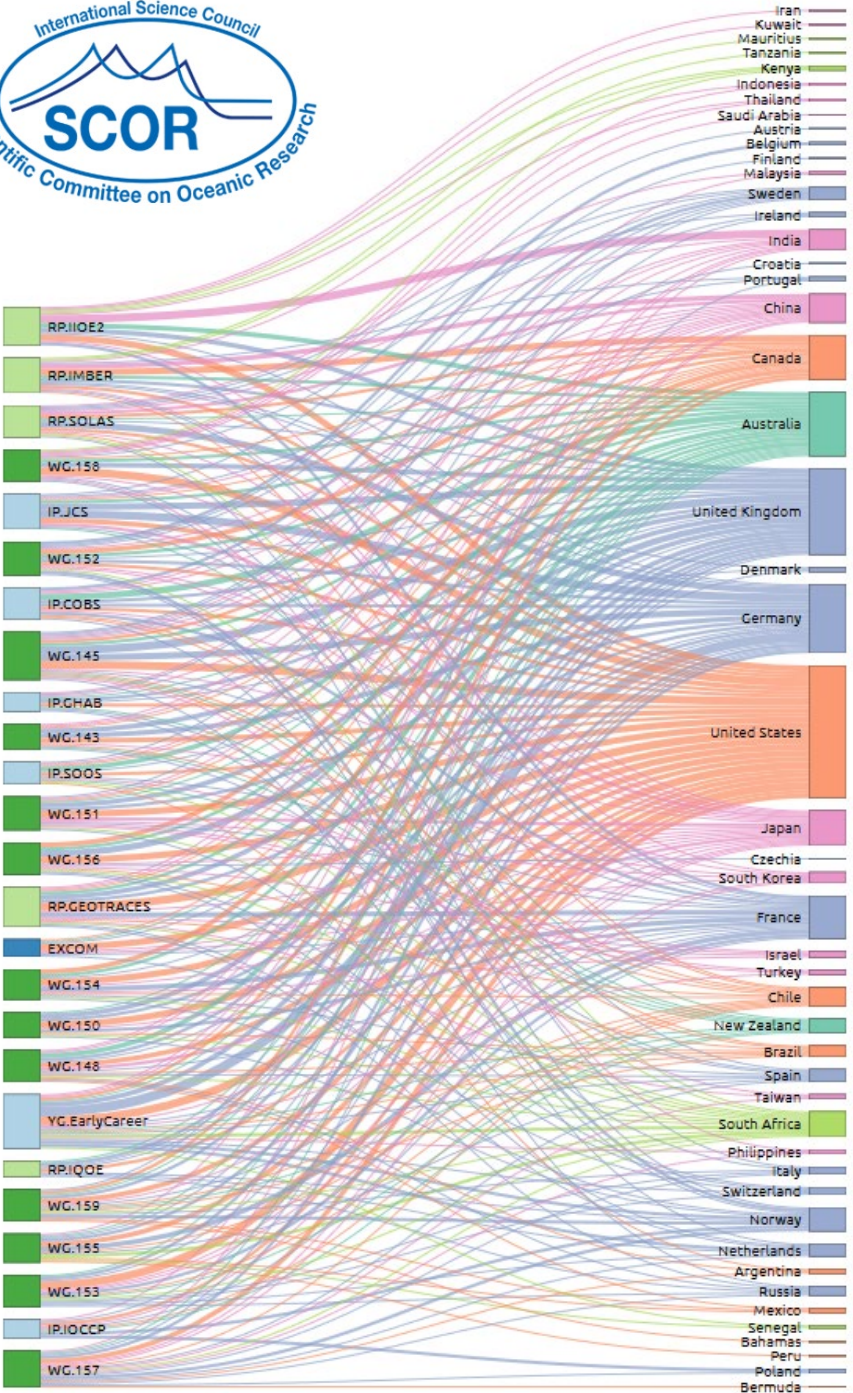
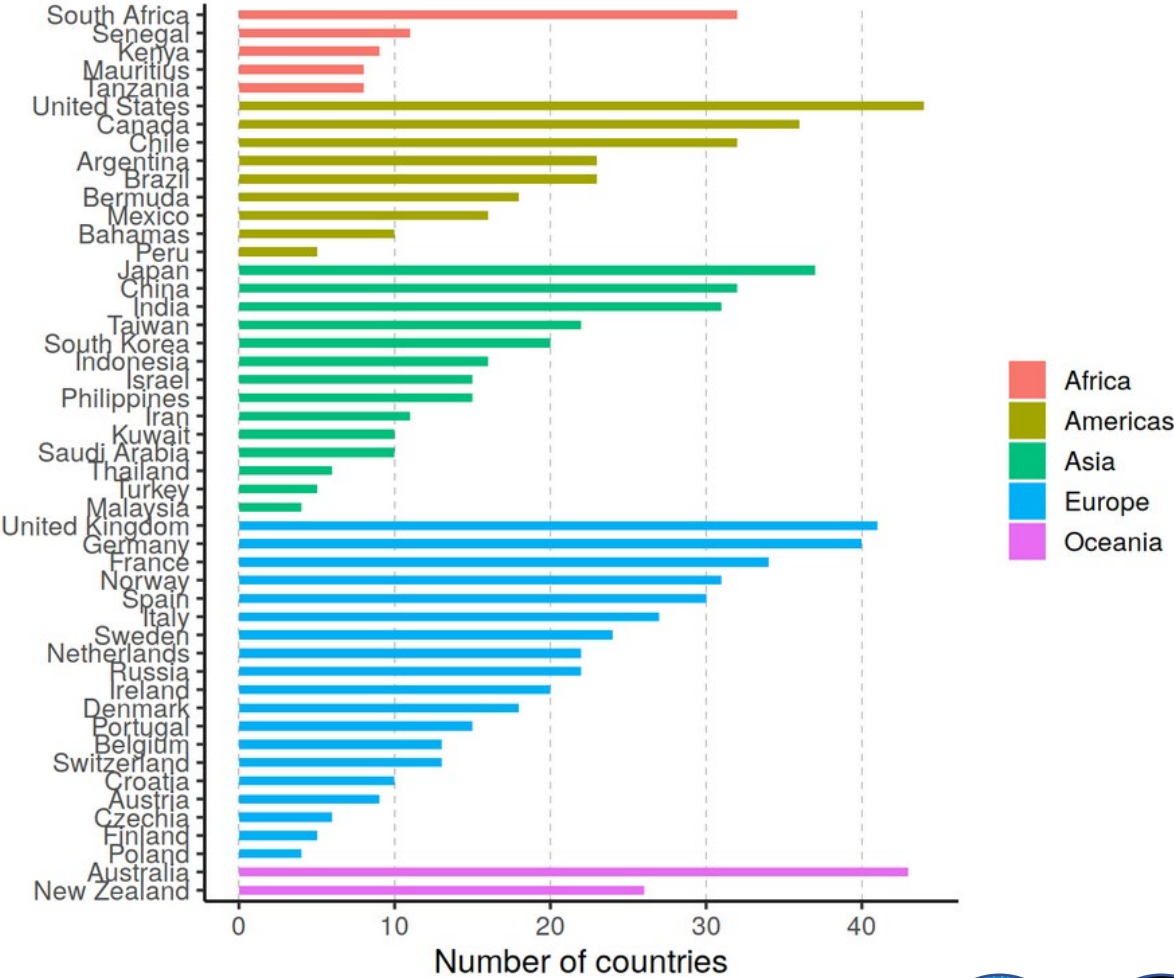
Early Careers
Countries
19

F
M

44%
56%



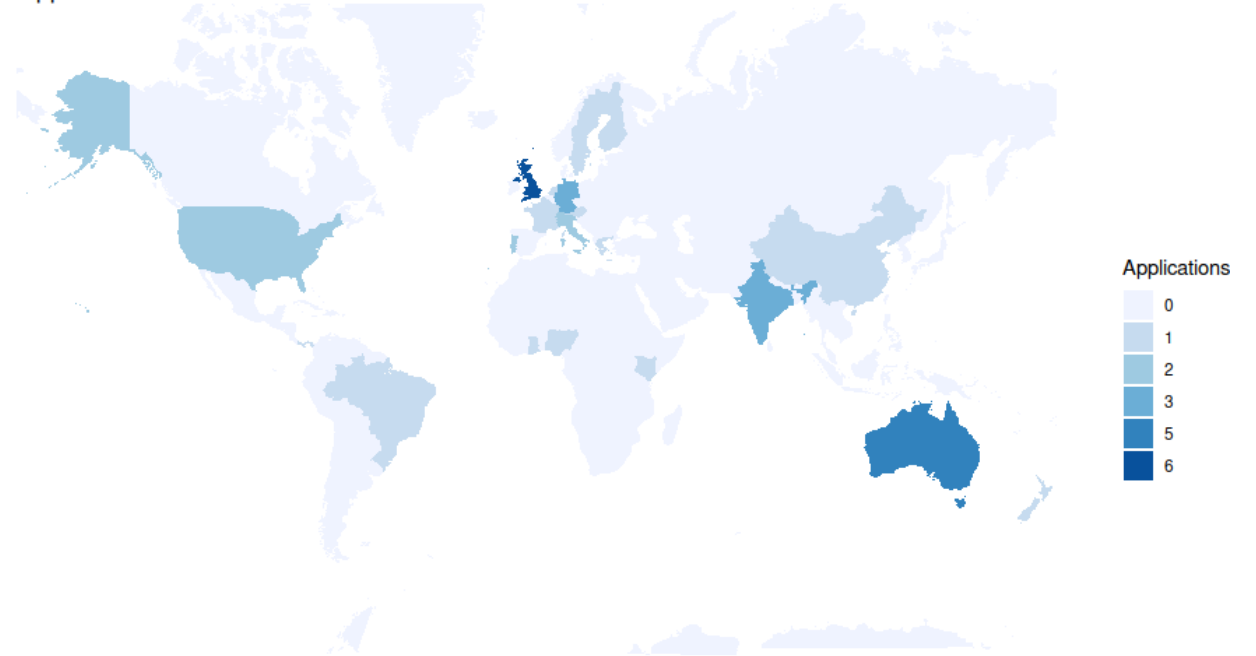
SCOR community - interactions



Recruitment of 2020 Early Career Scientist

- 39 applications received – ~34% women, 21 countries
- Each application was reviewed by three members of the EC and the reviews were ranked
- Top three candidates were interviewed by SCOR President (Sicre), Secretary (Myers) and Vice-president (Yoo) – moderated by Executive Director
- Selected applicant is Dr. Charlotte Laufkotter, Ambizione Fellow at Bern University, Switzerland. Her area of expertise is marine biogeochemistry, in particular biological carbon cycling and plankton communities, extreme events, and marine plastic pollution

ECC Applications



October 2019-2020: Working Group meetings

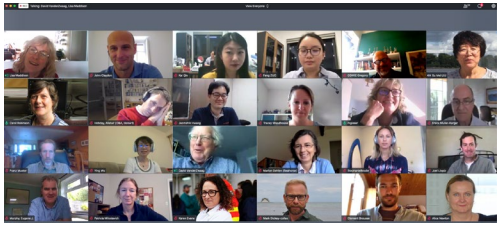


#	Working Group	Meeting
143	N2O & CH4 measurements	Ocean Sciences, San Diego, USA – February 2020
145	MARCHEMSPEC	Ocean Sciences, San Diego, USA – February 2020
148	IQuOD	Brest, France – October 2019
150	TOMCAT	Planned: Summer School 2021
151	FeMIP	Ocean Sciences, San Diego, USA – February 2020
152	ECV-Ice	Planned: Australia 2020 – postponed 2021
153	FLOTSAM	Planned: Japan 2020 – postponed to 2021
154	P-OBS	Virtual: September 2020
155	EBUS	Virtual: June 2020
156	Chlorophyll fluorescence	Ocean Sciences, San Diego, USA – February 2020
157	MetaZooGene	Ocean Sciences, San Diego, USA – February 2020
158	C-GRASS	Virtual: September 2020
159	DeepSeaDecade	Aveiro, Portugal – January 2020

October 2019-2020: Project activities



IMBeR SSC



GEOTRACES DMC



SOLAS SSC



Project	Meeting	SSC renovations / other
RESEARCH PROJECTS		
GEOTRACES	SSC and DMC: virtually – September 2020	Co-chair Andie Bowie stepping down in December 2020
SOLAS	SSC: virtually – October 2020	Chair Lisa Miller stepping down in December, Minhan Dai and Cliff Law new co-chairs from January 2021
IMBeR	SSC: virtually – June 2020	Call for nominations for new SSC members – September 2020 The IPO moved from Norway to Canada (Dalhousie)
IQOE	WGs - virtually	Ocean Sound EOVI Implementation Workshop - 2021
IIOE-2	SSC cancelled – Core Group meets virtually	SSC and Indian Ocean Science Conference – 2021
INFRASTRUCTURAL PROJECTS		
COBS	Subgroup at Ocean Sciences – Feb 2020	Transition from WG to project: proposed new ToRs and SSC
GlobalHAB	SSC: Virtually – September 2020	Six new SSC members
IOCCP	SSC: Virtually – December 2020	News SSC members – co-chair Masao Ishi steps down in December
SOOS	SSC: Virtually – October 2020	Two new co-chairs and three new SSC members
JCS	2020 meeting - cancelled	

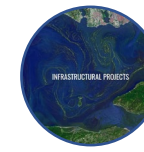
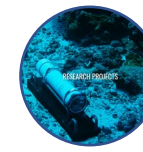
October 2019-2020: capacity building

PROGRAM	
SCOR Visiting Scholars	5 VS approved for 2019, one of these completed after the 2019 SCOR AM, 6 VS approved for 2020, none able to travel (rescheduling for 2021). Call open for 2021.
POGO-SCOR Fellowships	4 PS-F funded in 2019, 45 applications received in 2020 (40% females, 25 countries) – 5 candidates approved (India, Venezuela, Argentina, Colombia, Morocco) – none able to travel (rescheduling for 2021).
NSF Travel Support	Renewal of NSF Travel Grant approved (3 years). 8 + 1 requests received to support travel/ registration / cruise participation (WCMB, COSPAR, PORSEC, WG 150 SS, Conference Copeopoda, IMBeR CLIMECO, Int. HAB Conference, Gordon Research Conf, GEOTRACES cruise) of Early Careers from developing countries.
Research Discovery Camps	Supported by the Agouron Institute and Simons Foundation – postponed to 2021 (Namibia)



Visiting Scholar Brian Helmuth from Northeastern University at the Centro Nacional Patagónico CENPAT in Puerto Madryn, Argentina – November 2019

SCOR contributions to science



WG-151 and GEOTRACES:
Developing Autonomous
Observing Systems for
Micronutrient Trace Metals

WG-154:
Globally Consistent Quantitative
Observations of Planktonic
Ecosystems

***WG-158:**
Toward a Coordinated Global
Observing System for Seagrasses
and Marine Macroalgae

***WG-159:**
Global Observing Needs in the
Deep Ocean

SOOS:
Delivering Sustained, Coordinated, and
Integrated Observations of the Southern
Ocean for Global Impact

IQOE:
Observing the Oceans Acoustically

WG-148:
More Than 50 Years of Successful Continuous Temperature
Section Measurements by the Global Expendable
Bathymograph Network, Its Integrability, Societal
Benefits, and Future
+ 2 papers in ocean re-analysis and 3 papers related to
earth, ocean climate and sea level

IMBeR:
Editorial: Oceanobs'19: An Ocean
of Opportunity

GlobalHAB:
Scaling Up From Regional Case Studies to
a Global Harmful Algal Bloom Observing
System

WG-153:
Towards the Integrated Marine
Debris Observing System

IOCCP:
What We Have Learned From the
Framework for Ocean Observing

WG-143:
A Harmonized Nitrous Oxide (N₂O)
Ocean Observation Network for the
21st Century

 **frontiers**
in Marine Science

**WGs approved in 2019*

Integration – Innovation - Information

SCOR contributions to science



Publications 2019-2020:

- ~30 publications
- WGs and IOCCP
- Acknowledging SCOR

<https://scor-int.org/work/publications/>

Demonstrations and live conversations at SCOR booth:

IMBER
SOLAS
GEOTRACES
IOCCP
IIOE-2
WG145 – chemical speciation
WG151 – iron model intercomparison
WG 156 – chlorophyll fluorescence for primary productivity measurements

Townhalls:

IIOE-2
WG145 – chemical speciation

WG meetings:

WG145 – chemical speciation
WG151 – iron model intercomparison
WG 156 – chlorophyll fluorescence for primary productivity measurements
WG157 - zooplankton DNA metabarcoding

Sessions:

GEOTRACES
IMBeR
IOCCP
WG153 – floating litter transport and modelling
WG156 – chlorophyll fluorescence for primary productivity measurements

Tutorials:

IIOE-2
COBS – changing ocean biological systems
WG154 – plankton observations
WG 156 – chlorophyll fluorescence for primary productivity measurements

RCN meeting:

WG153 – marine debris



SCOR booth at Ocean Sciences: Live demonstrations and one-on-one training



2020: National Committees and Nominated Members



National Committee	Updates
Belgium	J. Nihoul and Francois Ronday retired, replaced by Jan Mees, Bruno Delille and Marc Kochzius
China-Beijing	Hong Huasheng rotated off. Fangli Qiao is the new president, with Minhan Dai as vice-president and Sun Song the past-president
Colombia	New membership in SCOR. Nominated members are Francisco Arias-Isaza, Paula Cristina Sierra and Constanza Ricaurte-Villota
Israel	Two new nominated members are Steve Brenner and Amatzia Genin
Mexico	Elva Escobar, Mario Martinez Garcia and Clara Morán have been replaced by Carlos Robinson and Alfonso Araiza Marroquin
Netherlands	Caroline Slomp, Gerald Ganssen and Maria van Leeuwe have been replaced by G.M. (Gerald) Ganssen, Katja T.C. Peijnenburg and Lennart de Nooijer
Poland	Adam Sokolowski has been incorporated as the third nominated member
Turkey	Gülsen Avaz has replaced Bilge Tutak
USA	Daniel Costa has replaced Kevin Arrigo

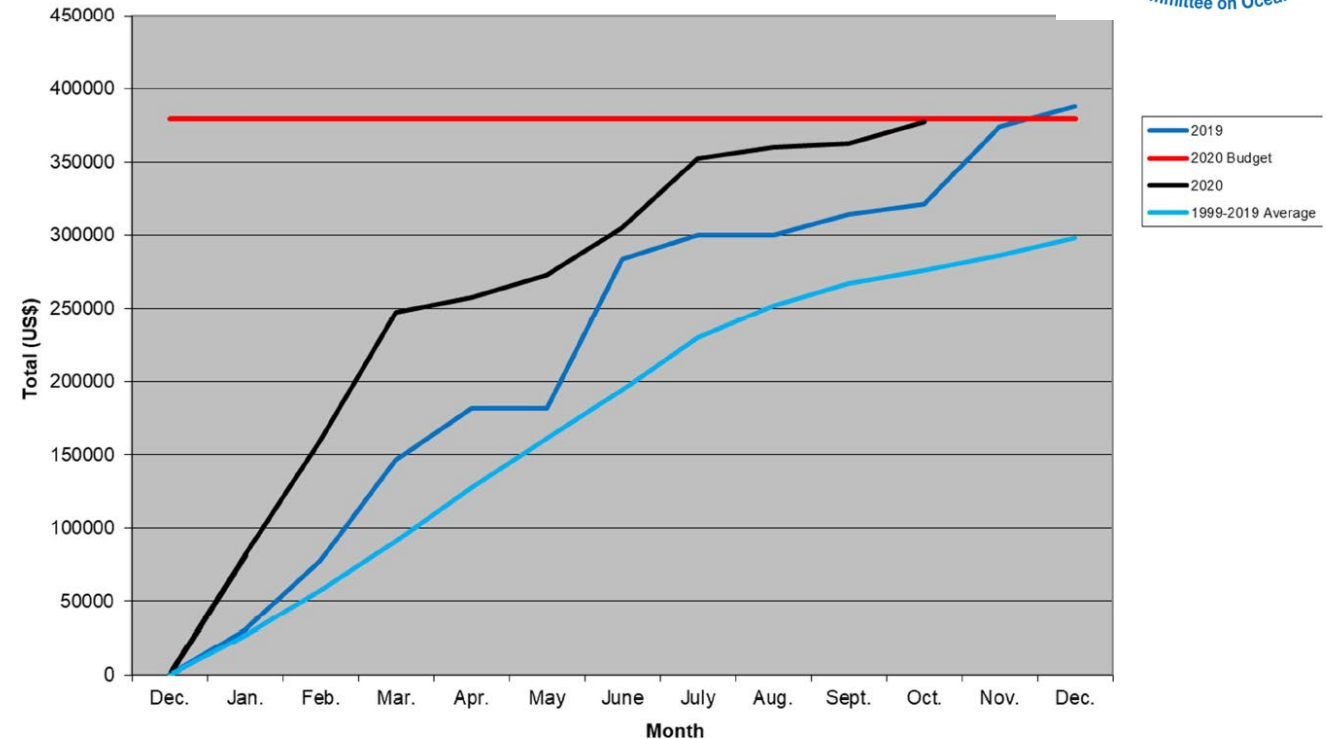
2020: Finances



SCOR Dues Payments
(as of 1 October 2020)

The 2020 appointed SCOR Finance Committee will report to the SCOR Executive and Nominated Members during the 2020 Annual Meeting on the SCOR Financial situation based on the following documents:

1. The SCOR Income and Expense final, post audit report for January-December 2019
2. Charts of SCOR finances, dues in arrears and actual vs budgeted WG expenses
3. 2020 Budget: approved and actual
4. Proposed 2021 Budget



- **Dues income from memberships is on track (96%) – these cover the costs of the Secretariat, annual SCOR meetings and some WG activities.**
- **SCOR depends on grant funding for large-scale research projects, ocean carbon activities, and some working groups. SCOR is currently in the third year of a three-year grant from NSF to fund these activities.**
- **We are in the one year ‘no cost’ extension for an NSF grant on capacity building, and in the first year of a three-year grant from NSF to support capacity building in ocean sciences.**
- **Due to the COVID 19 situation, the 2020 budget was underspent**



UPCOMING SCOR MEETING
20-22 October 2020
Virtual meeting
Past Annual Meetings

WHO WE ARE
History
About
Executive Committee
National Committees
Partner Organizations
Affiliated Projects

WHAT WE DO
Working Groups
Research Projects
Infrastructural Projects
Capacity Development
Achievements

GETTING INVOLVED
News
Opportunities
Calendar

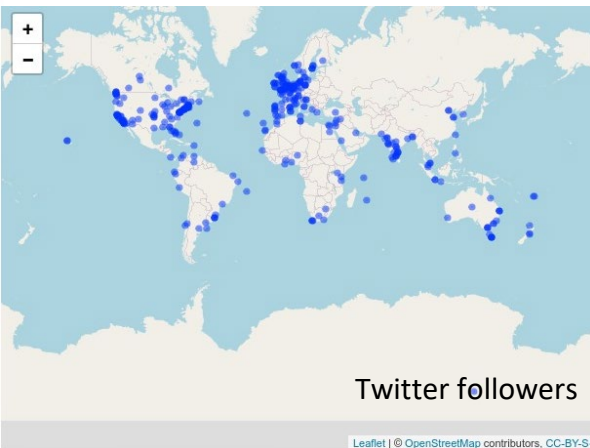


Communication

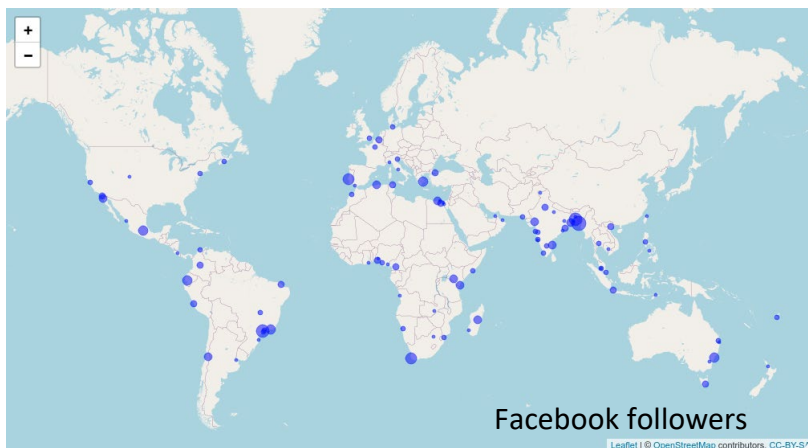
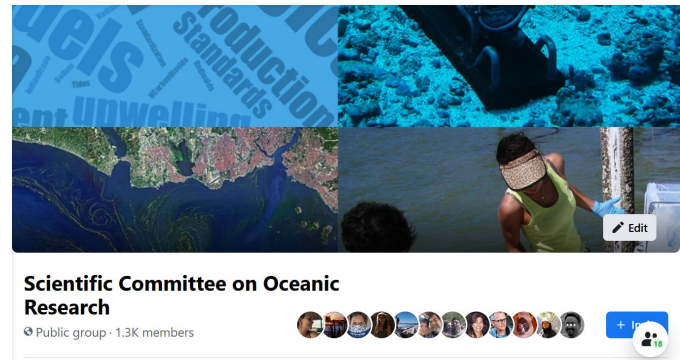
Website: ~1900 visits and +4500 views / month

<https://scor-int.org/>

Twitter: ~800 followers



Facebook group: 1.4 K members



Newsletter: 3/year



Project Software Demonstrations at SCOR Booth (#341)
SCOR WG 145 on Modelling Chemical Speciation in Seawater to Meet 21st Century Needs (MarChemSpec) (https://scor-int.org/Working_Groups/WG145_at_OS2020)
Attendees will be provided a guided hands-on experience with running our draft speciation modelling software and an opportunity to ask questions and provide feedback to the software developers. The software demonstrates some of the key capabilities of modelling approach, using these examples:
1. Calculate the change in pH of a seawater Tris/TrisH buffer when the composition is altered by adding or removing different salts (web-based application)
2. Calculate how the three stoichiometric equilibrium constants for the carbonate system (K₀, K₁, and K₂) response to composition changes of the seawater mix (Web-based application)
3. A Python environment in which some of these types of calculations can be done interactively will also be demonstrated.
1 FEBRUARY 2020



News & Updates
It has been 5 months since all the exciting SCOR activities held at [Ocean Sciences 2020](#). Since then, the world as we knew it, has changed. In these challenging times, the SCOR community has kept active and engaged, strengthening, and delivering outstanding ocean science. Here are some of the updates.

Visit our Website
News from the projects
SOOS, IOCCP and GlobalHAB have renovated the composition of the scientific committees. The IMBeR International Project Office has relocated to Canada and its Scientific Steering Committee met virtually. GEOTRACES released version 2 of its Data for Oceanic Research (DOOR) portal. Read more below!

The Integrated Marine Biosphere Research project (IMBeR)
The IMBeR International Project Office (IPO) has relocated from the Institute of Marine Research in Norway to Dalhousie University in Canada. John Claydon and Lisa Maddison continue to run the IPO with Tracey Woodhouse as a new team member. The IMBeR SSC held its annual meeting virtually from the 22nd of May to the 8th of June. IMBeR is also calling for nominations for a position in the SSC to start in January 2021. Deadline for nominations is 15 September (contact: imber@dal.ca)
[More information](#)

Marine Biogeochemical Cycles of Trace Elements and their Isotopes (GEOTRACES)
Image credit Lisa Maddison and John Claydon IMBeR SSC meeting

2020: Activities of Executive Director



SCOR organization:

SCOR community (WGs, projects, affiliated organizations and partners, National Committees), office, file safeguard, secretarial support to EC, facilitate recruitment of new Early Career Scientist to the EC.

SCOR administration and finances:

SCOR budget, banking, financial reporting (monthly and quarterly), grant submission, facilitate annual auditing (2019 completed in Sept. 2020), regular communication with sponsors (NSF, NASA)

Project and WG management:

Regular communication with projects and WGs, assist in renewal of SSC members, participate in SSC meetings / calls. Advise new WG proponents. Regular communication with SCOR EC.

Communication, outreach and other community services:

Develop and communicate general SCOR presentations, posters, respond to requests from the community, participate in calls, review applications and proposals (e.g. capacity building, NASA), communicate SCOR related or relevant news regularly by email, Fb, Twitter, Newsletter and continuously update of website.



UNIVERSITY OF
DELAWARE

Training:

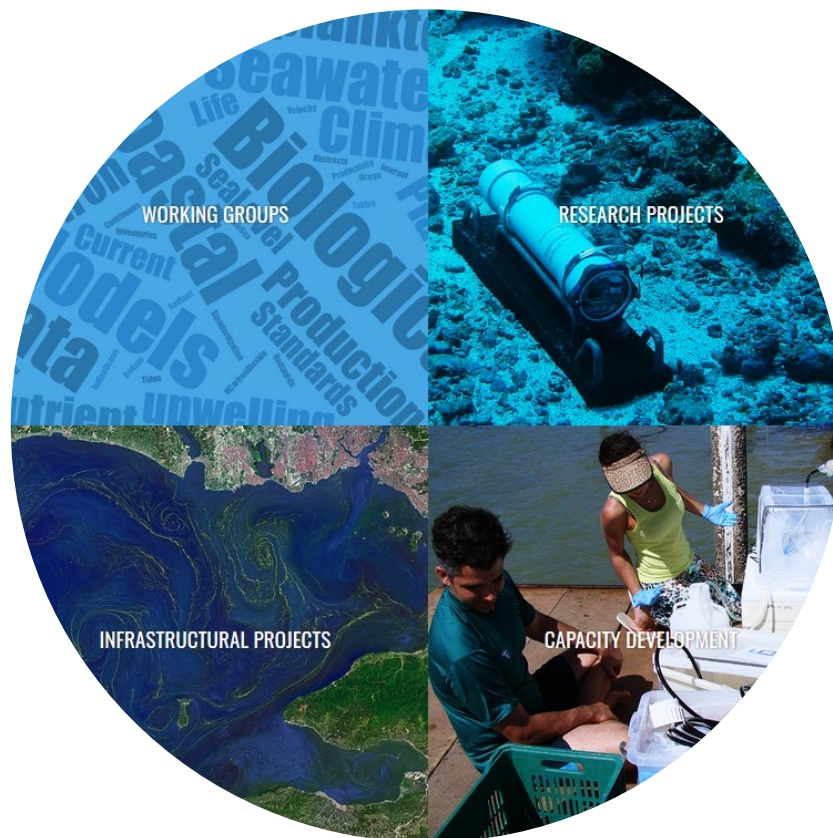
Regular training sessions with Ed Urban



Contribution to scientific papers:

4 papers in preparation:

- Miloslavich et al. "Building capacity for ocean science and technology"
- Estes et al. The importance of Life in the Sea
- Satterthwaite et al. Establishing the foundation for the global observing system for marine life
- Rogers et al. Critical Habitats and Biodiversity: Inventory, Thresholds and Governance



<https://scor-int.org/>

Executive Director Report

Activities by Ed Urban – October 2019- January 2020

In the four months between the SCOR Annual Meeting in Toyama and my retirement at the end of January 2020, I conducted the following tasks to follow-up on the SCOR meeting and prepare for my retirement:

- Completed the SCOR Proceedings from the Toyama meeting (see https://scor-int.org/Publications/2019_Proceedings.pdf).
- Worked with the monitors of the WG proposals to inform all WG proponents of the decisions of SCOR related to their proposals and advice for proponents whose proposals were declined, in case they decided to resubmit.
- Produced SCOR Newsletter #41 (see <http://scor-int.org/Publications/SCOR-NL-41.pdf>) to convey the outcomes of the Toyama meeting.
- Worked with Patricia Miloslavich for two weeks in December and two weeks in January for training and handover of duties. I made a major effort to reduce the number of unnecessary duplicate documents in the SCOR office.

Since my retirement, I have continued to provide support to Patricia in terms of ongoing training and advice, given that the SCOR Executive Director position has many component tasks. I am still serving as the project manager for the International Quiet Ocean Experiment.

In addition, I have been using my retirement time to do complete some writing projects related to SCOR history that I didn't have time to finish when working full time:

1. Urban, E.R., Jr., A.R. Bowie, P.W. Boyd, K.N. Buck, M.C. Lohan, S.G. Sander, R. Schlitzer, A. Tagliabue, and D. Turner. 2020 The Importance of Bottom-Up Approaches to International Cooperation in Ocean Science: The Iron Story. *Oceanography* 33(1):11–15, <https://doi.org/10.5670/oceanog.2020.109>.
2. Urban, Jr. E.R. in press. Outcomes of the U.S. Program in Biology of the International Indian Ocean Expedition. *Deep-Sea Research II* <https://www.sciencedirect.com/science/article/abs/pii/S0967064520300205>
3. Urban, E.R. 2020. New Species Described from Specimens Collected as Part of the U.S. Program on Biology of the International Indian Ocean Expedition. <http://udspace.udel.edu/handle/19716/24919>
4. Urban, E.R. 2020. The Collected Papers of Robert G. Snider in Relation to the First Years of The International Indian Ocean Expedition. <http://udspace.udel.edu/handle/19716/27285>
5. Urban, E.R. 2020. Reference Stations for the International Indian Ocean Expedition (IIOE). <http://udspace.udel.edu/handle/19716/27286>

Thank you to SCOR again for the wonderful retirement celebration in Toyama and the book of letters of appreciation, both of which provide fond memories! I greatly enjoyed my 19+ years as SCOR Executive Director and look forward to continuing to contribute to SCOR in the coming years.