

SCOR CAPACITY-BUILDING ACTIVITIES 2022

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SCOR capacity development activities include a visiting scholar program, the POGO-SCOR fellowships, travel support to scientist from developing countries to attend meetings and conferences, and the Regional Graduate Networks in Oceanography. Additional capacity development activities are carried out by the SCOR projects through Summer Schools (Figure 1.)



Capacity Development

- **Visiting Scholar Program**
Since 2009
45 Visiting Scholars from 39 countries to 22 host countries
- **POGO-SCOR Fellowship**
Since 2001
+160 fellows awarded (developing countries)
- **Travel support**
Since 2008
+ 200 meetings
+500 scientists awarded
- **Regional Graduate Networks**
Research Discovery Camps (University of Namibia)
Yearly since 2014
2020-2021 (online) 
- **Summer Schools**
GEOTRACES
SOLAS
IMBeR
IOCCP

Figure 1. Summary of SCOR capacity development activities.

SCOR Committee on Capacity Development (CD Committee)

The primary purpose of the SCOR Committee on Capacity Development (CD) is to oversee all SCOR's capacity-development activities and to help the SCOR Secretariat manage these activities. The Terms of Reference (ToRs) of the CD committee are to:

1. Provide direction for all SCOR's existing capacity-development activities: participation of scientists from developing countries and countries with economies in transition in SCOR activities, POGO-SCOR Fellowship Program, travel grants, and provision of reports to libraries in developing countries.
2. Guide and assist SCOR Executive Director in development of new capacity-development activities, particularly the Regional Graduate Schools of Oceanography activity.
3. Assist SCOR-sponsored projects in developing their capacity-development activities.
4. Help SCOR arrange funding for existing and new capacity-development activities.
5. Assist SCOR in interacting with regional and international groups related to capacity development in ocean sciences, such as the ICSU regional centers, START, IOC regional programs, etc.
6. Members of the SCOR Committee on Capacity Development will be appointed for three years, with one additional renewal for a total period of service of 6 years.

Currently, the SCOR CD committee is composed by:

Chair	Members	Liaisons
Claudia Benitez-Nelson (USA)	Sanae Chiba (Canada/PICES) Vanessa Hatje (Brazil) (*) Ntahondi Nyandwi (Tanzania) Rui Seabra (Portugal) (**) Paula Sierra (Colombia) Jennifer Verduin (Australia) Sun Xiaoxia (China-Beijing) Rebecca Zitoun (Germany) (**)	Jim Costopoulos (Global Oceans) Julius Francis (WIOMSA) Peter Pissierssens/Claudia Delgado (IODE/IOC) Eric Raes (IOOE-2 Early Career Scientists Network) Sophie Seeyave (POGO)

(*) *Vanessa Hatje resigned in August 2022 due to other multiple commitments*

(**) *Early Career Scientist*

In the past year, the CD committee has been quite engaged, providing ideas and feedback, and contributing to review reviewed several requests for travel support to scientific meetings and reviewed the 2022 SCOR Visiting Scholar applications. The CD Committee also approved an exceptional call (<https://scor-int.org/2022/05/16/exceptional-call-for-scor-project-and-working-groups-scholars/>) offering scholarships of up to \$2,500 each to scientists associated with current SCOR projects or working groups (WGs). This "exceptional" scholarship was intended for SCOR scientists to support travel to conduct a collaborative scientific activity (such as instrument training, collaborative sample, or data collection and/or analysis, etc.) at a host

institution that will result in a specific product (such as a presentation, proposal, or peer reviewed article, etc.) within their WG or project's goals. The duration of the activity was envisioned to occur over a 1–2-week period and needed to be aligned with the Terms of Reference of the specific WG, or science plan of a project. The CD committee also reviewed the applications for this “SCOR Exceptional Call”.

The CD committee also had the task this year to review the Namibian Research Discovery Camps, known as SCOR’s African Regional Graduate Network in Oceanography (A-RGNO) aimed at providing recommendations for improvement in the next years of the program.

SCOR Visiting Scholars

SCOR began a program in 2009 to enlist the services of ocean scientists from the SCOR community, from both developed countries and developing countries, both recently retired and active, to teach short courses and to provide more extended on-site education and mentorship at developing country host institutions and aiming to establish future collaborations between the visiting scientist and the host institution.

From 2021, the SCOR CD committee recommended that Visiting Scholar applications have identified a host and developed a joint plan. Information about the program is available at <https://scor-int.org/work/capacity/visiting-scholars/>.

Travel of the visiting scholars was reinitiated in mid-2022. Of the six scholars approved for travel in 2020, three either declined or were unresponsive, and the other three still have plans to make the visit either in late 2022 or early 2023 (Hailong Liu from China traveling to the Philippines, Teresa Cerveira Borges from Portugal traveling to Angola, and Hidenori Kumagai from Japan traveling to India). Of the four scholars approved for travel in 2021, only one has completed the visit (Enrique Montes from the USA traveling to Brazil), one has declined (Marina Ross from Greece), and two are pending (Julia Sigwart from Germany traveling to Malaysia, and Louise Firth from the UK traveling to South Africa). For travel in 2022, the CD committee approved three scholars approved for travel in 2022, two have completed their visit (Nubi Olobunmi from Nigeria traveling to Cape Verde, and Vyacheslav Lyubchich from the USA traveling to Brazil), and one is pending (Elva Escobar-Briones from Mexico traveling to Costa Rica).

Visiting Scholar 2022	Scholar country	Host country	Topic of training
Elva Escobar Briones	Mexico	Costa Rica	To develop a regional capacity development program on deep sea topics including deep-sea conservation

Vyacheslav Lyubchich	USA	Brazil	Popular methods of machine learning for ocean sciences and train in application of those methods to real data
Nubi Olobunmi	Nigeria	Cape Verde	Marine pollution and ecotoxicology

“Exceptional Call” for the SCOR community

A total of eight SCOR scientist were approved to carry out a collaborative scientific activity within a WG or project's goals. The beneficiaries and topic of training are in the table below.

Name	Affiliation	Country of affiliation	SCOR endorsement	Topic of training	Host institution	Country of host
Amii Usese	University of Lagos	Nigeria	N. Johnson, ICED (IMBeR)	Interaction between Southern Ocean zooplankton and microplastics	British Antarctic Survey	UK
Luciana Santoferara	Hofstra University	USA	A. Mitra and G. McManus, WG Mixonet	Mixoplankton and flow citometry	INTECH (UNSAM-CONICET)	Argentina
MaryMar Payne	Akland State University	Philippines	A. Bucklin, WG MetaZooGene	Training on DNA metabarcoding and Research Approach Integration	Atmosphere and Ocean Research Institute	Japan
Micaela Trimble	South American Institute for Resilience and Sustainability Studies (SARAS)	Uruguay	J. Claydon, IMBeR	Development of more sustainable, equitable and inclusive governance approaches to fisheries and aquaculture	University of Waterloo	Canada
Natalia Osma	Millennium Institute of Oceanography (IMO)	Chile	C. Robinson, WG ReMO	Techniques to measure mesopelagic respiration	Universidad de Las Palmas, Gran Canaria	Spain
Nina Schubak	Swiss Polar Institute and Chelsea Technologies	Switzerland and UK	D. Suggett and P. Tortell, WG Chlorophyll fluorescence	Methodological uncertainties of next generation fluorometer	Center for Marine Biology São Paulo University	Brazil
Saumya Silori	CSIR-National Institute of Oceanography, Regional Centre	India	C. Robinson, WG ReMO	Techniques to measure mesopelagic respiration	CSIC Instituto de Investigaciones Marinas / Universidad de Las Palmas, Gran Canaria	Spain
Frances Gulland / Tess Gridley	Marine Mammal Commission	USA	E. Berdalet, GlobalHAB	Marine biotoxins and their impacts on wildlife in the Benguela Eastern Boundary Upwelling System of South Africa and Namibia	University of Stellenbosch	South Africa

Travel for these Visiting Scholars and beneficiaries of the exceptional call will be supported by the U.S. National Science Foundation and national SCOR committees.

POGO-SCOR Visiting Fellowships for Oceanographic Observations

In 2022, 29 applications (45% female and 55% male) were received from Latin American (41%), African (28%), Asian (28%) and European (3%) candidates. Applicants proposed trainings of one,

two or three months in oceanographic centres in Europe (48%), North America (28%), Oceania (10%), Africa (7%), Asia (3%) and Latin America (3%). With the combined available budget from POGO and SCOR, a total of 6 candidates were selected in 2022 and 6 in 2021. As in 2021, SCOR contributed in 2022 an additional amount to support an additional candidate. The fellows will start their training between September 2022 and March 2023. Currently, due to COVID international travel restrictions, three of the fellows appointed in previous years are still completing their trainings. The 2022 fellows can be found at: <https://pogo-ocean.org/capacity-development/pogo-scor-fellowship-programme/>

The POGO report with further information can be found at: https://scor-int.org/wp-content/uploads/2022/08/POGO-SCOR-Fellowships_2022-incl-20202021-fellows.pdf

NSF Travel Support for Developing Country Scientists

SCOR has received support from the U.S. National Science Foundation (NSF) since 1984 to provide funding for SCOR capacity development activities. Most of the funds are used for travel grants for scientific meetings, although a portion are used for SCOR's contribution to the POGO-SCOR Fellowship Program and the SCOR Visiting Scholars program. Travel grants are awarded to ocean students and scientists to enable them to attend international scientific meetings (see https://scor-int.org/wp-content/uploads/2020/03/Eligible_Countries-1April2020.pdf for list of eligible countries).

During this last year, SCOR currently had two ongoing grants with NSF to support capacity development activities. The oldest of the two grants was on a No-cost-extension until July 2022 because of the delays in meetings due to COVID-19. In August 2022, the final report of this grant was submitted to NSF. Since October 2021, SCOR approved travel support for more than 30 early career scientists from developing countries to attend 16 international conferences (see table below), or summer schools taking place in 11 countries.

January-December 2022				
Small Pelagic Fish: New Frontiers in Science for Sustainable Management / Joint PICES-ICES	7-11 November 2022	Lis, Port.		\$5000
Gordon Research Conference and Seminar on Ocean Biogeochemistry (GRC and GRS)	GRS: 30 Apr – 1 May 2022 GRC: 1-6 May 2022	Casteldefels, Spain		\$3500
Fourth ICES PICES Early Career Scientist Conference	9-12 May 2022 (postponed to 2023)	St. John's Newfoundland, Canada		\$6000
Low oxygen environments in marine and coastal waters: Drivers, consequences, solutions.	16-20 May 2022	Liege, Germany		\$3500
Ocean Mixing Gordon Research Conference and Gordon Research Seminar	5-10 June 2022	South Hadley, USA		\$3500
Committee on Space Research (COSPAR) 44th Scientific Assembly (approved in 2020 for Australia)	16-24 July 2022	Athens, Greece		\$3000
5th International Symposium on the ocean in a high CO ₂ world	13-16 September 2022	Lima, Peru		\$5000
Ramon Margalef Summer Colloquia (RMSC): Past, present and future of a living ocean	27 Sept-2 October 2022	Barcelona, Spain		\$4000
Planning Meeting for Global Library of Underwater Biological Sounds (GLUBS)	16-Jul-22	Berlin, Germany		\$6000
SOLAS Open Science Conference 2022	25-29 September 2022	Cape Town, South Africa		\$8000
Ocean Optics XXV Conference	2-5 October 2022	Quy Nhon, Vietnam		\$3500
2022 Goldschmidt Conference	11-15 July 2022	Honolulu, USA		\$3500
Open Science Conference on Eastern Boundary Upwelling Systems (EBUS): Past, Present and Future / SCOR WG #155 (EBUS)	19-23 September 2022	Lima, Peru		\$5000
Best practices for the collection and processing of ship based underway flow-through optical data	1-5 August 2022	Maine, USA		\$5000
VI Latin American Symposium of Polychaeta, SILPOLY 2022	22-25 November 2022	Puerto Varas, Chile		\$3500
3rd GEOTRACES Summer School: Introducing polar parameters	10-15 July 2022	Bremerhaven, Germany		\$5000

Total approved for travel to conferences: \$73,000

Research Discovery Camps at the University of Namibia - Regional Graduate Network in Oceanography (RGNO)

After two years of operating as an online series of “Discovery Seminars”, the Discovery Research Camp in Namibia was again held onsite in April-May 2022. Since 2016, the African-RGNO Ocean Discovery Camps was co-directed and coordinated on-site by Dr. Chibo Chikwililwa, a researcher at the University of Namibia (UNAM) who organized the courses and had the additional responsibility of locally administering the funds. Sadly, Chibo passed away on June 2021 due to complications of COVID-19, and UNAM appointed Dr. Margit Wilhelm to take the coordination of the course. Under the new scenario, an agreement (Memorandum of Understanding – MoU) was drafted between SCOR and UNAM establishing the scope of cooperation between both parties and the administrative terms. The MoU was signed for one year (2022) and its renewal (and terms of renewal) will be conditioned to the recommendations of the SCOR Committee on Capacity Development after reviewing the program. As the A-RGNO enters the last phase of funding, the SCOR Committee on Capacity Development is reviewing the program to (1) evaluate the A-RGNO’s major achievements since its implementation in 2014, (2) stimulate the A-RGNO to plan for its major activities until 2025 (conditioned to the funder’s approval of a no cost extension until then), and (3) determine whether and how we should proceed with further funding and applying for future RGNO-type programs. The review process is intended to be useful for the parties involved, both SCOR and the University of Namibia (UNAM) along with the many partners to the program, by providing the opportunity to reflect on past achievements, on limitations, and to envision future paths.

Publications

Miloslavich et al. (In press). Developing Capacity for Ocean Science and Technology. In: Ittekkot, V. and E. Urban (eds). Blue Economy: An Ocean Science Perspective. Springer Singapore.