



Newsletter of the Global Ocean Acidification Observing Network ([GOA-ON](#))

Issue 7, Fall 2018

GOA-ON News

4th Global Ocean Acidification Observing Network (GOA-ON) International Workshop



The 4th Global Ocean Acidification Observing Network (GOA-ON) International Workshop

April 14 - 17, 2019 • Hangzhou, China

The First Announcement

CALL FOR ABSTRACTS

Deadline of Submission: January 10, 2019

<http://goa-on.org/workshops/hangzhou2019/workshop.php>

Organizers & Sponsors



State Key Laboratory of Satellite Ocean Environment Dynamics (SOED)



Second Institute of Oceanography (SIO), State Oceanic Administration, China

Co-Sponsors



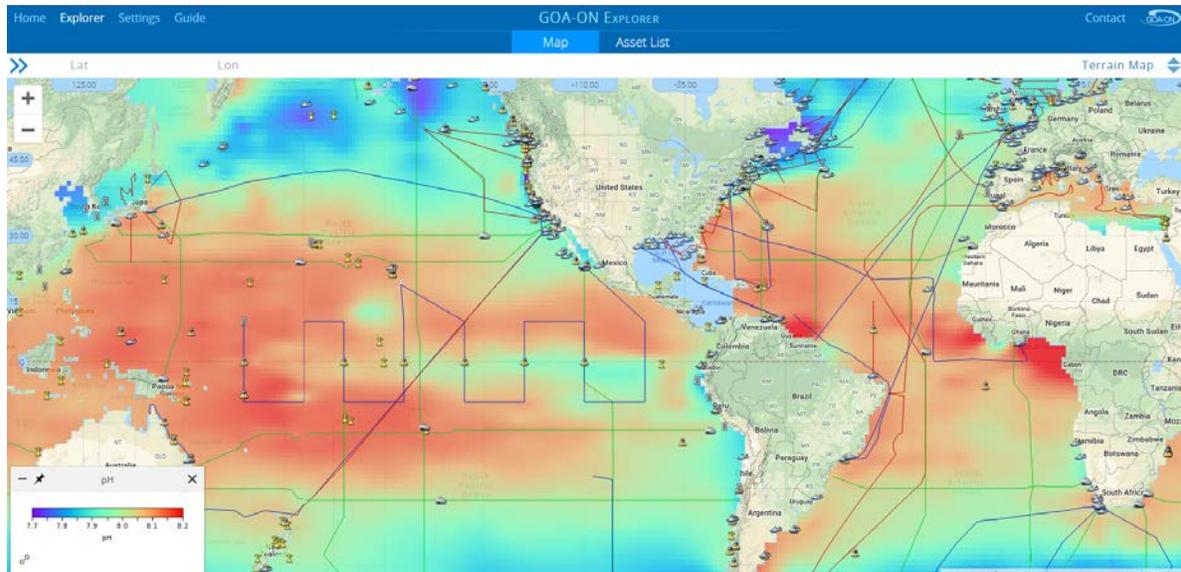
International Atomic Energy Agency
IAEA



Global Acidification Partnership
GAP



GOA-ON is delighted to announce that it will be holding its 4th International Workshop in Hangzhou, China, on 14-17 April 2019, to be hosted by the State Key Laboratory of Satellite Ocean Environment Dynamics (SOED) and the Second Institute of Oceanography, State Oceanic Administration. This workshop will bring together scientists from around the world to discuss emerging aspects from the coupled effects of ocean acidification with multi-stressors, review global ocean acidification status and forecast capabilities, and explore opportunities for capacity development. The deadline for abstracts is 10 January 2019. Visit the [workshop website](#) for more information, including opportunities for travel support. We look forward to seeing you there!



Visit the GOA-ON data portal [here](#).

Keeping the GOA-ON Data Portal Up-to-date

The GOA-ON data portal recently received an upgrade, and the Secretariat is using this opportunity to audit the asset information stored on the portal to ensure it is up-to-date. GOA-ON encourages all researchers with assets listed on the portal to periodically check that the metadata associated with their assets are correct, and that any links to data or additional information about the asset are functional. To modify or add a new asset, please fill out [this form](#), or [contact the GOA-ON Secretariat directly](#).

Recent Activities

Sustainable Development Goal Indicator 14.3.1 Methodology Expert Meeting

International experts on ocean acidification and data management, including members of the GOA-ON Executive Council, met at the Intergovernmental Oceanographic Commission (IOC) of UNESCO in Paris

from October 17-19 to discuss the [SDG Indicator 14.3.1 Methodology](#). The SDG Target Indicator 14.3.1 calls for "average marine acidity measured at an agreed suite of representative sampling stations" and the Methodology provides guidance to scientists and countries on how to carry out measurements and report the findings following the established best practices. The workshop participants discussed the data reporting, quality control and visualisation mechanisms for the Indicator, as well as ways to share the Methodology and its associated data and



Participants of the Methodology Expert Meeting at IOC-UNESCO in Paris. (Photo credit: IOC-UNESCO)

metadata files. As of 6 November, the SDG 14.3.1 Indicator was upgraded from Tier III to Tier II, meaning that “the Indicator is conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries.”

The Intergovernmental Oceanographic Commission (IOC) of UNESCO would like to request your assistance and five minutes of your time for a survey on ocean acidification data to facilitate reporting towards the SDG Indicator. Your answers to this survey will help trace where ocean acidification data is being collected, and where it is stored and served. The IOC would appreciate if you could take [the survey](#) by 20 December 2018.

OA-ICC and GOA-ON Organize Advanced Data Analysis and Management Workshop in Monaco

The IAEA Ocean Acidification International Coordination Centre (OA-ICC) and GOA-ON held a technical meeting on the management, analysis, and quality control of ocean acidification data on 22-26 October 2018 at the IAEA Environment Laboratories in Monaco. The advanced workshop included participation from 15 scientists representing 15 different countries from various regions around the world, many of whom have received GOA-ON Kits for measuring ocean acidification, or have been involved in the [GOA-ON Pier2Peer program](#). The workshop brought together both chemical oceanographers and biologists and took an interdisciplinary approach to discuss ocean acidification data analysis. The workshop emphasized the importance of chemistry for biological experimentation (proper manipulation and reporting, but also development of scenarios and interpretation of data) and biology for chemical monitoring (identification of relevant spatio-temporal scales to inform monitoring strategies, etc.). Lectures were given on quality assurance and quality control techniques used in monitoring and experimental research, such as estimating uncertainties, identifying outliers and flagging data. Participants were able to apply these theories to their own data sets that they brought with them to the workshop.



Participants workshop data at the IAEA Environmental Laboratories in Monaco. Photo credit: the IAEA OA-ICC.

Regional Hub Activities

First in-person Meeting of the North American Regional Hub

The GOA-ON North American Regional Hub is being established to coordinate the activities of Canada, the United States, and Mexico. Members held an initial planning conference call in September 2017 to set priorities for an initial in-person meeting, which was hosted at the Hakai Institute in Victoria, British Columbia, Canada, on 17-18 October 2018. Attendees discussed the development of synthesis products, facilitating data exchanges, improving the observing system, developing uniform QA/QC procedures, and developing OA messages for policymakers and other stakeholders.



Participants in the meeting of the North American Regional Hub in Victoria Harbor. Photo credit: the Hakai Institute.

The Pacific Islands and Territories Ocean Acidification (PI-TOA) Network

The PI-TOA regional hub held its inaugural virtual meeting on 14 September 2018. Members elected a steering committee, agreed upon a name for the regional hub, and discussed initial objectives for the network. PI-TOA was formed by scientists from Fiji, Papua New Guinea, Palau, Samoa, Tokelau, Tuvalu, Vanuatu, and New Zealand. Members plan to use the network as a system of coordination and support as new ocean acidification observing operations are launched in their respective countries. The acronym “PI-TOA” was considered particularly appropriate by the members because “toa” means “warrior” in some Pacific languages.

New NE Atlantic Regional Hub

The newly established North East Atlantic Regional Hub of GOA-ON will be holding its inaugural workshop on the 12-13th March 2019 in London, UK. The objectives of the meeting are to share information about ongoing European ocean acidification research, including monitoring, experimental and modelling activities, to provide integration across the region, to foster possible collaboration opportunities and to promote community best practices for ocean acidification research to enable the efficient collection of comparable and geographically distributed data. To attend, please contact Steve Widdicombe by



Plymouth Marine Laboratory Western Channel Observatory monitoring buoy at station L4. Photo credit: Steve Widdicombe.

1st December 2018. For more information and updates visit the [NE Atlantic hub website](#). If you are unable to attend this workshop but would still like to be part of this new hub please contact *Dr. Steve Widdicombe* (swi@pml.ac.uk) or *Dr. Helen Findlay* (hefi@pml.ac.uk), who will keep you updated on hub developments and activities.

WESTPAC Ocean Acidification Symposium and 5th Workshop on Research and Monitoring of the Ecological Impacts of OA on Coral Reef Ecosystems

The UNESCO/IOC Sub-Commission for the Western Pacific (WESTPAC) developed and has been strengthening a sustained research and monitoring network for ocean acidification in the Western Pacific and its adjacent waters. The network forms the WESTPAC regional hub of GOA-ON. Core activities include, but not limited to, regular regional/national science workshops, the development of Standard Operating/Monitoring Procedures (SOPs) and their demonstrations at pilot sites, capacity development and the transfer of knowledge and technology among experts, institutions and countries.



Participants in the 5th WESTPAC Workshop on the Impacts of OA on Coral Reef Ecosystems

As a part of this effort, WESTPAC held an Ocean Acidification Symposium, 5 November 2018, followed by the 5th WESTPAC Workshop on Research and Monitoring of the Ecological Impacts of Ocean Acidification on Coral Reef Ecosystems, 6-7 November 2018, in Xiamen, China. Both meetings were hosted and generously supported by the Third Institute of Oceanography, State Oceanic Administration of China. Seventy-six researchers from Australia, Bangladesh, China, India, Indonesia, Japan, Malaysia, Myanmar, Philippines, Singapore, Thailand, USA, and Vietnam participated in the meetings.

The first day of the symposium featured invited presentations on current ocean acidification research, impacts, and techniques that are used from local to regional scales to measure ocean acidification and ecosystem response. The 5th workshop on the following two days was a continuation of the previous four workshops in Phuket, Thailand (January 2015, August 2015, August 2016, and December 2017). The 5th workshop covered a series of talks and discussion on the progress made at pilot monitoring sites including the strengths, challenges and lessons learned from the programme implementation, and consideration of partnership building opportunities and best practice procedures.

More information on the meetings can be obtained from the WESTPAC ocean acidification leadership and from the website: <http://iocwestpac.org/calendar/883.html>

Contact: Somkiat Khokiattiwong (skhokiattiwong@gmail.com); Wenxi Zhu (w.zhu@unesco.org)

Upcoming Opportunities

Registration Open: The Ocean Foundation's Interdisciplinary Symposium and Advanced Training for Latin America and the Caribbean

There will be two events in late January 2019 serving the Latin American and Caribbean regional community around ocean acidification, organized by The Ocean Foundation and its partners, including GOA-ON, LAOCA, the OA-ICC, and US NOAA. The [Latin American and Caribbean Regional Symposium on Ocean Acidification](#) will be held on 21-24 January 2019 at the Instituto de Investigaciones Marinas y Costeras (INVEMAR) in Santa Marta, Colombia. The overarching intention of the symposium is for attendees to leave with an understanding of what implications ocean acidification has for their work. Chemists, biologists, oceanographers, aquaculture industry members, coral reef biologists, tourism industry members, policymakers, and ocean and coastal managers are all welcome. Topics will include strategies for building low-cost monitoring systems in laboratory or aquaculture settings, techniques for building resilient seafood supply chains including through technological interventions, and policy frameworks for building economic and social resilience at regional and national scales. The symposium will also focus both on existing practices and future options for researching the impacts on and the development of adaptation plans for coral reef ecosystems. Trainers will also demonstrate the use of a variety of chemical sensors and experimental set-ups for evaluating potential impacts of OA on marine organisms. More information, registration, and an opportunity to submit a poster abstract can all be [found here](#).

The Latin America and Caribbean [Advanced Ocean Acidification Training Workshop](#) will be held at INVEMAR following the symposium, on 28 January – 1 February 2019. All selected attendees will be fully funded to attend the training and will receive a “GOA-ON in a Box” kit and a two-year stipend to support the use of the kit to collect weather-quality carbonate chemistry data. The training will be a practical week of hands-on field and laboratory work, led by Dr. Christopher Sabine of the University of Hawai'i and Dr. Jose Martin Hernandez-Ayon of the Universidad Autonoma de Baja California. Applicants must hold a Master's Degree or a PhD in chemical oceanography or a related field and must hold a long-term position at a research or government institution that conducts ocean and/or water quality research. Five years of experience in a related field can substitute the degree requirements. The training is funded by the U.S.

Department of State and the Swedish International Development Cooperation Agency. More information and the application can be [found here](#).

For more information about either event, please contact *Ms. Alexis Valauri-Orton* (avalauriorton@oceanfdn.org) or *Ms. Meredith Kurz* (meredith.kurz@noaa.gov).

Upcoming deadline: Call for proposals for IAEA Coordinated Research Project (CRP) on ocean acidification

The International Atomic Energy Agency is launching a new 4-year Coordinated Research Project starting in 2019 to advance understanding on the effects of ocean acidification on seafood around the world and to explore adaptation strategies for aquaculture and seafood industries. One of the research objectives of this project will be to expand international collaboration on ocean acidification using knowledge and research kits developed through the OA-ICC capacity building activity and the IAEA Technical Cooperation project INT7019. The deadline for submitting proposals is 30 November 2018. More information on the project and proposal submission on the CRP can be found [here](#).

The Ocean Foundation Pier2Peer Scholarships

The Ocean Foundation is continuing its small grant program which provides funds to Pier2Peer pairs to collaborate on a project, conduct training visits, and/or collect data to be added to the GOA-ON data portal. Applicants must be in a Pier2Peer partnership and submit an application detailing how they will use the funds to support their collaboration and ultimately increase the mentee's ability to collect OA data. Applications are reviewed on a quarterly basis;

the next due date is 16 January 2019. For details on how to apply, contact *Ms. Alexis Valauri-Orton* (avalauriorton@oceanfdn.org) and *Ms. Meredith Kurz* (meredith.kurz@noaa.gov).



Other OA News

Survey on storage techniques used in ocean acidification sampling

The Ocean Acidification International Coordination Centre (OA-ICC) and partners are launching an effort to document uncertainties associated with various OA sampling and storage techniques, and provide guidance on how best to reach optimal measurements depending on the science question and the intended use of the data. To this end, a [short survey](#) was developed in order to evaluate which storage techniques are currently being used by the OA community. We would greatly appreciate your contribution to this effort. This survey should only take 5-10 minutes to complete. If you have any questions, please contact *Ms. Marine Lebrech* (M.Lebrech@iaea.org).

Follow GOA-ON on Social Media!



The GOA-ON has grown to a network of over 480 scientists from 80 countries, shown in black. In the first half of 2018, the GOA-ON added 38 scientists from Argentina, Bangladesh, Belize, Brazil, Chile, Colombia, Egypt, France, Greece, India, Kenya, Monaco, Myanmar, New Zealand, Nigeria, Norway, Papua New Guinea, Peru, Portugal, Spain, Tanzania, Turkey, the United Kingdom, and the United States of America

Questions? Contact us at info@goa-on.org