

The PIER Review



Welcome to the October 2018 issue of the PIER Review, the monthly [GOA-ON Pier2Peer](#) newsletter. The Review highlights accomplishments, provides updates for our members, highlights open-access research on ocean acidification, and shares funding or job opportunities. Please send all of your ideas for the newsletter to Meredith Kurz (meredith.kurz@noaa.gov) and we will be sure to incorporate your feedback into future editions of The PIER Review.

P2P FEATURE

This month's Pier2Peer Feature highlights the resources provided by the International Atomic Energy Agency (IAEA) Ocean Acidification International Coordination Centre (OA-ICC). [The OA-ICC](#) promotes international collaboration on ocean acidification by organizing training courses, providing access to data, and maintaining resources and a newsfeed for the international OA community.

The [OA-ICC news stream](#) collects OA news, peer-review publications, relevant job postings, and upcoming meetings. The News Stream is updated every day with new information. Numerous additional resources are linked in the right sidebar of the website. The OA-ICC maintains a bibliographic database of more than 5000 references, available through the free bibliographic software Mendeley. This database and user instructions are accessible [here](#). The OA-ICC also provides a data compilation hosted on the Germany-based data centre [PANGAEA](#) that includes over 900 data sets from 850 papers. This compilation is maintained in close collaboration with the State Key Laboratory of Marine Environmental Science at Xiamen University. User instructions for the data compilation can be found [here](#).

The OA-ICC is currently conducting 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. If you are interested in providing feedback to the OA-ICC to help them help you, please take the short survey [at this link](#).

The screenshot shows the Mendeley desktop application interface. On the left, there is a sidebar with sections: 'MY LIBRARY' (containing 'All Documents', 'Favorites', 'My Publications', 'Recently Read', 'Recently Added'), 'FOLDERS' (with a '+ Create Folder...' option), 'GROUPS' (with a '+ Create Group...' option and a selected group 'Ocean Acidification' containing sub-groups like 'Biological response...', 'Calcification rate', 'Mesocosm', and 'Ocean acidification'), and 'TRASH'. The main window displays a list of 20 bibliographic entries. Each entry includes a checkbox, a title, authors, journal information, and a date (mostly '5 Sep'). The top right of the window has tabs for 'Feed', 'Library', 'Suggest', and 'Groups', with 'Library' selected. A search bar and 'Add' button are visible at the top left of the main window.

Screenshot of the OA-ICC bibliographic database in Mendeley

BECOME A Pier2Peer RECRUITER

We are always recruiting senior and experienced OA observing experts to serve as mentors and early career scientists from emerging regions to become mentees. If you know someone who would be a good mentor or mentee, direct them to the [Pier2Peer website](#) or put them in contact with Meredith Kurz (meredith.kurz@noaa.gov).

If you are attending a meeting or event, are interested in sharing a few slides on the program and disseminating sign-up information, please email Meredith and we will send you communication materials and sign-up sheets for your upcoming event. And thanks!

UPCOMING EVENTS and CONFERENCES

[The Association for the Sciences of Limnology and Oceanography \(ASLO\)](#) will hold the 2019 Aquatic Sciences meeting in San Juan, Puerto Rico, USA, from 23 February to 2 March 2019. There will be a session (#CS05) on ocean acidification. The deadline for abstract submission is 22 October 2018.

[The Our Ocean Conference](#) will be hosted by the Government of the Republic of Indonesia in Bali on 29-30 October 2018. The yearly Our Ocean Conferences are by invitation only, and have

generated 18 billion USD in commitments to maintain the sustainability of our oceans by governments, NGOs, and private industry. Ocean acidification and its impacts have gained increasing attention at each subsequent conference.

[The Sustainable Ocean Summit](#) organized by the World Ocean Council will be held on 14-16 November 2018 in Hong Kong.

[The American Geophysical Union \(AGU\) Fall 2018 Meeting](#) will be held on 10-14 December 2018 in Washington, D.C., U.S.A. Abstract submission is closed but registration is still open.

[The American Geophysical Union \(AGU\) Geoscience and Society Summit](#) will be held on 12-21 March 2019 in Stockholm, Sweden. Abstract submission and registration will open soon.

[OceanVisions2019](#) will be hosted in Atlanta, Georgia, USA, on 1-4 April 2019, and co-organized by researchers at Georgia Tech, Stanford University, Scripps Institution of Oceanography, and the Smithsonian Institution in cooperation with IOC-UNESCO, the Ocean Conservancy, and Georgia Aquarium. This climate summit is intended to highlight ocean-based science and engineering successes in the areas of resilience, adaptation, mitigation, and sustainability and promote scalable solutions across human, climate and ecological dimensions. There will be a session on “Protecting Ocean Health: Ocean Acidification and Hypoxia.” Application to participate is required and the deadline is 30 October 2018. Limited travel support is available by application.

[The Eleventh Western Indian Ocean Marine Science Association \(WIOMSA\) Scientific Symposium](#) will be held at the University of Mauritius from 8-13 July 2019. The call for abstracts and registration will open soon.

[OceanObs'19](#) is part of a decadal conference series on setting ocean observation priorities to be held on 16-20 September 2019 in Honolulu, Hawaii, U.S.A. OceanObs'19 will announce some scholarships to attend for early career scientists and those working in developing nations at a later date. Abstract submission for white papers is closed. Poster abstract submissions are due 1 March 2019. Registration is open and early bird prices are available until 1 March 2019.

UPCOMING OA Workshops

Latin America & the Caribbean Ocean Acidification Science & Policy Symposium

Organization: The Ocean Foundation, GOA-ON, the Latin America Ocean Acidification Network (LAOCA), the International Atomic Energy Agency's Ocean Acidification International Coordination Centre (IAEA OA-ICC), US NOAA, and other partners. Funded by the US Department of State and the Swedish International Development Agency.

Host and Location: Instituto de Investigaciones Marinas y Costeras (INVEMAR), Santa Marta, Colombia

Dates: 21 – 24 January 2019

Description: The Ocean Foundation, GOA-ON, NOAA, and other partners will hold a 4-day symposium on ocean acidification science and policy in the Latin American & Caribbean region.

Topics will include strategies for building low-cost monitoring systems, 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.

Requirements: The symposium is open to all interested stakeholders and scientists. There is a \$75 participation fee to cover basic costs. Details about applying for limited travel support and a fee waiver will be announced soon.

[Register here](#)

Latin America & the Caribbean Ocean Acidification Practical Training Workshop

Organization: The Ocean Foundation, GOA-ON, the Latin America Ocean Acidification Network (LAOCA), the International Atomic Energy Agency's Ocean Acidification International Coordination Centre (IAEA OA-ICC), US NOAA, and other partners. Funded by the US Department of State and the Swedish International Development Agency.

Host and Location: Instituto de Investigaciones Marinas y Costeras (INVEMAR), Santa Marta, Colombia

Dates: 28 January – 1 February 2019

Description: The practical workshop is a week of hands-on training to use the "GOA-ON in a Box" ocean acidification monitoring equipment. All selected attendees will receive a "GOA-ON a Box" kit and a two-year stipend to support the use of the kit to collect weather-quality carbonate chemistry data. Their attendance and travel will be fully funded. Attendees of this training may attend the preceding symposium, but are not required to.

Requirements: Applicants must hold a Master's Degree or a PhD in chemical oceanography or a related field and must hold a permanent 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.

Application details are included in an attached flyer.

FUNDING and JOB OPPORTUNITIES

The Ocean Foundation Pier2Peer Scholarships

Organization: The Ocean Foundation

Description: Small grant program providing funds to Pier2Peer matches to collaborate on a project, conduct training visits, collect data for GOA-ON submission, etc.

Requirements: Applicants must be in a Pier2Peer partnership and applying to use funds to support this collaboration.

Amount: USD 5,000

Application Deadline: 16 October 2018 is the due date for the Fall 2018 review period; applications are accepted on a continuing basis; submit to avalauriorton@oceanfdn.org and meredith.kurz@noaa.gov.

Application Details: Attachment with this email

Western Indian Ocean Marine Science Association Marine Research Grant Programme

Organization: Western Indian Ocean Marine Science Associated (WIOMSA)

Description: The award is designed to enhance the capacity of scientists in the Western Indian Ocean region to conduct marine research. There are three tiers (MARG I, II,III) that vary in duration and amount. MARG I and II applications are closed.

Requirements: Applicants should be young scientists studying the Western Indian Ocean region

Amount: USD 3,000 (MARG III), USD 6,000 (MARG II)

Application Deadline: No deadline for MARG III

[Application Details](#)

IAEA Coordinated Research Project: Evaluating the Impacts of OA on Seafood

Organization: International Atomic Energy Agency OA International Coordination Centre

Description: The IAEA is launching a new 4-year CRP starting in 2019 to advance understanding of the effects of OA on seafood around the world and to explore adaptation strategies for aquaculture and seafood industries using a standardized, collaborative, global approach.

Requirements: [More information about how IAEA CRPs work](#). Recipient institutions must be located in Member States to the IAEA.

Amount: No maximum specified

Application Deadline: 30 November 2018

[Application Details](#)

US Agency for International Development Partnership for Enhanced Education and Research

Organization: US Agency for International Development and US National Science Foundation

Description: The award is intended to foster international partnerships between eligible developing country institutions and a partner US institution.

Requirements: Applications must be submitted together by representatives from either a higher education institution in the US or from a higher education institution in a developing country. Either institution may be the prime awardee and the two institutions must have well developed plans to collaborate. [Examples of previous awards](#)

Amount: USD 500,00 to 1,000,000

Application Deadline: Next deadline January 2019

[Application Details](#)

EMBO Short-Term Travel Fellowships

Organization: European Molecular Biology Organization

Description: The fellowship funds research exchanges of up to three months between laboratories in [eligible member countries and cooperation partners](#).

Requirements: Applicants must be from one of the member or cooperation countries and traveling to a lab in another member or cooperation country. Research must be related to life sciences. The travel must be associated with a larger project and not just limited to training in a technique, though it can include that type of training.

Amount: Travel and living costs of the traveling fellow

Application Deadline: Three months before proposed starting date of travel

[Application Details](#)

Jobs Lists:

[The Global Marine Community Newsletter & Jobs List](#)
[Ocean Opportunities](#)
[Josh's Water Jobs List](#)

NEWS and links to select OPEN ACCESS ARTICLES on OA**News:**

Save the Date: The 4th GOA-ON International Workshop is being planned for 14-18 April 2019 in Hangzhou, China. A formal announcement with details about the location, sponsors, themes, and travel logistics will be distributed in the coming weeks. Registration will open shortly after that.

[The IAEA OA International Coordination Center ocean acidification news stream](#) is a great resource for all things OA!

Join the conversation on the OA Information Exchange! Featured conversation:

[FluxEngine v3 toolbox available on GitHub](#). This is an open-source toolbox for calculating air-sea CO₂ gas fluxes from in situ, model, and Earth observation data.

A [new Alaska study](#) is examining the connections between ocean acidification and Alaskan razor clams at the University of Alaska Fairbanks College of Fisheries and Ocean Sciences. The article includes a 4-minute video **on training citizen scientists to take water samples** that can be analyzed for ocean acidification monitoring.

The US National Oceanic and Atmospheric Administration (NOAA) [awarded \\$3.5 million to four regional projects](#) to research the **impact of acidification on complex ecosystems**.

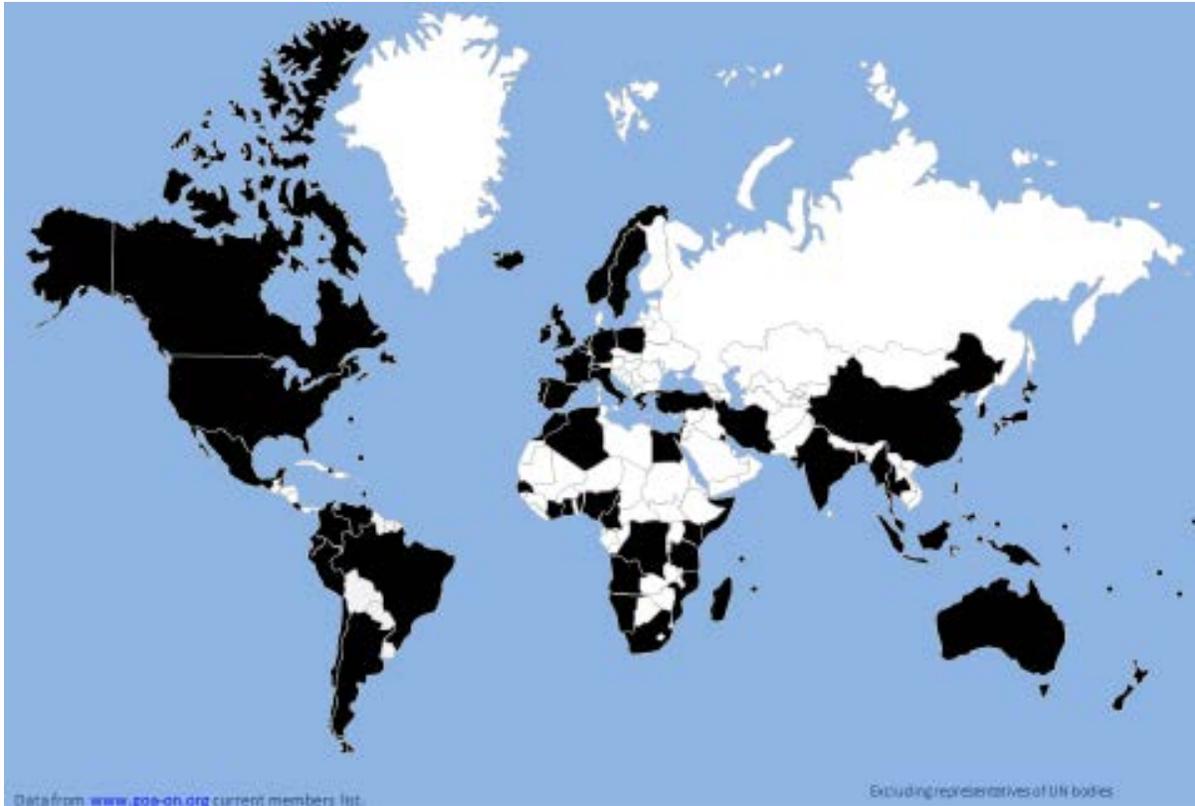
The **Pacific Islands and Territories Ocean Acidification network (PI-TOA)** held its first virtual meeting in September 2018 to elect a steering committee and discuss initial goals and objectives. PI-TOA is an appropriate acronym because “toa” means “hero” or “warrior” in several South Pacific languages.

Open-access science:

Cavalcanti, G.S., Shukla, P., Morris, M., Ribeiro, B., Foley, M., Doane, M.P., Thompson, C.C., Edwards, M.S., Dinsdale, E.A., and F.L. Thompson. 2018. [Rhodoliths holobionts in a changing ocean: host-microbes interactions mediate coralline algae resilience under ocean acidification](#). *BMC Genomics*. 19:701. <https://doi.org/10.1186/s12864-018-5064-4>

Gomez, C.E., Wickes, L., Deegan, D., Etnoyer, P.J., and E.E. Cordes. 2018. [Growth and feeding of deep-sea coral *Lophelia pertusa* from the California margin under simulated ocean acidification conditions](#). *PeerJ* 6:e5671 <https://doi.org/10.7717/peerj.5671>

- Griffith, A.W. and C.J. Gobler. 2018. [Transgenerational exposure of North Atlantic bivalves to ocean acidification renders offspring more vulnerable to low pH and additional stressors.](#) *Nature Scientific Reports* 7: 11394.
- Hofmann, L.C., Schoenrock, K., and D. de Beer. 2018. [Arctic coralline algae elevate surface pH and carbonate in the dark.](#) *Frontiers in Plant Science*. <https://doi.org/10.3389/fpls.2018.01416>
- Le Goff, C., Tambutte, E., Venn, A.A., Techer, N., Allemand, D. and S. Tambutte. 2018. [In vivo pH measurement at the site of calcification in an octocoral.](#) *Nature Scientific Reports*. 7:11210.
- Maboloc, E.A., and K.Y.K. Chan. 2018. [Resilience of the larval slipper limpet *Crepidula onyx* to direct and indirect-diet effects of ocean acidification.](#) *Nature Scientific Reports* 7: 12062.
- Steiner, Z., Turchyn, A.V., Harpaz, E., and J. Silverman. 2018. [Water chemistry reveals a significant decline in coral calcification rates in the southern Red Sea.](#) *Nature Communications* 9: 3615.
- Taucher, J., Aristegui, J., Bach, L.T., Guan, W., Montero, M.F., Nauendorf, A., Achterberg, E.P. and U. Riebesell. 2018. [Response of subtropical phytoplankton communities to ocean acidification under oligotrophic conditions and during nutrient fertilization.](#) *Frontiers in Marine Science*. <https://doi.org/10.3389/fmars.2018.00330>
- Xue, L., Cai, W.-J., Takahashi, T., Gao, L., Wanninkhof, R., Wei, M., Li, K., Feng, L., and W. Yu. 2018. [Climatic modulation of surface acidification rates through summertime wind forcing in the Southern Ocean.](#) *Nature Communications* 9: 3240.
- Yuan, X., McCoy, S.J., Du, Y., Widdicombe, S., and J.M. Hall-Spencer. 2018. [Physiological and behavioral plasticity of the sea cucumber *Holothuria forskali* \(Echinodermata, Holothuroidea\) to acidified seawater.](#) *Frontiers in Physiology*. <https://doi.org/10.3389/fphys.2018.01339>
- Zhang, Y., Gao, X., Guo, W., Zhao, J., and Y. Li. 2018. [Origin and dynamics of dissolved organic matter in a mariculture area suffering from summertime hypoxia and acidification.](#) *Frontiers in Marine Science*. <https://doi.org/10.3389/fmars.2018.00325>



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