



Global Ocean Acidification
Observing Network

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

Issue 14, April 2021

GOA-ON news

Prof. Widdicombe is the New GOA-ON Co-Chair

GOA-ON welcomes Professor Steve Widdicombe as its new co-chair. Prof. Widdicombe follows Dr Bronte Tilbrook into this position and will be co-chairing GOA-ON with Dr Jan Newton. Prof. Widdicombe is Director of Science at Plymouth Marine Laboratory in the United Kingdom. As a marine ecologist with expertise in the impacts of climate change and ocean acidification on marine organisms and ecosystems, Steve is an expert in using field observations and large manipulative experiments to address issues related to benthic ecology, biodiversity and ecosystem function. Steve has established the [North East Atlantic regional hub](#) of GOA-ON, together with Dr Helen Findlay, and is part of the GOA-ON Biological working group. Welcome aboard, Steve!



Thank you to former GOA-ON co-chair Bronte Tilbrook



We are incredibly grateful to former GOA-ON co-chair, Dr. Bronte Tilbrook, for his extensive contributions to GOA-ON over the years.

Bronte, a chemical oceanographer and senior principal research scientist at CSIRO Oceans and Atmosphere and Australian Antarctic Program Partnership based in Hobart, Tasmania, had an impressive foundation from which to lend his expertise to GOA-ON. Bronte led a team that established Australia's ocean observing system for ocean acidification extending from the tropics to the Antarctic shelf and has been involved in numerous international programs for

sustained observing systems to detect environmental change. He is a member of the GLODAP Reference Group and co-author of the Global Carbon Budget 2020, as well as senior author for [GOA-ON's OceanObs'19 publication](#), among his many others. Bronte participated in all four GOA-ON workshops, hosting the third one in Hobart during May 2016. Bronte is currently a co-chair for the 5th International Symposium on the Ocean in a High-CO2 World, planned for Lima, Peru. As GOA-ON co-chair, he strengthened GOA-ON's regional hubs, brought attention to ocean acidification in a multi stressor context, and propelled GOA-ON's contributions of data and information for policy applications, through the development of the United Nations [Sustainable Development Goal \(SDG\) Indicator 14.3.1 Methodology](#); helping to generate an OA indicator for the [WMO headline climate indicators](#); and serving as the current focal point for the [Communities of Ocean Action on Ocean Acidification](#).

As with many things, it is not only what a person has achieved it is also how they did it that matters. Bronte has been a champion for ocean acidification scientists round the world, willing to listen to all input, to lead GOA-ON effectively, and most of all, to have his quick wit and a smile never too far away. Thank you so very much Bronte for all you have given us!

Doctor Wilmer Carbajal Villalta

It is with great sadness that GOA-ON shares news of the passing of Doctor Wilmer Carbajal Villalta, a prominent Peruvian researcher and educator who contributed to the knowledge of marine sciences in Peru and the region, in Chiclayo on January 20th, 2021.

Wilmer's extensive professional experience, his contribution to national and international marine science, and in particular his interest in the study of ocean acidification leave an important legacy in marine sciences for his students and colleagues. In addition to being a researcher and professor, Dr Carbajal was part of the founding group of the Latin American Ocean Acidification Network (LAOCA) and the founder of the Peruvian Oceanography Network. Dr Carbajal chaired the organizing committee of the 5th International Symposium on the Ocean in a High CO2 World, to be held in Peru. He knew how to transcend the fields of science and reached out to the fisherman and aquaculture in order to jointly develop research for the benefit of all. Wilmer will be greatly missed.



GOA-ON Webinar Series

The GOA-ON Webinar Series is off to a great start! The first webinar took place in January and featured Steve Widdicombe and Sam Dupont. They discussed the GOA-ON Biological Working Group's efforts to determine optimal monitoring strategies for observing biological rates. In February, Katherina Schoo and Kirsten Isensee gave a presentation about the United Nations' Sustainable Development Goal (SDG) 14, the SDG target 14.3, and its indicator 14.3.1, which are focused on addressing ocean acidification. In March, Dr. David Long, William Pardis, and Kalina Grabb discussed "the pHyter", a new, low-cost, handheld pH-measuring instrument with the potential to democratize OA monitoring.

These webinars were recorded and can be viewed on the [GOA-ON YouTube Channel](#).

The goals of the GOA-ON Webinar Series are to enable members to share their science with the broader audience, create opportunities for collaboration, and foster a sense of community among GOA-ON members. GOA-ON is looking for additional speakers, particularly early career scientists. If you are interested in giving a presentation, please submit us your proposed title and abstract [via this form](#). For more information, please check out the new [GOA-ON Webinar Series webpage](#).



Welcome to the GOA-ON Webinar Series

Success Stories!

New Mooring station joins the Canary Islands Ocean Acidification Network

On Monday, 25 January 2021, the [QUIMA](#) group at the Instituto de Oceanografía y Cambio Global de la ULPGC has deployed an oceanographic buoy at the Marine Reserve "Punta La Restinga-Mar de las Calmas", south of the Island of El Hierro, the westernmost island of the Canary Archipelago and the farthest SW EU territory of the NE Atlantic. This action is part of the Project CanBio (Canary Monitoring network for the study of climate change, ocean acidification, marine noise, the effects on the



biodiversity and marine ecosystems) and the sub-project CanOA (The Canary Island Ocean Acidification Network), financed by the Canary Island Government and the Loro Parque Foundation. The new buoy can measure pCO₂, pH, dissolved oxygen, fluorescence, temperature and salinity, and all data are transmitted daily to the QUIMA laboratory. This

buoy joins the CanOA MORGAN1 buoy and two SOOP VOS lines. Later this year, a third buoy will be deployed, completing the CanOA network. This effort was championed by two GOA-ON members, Professors [J. Magdalena Santana-Casiano](#) and [Melchor González-Dávila](#).

GOA-ON in a Box contributes to the SDG 14.3.1 Indicator

The United Nations 2030 Agenda and its Sustainable Development Goals (SDG) include a goal dedicated to the ocean, [SDG 14](#), which calls to "conserve and sustainably use the oceans, seas and marine resources for sustainable development." Under Goal 14, the SDG Indicator 14.3.1 calls for the measurement of the *Average marine acidity (pH) measured at agreed suite of representative sampling stations.* As the custodian agency for this Indicator, the [Intergovernmental Oceanographic Commission \(IOC\) of UNESCO](#) is tasked with developing the [Methodology](#) and collecting the relevant ocean acidification data. Following the second call for data submissions towards the Indicator via its [SDG 14.3.1 Data Portal](#) this year, the IOC has received a number of datasets collected with the [GOA-ON in a Box kits](#). These kits, developed by a group of experts in the field of ocean acidification under the [coordination of the IAEA OA-ICC](#), together with [The Ocean Foundation](#), GOA-ON and its partners, are low-cost kits designed for measuring acidification in coastal surface waters. To date, 17 laboratories in 12 different countries have received kits donated by the Ocean Foundation, increasing capacity for ocean acidification observations together with the hands-on training courses by experts.



IOC and GOA-ON would particularly like to thank and congratulate Mauritius, Mozambique, Viet Nam and Fiji for submitting their GOA-ON in a Box datasets! Global observations are crucially important to assess regional and local differences in the rate of change and to devise management and adaptation strategies for ocean acidification impacts at global and local scales. The GOA-ON in a Box kits add invaluable data on ocean acidification to the local and global research communities.

In the spotlight

Community of Ocean Action (COA) Voluntary Commitments

The [ocean acidification community of action \(COA\)](#) is one of the 9 COAs that exist to advance implementation of SDG 14, Life Below Water. These communities exist to support each other and share experiences about progress on meeting tangible goals that respond to components of SDG 14, such as ocean acidification. There are currently 277 [voluntary commitments](#) (VCs) related to ocean acidification with 240 contributing member organizations. Many different organizations have become involved, including GOA-ON ([#OceanAction16542](#)), the OA-ICC, and several GOA-ON hubs: the OA Med-Hub ([#OceanAction34011](#)) and OA Africa ([#OceanAction32021](#)).

Submitting a commitment is an important step to gain greater visibility and recognition for an organization's contributions to SDG 14. Voluntary commitments may be registered online via the form on the [Communities of Ocean Action website](#).

Ocean acidification COA members have referenced their commitments when applying for grants and other applications, and to show stakeholders they are visibly committed to tangible actions. The OA-ICC is currently organizing a webinar for the COA on ocean acidification, to be announced soon. As the new decade is here, now is a great time to add new commitments to the Communities of Ocean Action that address OA and life below water.



Regional updates

The OA Med-Hub in Monaco Ocean Week 2021

Do you remember **Monaco Ocean Week**? This ocean science event, like most conferences, was postponed last year after the arrival of the pandemic. This year it's back virtually, from March 22-28, and it was full of events, environmentalists, journalists, and more. Abed El Rahman, chair of the [OA Med-Hub](#) has been asked to prepare a session based on the last year's program in collaboration with the IUCN and the Prince Albert II of Monaco Foundation. The session that took place on the 24th of March 2021 was a mixture of OA science and policy. The first part of the session started with short presentations by scientists to give an overview of the status of OA science in the Mediterranean region, the socio-economic aspects of OA, the reasons behind the policy gaps, the actions that can realistically be implemented at national and regional levels, and the opportunities the current enhanced global focus on climate change could bring to improve the resilience of Mediterranean marine ecosystems. At the end of this part, some highlights on how to better engage Southern Mediterranean countries in OA science and actions were presented. The second part of this session, a discussion panel gathered stakeholders (farms representative), policymakers (FAO, MedSea foundation, Ministry of Environment from a Mediterranean country), funders (IAEA) and international OA-Science/policy organization (OA Alliance) who were asked critical questions related to OA and climate change to evaluate the gaps of policies in responding quickly to OA observed trends in the Med. The recorded session can be watched here: <https://www.youtube.com/watch?v=YiQ5tBguD3c>.



OA Session at ASLO

The OA Med-Hub has been approved to lead a session titled, “*Ocean acidification: trends and effects from local to regional scales*”, at the upcoming ASLO 2021 ASM conference. The conference, previously scheduled to take place in Palma de Mallorca, Spain, will now be entirely virtual. The conference is tentatively scheduled for the 22-27 of June 2021, although the timing is dependent on the global COVID-19 situation. Abstract submission closed with over 1500 submissions with tens of submissions to the OA session. Thanks in advance to all who will be presenting.

For more information on the conference visit [the ASLO website](#).

OA Africa Network virtual event recap

Following the OA-Day of Action side event in Monrovia, a virtual event was organized by the OA Africa Network and the OA-ICC to feature OA research and capacity building efforts across Africa. Nine speakers were able to present, and the event was well attended. The focus of the event was on recent capacity building and new data collection efforts developing in African waters, with many prominent OA scientists sharing how OA research can grow in different regions in Africa. During the final panel discussion, the OA Africa co-chairs and the IAEA Radioecology Laboratory section head Peter Swarzenski, outlined future directions for continued OA research in Africa. A recording of the event can be found on the [GOA-ON Youtube Channel](#).



Announcements & Reminders

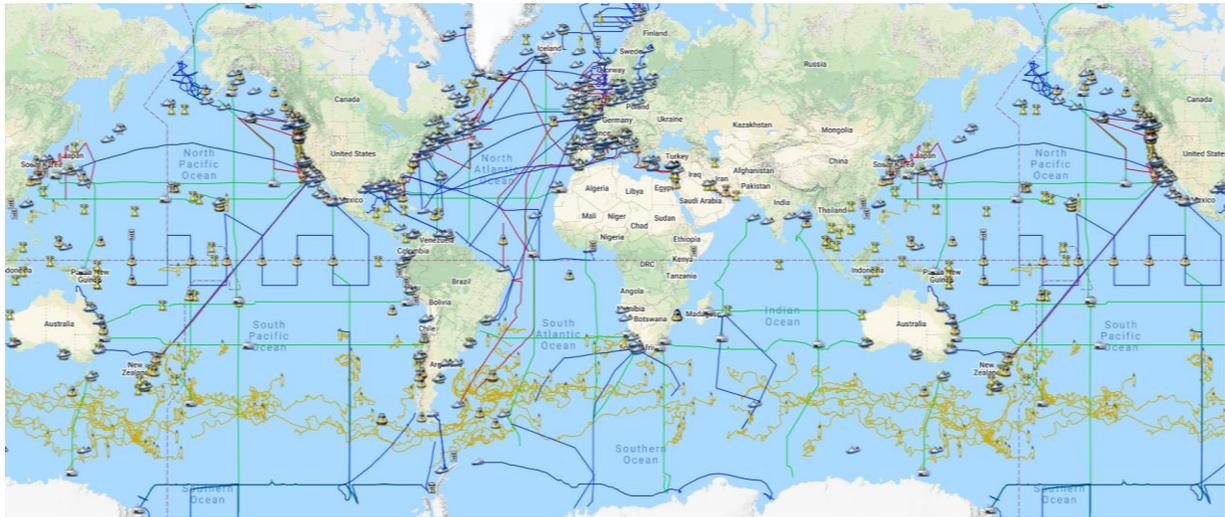
West Pacific Regional OA Training Hub Proposal

The Ocean Foundation seeks applications from institutions to become a regional ocean acidification training hub for the Pacific Islands. The regional training hub will receive financial support for staff time, two GOA-ON in a Box monitoring systems to use for regional training activities, and additional support from The Ocean Foundation and the project partners. Full details including proposal requirements are included in the Request for Proposals, [linked here](#). Applications are due by April, 2021, and should be sent to IOAI@oceanfdn.org.

Request for data providers to update GOA-ON Data Portal platforms

The GOA-ON Data Portal includes over 700 assets monitoring ocean acidification parameters throughout the world's ocean. Fifty-seven of these assets have data that are accessible directly on the Portal, and 282 assets have links to externally accessible data.

The portal allows anyone interested to search for monitoring assets and the collected data, and is a great way to highlight research efforts carried out worldwide. To this end, it is important for data providers to update their assets in order for this portal to include accurate metadata and links to data. If your assets need to be updated, or if you would like to add a new platform, please fill out [this short survey](#). For any questions, please contact the GOA-ON Secretariat (secretariat@goa-on.org).



COVID-19 Update: 5th International Symposium on the Ocean in a High-CO2 World

The [5th International Symposium on the Ocean in a High CO2 World](#) has been postponed until 2022 and the new dates will be announced soon. The organisers will continue to monitor the state of the COVID-19 pandemic that may require further adjustments to the dates. Please continue to check the Symposium website to find out more about dates and deadlines. GOA-ON will continue to support the Symposium and to provide updates to the community.



Join the OA Info Exchange (OAIE)

The OA Information Exchange ([OAIE](#)) is a website for the ocean acidification community to share ideas and resources, ask questions, and interact with people in a variety of disciplines around the world.

Scientists, citizen scientists, educators, NGO and government employees, resource managers, concerned citizens, and others are all welcome to take part in the OAIE.



**Ocean Acidification
Information Exchange**

New version of the R package seacarb available

The R package seacarb calculates parameters of the seawater carbonate system and includes functions useful for ocean acidification research. It has just been updated to v3.2.16. It is recommended to use this version rather than any of the earlier ones. The new or updated functions are listed below; the seacarb Change Log provides more details:

Schockman K.M. & Byrne, R.H., Spectrophotometric Determination of the Bicarbonate Dissociation Constant in Seawater, *Geochimica et Cosmochimica Acta* (2021), doi: <https://doi.org/10.1016/j.gca.2021.02.008>

Gattuso J.-P., Epitalon J. M., Lavigne H., Orr J., Gentili B., Hagens M., Hofmann A., Mueller J.-D., Proye A., Rae J. & Soetaert K., 2021. seacarb: seawater carbonate chemistry. R package version 3.2.16. [More information.](#)

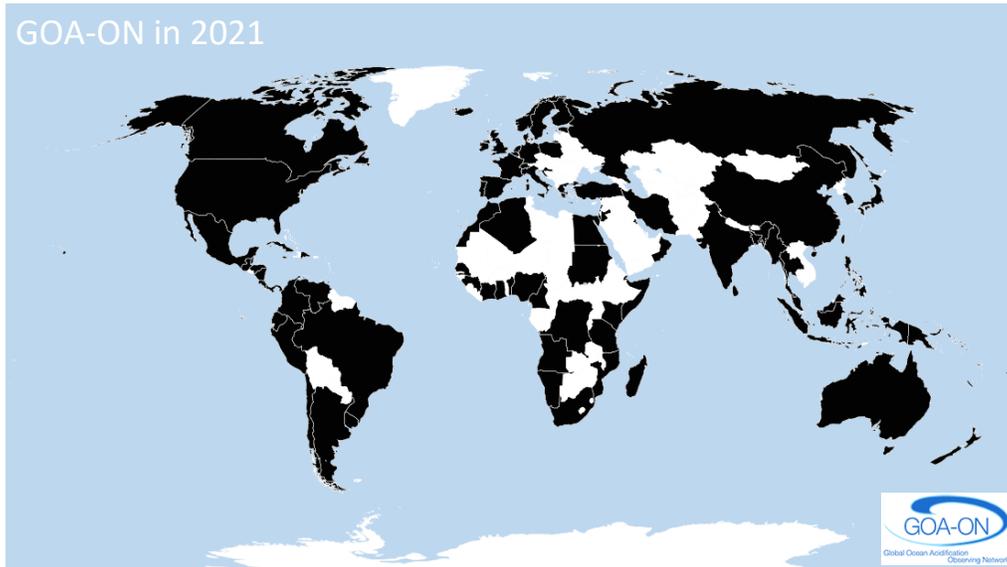
Subscribe to the [OA-ICC news stream](#)

for daily posts with new OA publications, media coverage, upcoming events, job postings, etc.

- Use the [OA-ICC portal](#) for ocean acidification biological response data to access over 1000 data sets.
- Access over 6,300 ocean acidification publications from the [OA-ICC bibliographic database.](#)

GOA-ON keeps growing

GOA-ON is a network composed of more than 800 members from 105 countries! We appreciate the interest and look forward to facilitating new and exciting collaborations together. A full list of GOA-ON members is available online on the [GOA-ON website](#). If you wish to change your affiliation as it is presented online, please email the GOA-ON Secretariat (secretariat@goa-on.org).



Are you involved in OA work that you would like to have included in future newsletters?
Contact the GOA-ON Secretariat: secretariat@goa-on.org

GOA-ON Secretariat

Kerri Dobson, NOAA Ocean Acidification Program
Trevor Eakes, IAEA Ocean Acidification International Coordination Centre
Katherina Schoo, Intergovernmental Oceanographic Commission of UNESCO



<https://www.facebook.com/GOAON/>
https://twitter.com/goa_on (@goa_on)
<https://www.youtube.com/channel/UCWZnXpGzQWwWfT3LEMkxXgg>