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

GOA-ON Highlighted at UNFCCC Conference of the Parties (COP25)

The UNFCCC Conference of the Parties (COP25), referred to as the "Blue COP", was held during 2-13 December 2019 in Madrid, Spain, and served as a platform for policymakers and scientists to outline solutions and priorities to address climate change. Throughout the conference, ocean acidification was highlighted as an emerging threat to the world's ocean. In collaboration with its partners, GOA-ON's efforts to advance monitoring, increase capacity, and raise awareness on ocean acidification were showcased in several events, including:

- From Knowledge to OA Action: Mobilizing Global Leadership to Protect Coastal Communities and Livelihoods from a Changing Ocean- Perspectives from the NE Atlantic, *5 December 2019, French Pavilion*
- Managing and adapting to the challenge of ocean acidification: strategies from around the world, *5 December 2019, UK Pavilion*
- Pacific Leadership and International Cooperation to Advance Regional Science and Mainstream Ocean Acidification into National Policies, *6 December 2019, Moana Blue Pacific Pavilion*
- Understanding Changing Ocean Conditions and Impacts to Marine Species and Ecosystems: Global Networks that Are Advancing Regional Science, Monitoring and Response Strategies, *7 December 2019, Chilean Pavilion*
- Polar Ocean Acidification – Highlighting Issues and Raising Ambition, *9 December 2019, Cryosphere Pavilion*

Participants of an ocean acidification side event at COP25 included Andrés Couve, Chilean Minster of Science, Technology, Knowledge and Innovation, and Jennifer Hennessey, senior advisor to USA Washington State Governor. Representatives of GOA-ON regional hubs (Nayrah Shaltout, OA-Africa; Duncan McIntosh, Pacific Islands & Territories; and Martin Hernandez-Ayon, LAOCA) presented talks. The event was organized by the International Alliance to Combat Ocean Acidification and the Chile California Council.

GOA-ON co-chair Bronte Tilbrook presenting at COP25 on GOA-ON's role in addressing Sustainable Development Goal 14.3. Gideon Henderson, Chief Scientist for UK DEFRA chaired the event, and Helen Findlay, NE Atlantic regional hub, also presented. The event was organized by Plymouth Marine Laboratories and the UK Government.

Call for Abstracts: 5th International Symposium on the Ocean in a High-CO2 World

The 5th International Symposium on the Ocean in a High-CO2 World will be held on 7-10 September 2020 in Lima, Peru. The Symposium is the place to share cutting-edge science in a rapidly developing frontier of research dealing with the science of ocean acidification and related stressors. GOA-ON members are encouraged to attend this international Symposium!

The Symposium themes, abstract submission, and meeting details are available at the Symposium website.

GOA-ON in a Box training course

Fifteen participants from around the world met at the IAEA Environment Laboratories in Monaco to receive training on ocean acidification monitoring. Participants learned how to measure pH and total alkalinity using a set of simplified methodologies, referred to as the "GOA-ON in a Box", developed by The Ocean Foundation, the IAEA Ocean Acidification International Coordination Centre (OA-ICC), and experts from GOA-ON. The course, led by GOA-ON Executive Council member Kim Currie, included lectures and practical sessions on carbonate chemistry, sampling design, data quality and assurance, biological impacts, experimental design, and opportunities for international networking and collaboration.

Participants of the "GOA-ON in a Box" training course in Monaco measuring total alkalinity (Photo: Marine Lebrec, IAEA)

GOA-ON Implementation Strategy updated

An updated version of the GOA-ON Implementation Strategy is now available online. GOA-ON invited members to review the Implementation Strategy after it was first launched during the 4th GOA-ON International Workshop, held in Hangzhou, China, in April 2019. This updated version of the Strategy reflects the input received from the community and includes the latest developments of the network. The document outlines how to implement the GOA-ON Requirements and Governance Plan, including expanding ocean acidification observations, closing human and technology capacity gaps, and informing about the impacts of ocean acidification.

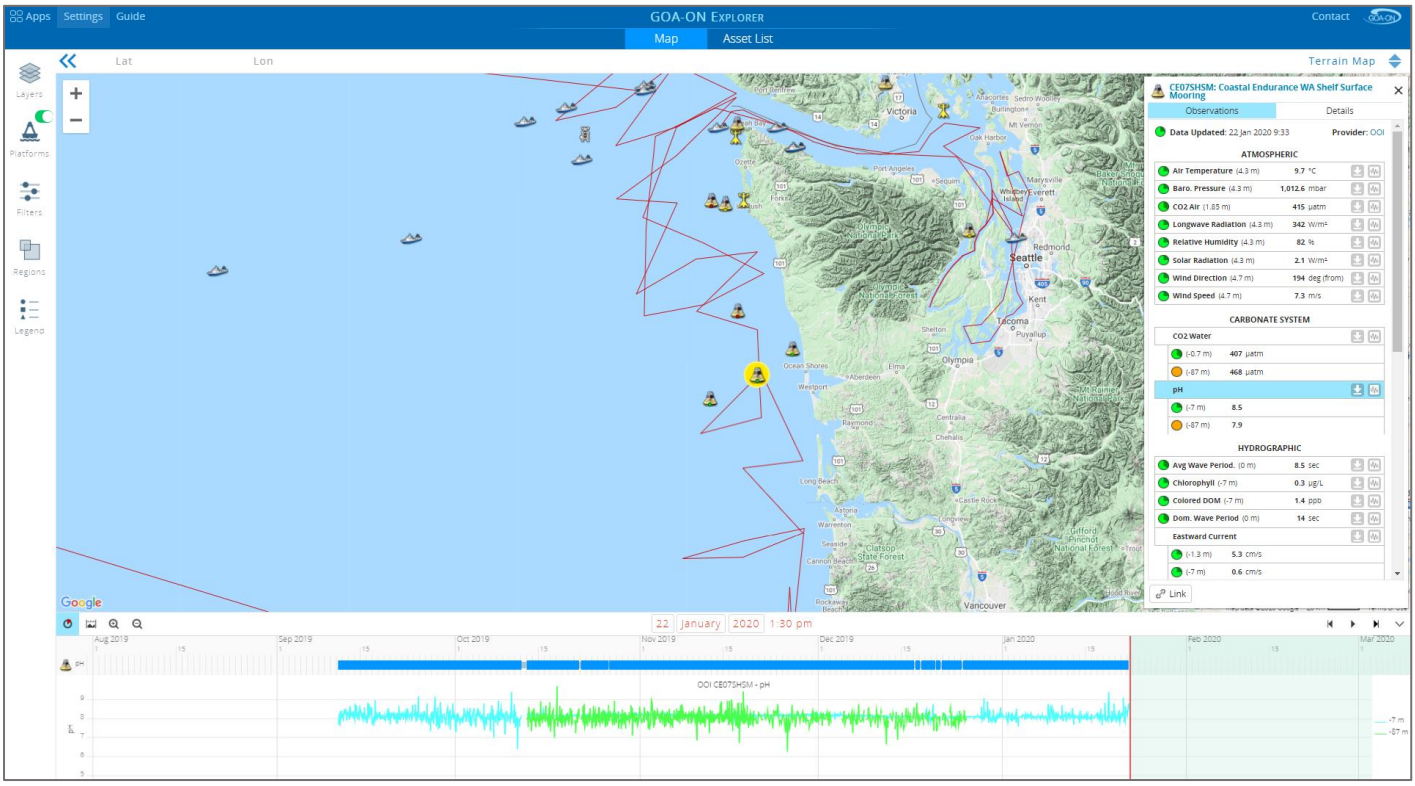
NOAA OCEAN ACIDIFICATION PROGRAM · The Global Ocean Observing System · United Nations Educational, Scientific and Cultural Organization · Intergovernmental Oceanographic Commission · IOOS Integrated Ocean Observing System · IAEA · Ocean Acidification International Coordination Centre OA-ICC

New data streams and sources on GOA-ON Data Portal

- Near real-time data streams from select Ocean Observatories Initiative (OOI) platforms are now available on the GOA-ON Data Portal. These data streams include observations from six OOI Coastal Endurance moorings and two Regional Cabled Array Benthic Experiment Packages (BEP) located off the coasts of Oregon and Washington, USA. Atmospheric and hydrographic variables are available, including near real-time pH and pCO2 measurements. Data access was facilitated by partners at Oregon State University and the University of Washington.

- The GOA-ON Data Portal also now includes data links, metadata and track visualizations, and from 71 Biogeochemical Argo Floats (BGC Argo). These BGC Argo Floats all measure pH profiles throughout the water column, along with other hydrographic parameters. The BGC Argo Floats included on the GOA-ON Data Portal are managed by the National Oceanic and Atmospheric Administration, Southern Ocean Carbon and Climate Observations and Modeling project, the Norwegian Institute of Marine Research, the Federal Maritime and Hydrographic Agency of Germany, the Second Institute of Oceanography China Argo Project and the Observatoire Océanologique de Villefranche.

If you are interested in having your ocean acidification data visualized on the GOA-ON data portal, please contact the GOA-ON Secretariat at secretariat@goa-on.org. To add or modify a platform on the GOA-ON data portal, please fill out this short form.



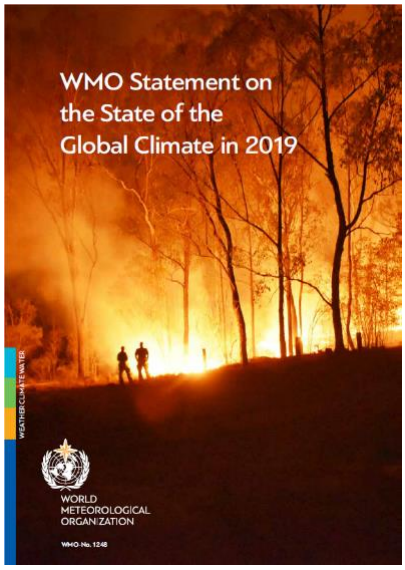
SDG 14.3.1 Data portal

The Intergovernmental Oceanographic Commission (IOC) of UNESCO invites GOA-ON members and IOC Member States to contribute to the global ocean acidification data collection in relation to the Sustainable Development Goal (SDG) 14.3.1 Indicator: *Average marine acidity (pH) measured at agreed suite of representative sampling stations*. This is a major milestone in recognizing ocean acidification as a stressor on marine ecosystems and that its observation is contributing to sustainable management of the ocean resources (SDG 14). To facilitate the data submission, IOC has developed an online portal based on the SDG 14.3.1 Indicator Methodology and the associated data and metadata files, in cooperation with the International Oceanographic Data and Information Exchange (IODE). The online data submission interface is a tool for the storage, validation and sharing of ocean acidification data submitted towards the SDG 14.3.1 Indicator.

This SDG 14.3.1 Data Portal is a tool for the submission, collection, validation, storage and sharing of ocean acidification data and metadata submitted towards the Sustainable Development Goal 14.3.1 Indicator.

Increasing ocean acidification documented in 2019 WMO Statement

The World Meteorological Organization (WMO) published the Statement on the State of the Global Climate for 2019 on 10 March 2020. The multi-agency Statement, compiled with input from Meteorological offices, scientists, GOA-ON, IOC-UNESCO and other UN agencies, documents the status of climate change, including global impacts on the atmosphere, land and ocean. GOA-ON contributed to the chapter on ocean acidification, one of the Global Climate Indicators, and highlighted the need for sustained long-term observations of ocean acidification with high temporal and spatial resolution in the open ocean and coastal seas. The WMO Statement on the State of the Global Climate is a flagship publication that provides definitive information for policy makers on the urgent need for global climate action.



Regional Updates

North American hub

The second in-person meeting of the GOA-ON North American Ocean Acidification Hub was held on 16-18 December 2019 at the Universidad del Mar, Huatulco, México, and was attended by 26 hub members from Canada, Mexico, and the United States. This workshop built upon the goals and initiatives established in the hub's inaugural meeting in 2018. The meeting included updates on current ocean acidification research efforts in the region, future capacity building opportunities, and reassessing the near- and long-term priorities of the regional hub. The meeting report will be available soon.

Participants of the North American regional hub meeting in Huatulco, Mexico

Western Pacific hub (WESTPAC)

The IOC Sub-Commission for the Western Pacific WESTPAC Ocean Acidification Programme (WESTPAC-OA) presented on GOA-ON and the hub's activities at the First Workshop of the WESTPAC Working Global Ocean Oxygen Network (GO2NE), Manila, Philippines, 20-22 November 2019. The workshop emphasized the importance of both the global oxygen and ocean acidification networks to continue working together in advancing multi-stressor ocean science.

North East Atlantic hub

The North East Atlantic Hub held its first Executive Group meeting in September 2019, with members joining both in person and via video conference to discuss the research, cooperation and capacity development priorities in the region. The NEA Hub currently has members from 13 countries in the North East and Atlantic regions, including the Baltic Sea. For more information on the hub, see the hub website or join the new North East Atlantic OA Hub on the OA Information Exchange.

OA Med-Hub

The Ocean Acidification Mediterranean Hub (OA Med-Hub) is expanding its network, with 45 members from 9 Mediterranean countries presently involved. The regional hub submitted a Voluntary Commitment (VC) under the Community of Ocean Action on Ocean Acidification as part of the Sustainable Development Goal 14.3 process. This VC submission will raise awareness on the regional hub's activities to the global community. The OA Med-Hub launched a survey in July 2019 to assess the capacities, gaps, and ocean acidification projects taking place in the OA Mediterranean field. The results have been circulated in the community and will help to evaluate the needs and tailor the future steps of the hub.

Announcements / Reminders

Upcoming international meetings

- A Changing Arctic conference: Tromsø, Norway (postponed due to COVID-19)
- UN Ocean Conference: Lisbon, Portugal (postponed due to COVID-19)
- The 6th International Marine Conservation Congress, 24-27 August 2020, Kiel, Germany
- 5th International Symposium on the Ocean in a High CO2 World: 7-10 September 2020, Lima, Peru

GOA-ON Pier2Peer Program

The Pier2Peer Program is a scientific mentorship program that matches senior researchers with early career scientists to facilitate an exchange of expertise and to provide a platform for international collaborations. If you wish to join the GOA-ON Pier2Peer program as either a mentor or a mentee, please contact the Pier2Peer coordinator, Michael Acquafredda (Michael.Acquafredda@noaa.gov).

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 OA Information Exchange.

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 6,000 ocean acidification publications from the OA-ICC bibliographic database.

GOA-ON is a network comprised of 730 scientists from 100 countries!
New countries which have recently joined GOA-ON include Bermuda and Sri Lanka
A full list of GOA-ON membership is available 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

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