

OA-ICC HIGHLIGHTS

The latest news and updates from the OA-ICC and partners



Participants of the advanced ocean acidification data management & analysis workshop at the IAEA Environment Laboratories, Monaco (Photo: © Tanmay Misra, IAEA)

THIS QUARTER:

DATA MANAGEMENT AND ANALYSIS WORKSHOP

NEW BIOLOGICAL RESPONSE PORTAL

TRAINING COURSE IN KUWAIT

UNCERTAINTY PROPOGATION PUBLICATION

SDG 14.3.1 TIER UPGRADE

COMMUNITIES OF OCEAN ACTION

UPCOMING GOA-ON WORKSHOP

OA-ICC BY THE NUMBERS, 2018

OA-ICC and GOA-ON organize advanced data analysis and management workshop in Monaco

The IAEA OA-ICC and the Global Ocean Acidification Observing Network (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 countries from different regions around the world. Different data products and resources were presented, such as the [GOA-ON data portal](#), [SOCAT](#), [GLODAP](#) and the OA-ICC compilation of biological response data and bibliographic database.



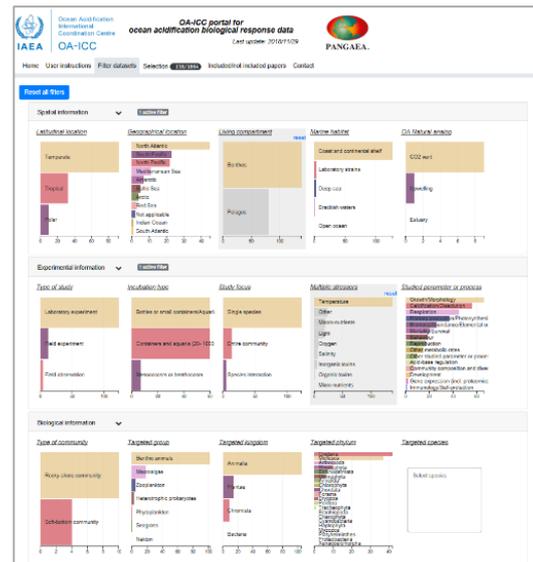
Workshop participants engaged in lectures, discussions, and hands-on sessions (Photo: © Tanmay Misra, IAEA)

The workshop brought together both chemical oceanographers and biologists that used an interdisciplinary approach to discuss ocean acidification data analyses. The workshop emphasized the importance of marine chemistry for biological experimentation (proper manipulation and reporting, but also development of scenarios and interpretation of data) and biology for chemical monitoring (e.g., identification of relevant spatio-temporal scales to inform monitoring strategies). 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 also provided feedback on the methodology for reporting on the UN [Sustainable Development Goal Target 14.3 Indicator 1](#), which calls for “average marine acidity measured at an agreed suite of representative sampling stations”. [#CAPACITY-BUILDING](#)



New OA-ICC portal for biological response data

A new user-friendly [portal](#) has been developed to allow scientists to easily access relevant ocean acidification biological response data in a coherent format. This new tool was created in response to the growing number of studies that investigate the effects of ocean acidification on marine organisms and ecosystems. The data compilation is hosted by [PANGAEA](#) Data Publisher for Earth and Environmental Science and maintained in the framework of the OA-ICC in collaboration with [Xiamen University](#), China and the [Laboratoire d'Océanographie de Villefranche](#), France. The goal of this data compilation is to ensure the archival and streamlining of data on the biological response to ocean acidification (and other environmental drivers), as well as to provide easy access to the data for all users. #SCIENCE



IAEA Member States trained on ocean acidification in Kuwait City

A group of 14 participants representing 14 Member States (Algeria, Angola, Argentina, Bangladesh, Belize, Brazil, Chile, Costa Rica, Cuba, Ecuador, Kenya, Mexico, Thailand, and Turkey) attended a 2-week course on ocean acidification in Kuwait City, Kuwait from 18 to 30 November 2018. This inter-regional training course was organized through an IAEA Technical Cooperation project in partnership with [Kuwait Institute for Scientific Research \(KISR\)](#). The course provided participants the knowledge required for designing and performing a laboratory experiment for studying impacts of ocean acidification on marine organisms. This course also included an in-depth training on the use of radiotracers, such as calcium-45, to assess the effects of ocean acidification on physiological processes and contaminant transport. #CAPACITY-BUILDING



New tools for estimating uncertainties for OA variables

Through a project funded by the OA-ICC, a set of tools have been developed to consistently estimate uncertainties for marine CO₂ system variables. Uncertainty propagation add-ons are now available for four of these packages: [CO2SYS-Excel](#), [CO2SYS-MATLAB](#), [seacarb](#), and [mocsy](#). Additionally, a new type of diagram has been designed to assess how propagated uncertainty changes with different input uncertainties. The tools and interpretation of results are described in [Orr et al., 2018](#). #SCIENCE

UN Sustainable Development Goal Target 14.3.1 Tier upgrade



The UN Sustainable Development Goal Target Indicator 14.3.1 was upgraded from **Tier III to Tier II** by the IAE-SDG of the United Nations Statistical Commission. Tier II classification means that the *“indicator is conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries”*. The SDG Indicator 14.3.1 calls for *“average marine acidity (pH) measured at an agreed suite of representative sampling stations”*. The [Indicator Methodology](#), which provides guidance to scientists and countries about how to carry out measurements and how to report them, was developed with the support of experts in the ocean acidification community, including the OA-ICC. #SCIENCE

Communities of Ocean Action on Ocean Acidification

The [Community of Ocean Action on Ocean Acidification](#) (COA on OA), led by David Osborn, IAEA Environment Laboratories and Bronte Tilbrook, CSIRO, Australia, and co-chair of the Global Ocean Acidification Observing Network (GOA-ON), was presented at the [UN DESA Asia-Pacific Day for the Ocean](#) held on 20 November 2018 in Bangkok, Thailand, where Voluntary Commitments from the Asia-Pacific region were discussed. Voluntary Commitments can be submitted at any time at this [website](#), where you will also find more information about the SDG 14 Voluntary Commitments process.



The COA on OA will hold its next webinar on 5 February, with a presentation by the [International Alliance to Combat OA](#). [Contact us](#) if you would like to participate in the webinar. [#COMMUNICATION](#)

Registration open: 4th Global Ocean Acidification Observing Network International Workshop

The [Global Ocean Acidification Observing Network \(GOA-ON\)](#) will be hosting 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 ([SIO](#)). The deadline for abstracts is **31 January 2019**, and registration will close on **31 March 2019**. Visit the [workshop website](#) for more information. [#SCIENCE](#)

OA-ICC by the numbers: 2018 stats

- **OA-ICC news stream** – 3,630 posts and 35,100 visitors from 173 countries
- **OA-ICC website** – 9,026 views from 3,030 users representing 123 countries
- **OA-ICC bibliographic database** – 730 publications were added to the OA-ICC bibliographic database, which now includes a total of 5,475 references
- **OA-ICC capacity building** – the OA-ICC supported 53 scientists from 32 countries (through training courses and support to attend international workshops)

NEXT ISSUE

- *OA-Africa Steering Committee meeting at Blue Oceans Conference, Monrovia, Liberia, 18-21 March 2019.*
- *OA-ICC cooperation in the Latin American and Caribbean Advanced Training on Ocean Acidification Monitoring & Regional Symposium, Santa Maria, Columbia, 21 January – 1 February 2019, organized by the Ocean Foundation.*
- *Launch of the OA-ICC Coordinated Research Project: [Evaluating the Impacts of Ocean Acidification on Seafood - A Global Approach](#)*

OA-ICC online resources: www.iaea.org/services/oa-icc

- [OA-ICC news stream](#) - recent publications, media coverage, meeting announcements, jobs etc.
- [OA-ICC bibliographic database](#) - over 5,400 references with citations, abstracts and keywords.
- [OA-ICC data compilation](#) on the biological response to ocean acidification - access to experimental data from 928 scientific papers.
- [OA-ICC portal for OA biological response data](#) – access to over 1,000 data sets along with citations.

The IAEA OA-ICC promotes global collaboration and activities to advance ocean acidification science, capacity building, and communication