Community of Ocean Action on Ocean Acidification

SESSION III: Implementing SDG14 and Ocean Commitments with the Communities of Ocean Action: Experiences and Lessons

15 November 2023
SDG 14.3.1 Indicator: 
Average marine acidity (pH) measured at agreed suite of representative sampling stations.
Voluntary Commitments
COA – Ocean Acidification

341 Voluntary Commitments
Many from 2017
Little activity since 2021
Difficulties to assess progress and gaps with the current web interface

HOWEVER....
The trend of bottom water pH (top; yr-1) and $\Omega_{\text{Arag}}$ (bottom; yr-1) between 2015 and 2049 as projected by the AMM7-NEMO-ERS EM model under the RCP4.5 scenario (left) and RCP8.5 scenario (right) on the North Western shelf. Only data within the OSPAR Regions has been shown.
Regional/Global Ocean Acidification Action

Facilitating global coordination and collaboration on ocean acidification (IAEA Ocean Acidification International Coordination Centre (OA-ICC))

#OceanAction46916

OA and Multiple Stressors Training, Monaco, 2022

Measure and Report Ocean Acidification - Sustainable Development Goal 14.3.1 Indicator Methodology (Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO)) #OceanAction43098

SDG 14.3.1 Data Portal
Global Ocean Acidification Action

Global Ocean Acidification Observing Network and the Ocean Decade Programme ’Ocean Acidification Research for Sustainability’ #OceanAction40975

10 regional hubs enforcing OA action at local and regional levels

GOA-ON’s Goals

Goal 1: Improve our understanding of global OA conditions.
Goal 2: Improve our understanding of ecosystem response to OA.
Goal 3: Acquire and exchange data and knowledge necessary to optimize modeling for OA and its impacts.
Global Ocean Acidification Action

Global Ocean Acidification Observing Network and the Ocean Decade Programme ‘Ocean Acidification Research for Sustainability’ #OceanAction40975

Fostering the co-development of ocean acidification science, including the impacts on marine life and sustainability of marine ecosystems in estuarine-coastal-open ocean environments.

Targeted Outcomes

1. Quality Data
2. Science to Action
3. Observing Strategies
4. Biological Impacts
5. Future Projections
6. Public Awareness
7. Policy Engagement

The Next Steps

- Endorsed as a UN Ocean Decade Programme
- Publicly launched at UN Ocean Conference in Lisbon
- Outcome white papers written, community reviewed. To be published 2023.
- 11 projects and actions endorsed by the decade under OARS.

- Satellite events planned for UN Ocean Decade conference.
- UNFCCC, COP28, UN Decade flagship event & other side events
- High-level Economist event in London
- OARS Commitment Campaign launch
Way forward for the COA OA

• Connection to other international frameworks, conventions and efforts, e.g. CBD GBF, UNFCCC
• Increase the notion of science and ocean acidification action in general in the upcoming preparatory conference in Costa Rica 2024
• Facilitate access to COA relevant commitments (web interface)
• Engage in OARS activities and commitments and potentially align the VC processes
SDG 14.3.1 Reporting – GOOD news

- **2019** – 8 countries submitted data and information
- **2020** – 28 countries submitted data and information (178 stations)
- **2021** – 37 countries submitted data and information (308 stations)
- **2022** – 41 countries submitted data and information (539 stations)
Stations for which data were submitted in 2023 for 2022 data
The Global Ocean Acidification Observing Network

GOA-ON
What is GOA-ON?

GOA-ON is a collaborative international network designed to address 3 goals:

- Improve our understanding of global OA conditions
- Improve our understanding of ecosystem response to OA
- Acquire and exchange data and knowledge necessary to optimize modelling for OA and its impacts

OA is a global condition with local effects

www.goa-on.org
GOA-ON in 2013

Network of 150 scientists from 31 countries

Data from validated 1st & 2nd GOA-ON workshop participant lists (Seattle, Washington 2012 & St. Andrews, UK 2013)
GOA-ON in 2022

Network of >900 members from 105 countries

Data from www.goa-on.org current members list

Excluding representatives of UN bodies
GOA-ON in 2022
9 regional hubs

Network of >900 members from 105 countries

Southern Ocean Hub, in formation

Data from www.goa-on.org current members list
Excluding representatives of UN bodies
GOA-ON Structure

• 922 scientists from 114 countries, 10 regional hubs and one network
  • Caribbean hub est. 2023, others in discussion
  • ICONEC Network – International Carbon Ocean Network for Early Career
• Executive Council:
  • Chairs: Jan Newton and Steve Widdicombe
  • 18 science members (including hub reps)
  • 5 programme representatives
  • 3 secretariat (IOC-UNESCO, NOAA, IAEA OA-ICC)
GOA-ON Activities

• Communication
  • Webinar Series, YouTube channel, Facebook, Twitter, Newsletters
• OA Week, 30 Oct – 3 Nov 2023
  • 22 Sessions
  • over 750 participants
• Data Explorer
  • 776 assets measuring carbonate chemistry
  • Meta-data for discovery
  • Some near-real-time
• SDG14.3 App on Data Explorer
GOA-ON Capacity Building

Peer2Peer:
• Scientific mentorship program with 65 partnerships
• Knowledge exchange
• Collaborations
• Scholarships funded by NOAA*

Direct assistance:
• Training workshops
• Sensor kit provision (GOA-ON in a box)*
For more information on GOA-ON visit:

www.goa-on.org

www.oars-un.org
#OceanAction46916:
Facilitating global coordination and collaboration on ocean acidification

Communities of Ocean Action Workshop
Incheon, Korea
13-15 November 2023
The Ocean Acidification International Coordination Centre (OA-ICC)

❖ A hub for overarching, global activities on ocean acidification
❖ Announced in June 2012 at Rio+20 UN Conference
❖ Supported by the IAEA Peaceful Uses Initiative

SCIENCE
❖ Unique resources for the research community
  ▪ Bibliographic database
  ▪ Data portal – biological response to OA
❖ Global and regional monitoring and observation (GOA-ON and its 9 regional hubs)
❖ Best practices in research and data management

CAPACITY BUILDING
❖ More than 800 scientists / over 100 IAEA MSs
❖ Comprehensive approach:
  ▪ Conducting experiments
  ▪ Managing data and
  ▪ Communicating results
❖ Resources / opportunities / mentorship

COMMUNICATION
❖ OA-ICC News Stream
❖ Dedicated OA-ICC website
❖ A diversity of OA-related publications
❖ Multimedia outreach products
❖ Presence at major international events
❖ Relevant collaborations / partnerships
**Recent Activities**

- The **OA-ICC bibliographic database** continues to be updated monthly on Zotero
  - Literature searches are performed daily and new references are posted on the News Stream
  - 10,472 references are now included
- Open-access (Pangaea) **Biological Response Data Portal** is updated regularly
  - Currently contains >1,400 datasets
- Use of databases in training courses
- Publications (in prep) from training course experiments
Capacity building

Recent Activities

• Intermediate Training – OA & Multiple stressors (September 2022, Peru and October 2022, Monaco with OACIS)
• Intermediate/Advanced Training – Meta-analysis (February 2023, Virtual)
• Collaborative research (follow-up from OA basic training 2022)

Upcoming Plans

• Intermediate/Advanced Training – Communication on OA (November 2023, Costa Rica)
• Collaborative research – Final meeting: Impacts of OA on Seafood (December 2023, Monaco)
• Basic Training – OA training (2024, Liberia)
• Intermediate Training – OA & Multiple Stressors intermediate training (2024, Monaco with OACIS)
• Level 4 Training – Advanced collaborative research training
Recent Activities

- COP27: “Ocean Acidification Adaptation and Resilience in Africa” side event with OA Africa hub
- “OA-ICC Highlights” resumed in May 2023
- OA-ICC News Stream consistently updated

Upcoming Plans

- Publish GOA-ON regional hubs policy briefs
- Side Event at COP28 (December 2024, Dubai)
- Event at Monaco Ocean Week 2024 in collaboration with OACIS
- Submitted Satellite Event at UN Ocean Decade Conference in Barcelona (April 2024)