IAEA

Ocean Acidification
International
Coordination Centre

OA-ICC

Promoting global cooperation in a changing ocean world

OCEAN ACIDIFICATION INTERNATIONAL COORDINATION CENTRE (OA-ICC)

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Established in 2012 by the International Atomic Energy Agency (IAEA) in response to recommendations of the scientific community and the growing concern of Member States about ocean acidification.

Operated by the IAEA Environment Laboratories in Monaco, and supported by the *IAEA Peaceful Uses Initiative*. Cooperates closely with several IAEA Member States and key research institutions.

Feedback provided by an Advisory Board of key international institutions and leading scientists in the field.

Communicating, promoting and facilitating global actions in a changing ocean world

A hub for global activities on ocean acidification

SCIENCE

Accelerate advances in international ocean acidification research:

- Global OA Observing Network (GOA-ON)
- Facilitating dialogue between natural and social scientists
- Intercomparison exercises
- Promoting best practices
- International data management

COMMUNICATION

Facilitate efficient exchange of information between stakeholders:

- Website and news stream
- Multimedia outreach products (e.g. presentations, videos, animations)
- International collaboration on dissemination and exchange of knowledge
- Support of international partnerships at major conferences (e.g. UNFCCC COPs)

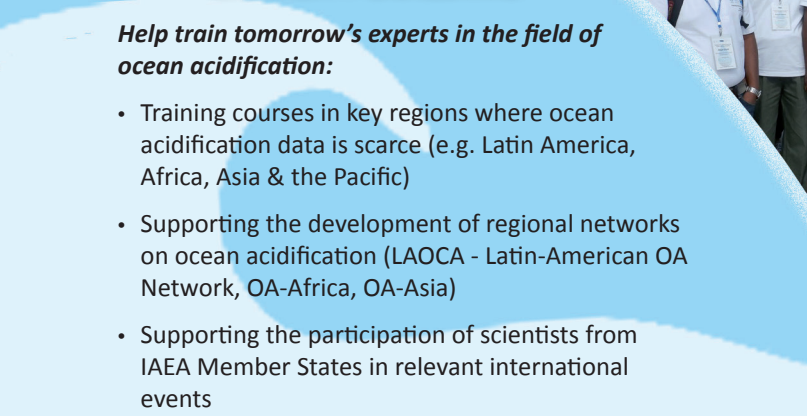
Bridging the gap between the scientific community and the science end-users, e.g. policy makers, media, schools, the general public.

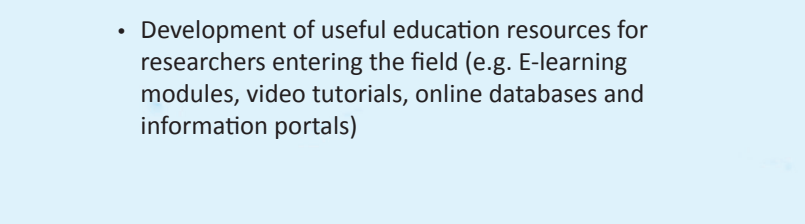
Key overarching activities in science, capacity building, and communication

ISOTOPES ARE POWERFUL TOOLS TO STUDY OCEAN ACIDIFICATION

Corals incorporate certain chemical compounds when forming their skeletons. One example is boron, which has two naturally-occurring isotopes, B-10 and B-11. Their abundance in seawater depends on ocean pH, making it possible to assess past seawater acidity by measuring their relative amounts in coral skeletons formed thousands of years ago.

Isotopic techniques can be used to study the rates of biological processes in marine organisms (mussels, oysters, corals etc.). For instance, the creation of shells and skeletons (calcification) can be measured using Ca-45, and the growth of phytoplankton (tiny plants which are the basis of the marine food chain) can be studied using C-14.





CAPACITY BUILDING

Help train tomorrow's experts in the field of ocean acidification:

- Training courses in key regions where ocean acidification data is scarce (e.g. Latin America, Africa, Asia & the Pacific)
- Supporting the development of regional networks on ocean acidification (LAOCA - Latin-American OA Network, OA-Africa, OA-Asia)
- Supporting the participation of scientists from IAEA Member States in relevant international events
- Development of useful education resources for researchers entering the field (e.g. E-learning modules, video tutorials, online databases and information portals)

OA-ICC Online Resources

1 The OA-ICC **news stream**, ***news-oceanacidification-icc.org***, provides daily information on ocean acidification (scientific papers, jobs, media coverage, meeting announcements etc.). Subscribe free of charge via email, RSS or Twitter to stay tuned to ocean acidification news!

2 The OA-ICC **website**, ***iaea.org/ocean-acidification***, provides information on the project and resources on ocean acidification grouped according to audience and language.

3 The OA-ICC **bibliographic database** has currently more than 3500 references and includes citations, abstracts and assigned keywords.

4 The **data compilation** on the biological response to ocean acidification provides easy access to regularly updated experimental data from more than 600 research papers.

"The Other CO_2 Problem"

- **The ocean absorbs 1/4 of the carbon dioxide (CO_2) emitted each year as a result of human activities, with potentially severe consequences for marine organisms, ecosystems and human society.**
- **Since the beginning of the industrial revolution, ocean acidity has increased by 30%.**
- **Changes in ocean acidity are occurring about 100 times faster than at any moment during the last 20 million years, and could reach an increase of 170% by the end of this century.**

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