

The Ocean Acidification Network
an information network for the international scientific community

The Scientific Committee on Oceanic Research
 UNESCO Intergovernmental Oceanographic Commission
 IAEA Marine Environment Laboratory
 The International Geosphere-Biosphere Programme



How is ocean acidity changing?
 Scientists use scenarios of increasing CO₂ levels to calculate the future acidity of the oceans. (photo: S. Doney)



How will ecosystems be affected?
 Calcifying organisms and corals may have difficulty growing. (photo: Coral Reef Alliance)



What research is being done?
 Scientists are studying the impact of increased CO₂ levels on marine organisms. (photo: J.P. Gattuso, U. Ribeselli)



What is ocean carbon sequestration?
 Scientists are trying to determine if liquid CO₂ can be safely stored under the seabed or in the deep ocean. (photo: Statoil ASA)

www.ocean-acidification.net

Perspectives on Ocean Acidification:
The UNESCO / Intergovernmental Oceanographic Commission and the International Ocean Carbon Coordination Project

→ Current activities
 → Priorities / capacity for future activities

European Science Foundation Strategic Workshop on Ocean Acidification
 Meloneras, Gran Canaria, 28-30 January 2008

The UNESCO / IOC and IOCCP Perspectives on Ocean Acidification
 → *Current activities*

Watching Brief on Ocean CO₂ Sequestration (www.ocean-acidification.net >Resources)

The Ocean in a High CO₂ World International Science Symposium (2004)

- Web-site from 2004 symposium
- Research Priorities Report
- Special Issue: JGR-Oceans
- Oceanography Magazine Article
- EOS Article
- all available at: (www.ocean-acidification.net >Symposium)

The Ocean in a High CO₂ World – II (2008) (www.ocean-acidification.net >Symposium)

The Ocean Acidification Network (www.ocean-acidification.net)

BBC Documentary with UNEP

U.N. Global Environment Facility / World Bank Proposal on Ocean Acidification (*now in:* Climate Impacts on West Bering Sea Fisheries: ice melt and ocean acidification.)

EPOCA partner – contributing to WP3 (Present day observations of ocean chemistry and biogeography) and WP14: (Dissemination and Outreach).

The UNESCO / IOC and IOCCP Perspectives on Ocean Acidification

→ *Priorities / Capacity for future activities*

IOC: Emphasis on societal relevance issues

- Ocean acidification impacts on fisheries and coral reef ecosystems (sustain 300 million of the world's poorest people; 23 World Heritage sites)
- Ocean CO₂ sequestration – ensuring that sound science gets to the decision makers and that top scientists are participating in intergovernmental panels; cooperation with IPCC; catalyzing peer-reviewed research for assessment.

IOCCP: Emphasis on monitoring network coordination

- Existing ocean carbon networks can contribute to ocean acidification monitoring (hydrography for full profile / high quality pH; VOS for seasonal to interannual surface coverage; time series for full depth / high frequency process investigations).
- IOCCP, along with GCRMN, can assist with coordination of monitoring networks for ocean acidification at coral or coastal sites using the same map / table database system used for IOCCP and on-site status and assessment reports as part of the Status of Coral Reefs of the World biennial assessment program.
- Links to GCOS and UNFCCC and GEO for essential climate variables.