Nuclear applications for the environment

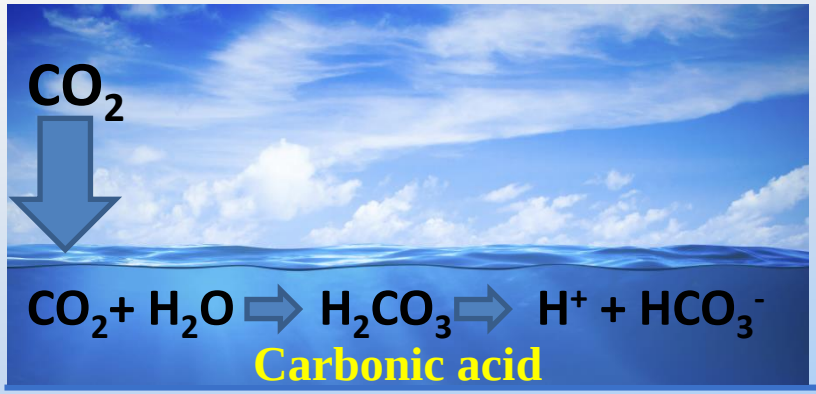
What we do?

How we do it?

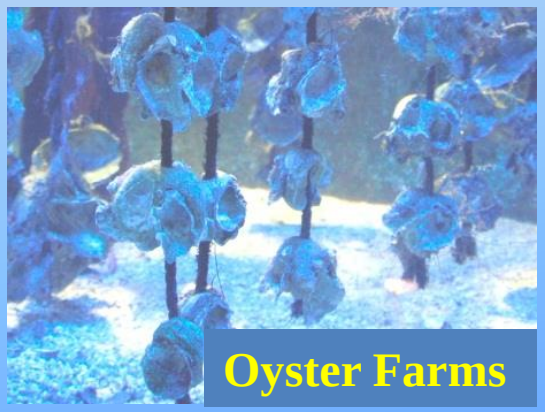
Some acidification examples:

1. **Combined effects experiments on bioaccumulation of metals in conditions of elevated CO_2 (e.g., Cadmium, Cobalt, Cesium, Manganese, Silver and Zinc)**
2. **Calcification experiments using Calcium-45 and elevated CO_2**
3. **Boron isotopic ratios of ^{10}B and ^{11}B for paleo-dating of ocean pH geologically**

Social and Economic Areas of Concern



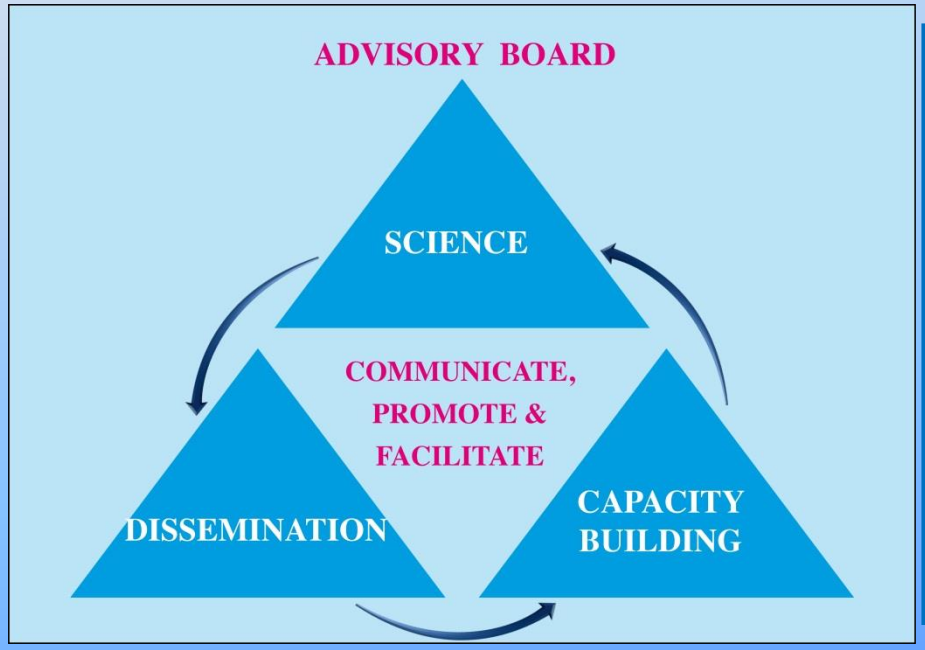
OA is a change in seawater chemistry caused by excess atmospheric CO_2 being absorbed by the ocean.

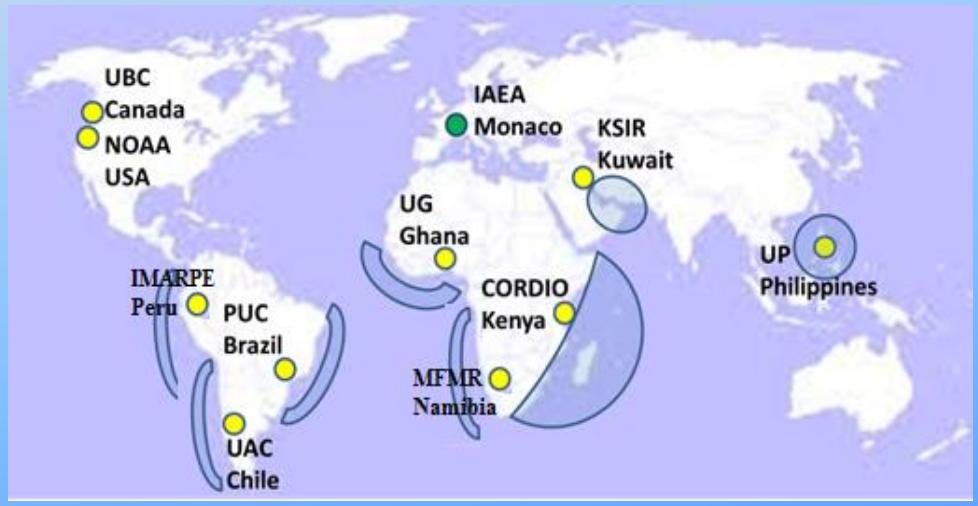


Ocean acidification may affect various ecosystem services including: aquaculture, fisheries, marine tourism, seafood security, coastal protection and human livelihoods

Communication and Institutional Cooperation

Ocean Acidification International Coordination Center (OA-ICC)	Coordinated Research Project (CRP) Regional Socio-economic impact modelling





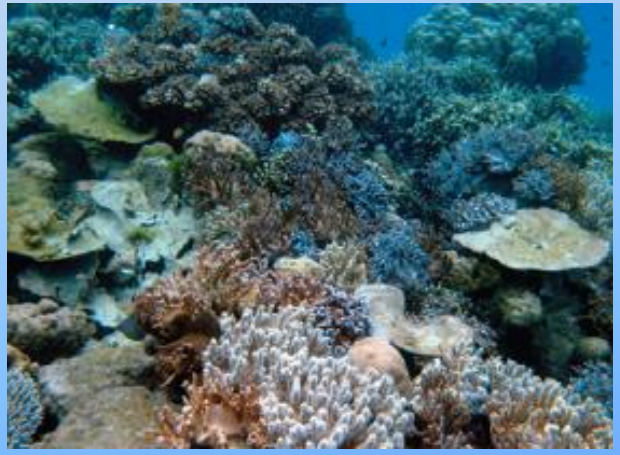
www.iaea.org/oceanacidification

http:// news-oceanacidification-icc.org/

Future Ocean

Which future do we want?

$ ↑ | ??? | $ ↓



pH = 8.1 | pH = 7.8 to 8.0 | pH < 7.7

Images from coastal area near Papua New Guinea at natural CO_2 venting from the sediment (Fabricius *et al*, 2011 Nature Climate Change)