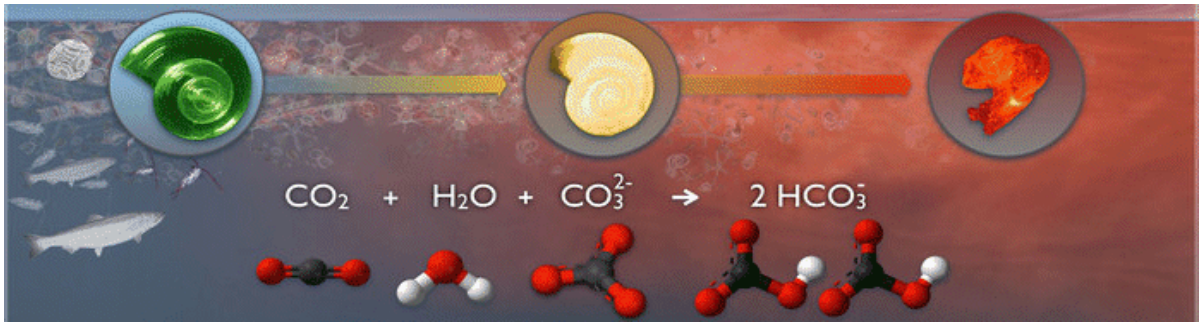

International Ocean Acidification Observing System Workshop Update

In June of 2012, 62 scientists from 23 countries assembled at the University of Washington in Seattle to discuss the form and function of a global network for monitoring ocean acidification and its effects on biological systems. The workshop was sponsored by NOAA, IOC, GEOS and UW.

The principal goals of this international workshop were to: (1) provide the rationale and design of the components and locations of an international carbon and ocean acidification observing network that includes repeat hydrographic surveys, underway measurements on volunteer observing ships, moorings, floats and gliders taking into account existing networks and programs wherever possible; (2) identify a minimum suite of measurement parameters and performance metrics for each major component of the observing system; and (3) develop a strategy for data quality assurance and data distribution; and (4) discuss requirements for program integration at the international level.

Participants identified that the goals of the network are to provide:
(1) An understanding of global OA conditions: Identify spatial/temporal patterns and assess generality of response; document and assess variation to infer mechanisms driving condition; quantify rate of change and ID areas of vulnerability; (2) An understanding of ecosystem response to OA: Measure biological responses to physical / chemical changes; quantify rate of change and ID areas of vulnerability; and (3) Input data to optimize modeling for OA: Provide spatially and temporally resolved data for initial conditions and evaluation of models; then use model outputs to aid the interpretation of goals 1 and 2. **Network outcomes** are to provide globally distributed high quality data, near-real-time data, and data synthesis products that facilitate new research on OA, communicate status of OA and biological response and enable forecasting/prediction of OA conditions.

Further, participants discussed the guiding principle of two standards for data quality. 1) "Climate": Data of quality sufficient to assess long term trends with defined level of confidence. This standard will be needed for detection of the long-term anthropogenically-driven changes in state and carbonate-chemistry over multi-decadal timescales. 2) Versus "Weather": Data of sufficient and defined quality used to identify relative spatial patterns and short-term variation. These data are valuable for mechanistic interpretation of the ecosystem response to, and impact on local, immediate OA dynamics. Specific recommendations were made for both data standards for all three goals of the network.

A workshop report, under preparation, will provide not only these details, but will serve as a consensus approach on the strategy needed to construct a suitable global ocean acidification observing system for review and vetting and hopeful support by the member countries. The full report is anticipated by January 2013. For details, see http://www.pmel.noaa.gov/co2/OA2012Workshop/