



NOAA Response to the SAB Recommendations on Ocean Acidification

A Presentation to the
NOAA Science Advisory Board

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NOAA Fisheries

March 24, 2010



Outline



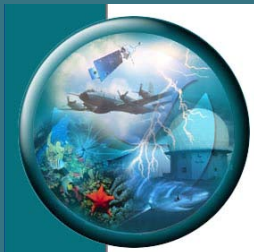
- Purpose
- Issue
- Presentation of Briefing
- NOAA Coordination and Views
- Desired Outcome



Purpose



Informational briefing on the status of NOAA's ocean acidification activities relative to the SAB's May 2007 recommendations.

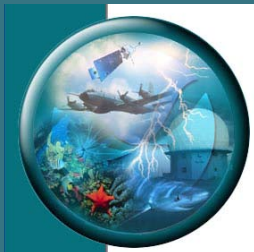


Issue



The March 2007 SAB meeting included an agenda item on Ocean Acidification. The SAB made the following recommendations:

1. NOAA should be the primary agency for ocean acidification observations;
2. NOAA should coordinate its research with other agencies;
3. NOAA should coordinate its research with the international research community;
4. NOAA move ahead quickly with a National Research Council study on ocean acidification, but scope it out carefully to ensure policy relevance; and
5. Any NOAA ocean acidification research program should include studies on feedback loops, both positive and negative.



Recommendation #1



SAB Recommendation: NOAA should be the primary agency to deploy observing systems for ocean acidification

Status:

- Ocean acidification observing network established in FY 2010
- Coral reef test beds established in FY 2010
- Technology for carbon measurements on moorings is under development.
- Caribbean ocean carbon chemistry monitoring through assimilation of satellite and in situ data established in FY 2009
- Some ocean acidification-related variables are made accessible and preserved by NOAA. NOAA is working on future access to other ocean acidification data and information both within NOAA and in collaboration with existing partnerships, such as the Department of Energy (Carbon Dioxide Information Analysis Center)
- Organism response studies are underway

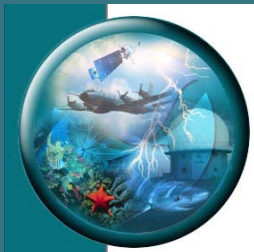


Recommendation #2

SAB recommendation: NOAA should coordinate its research with other agencies.

Status:

- JSOST Interagency Working Group on Ocean Acidification (IWG-OA) established in October 2009 under the terms of the FOARAM Act of 2009 (Ned Cyr, Chair)
- IWG-OA is developing a Strategic Plan for Ocean Acidification Research and Monitoring
- Some coordination occurring now (e.g., NOAA-NSF collaboration; work with USGS and NASA on coral reef test beds)



Recommendation #3

SAB recommendation: NOAA should coordinate its research with the international research community;

Status:

- In December 2009 SOLAS-IMBER-IOC established the SOLAS-IMBER Coordination Program. The Goal of this program is to develop international coordination of ocean acidification research, education and policy issues. US members of this committee include Dr. James Barry (MBARI), Dr. Lisa Robbins (USGS) and Dr. Richard Feely (NOAA).
- Ocean acidification data quality control and management is coordinated with the international community (i.e., through IOC's International Oceanographic Data and Information Exchange)



Recommendation #4



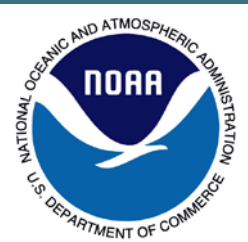
SAB recommendation: NOAA move ahead quickly with a National Research Council study on ocean acidification, but scope it out carefully to ensure policy relevance

Status:

- NRC study **Development of an Integrated Science Strategy for Ocean Acidification Monitoring, Research, and Impacts Assessment** initiated in Feb 2009. The study's terms of reference were reviewed by NOAA for policy relevance.
- Report anticipated in April 2010.



Recommendation #5



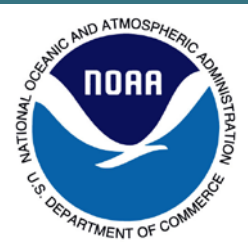
SAB recommendation: Any NOAA ocean acidification research program should include studies on feedback loops, both positive and negative.

Status:

- Feedback loops are being addressed as part of NOAA's CLIVAR/CO₂ Repeat Hydrography Program which determines decadal changes in ocean carbon sources and sinks.



NOAA Coordination & Views



- Coordination with:
 - NOAA Working Group on Ocean Acidification
- What has NOAA done to address this issue?
 - NOAA has an active and expanding ocean acidification research program, consistent with the SAB recommendations
 - A NOAA Ocean Acidification Program Office is being established
 - A NOAA Implementation Plan for Ocean Acidification Research is in preparation
 - A monitoring program for ocean acidification has been initiated in 2010
 - NOAA is communicating the results of its OA work to other Federal agencies, the academic community, Congress and the public through a variety of publications, presentations and through the IWG-OA
- What are NOAA's views on the subject?
 - NOAA supports the SAB recommendations and is working actively to implement them.

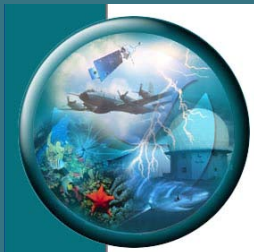


Desired Outcome

Informational briefing for the SAB that represents NOAA's comprehensive response to the SAB's OA recommendations.

Bring to the SAB's attention:

- Oceanography Magazine's special issue on Ocean Acidification that NOAA co-led
- NOAA participation in developing the "Best Practices" manual with EPOCA and the Ocean Carbon and Biogeochemistry (OCB) program
- NOAA leadership in developing Ocean Acidification School (WHOI, November 2009)

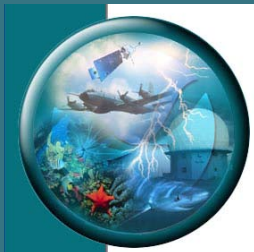


Backup Slides

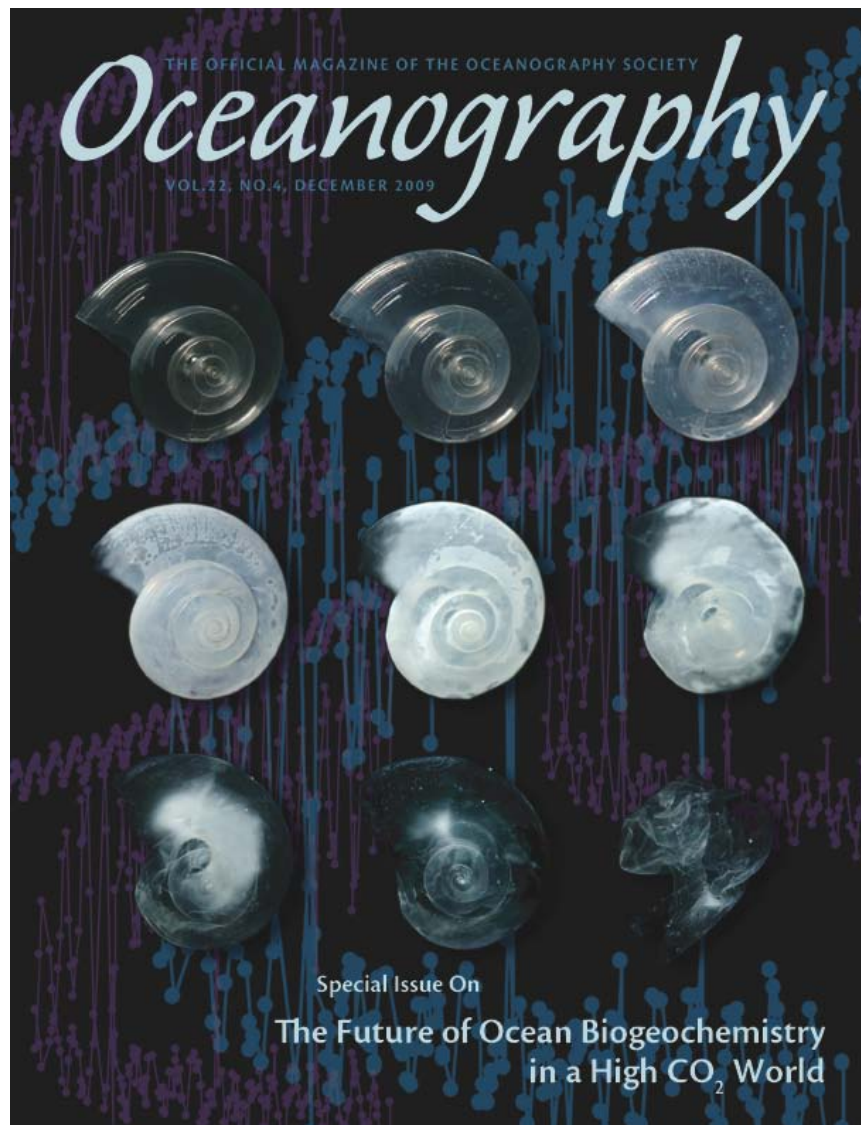
NOAA OCEAN AND
GREAT LAKES
ACIDIFICATION
RESEARCH
IMPLEMENTATION
PLAN

The cover art for the report. It features a dark background with a globe, a satellite, and data points connected by lines. The data points are colored purple and red, and the lines are colored purple and red. The globe is shown in a perspective view, and the satellite is in orbit above it. The data points are scattered across the scene, with some lines connecting them to form a network.

NOAA OCEAN
ACIDIFICATION
STEERING
COMMITTEE
FEBRUARY 2010



Backup Slides





Editors of the special issue of Oceanography Magazine



- Ulf Riebesell
- Vicky Fabry
- Lina Hansson
- Jean-Pierre Gattuso



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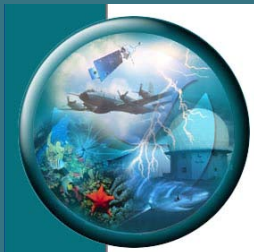


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- Terry Heatlie
- Adrienne J. Sutton
- Richard A. Feely

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- Adrienne J. Sutton



Primary players in NOAA who established the coordinated NOAA Implementation Plan



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- Rik Wanninkhof (OAR/AOML)
- John Stein (NMFS/NWFSC)
- Mike F. Sigler (NMFS/AFSC)
- Elizabeth Jewett (NOS/CSCOR)
- Felipe Arzayus (OAR/OOER)
- Dwight K. Gledhill (OAR/AOML)



IWG-OA Membership



- Ned Cyr, NOAA (Chair)
- Libby Jewett, NOAA
- Richard Feely, NOAA
- Chris Sabine, NOAA
- Kenric Osgood, NOAA
- Phil Taylor, NSF (Vice-Chair)
- Don Rice, NSF
- Fred Lipschultz, NASA (Vice-chair)
- Bill Fisher, EPA
- Courtney St. John, Navy
- Mary Boatman, MMS
- Lisa Robbins, USGS
- Bret Wolfe, USFWS
- Robert Domaingue, DOS
- Sherry Sykes, DOS
- Steve Gittings, NOAA
- Susan Laessic, EPA