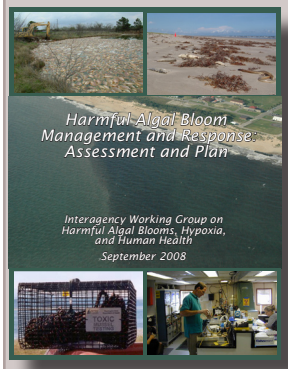
Harmful Algal Bloom Management and Response: Assessment and Plan

Report Description



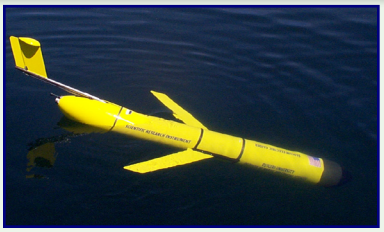
The *Harmful Algal Bloom Management and Response: Assessment and Plan* is the third of five reports mandated by the 2004 reauthorization of the Harmful Algal Bloom and Hypoxia Research and Control Act (HABHRCA). This report was developed by the Joint Subcommittee on Ocean Science and Technology's Interagency Working Group on Harmful Algal Blooms, Hypoxia, and Human Health.

This report describes the nature of harmful algal blooms (HABs) in U.S. waters, Federal actions to predict and respond to HAB events, and presents a plan to advance these capabilities and reduce the impacts of HABs on humans and the environment. To download the report: *http://ocean.ceq.gov/about/sup_jsost_iwgs.html.*

The plan presented draws strongly from the findings of the *HAB Research, Development, Demonstration, and Technology Transfer National Workshop Report: http://www.whoi.edu/redtide/page.do?pid=15075*

Report Findings

- The frequency of HAB events is increasing, and their geographic distribution has expanded to now include all U.S. states.
- The majority of advances in HAB management have improved mitigation, which minimizes HAB impacts to human health, economies, and the environment. Progress in HAB prevention and control is evident but has been more challenging; focused research in these areas will be required.
- Current Federal HAB event response programs are effective for assisting managers, but can be overwhelmed when multiple events occur over short time periods. Further, federal and state response programs may have difficulty addressing any increases in HAB frequency or intensity.
- Infrastructure forms the foundation upon which the science and its management applications depend. As HAB research and response has matured, the infrastructure needs have also increased.
- A HAB "Research, Development, Demonstration, and Technology Transfer (RDDTT) Program" is proposed to optimize progress in HAB management.



A HAB sensor, called a 'Brevebuster', can be mounted on moorings or automated underwater vehicles (shown here) for in-water detection and early warning of Florida Red Tides. (Photo: G. Kirkpatrick, Mote Marine Laboratory)

Control by clay flocculation being tested in the field. This method has shown effectiveness for controlling blooms under certain conditions. (Photo: Richard Pierce, Mote Marine Laboratory)

Proposed RDDTT Program for Advancing HAB Management

- The **Prevention, Control, and Mitigation component** of the RDDTT Program will focus on moving promising technologies and strategies that arise through basic research programs from development to demonstration to technology transfer for field application by managers or other end-users.
- The **Event Response component** will improve access to existing resources for response through better information sharing, communication, and coordination and provide essential new resources. A regionally based, federal HAB Event Response Program linked to a network of Regional HAB Coordinators is proposed.
- The **Core Infrastructure component** will 1) increase availability of adequate analytical facilities, reference and research materials, technical training, and access to data; 2) improve integration of HAB activities with existing monitoring and emerging observational programs; and 3) enhance communication and regional and national coordination.

For more about HABHRCA: http://www.cop.noaa.gov/stressors/extremeevents/hab/habhrca/

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