

Summit on Long-Term Monitoring of the Gulf of Mexico Hypoxic Zone: Developing the Implementation Plan for an Operational Observation System

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Stennis, Mississippi

Sponsored by NCCOS (CSCOR & CCMA) and NESDIS in coordination with the Northern Gulf Cooperative Institute

Workshop Rationale: Hypoxia is one of the many symptoms of coastal eutrophication. Sustained low oxygen conditions can lead to faunal mortalities, food web alterations, loss of habitat, and impacts to fisheries. Since 1985, NOAA has supported research that included monitoring the annual extent of the hypoxic zone (“dead zone”) in the northern Gulf of Mexico, a key metric of the 2001 *Action Plan for Reducing, Mitigating and Controlling Hypoxia in the Northern Gulf of Mexico*, <http://www.epa.gov/msbasin/taskforce/pdf/actionplan.pdf>.

NOAA has been measuring this management metric by virtue of providing data for a series of ecosystem studies to gain understanding and predictive capabilities for both the causes and consequences of hypoxia in the Gulf, not as a sustainable long-term monitoring program. A more robust, integrated, and multi-partner monitoring effort is critically needed in order to assess management efficacy in meeting the *Action Plan* goal to reduce the hypoxic zone, and to support on-going modeling and ecological forecasting efforts. This integrated modeling strategy should be linked to with regional and national monitoring networks such as the Gulf of Mexico Coastal Ocean Observing System (GCOOS) and Integrated Ocean Observing System (IOOS). The *Summit on Long-Term Monitoring of the Gulf of Mexico Hypoxic Zone: Developing the Implementation Plan for an Operational Observation System* will convene key officials with responsibilities and resources for monitoring environmental conditions in the Gulf of Mexico (especially those with regional and national observing system responsibilities), researchers with intimate knowledge of spatial and temporal dynamics of the hypoxic region in the Northern Gulf of Mexico (physical, chemical, biological), and users of monitoring data that have decision-making authority for coastal management. This group will work together with the Cooperative Institute to develop a long-term comprehensive monitoring plan for the dead zone that can be implemented in the near-term, including specific commitments and plans for long-term fiscal support. The goals of the planned monitoring program are to improve characterization of the hypoxic zone to better inform management of the problem, and to advance the development of a Gulf-wide observation system that is the vision of IOOS and GCOOS.

Objectives of the workshop are to:

- 1) assess existing monitoring and observing program capabilities in and surrounding the Gulf of Mexico's hypoxic zone;
- 2) identify long-term monitoring and observing needs for optimizing management capabilities (e.g. tracking size of hypoxic zone in support of Action Plan; supporting fishery assessments) and supporting ongoing and planned ecosystem modeling efforts;
- 3) identify programmatic opportunities to achieve needed level of monitoring through integration with new or existing Gulf hypoxic zone monitoring/observing efforts (e.g. GCOOS network) and national monitoring networks (e.g. IOOS, NWQWN);
- 4) develop a near-term plan for achieving a comprehensive, integrative, sustainable monitoring program for the Gulf hypoxic zone including available mechanisms for long-term funding and starting with actions that can be taken in the current fiscal year;

Targeted Outcomes:

- 1) A pre-meeting "white paper" that summarizes the history, activities, and plans of existing monitoring programs in and around the Gulf hypoxic zone;
- 2) A planning document that details the scientific, technical, operational, and financial plans for a 5-year (2007-2011) cooperative monitoring program for the northern Gulf of Mexico hypoxic zone.

Format: The 2-day workshop will be by invitation only and plans are for 20-30 participants.

Participants: Participants will be selected primarily on their ability to represent their agencies or scientific constituencies and commit the necessary resources to move forward with a viable plan.

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