What is a Coastal Ocean Observing System?

A Coastal Ocean Observing System is a combination of instruments on buoys, satellites, ships, drifters and underwater vehicles that are used to make observations of the ocean. Computer models are developed as part of the system to understand and make ocean forecasts.

Oil & Gas Production and Safety

“The ocean and atmosphere affect almost all the activities of the offshore oil industry from our daily operations to the design of our multi-billion-dollar infrastructure. Hence persistent and spatially detailed ocean and atmospheric measurements enable us to do our business efficiently and safely.” Cortis Cooper, Chevron Energy Technology Corporation

Because sustained, integrated ocean information from the Gulf of Mexico Coastal Ocean Observing System (GCOOS) was available as part of the U.S. Integrated Ocean Observing System, it was of immediate value to the NOAA Office of Response and Restoration to inform decisions related to the Deepwater Horizon Oil Spill.

In the wake of the 2010 DWH spill which brought deepwater drilling to a halt, real-time oceanographic and numerical model data have demonstrated economic value for companies like Shell Offshore Inc., as they undertake multi-billion-dollar initiatives drilling in deep water of the massive Mars field.

Emergency Preparedness & Response

Hurricane Isaac brought damaging waves along Mobile Bay, AL in 2012. AP Photo/Butch Dill

Improved Gulf forecasts and predictions of extreme coastal storms and long-term water level changes require increased ocean observations to drive the forecast models. GCOOS contributes to minimizing the risk of damage and losses of lives and property by:

- Providing timely hazard and disaster information
- Providing understanding of the natural processes that produce hazards
- Promoting risk-wise behavior

For more information on GCOOS or to become a member, please contact Executive Director Dr. Barb. Kirkpatrick:
barb.kirkpatrick@gcoos.org
www.gcoos.org
Ports and Homeland Security

The Alabama State Port Authority has an economic impact totaling $7.9 billion and impacts nearly 67,000 jobs. With the recently approved U.S. Capitol Program, supporting a $5 billion investment in port facilities for ThyssenKrupp Steel and other industries, the Port of Mobile is growing at a rapid rate. The increased shipping and hazardous cargo volumes (e.g. phenol and acetone) translate to a growing need for information that supports safe and efficient marine operations and protects ports from terrorist threats.

Homeport Marina, Gulf Shores, AL, supports the state’s tourism revenue that generates $2.3 billion annually and supports more than 41,000 jobs. Photo credit: Paschenfruit Photography, LLC

Conservation and Sustainability

To enhance Alabama’s economically important fishing and tourism industries in a sustainable manner, increased oceanographic and regional-scale environmental data are needed.

GCOOS has demonstrated the value of ocean observing systems to Alabamians:
- Ecosystem models guide management of Alabama’s $540 million fishing industry which supports more than 9,000 jobs
- The fishing port in Bayou La Batre, among the most productive in the Gulf by poundage and economic value, benefits from real-time oceanographic information
- Red tide forecasts aid the state’s $9.3 billion tourism industry
- Effective marine spatial planning requires synoptic ocean information

GCOOS is Good For Alabama

With more than 100 signatories to the GCOOS Memorandum of Understanding, Alabama leaders representing industry, academia, education, small business, the general public, and state and federal agencies agree that a fully developed GCOOS is smart for Alabama, benefitting lives, ecosystem health, workforce development, and the economy.

Concern that the DWH Spill harmed water quality in Orange Beach has led to a study in Cotton Bayou. The GCOOS Regional Association is aiding such studies by serving publicly available science information via the developing GCOOS Integrated Water Quality Network. Photo credit: City of Orange Beach