

The Center for Gulf Studies (CGS): *A Mississippi Research Center of Excellence*

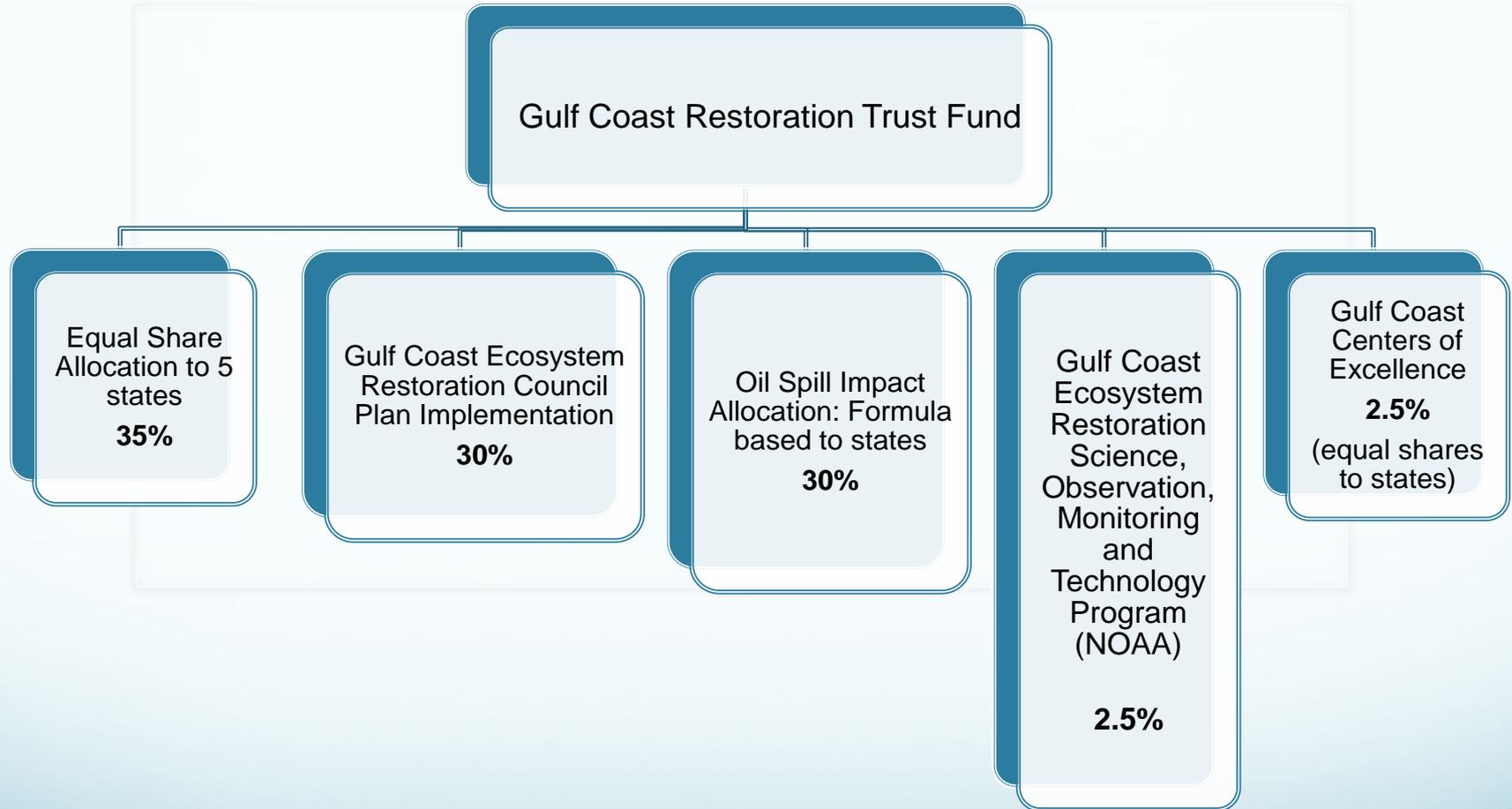
Partnerships and Leveraging Opportunities
Monty Graham, Acting Director



Our Sea. Our Place. Our Legacy.



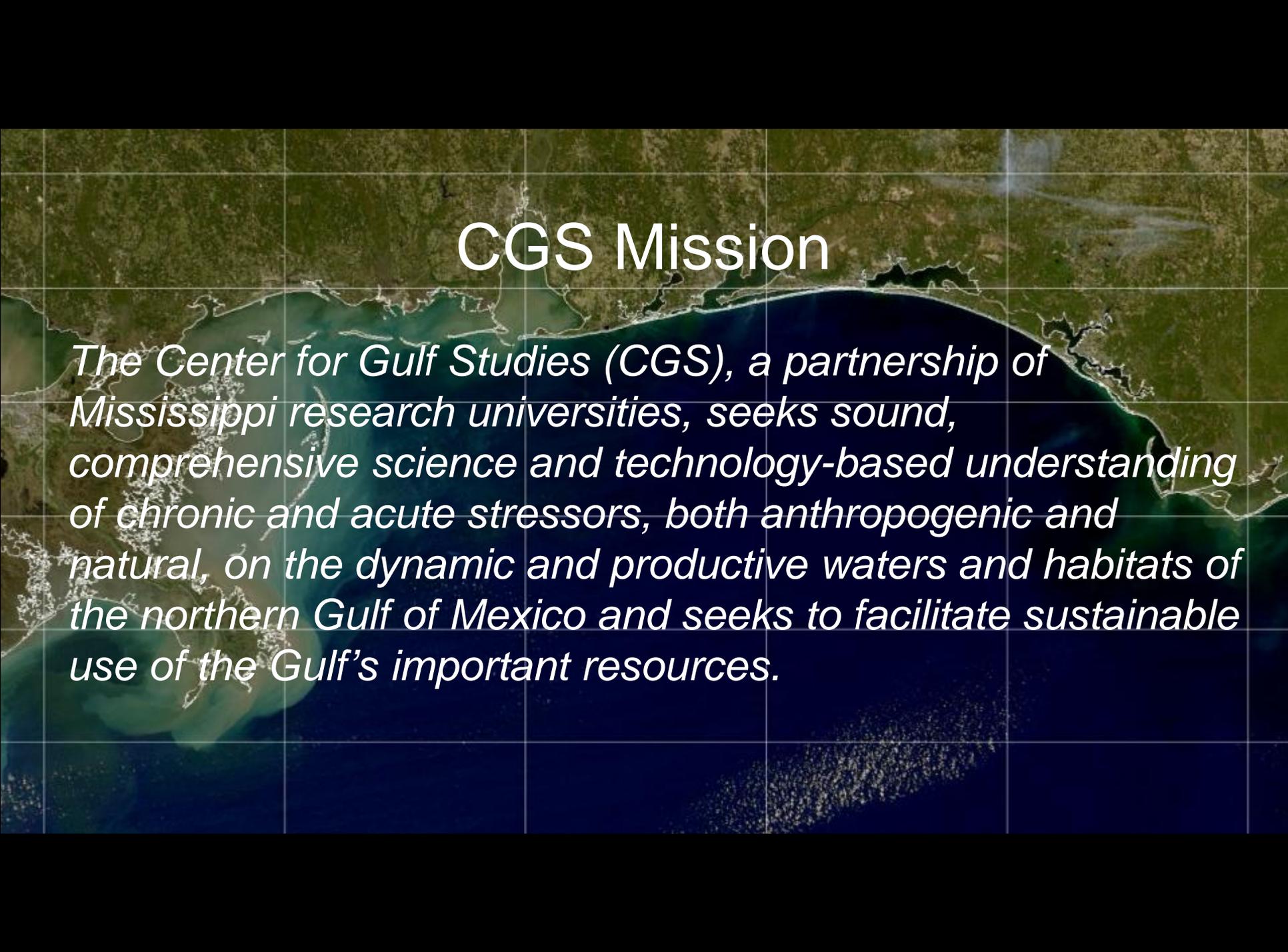
RESTORE* Act Funding Allocations



Slide courtesy of GoMURC

The Five RESTORE Disciplines for the Centers of Excellence

1. Coastal and deltaic sustainability, restoration, and protection, including solutions and technology that allow citizens to live in a safe and sustainable manner in a coastal delta in the Gulf region
2. Coastal fisheries and wildlife ecosystem research and monitoring in the Gulf Coast region
3. Offshore energy development, including research and technology, to improve the sustainable and safe development of energy resources in the GoM
4. Sustainable and resilient growth, economic and commercial development in the Gulf Coast region
5. Comprehensive observation, monitoring, and mapping

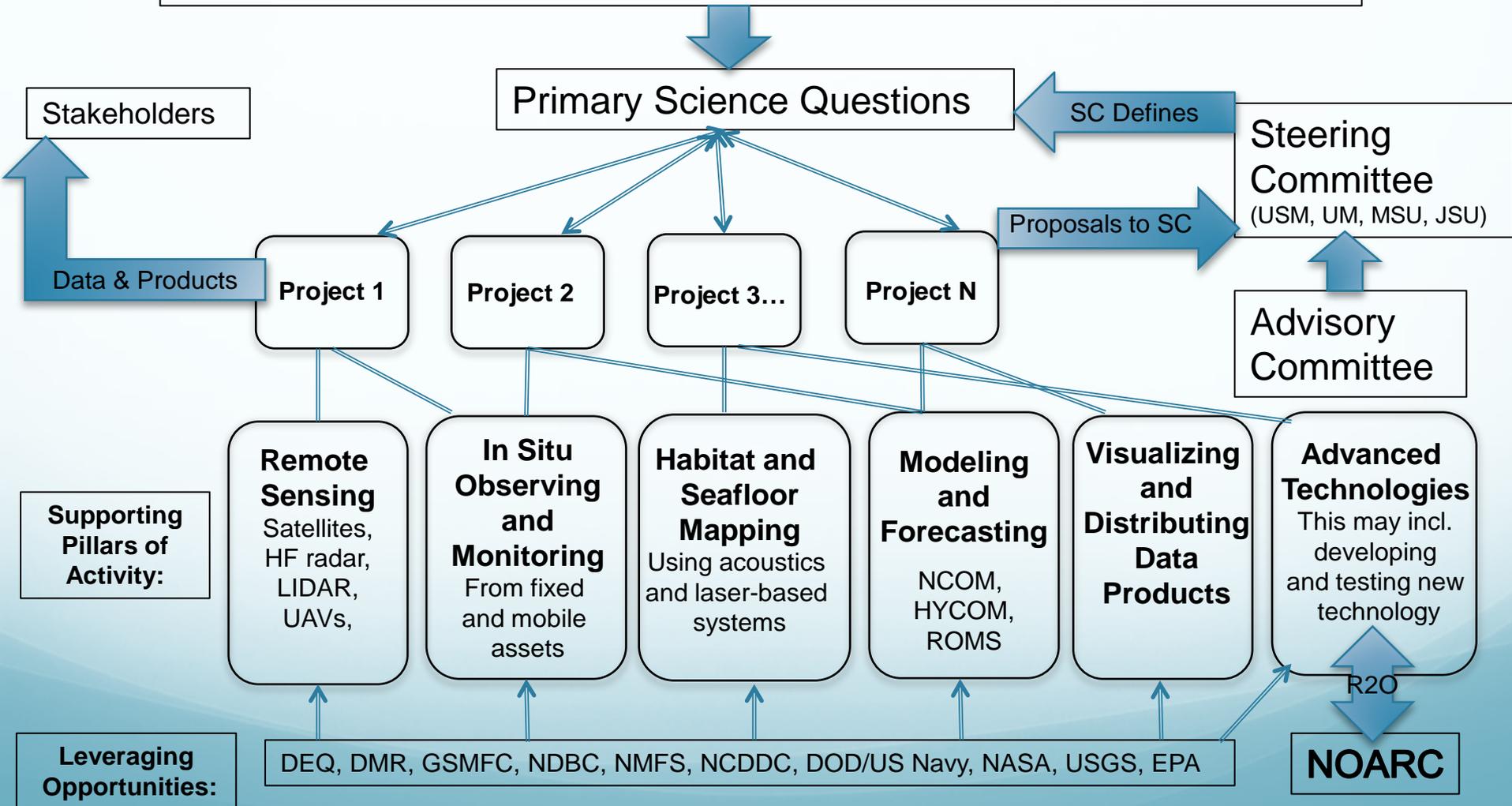
The background of the slide is an aerial satellite image of the northern Gulf of Mexico coastline. The land is shown in shades of green and brown, while the water is a deep blue. A white grid is overlaid on the entire image. The title 'CGS Mission' is centered in the upper half of the image.

CGS Mission

The Center for Gulf Studies (CGS), a partnership of Mississippi research universities, seeks sound, comprehensive science and technology-based understanding of chronic and acute stressors, both anthropogenic and natural, on the dynamic and productive waters and habitats of the northern Gulf of Mexico and seeks to facilitate sustainable use of the Gulf's important resources.

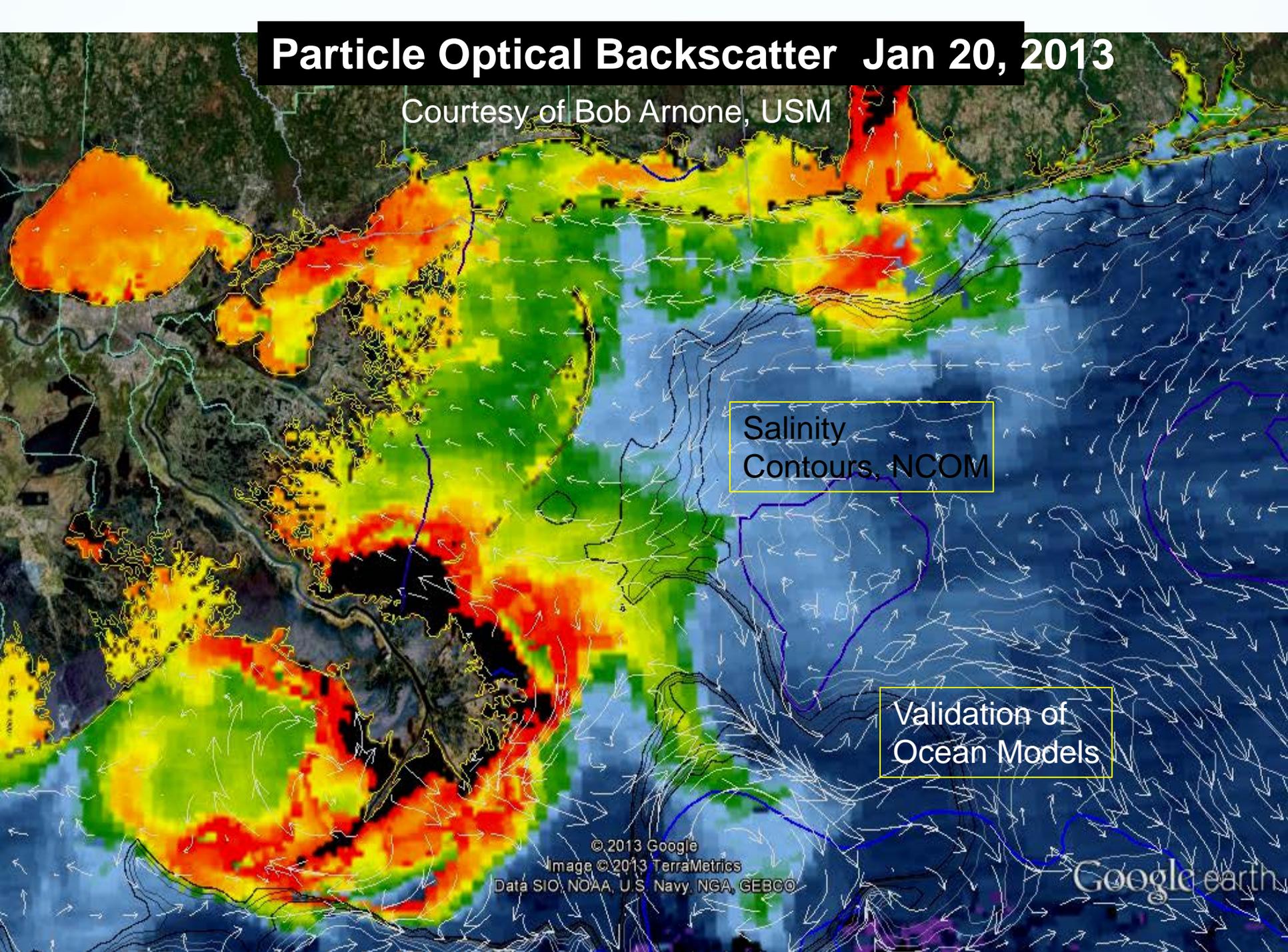
Center for Gulf Studies Concept

Purpose: To establish a comprehensive observing, monitoring, and mapping program to understand and forecast ecosystem dynamics in the northern Gulf of Mexico



Particle Optical Backscatter Jan 20, 2013

Courtesy of Bob Arnone, USM



Salinity
Contours, NCOM

Validation of
Ocean Models

© 2013 Google
Image © 2013 TerraMetrics
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Google earth

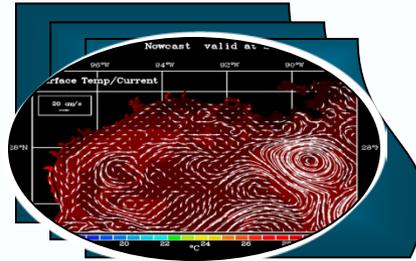
Ocean Color and LIDAR used for Ecological Models

Subsurface Profiler

“ Gliders , Buoys, **LIDAR**

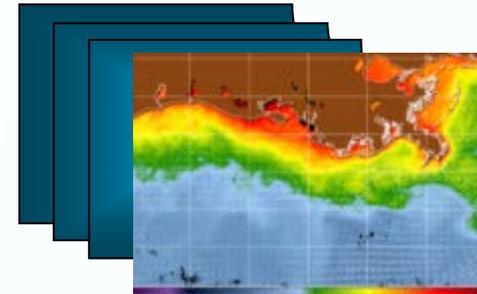


3D Physical Models

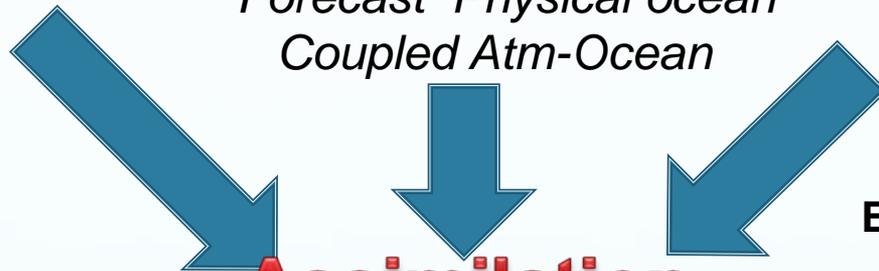


Forecast Physical ocean
Coupled Atm-Ocean

Satellite Bio-Optics and SST ,



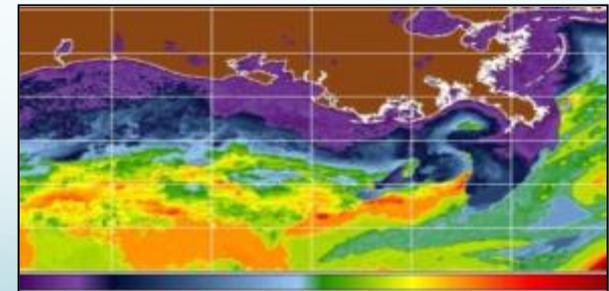
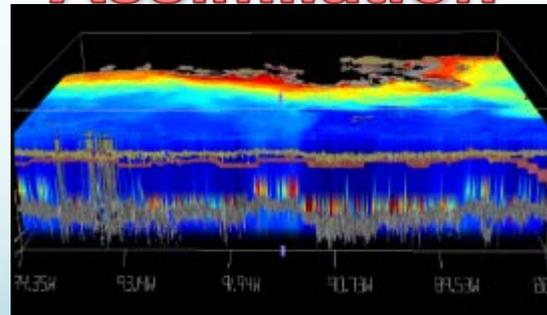
Extends Spatial coverage



Assimilation

Ensemble spread of the Physical
Ecological Forecast

Ensembles
Enables
Adaptive
Sampling



3d Ecological Ocean environment

3d - Product
Uncertainty

Vertically Structured Activities

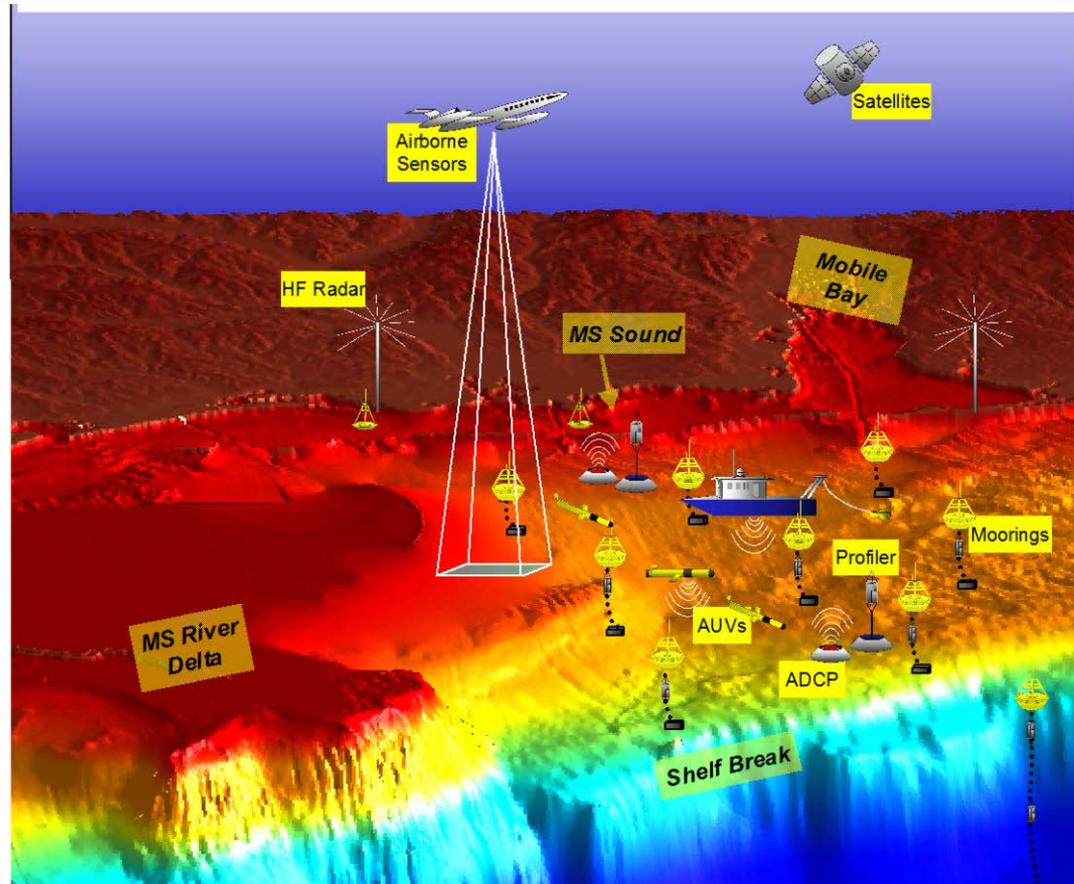


Image by Dr. Steven Lohrenz

Partnership & Leveraging Opportunities: Research and Resource Management

- NOAA, NASA, US Navy, EPA, and USGS (all co-located at Stennis, with some field offices throughout the N. Gulf Region)
- Mississippi State Programs – Department of Environmental Quality, Department of Marine Resources, Mississippi Gulf of Mexico Commission
- Gulf-wide observing programs, such as Gulf of Mexico Coastal Ocean Observing System (GCOOS)
- Gulf-wide collaborations, such as Gulf of Mexico Alliance (GoMA)
- Other RESTORE activities, such as those funded through the Gulf Restoration Council, NOAA, the State of Mississippi, and the other States' Centers of Excellence
- National Ocean Applications Research Center (NOARC)
- Other University Consortia, such as GoMURC, GoMRI, SCeMFis

Partnership & Leveraging Opportunities: Research and the MS Economy

- Partner with NOARC to serve as the University-based research branch to conduct NOARC's research and development on new advanced technologies
- Work with economic development and technology transfer agencies such as Mississippi Development Authority (MDA), Mississippi Enterprise for Technology (MSET), the USM Business and Innovation Assistance Center (USM-BIAC), and the Mississippi State University Extension Service (MSU-ES) to transition research technologies into economic development
- Collaborate with existing and start-up marine technology companies working to develop or refine ocean technology products in the working research environment of CGS
- Develop marine technical training curricula through University, Community College, Sea Grant, and private sector partnerships

CGS Status

- Established our Steering Committee, meeting bi-weekly
 - Leaders of partners (USM, MSU, UM, JSU)
 - Ex Officio members (of other key partner organizations or institutions)
- Hiring a Full-Time Director at USM (August target date)
- Ongoing Meetings with Potential Partners
- Drafting Governance Documents
- Establishing an External Advisory Committee
- Working Groups (Pillars) develop assessments and needs
- Drafting a Prioritized Science Plan and a Strategic Plan (soon)

CGS Website

<http://www.usm.edu/gulf-studies>



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Center for Gulf Studies

About the CGS

Partner Institutions

Developing Partnerships

Documents

RESTORE & Centers of Excellence

Contact Us

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Center for Gulf Studies

The University of Southern Mississippi

March 7, 2013

Governor Phil Bryant designates the Center for Gulf Studies as
Mississippi's RESTORE Act Research Center of Excellence!



CGS is Mississippi Center of Excellence

Gov. Phil Bryant today named the Center for Gulf Studies as the RESTORE Research Center of Excellence Mississippi. [Details](#)

Acronyms & Abbreviations

Don't recognize an acronym or abbreviation? Here's a convenient [reference](#) with web links.

Introduction to the Center for Gulf Studies

This [PowerPoint presentation](#) (pdf file) from Associate Director Stephanie Watson provides an

Your ideas?



Our Sea. Our Place. Our Legacy.

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