

**Clean Gulf Workshop
November 1, 2016
Tampa, FL
Oil Spill Response 101 and Exploring the
Role of Environmental Research during
Response**

**Overview of the Gulf of Mexico
Research Initiative (GoMRI)**

www.Gomri.org

Mission and Goal

MISSION: to implement an independent research program that will

- ▶ Study the effect and the potential associated impact of hydrocarbon releases on the environment and public health
- ▶ Develop improvements for spill mitigation, oil detection and characterization, and advanced remediation technologies

ULTIMATE GOAL: to improve society's ability to understand, respond to, and mitigate the impacts of petroleum pollution and related stressors on marine and coastal ecosystems

After the Deepwater Horizon...



**GOMRI is not part of
National Resource Damage
Assessment or
Clean Water Act**



Credit: AP Photo/Charlie Riedel

**GOMRI is not part of the
National Academy of Science or
National Fish and Wildlife Foundation**

Credit: SAUL LOEB/AFP/Getty Images

Research Themes

1. **PHYSICAL DISTRIBUTION**, dispersion, and dissolution of petroleum, its constituents, and associated contaminants under the action of physical oceanographic processes, air-sea interactions, and tropical storms
2. **CHEMICAL EVOLUTION and BIOLOGICAL DEGRADATION** of the petroleum/dispersant system and subsequent interactions with coastal, open-ocean, and deep-water ecosystems
3. **ENVIRONMENTAL EFFECTS** of the petroleum/dispersant system on the sea floor, water column, coastal waters, beach sediment, wetlands, marshes and organisms, and the science of ecosystem recovery
4. **TECHNOLOGY DEVELOPMENTS** for improved response, mitigation, characterization, and remediation associated with oil spills and gas releases
5. **PUBLIC HEALTH** impacts of oil spills including behavioral, socioeconomic, environmental risk assessment, and other population health considerations

Research Board

- ▶ **Rita Colwell** – UMD & JHU
- ▶ **Margaret Leinen** – Scripps
- ▶ **Debra Benoit** – Nicholls State
- ▶ **Peter Brewer** – MBARI
- ▶ **Richard Dodge** – NOVA SE
- ▶ **John Farrington** – WHOI
- ▶ **Kenneth Halanych** – Auburn
- ▶ **David Halpern** – NASA
- ▶ **William Hogarth** – FIO
- ▶ **Cecile Mauritzen** - Norway
- ▶ **Raymond Orbach** – Tx Austin
- ▶ **Jürgen Rullkötter** – University of Oldenburg, Germany
- ▶ **David Shaw** – MSU
- ▶ **John Shepherd** – University of Southampton, UK
- ▶ **Bob Shipp** – South Alabama
- ▶ **Burton Singer** – Florida
- ▶ **Ciro Sumaya** – Texas A&M
- ▶ **Dennis Wiesenburg** – USM
- ▶ **Rick Shaw** – LSU
- ▶ **Dana Yoerger** – WHOI
- ▶ **Michael Carron** – PD¹
- ▶ **Chuck Wilson** – CSO¹

¹ *Ex Officio*

Scientific Integrity

- ▶ **National Science Board peer evaluation protocols to select funded research**
- ▶ **Independent reviews by scientific peers not affiliated with institutions leading proposed projects to avoid conflict of interest in selecting funded research**
- ▶ **RB and staff members and peer reviewers sign conflict of interest and non-disclosure statements**
- ▶ **Researchers comply with National Academies of Science standards**
- ▶ **Researchers conduct independent, objective work with no influence from BP**
- ▶ **Researchers independently publish results in peer-reviewed scientific journals with no requirement for BP approval**

Funded Research to Date = \$353.6M

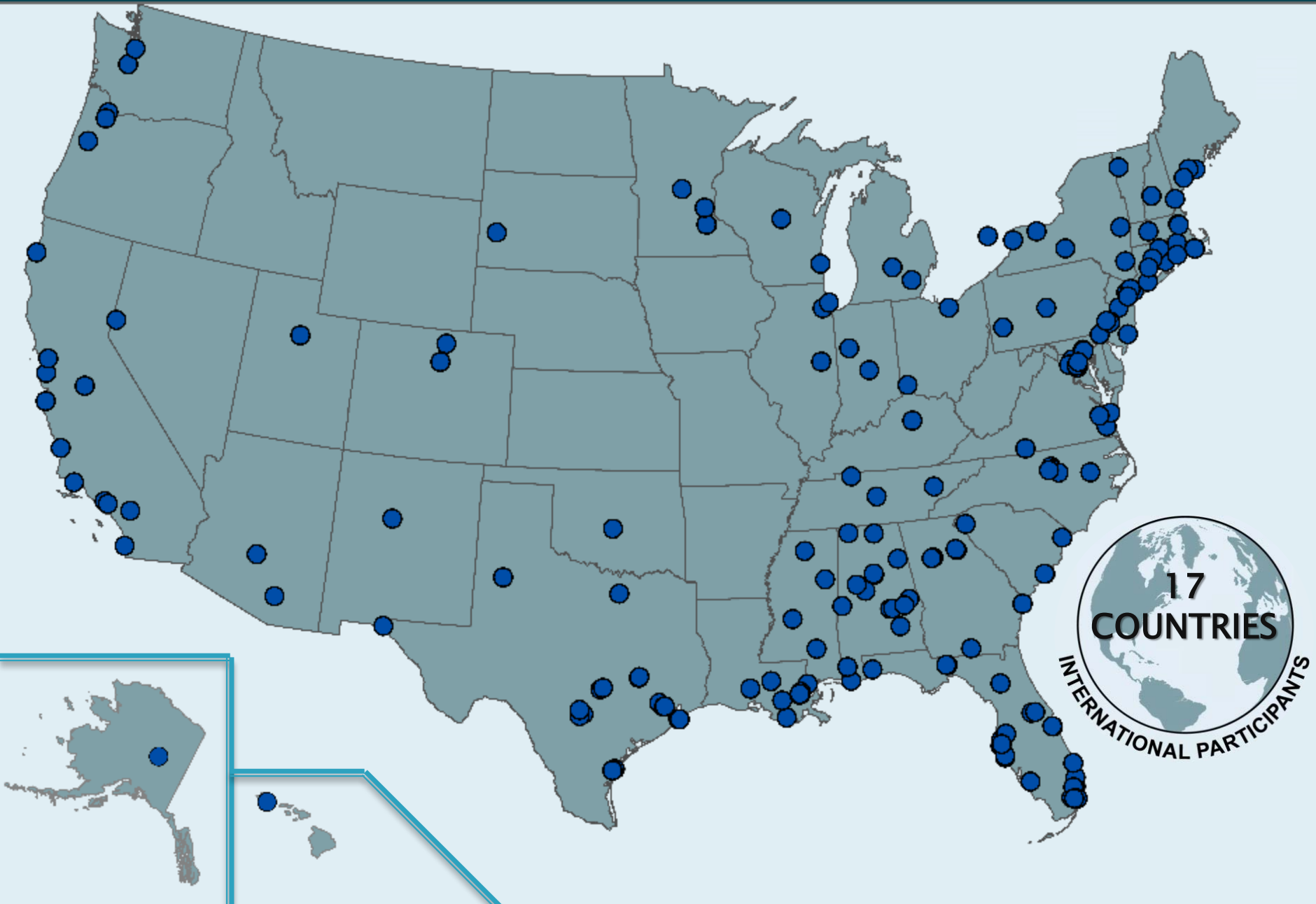
Alternating RFPs for consortia = 2 (> 3 institutions) and small research teams = 2 (1-4 investigators)

- ▶ 42 states
- ▶ 278 academic institutions
- ▶ 17 countries

As of May 2016:

- 825 scientific peer-reviewed publications, book chapters
- 2965 scientific presentations and posters
- 3450 people: >1000 Scientists 255 Post Docs >1000 grad students

Grants Distribution



Gulf of Mexico Research Initiative Information & Data Cooperative

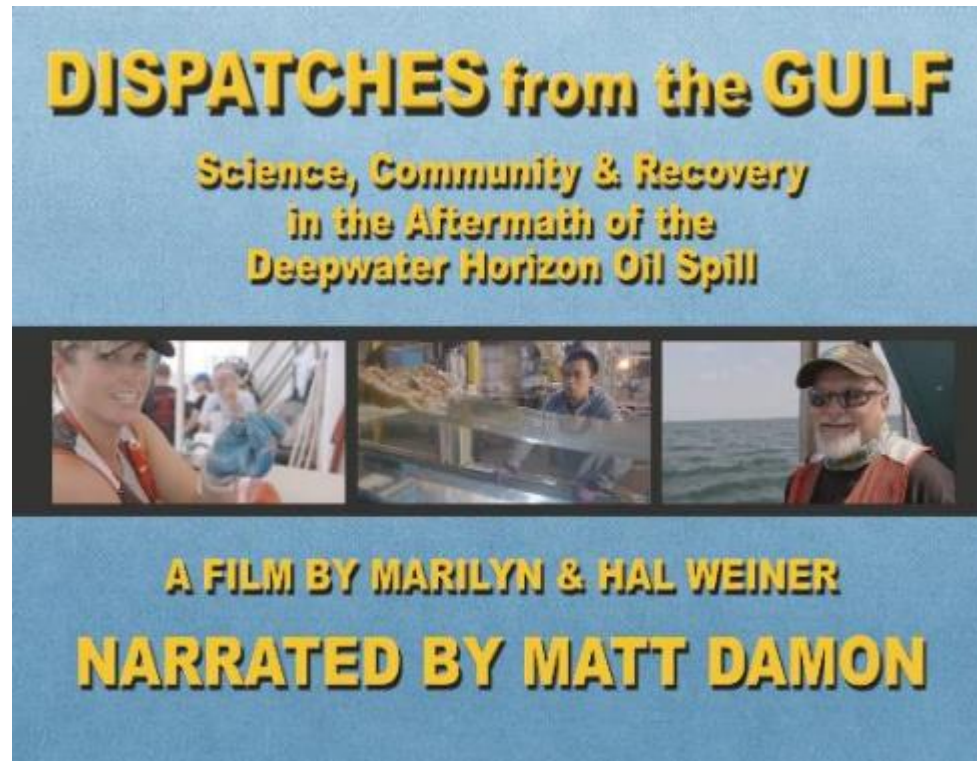
- ▶ **GRIIDC mission:** to ensure a data and information legacy that promotes continual scientific discovery and public awareness of the Gulf of Mexico ecosystem.
- ▶ **GRIIDC maintains the scientific datasets** resulting from GOMRI-funded research and assists researchers with data archiving and data interoperability among GOMRI and other datasets.

Education & Outreach

- Next Generation Scientists
- Science Conventions, Public Events
- Website, Newsletters, Social Media
- Media Events, Documentaries, Podcasts
- Sea Grant, Smithsonian Ocean Portal, Screenscope



Documentary Public Screenings



<http://dispatchesfromthegulf.com/screenings/>



Gulf of Mexico OIL SPILL & ECOSYSTEM SCIENCE CONFERENCE 2017

February 6-9, 2017

Hyatt Regency Hotel, New Orleans, LA



GULF RESEARCH PROGRAM
INNOVATE | EDUCATE | COLLABORATE

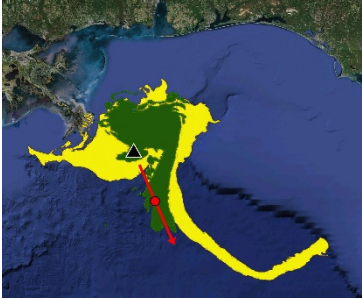


GOMURC
GULF OF MEXICO UNIVERSITY RESEARCH COLLABORATIVE



GULF OF
MEXICO
RESEARCH INITIATIVE

Science For Response



Research on Oil Transport that Informs Spill Response



Research on Dispersants that Informs Oil Spill Response



Research on Oil Biodegradation and Monitoring that Informs Spill Response