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Abstract

In response to the Deepwater Horizon Oil Spill, the Gulf of Mexico Research Initiative (GoMRI) was formed to answer oil spill–related scientific questions. However, peer-reviewed scientific discoveries were not reaching people whose livelihoods depended on a healthy Gulf of Mexico. GoMRI and the four Gulf of Mexico Sea Grant programs partnered to develop a regional Extension program with a team of multidisciplinary specialists and a regional manager embedded within the Sea Grant programs. The team answered oil spill science questions from target audiences. The program leaders also identified the value of adding a regional Extension communicator to enhance their Extension products.

Keywords: regional, Extension program, sea grant, oil spill, Deepwater Horizon

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Background

The Deepwater Horizon (DWH) oil spill, which occurred in spring 2010, was the largest accidental marine oil spill to have ever occurred, releasing 172 million gal of oil into the Gulf of Mexico (Griffiths, 2012; U.S. Coast Guard, 2011). Emergency responders used multiple methods to reduce the spill's impact on people and the environment, including applying an unprecedented 1.8 million gal of dispersant (National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, 2011). Fishing grounds closed, tourists canceled reservations, resource managers scrambled to protect resources and assess damages, and many other sectors felt direct impacts. Immediately after the news broke about the spill, coastal residents and businesses began asking scientists, community leaders, and others questions about the short-, mid-, and long-term effects from the spill. Eight years later, the questions continue.

Partnership and Cross-State Collaboration for Responding to Needs

During the summer of 2010, BP invested $500 million of nonpenalty funds to fund research and answer oil spill science-related questions. These funds created a 10-year research program called the Gulf of Mexico Research Initiative (GoMRI). GoMRI is administered by the Gulf of Mexico Alliance, a regional governance structure led by the five Gulf states. An independent, academic research board (RB) makes funding decisions for GoMRI. By 2014, GoMRI-supported research results were primarily shared in peer-reviewed journals and at academic conferences.

The four Gulf of Mexico Sea Grant College Programs—Texas, Louisiana, Mississippi–Alabama, and Florida—responded to the needs of diverse target audiences immediately following the DWH oil spill. Audiences ranged from fishermen to resource managers to tourism leaders and many others. These audiences continued to have questions after the well was capped. The four Gulf Sea Grant programs devoted substantial effort to Extension communication, legal, and education programming to address oil spill concerns during and after the spill (Lampila & Bankston, 2013). However, no resources existed to exclusively focus on oil spill science outreach programming.

In 2014, the four Gulf of Mexico Sea Grant College Programs proposed a new outreach program to the GoMRI RB. The program would synthesize the peer-reviewed research results and translate the data to audiences concerned about and affected by the Gulf's health, on the basis of these audiences' questions and needs. This two-way communication formed the foundation for the Gulf of Mexico Sea Grant Oil Spill Science Outreach Program (https://gulfseagrant.org/oilspilloutreach/) (Hale et al., 2016). GoMRI provided 2 years of funding to support a pilot program. To implement the pilot program effectively, each of the four Sea Grant College Programs hired an oil spill science Extension specialist to develop answers to audience questions based on peer-reviewed research results regardless of who funded the research. The four specialists have complementary academic backgrounds and interests that cover the spectrum of oil spill–related topics, allowing for delivery of multidisciplinary Extension programming. Each specialist serves as the regional lead for specific target audiences across the Gulf of Mexico and engages with all audiences in the specialist's state. An oil spill science outreach manager leads the team to ensure that the program operates on a regional level and engages with leadership at each of the Gulf Sea Grant programs and with GoMRI RB members. Table 1 highlights how the oil spill science outreach program functions in a matrix management setting.

Table 1.

Members of the Sea Grant Oil Spill Science Outreach Program, Office Locations, and Distribution of Programming

Position	Office location	Regional lead for audiences	Primary roles related to program
Oil spill science Extension specialist, TX (ecosystem sciences)	Corpus Christi, TX	Fishermen Natural resource managers Nongovernmental organization employees	Build trust with audience members and learn audience needs Synthesize, translate, and deliver oil spill science to meet audience needs
Oil spill science Extension specialist, LA (aquatic toxicology)	Baton Rouge, LA	Policy makers Tourism industry members	
Oil spill science Extension specialist, MS/AL (human health)	Mobile, AL	Health professionals Sea Grant Extension agents in Gulf of Mexico	
Oil spill science Extension specialist, FL (physical oceanography)	St. Petersburg, FL	Emergency responders Environmental consultants Oil and gas industry members	
Program communicator	Ocean Springs, MS	Communicators within NOAA, Sea Grant, GoMRI, and elsewhere	Enhance outreach products and services Communicate program's activities, impacts, and accomplishments
Oil spill science outreach manager and co-PI	Ocean Springs, MS	GoMRI management team GoMRI research board Sea Grant Program leadership	Ensure program meets regional and national needs Engage with GoMRI and Sea Grant leaders
Principal investigator	Ocean Springs, MS	GoMRI research board Managers of other oil spill–	Supervise MS/AL oil spill science Extension specialist, program manager, program communicator

		related science and restoration programs	Identify opportunities for program to continue to serve audiences Ensure program meets all objectives
State Sea Grant program co-PI	College Station, TX Baton Rouge, LA Gainesville, FL	University-based fiscal and contracting support staff	Supervise oil spill specialist in co-PI's state Sea Grant program

Note. NOAA = National Oceanic and Atmospheric Administration. GoMRI = Gulf of Mexico Research Initiative. PI = Principal investigator.

Early Successes and Expansion

During the two-and-a-half-year pilot program, the Gulf of Mexico Sea Grant Oil Spill Science Outreach Program has

- met with and provided program updates to more than 1,600 people;
- developed and distributed 12 eight-page outreach publications that synthesize oil spill science, translated these results to a general audience, and directly answered audience questions;
- organized, facilitated, and led 16 oil spill science seminars, totaling more than 66 presenters and 1,200 attendees;
- developed and delivered 87 presentations for more than 2,400 participants; and
- conducted two social network analyses, one needs assessment, and one formative evaluation.

The social network analysis and program evaluation results identified team members as trusted sources of oil spill science information. Due to the initial success of the pilot program, the GoMRI RB elected to expand the Sea Grant Oil Spill Science Outreach Program. In Phase II, the program added an oil spill science communicator to enhance the print, electronic, and video products produced. In addition, the program is expanding nationally and engaging with Sea Grant programs in other regions to share oil spill science and link the oil spill response community with other boundary organizations that serve a critical role during spills (Freitag, 2015). Finally, the program is diversifying products on the basis of target audience feedback provided during the pilot program. In addition to continuing to produce outreach publications and seminars, the team will develop short videos, multilingual materials, shorter publications, National Oceanic and Atmospheric Administration Science on a Sphere content, enhanced conference booth materials, and other outreach products in Phase II.

Lessons Learned

The success of the pilot program depended on collaboration and trust across five independent programs (GoMRI and the four Gulf Sea Grant Programs). The following elements contributed to this success:

- *Programmatic support.* Each participating Sea Grant program added a full-time person dedicated to the Sea Grant Oil Spill Science Outreach Program.

- *Communication with leadership.* The oil spill science outreach manager maintained close communication with GoMRI leadership and each Sea Grant program through face-to-face meetings, emails, and reoccurring conference calls. In addition, each specialist worked closely with leadership in his or her state Sea Grant program.

- *Singular focus.* The specialists focused exclusively on oil spill science topics related to audience needs. However, if audiences expressed interest in additional topics, the oil spill specialists engaged with other Sea Grant Extension agents to address the spectrum of audience concerns.

- *Service-oriented two-way engagement.* The specialists fostered two-way dialogue with audiences. To begin the pilot program, the specialists conducted individual and small-group meetings with more than 500 people from the target audiences.

- *Trust.* Each specialist built trust among his or her regional and in-state audiences and within the Sea Grant Extension network. The people served by the program sought the specialists to answer emerging questions and provide media reports.

- *Acknowledgement of controversy.* Due to the aforementioned approaches, the team was able to navigate controversial topics, gain trust, and successfully deliver information to groups that had conflicting views or opinions. This success was identified through the program evaluation.

Additionally, the inclusion of a dedicated, full-time communicator overcame the challenge of sharing communications responsibilities across the four Sea Grant programs. This position has made the process of developing outreach materials and services more efficient and uniform, thereby enhancing the overall products in Phase II.

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