Journal of Agricultural and Applied Economics, 45,3(August 2013):331–337

The RESTORE Act of 2012: Implications for the Gulf Coast

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Like most of my predecessors, I chose the topic for my address with some degree of apprehension. After all, an opportunity to speak to a large assembly of one's colleagues does not come along everyday. I struggled with answering a fundamental question: what can I speak about that my peers will find interesting and useful? Previous presidential addresses have covered a variety of topics ranging from improving SAEA membership to providing insights into how our profession may address important issues of the day. Past presidents have sought to answer some difficult questions. Has our profession lost its relevance? Have we drifted too far from our agricultural roots? Is our profession headed in the right direction (Harris, 2000; Hudson, 2011; Segarra, 1998)? Others have offered insights on issues central to our mission such as advances in teaching methods (Broder, 1994), improved curriculums (Reed, 2010), and effectiveness of Extension programs (Doye, 2006). Some have provided commentary on changes in trade and agricultural policies and their effects on agriculture and rural communities of the south (Duffy, 1997; Marchant, 1999).

There are 13 states and two U.S. territories designated by USDA as members of the southern region. These include Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and Puerto Rico and the U.S. Virgin Islands (USDA/CRIS, 2013). All of these have land-grant missions with agricultural experiment stations, cooperative Extension services, and agricultural colleges. Nine are also members of NOAA's National Sea Grant College program. This geographic diversity means our colleagues address a broad range of economic issues, which include traditional agricultural problems such as agricultural policy, commodity marketing, production efficiency, technology adoption, and farm management. Declining farm numbers, disparity of farm size, migrant labor, and competitiveness in domestic and international markets continue to be important issues for the south. Rural poverty also continues to be a problem and has worsened because of declining farm numbers and migration of rural populations to urban areas.

Many nontraditional agricultural problems have also found their way into our sphere of scholarship. The economics of health, wellness, nutrition, food safety, and food labeling have become important topics for our members. Considering that the south contains nine of the top ten states where the incidence of obesity is greater than 30%, there is a need for additional resources devoted to this important health concern. Moreover, so-called "food deserts" create opportunities to apply our training and expertise to problems associated with access and affordability of nutritious foods in low-income urban areas.

I could have chosen any of these issues for my address. They are all appropriate topics for this occasion. However, I chose a topic I would not have considered a priority for our profession

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before 2010. Some of you may not consider it a priority for our profession today, but the April 2010 *Deep Water Horizon* (DWH) oil spill awakened public awareness of the risks and implications associated with oil and natural gas extraction in the Gulf of Mexico (GOM). The impact of the oil industry on coastal communities and marine ecosystems has emerged as an important topic for at least five of the 13 states listed. In fact, one could easily argue that oil and natural gas extraction in the GOM has implications for the entire nation.

The April 2010 explosion of the DWH drilling platform resulted in the death of 11 people and the subsequent breach of BP's Macando well, which remained uncapped for three months spilling 4.9 million barrels of oil into the GOM. Consequently, 88,522 square miles of state and federal waters were closed to fishing, and approximately 650 miles of shoreline, bayous, bays, and beaches were oiled. Unprecedented levels of the oil dispersant Corexit were sprayed on the ocean surface and later applied directly at the well head approximately 5000 feet below the surface. Countless marine life and waterfowl were affected, of which the full impact is unknown and may not be known for decades.

The consequences of the spill and the risks of a similar disaster in the future are inextricably linked to the economic costs and benefits of oil and gas extraction in the GOM. Oil and gas extraction in the GOM has potentially negative effects on commercial fishing, tourism, and other recreational uses of marine and wetland resources as well as the storm-surge buffering benefits of healthy wetlands. Moreover, oil and gas extraction presents a broad array of socioeconomic problems for coastal communities along the Gulf Coast and has economic and policy implications for the nation's dependence on foreign oil, energy and gas prices, global warming, and the demand and profitability of bioenergy. In my view, this is a "top-of-mind" issue for the southern region and is likely to be a prominent national issue for decades to come.

My address is organized into three sections. First, I briefly review the primary changes in public policy related to the DWH oil spill and funds allocated for restoration of the Gulf Coast. The second section of the article discusses the RESTORE Act of 2012 in some detail. The article concludes with a discussion of the research and Extension implications of the RESTORE Act for the Gulf Coast.

Changes in Policy and Regulatory Reform

Offshore oil and gas exploration on the Outer Continental Shelf (OCS) has been part of the Gulf Coast economy since 1947 when the first productive well appeared approximately 10 miles off the Louisiana coast (NCBP, 2011). Today there are over 4000 active oil platforms and approximately 6000 active leases in the Gulf of Mexico, most on the OCS (Bureau of Ocean Energy Management, 2013). The leases and their associated wells are regulated by a variety of federal agencies (e.g., Department of Transportation, Department of Commerce, Environmental Protection Agency), but before 2010, the U.S. Minerals and Management Service (MMS) was the primary agency approving and regulating oil exploration on the OCS. A significant reorganization of MMS was initiated after the 2010 spill, which began with renaming MMS the Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEM, 2013). The goal of the reorganization was to ensure independence, integrity, and conflict of interest among the three regulatory functions, which includes collecting royalties and revenues, approving leases, and regulating safety. Before 2010, these functions were not clearly independent within MMS.

On October 1, 2010, the Department of the Interior (DOI) transferred the revenue collection function of the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) to the Office of Natural Resources Revenue (ONRR), which is under the jurisdiction of DOI's Office of Policy, Management and Budget. The second stage of the reorganization became effective October 1, 2011. The BOEM was established and charged with development of energy resources on the OCS. The BOEM evaluates all new exploration applications and authorizes all federal oil and gas leases on the OCS. The Bureau of Safety

and Environmental Enforcement (BSEE) was also created and charged with ensuring safe and environmentally responsible exploration and production. The BSEE is also responsible for enforcement of applicable rules and regulations related to safety on the OCS (BOEM, 2013). The reorganization of BOEMRE separated the royalty and revenue generating activity of ONRR from the approval and leasing authority of BOEM and the regulatory authority of BSEE.

The reorganization of BOEMRE was a significant change in the regulation of offshore oil and gas exploration and extraction. However, changes in public and private policies continue to evolve. In January 2011 the National Commission on the BP *Deep Water Horizon* Oil Spill and Offshore Drilling formulated a number of broad recommendations to provide guidance for additional policy and regulatory action. Seven areas are covered, including: 1) improving the safety of offshore operations; 2) safeguarding the environment; 3) strengthening oil spill response, planning, and capacity; 4) advancing well-containment capabilities; 5) overcoming the impacts of the DWH spill and restoring the Gulf Coast; 6) ensuring financial responsibility; and 7) promoting congressional engagement to ensure responsible offshore drilling (NCBP, 2011). I will focus on the fifth recommendation, which is the basis for the "Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act of 2012" (also known as the RESTORE Act of 2012).

The RESTORE Act of 2012

The RESTORE Act was signed into law on July 6, 2012. It is part of a much larger bill entitled the Moving Ahead for Progress in the 21st Century Act. The primary action of the legislation was to establish the Gulf Coast Restoration Fund (GCRF) and to authorize the U.S. Treasury to transfer 80% of all administrative and civil penalties paid by responsible parties in connection with the DWH explosion, sinking, and resulting hydrocarbon release into the environment under Section 311 of the Federal Water Pollution Control Act (also known as the Clean Water Act [CWA]). Based on provisions of the CWA, total penalties and fines are expected to fall between $5.4 and $21.1 billion. The RESTORE Act also stipulates how the GCRF is to be allocated to the five Gulf states of Alabama, Florida, Louisiana, Mississippi, and Texas. The language within the RESTORE Act also includes provisions for how funds are to be used within each division of the GCRF. Under these provisions, the GCRF is to be divided into five allocations, sometimes referred to in the media as the five buckets (or pots) of the RESTORE Act funds. The discussion that follows explains these allocations.

The Five Gulf Coast State Allocations

Thirty-five percent of the GCRF is specified to go to the five Gulf states in equal shares with provisions for how each state allocates the funds to either nondisproportionally or disproportionally affected counties or parishes in each state. Provisions for the use of state-allocated funds fall into two categories: environmental or economic improvement. The funds may be used for any one or more environmental projects, including restoration, protection, and/or mitigation of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and wetlands of the Gulf Coast; implementation of federally approved conservation management plans; workforce development and job creation; improvements to or on state parks affected by the DWH spill; and other related activities. The funds may also be used for one or more of the following economic projects: activities to promote tourism in the Gulf Coast region, including recreational fishing; and promotion of the consumption of seafood harvested from the Gulf Coast region (United States of America Public Law 112-141, 2012). The state fund allocations will be administered by the Gulf Coast Recovery Council in Alabama, the Coastal Protection and Restoration Authority in Louisiana, the Go Coast 2020 Commission in Mississippi, and the Commission on Environmental Quality in Texas. Florida's allocation is expected to be administered by a consortium of affected counties.

Gulf Coast Ecosystem Restoration Council

The RESTORE Act also established the formation of the Gulf Coast Ecosystem Restoration Council (GCEC), which is comprised of designees from the U.S. Departments of Interior, Army, Commerce, Agriculture, the administrator of the Environmental Protection Agency, and a designee from the U.S. Coast Guard. The governor from each of the five Gulf states also has a designee appointed to the council. The council's charge is to develop a comprehensive plan that stipulates how 35% of the GCRF is allocated to projects for restoration and protection of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, coastal wetlands, and the economy of the Gulf Coast. The GCEC was created by executive order on September 10, 2012, and the first public meeting was held December 11, 2012, in Mobile, AL (GCEC, 2013). The legislation further stipulates that the comprehensive plan should incorporate the findings and information from the president's Gulf Coast Ecosystem Restoration Task Force (GCRT) and that a "proposed" plan be completed within 180 days of the enactment of RESTORE Act. A final "approved" plan should be completed within 1 year of enactment of the RESTORE Act (U.S. Public Law 112-141, 2012). The GCRT's report was published in December 2011 and cites the following strategic initiatives: restore and conserve habitat, restore water quality, replenish and protect living coastal and marine resources, and enhance community resilience (GCRT, 2011).

Oil Spill Restoration Impact Allocation

The Oil Spill Restoration Impact Allocation receives 30% of the funds made available under the RESTORE Act. These funds will be disbursed to each of the five Gulf states based on a weighted average, in which 40% will be determined by the number of miles of shoreline in each state that experienced oil damage before April 10, 2011, proportionate to the total miles of shoreline damaged as a result of the DWH oil spill; 40% is to be determined by the inverse proportion of the average distance from the DWH drilling unit to the distance between the nearest and farthest point of shoreline that experienced oiling of each Gulf state; the remaining 20% will be based on the average population in the 2010 census of coastal counties/parishes bordering the GOM within each Gulf state (U.S. Public Law 112-141, 2012). The funds allocated to each state must be used to fund restoration projects subject to a state plan, which must be approved by the Gulf Coast Ecosystem Restoration Council and is subject to other restrictions cited in the legislation (U.S. Public Law 112-141, 2012). State plans are developed by a council, commission, or consortium for each Gulf state. These include the Alabama Gulf Coast Recovery Council, the Florida Consortium of Counties, the Coastal Protection and Restoration Authority for Louisiana, the Go Coast 2020 Commission in Mississippi, and the Texas Commission of Environmental Quality.

Science, Observation, Monitoring, and Technology Program

The Science, Observation, Monitoring, and Technology Program will receive 2.5% of the trust fund. These funds may be used for marine and estuarine research, monitoring, observation, data collection, stock assessment, and cooperative research. The funds may also be used to establish benchmarks for costs and benefits of coastal marsh restoration and protection projects, including the impacts on the economies and cultures of coastal communities. This allocation will be administered by NOAA and the director of the U.S. Fish and Wildlife Service in consultation with the Gulf Marine Fisheries Commission and the GOM Fisheries Management Council (U.S. Public Law 112-141, 2012). These funds are likely to be used in coordination with ongoing research and monitoring programs.

Centers of Excellence

The Centers of Excellence fund receives 2.5% of the GCRF to be divided equally by the five Gulf states to establish centers for research excellence. The centers will fund science-based research on one or more of the following topics:

coastal and deltaic sustainability, restoration and protection; coastal fisheries and wildlife ecosystem research; safe and sustainable offshore energy development; sustainable and resilient economic growth and development; and comprehensive observation, monitoring, and mapping (U.S. Public Law 112-141, 2012). The centers are charged with awarding competitive grants to nongovernmental agencies, including public and private institutions of higher education. State centers must be approved by the council, commission, or consortium for each gulf state mentioned earlier. The precise structure of the centers for Alabama, Mississippi, and Texas is presently unclear, but Florida's center will consist of a consortium of public and private research institutions, including the Department of Environmental Protection and the Florida Wildlife Commission. Louisiana's center is expected to be the Water Institute of the Gulf.

Key Reports and Recent Developments

Before I conclude, there are several key reports and recent developments that are worth mentioning. The Maybus Report was the first systematic inquiry into the extent of the environmental and ecological damages associated with the DWH oil spill and provided the groundwork for subsequent Gulf Coast restoration planning. Among other things, the Maybus Report recommended the formation of the Gulf Coast Ecosystem Restoration Task Force and proposed that penalties for violating the Clean Water Act be used to fund restoration of the Gulf Coast, thus planting the seed for what would ultimately become the RESTORE Act (Maybus, 2010). The Gulf Coast Ecosystem Restoration Task Force (GCERTF) was established by Executive Order in October of 2010. The GCERTF consisted of members from 11 federal agencies and representatives from each state bordering the Gulf of Mexico. The GCERTF was charged to develop a holistic, long-term, science-based Regional Ecosystem Restoration Strategy for the Gulf of Mexico (GCERTF, April 2012). Its final report was published in December of 2011 entitled the "Gulf of Mexico Regional Ecosystem Restoration Strategy." Under provisions of the RESTORE Act, the GCERTF will be replaced with the previously discussed Gulf Coast Ecosystem Restoration Council (GCERC).

The GCERC released its initial framework entitled "The Path Forward to Restoring the Gulf Coast: A Proposed Comprehensive Plan" in January 2013. The plan follows largely from the previously mentioned restoration strategy articulated by the GCERTF. The Comprehensive Plan will adopt and expand on five overarching task force strategy goals: restore and conserve habitat, restore water quality, replenish and protect living coastal and marine resources, enhance community resilience, and restore and revitalize the gulf economy (GCERC, 2013). This initial plan is open for public comment and the final comprehensive plan is scheduled to be completed by June of 2013.

In another recent development, BP pleaded guilty to felony charges and agreed to pay $4.5 billion in fines and penalties in November of 2012, of which $1.3 billion are criminal fines. Approximately 80% of these funds will be used for restoration of damages administered by the National Restoration and Damages Assessment authority, which will be spent in coherence with RESTORE Act funds. Moreover, Transocean LTD, the owner and operator of the DWH exploration platform, agreed to pay $1.4 billion in fines and penalties under the CWA in January of 2013. Eighty percent of these funds will be transferred to the Gulf Coast Restoration Fund. The federal trial to determine BP's fines and penalties began February 25, 2013. The trial or a negotiated settlement between BP and the U.S. Justice Department will determine the extent of BP's fines and the magnitude of the Gulf Coast Restoration Fund.

Concluding Remarks

Relatively early in the aftermath of the DWH oil spill, BP announced a commitment of $500 million over ten years to fund an independent research program designed to study the impact of the oil spill and its associated impact on the environment and public health in the Gulf of Mexico. These funds are separate from RESTORE Act funds and were used

to establish the Gulf of Mexico Research Initiative (GRI), presently in its third year of funding. The research agenda for GRI is determined largely by biophysical scientists. The stated goal of GRI is to fund competitive research that targets: 1) physical distribution, dispersion, and dilution of petroleum (oil and gas), its constituents, and associated contaminants (e.g., dispersants) under the action of physical oceanographic processes, air sea interactions, and tropical storms; 2) chemical evolution and biological degradation of the petroleum/dispersant systems and subsequent interaction with coastal, open-ocean, and deepwater ecosystems; 3) environmental effects of the petroleum/dispersant system on the sea floor, water column, coastal waters, beach sediments, wetlands, marshes, and organisms and the science of ecosystem recovery; 4) technology developments for improved response, mitigation, detection, characterization, and remediation associated with oil spills and gas releases; and 5) impact of oil spills on public health.

Aside from the last research item, GRI has given little attention to economic questions related to the oil spill. Indeed, the economic implications related to the spill have been investigated almost entirely as part of the adjudication process of the courts. There is a need for objective socioeconomic research to address both short- and long-run damages of the oil spill, the economic costs and benefits of oil and gas extraction in the GOM, and the extent that the spill and oil and gas extraction affects changes in economic behavior and prosperity along the Gulf Coast.

It is too early to tell the extent to which RESTORE Act funds will be used for socioeconomic research, but the biophysical-centric agenda of GRI should raise some concerns. There is language both within the legislation itself and in the previously mentioned reports to justify the use of RESTORE Act funds for socioeconomic research. In particular, the language refers to community resiliency and economic development. I can think of a number of research areas worth funding. These include measuring the costs of the spill to commercial fishing and the seafood industry; loss in Gulf seafood brand-equity associated with negative consumer perceptions of Gulf seafood quality; the economic costs and benefits of seafood quality assurance programs; and the effectiveness of risk communication strategies intended to inform seafood consumers of the objective risks associated with seafood safety, not to mention economic cost–benefit analysis associated with losing wetlands, lost storm surge protection, and the economic value of healthy wetlands, all of which are affected by oil and gas extraction in the GOM.

I can also think of several Extension applications that fit under RESTORE Act funds. Direct seafood marketing programs could help commercial harvesters examine the opportunities for marketing directly to consumers. Seafood safety Extension and outreach projects could educate commercial fishers about state and federal testing protocols to assure that all Gulf seafood is sourced from areas cleared for commercial harvest. Coastal preparedness workshops would allow Extension faculty to work with local municipalities to access their vulnerability and susceptibility to natural and manmade disasters through a series of numerical scoring exercises designed to gauge community resiliency (e.g., financial planning, insurance coverage, evacuation planning, and mobilization of clean-up efforts). Another possibility may be "smart-growth" workshops for coastal community leaders to assist in developing public policy to mitigate flood risk and exposure of infrastructure to natural hazards. Extension projects could develop practices, technologies, and systems designed for enhanced and more efficient operation of mariculture facilities. Other programs may develop new processing technologies, value-added products, innovative waste management practices, and/or byproducts that maximize the quality, safety, and use of gulf seafood products in an environmentally sustainable way.

An important question we must answer is how do we become more engaged in setting the research and outreach agenda for funds made available through the RESTORE Act as well as the research agenda for the remaining seven years of GRI funding? As many of you know, this is not a simple question. Biophysical

sciences are well represented on the various advisory boards and commissions that will set the agenda. Those of us with research and extension programs related to commercial fishing and seafood industries, tourism, marine ecosystems, community development, disaster planning and environmental and/or ecosystems projects must use contacts within state and local agencies to argue for requests for proposals that include socioeconomic research.

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