

U.S. Senate Committee on Environment and Public Works

Subcommittee on Water and Wildlife

Status of the Deepwater Horizon Natural Resource Damage Assessment

June 28, 2011

Testimony of

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Chairman Cardin, Ranking Member Sessions and members of the subcommittee, I am Donald F. Boesch and I am very appreciative of the opportunity to appear before you today to address issues related to damage assessment and restoration of natural resources following the Deepwater Horizon oil spill of 2010. I am a native of the Gulf Coast region and was actively engaged in scientific research on long-term environmental problems of the Gulf of Mexico and the impacts of offshore oil and gas development activities, including oil spills, before leaving Louisiana to head the University of Maryland Center for Environmental Science almost 21 years ago.

I suspect that it was because of my familiarity with the region and scientific issues surrounding the disastrous incident that President Obama appointed me to serve as one of the seven members of the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, co-chaired by former Florida Senator Bob Graham and former EPA Administrator William Reilly. While it is primarily from the appraisals of the Commission that I will offer these perspectives today, I will expand on them based on my own experience where appropriate.

Natural Resources Damage Assessment Process

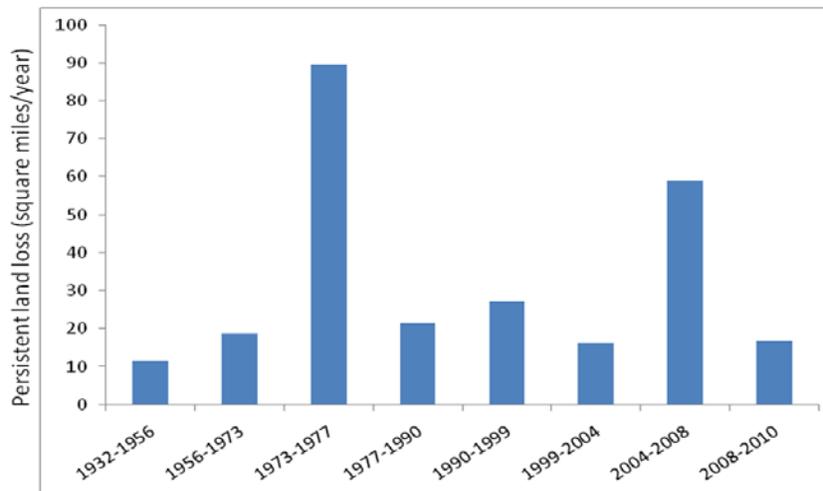
The Oil Spill Commission was charged fundamentally with determining the causes of the disaster, improving the country's ability to respond to spills, and recommending reforms to make offshore energy production safer. Also, we were required to submit our final report within six months of our first meeting and did so on January 11, 2011. The Natural Resources Damage Assessment (NRDA) was not central to our investigation and, in any case, was still in an early phase as we were completing our report. Nonetheless, the Commission's final report *Deep Water: The Gulf of Mexico Oil Spill and the Future of Offshore Drilling*¹ does discuss and offer recommendations concerning the ongoing NRDA. A staff working paper entitled *Natural*

¹ National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling. Deep Water and the Future of Offshore Drilling. U.S. Government Printing Office, Washington, DC. <http://www.oilspillcommission.gov/final-report>

*Resource Damage Assessment: Evolution, Current Practice, and Preliminary Findings Related to the Deepwater Horizon Oil Spill*² was also released by the Commission.

The Commission's report understood the goal of the NRDA is to make the environment and public whole for injuries to natural resources and services resulting from the oil spill and that these injuries are quantified by reference to baseline conditions, the conditions that would have existed had the incident not occurred. We recognized that establishing such baseline conditions will be challenging, not only because of the paucity of background data and the confounding effects of natural variability, but because many Gulf coastal habitats have been substantially degraded over decades under pressure from industrial, agricultural, commercial and residential development.

Of particular note in that regard has been the impact of oil and gas extraction and transportation of Louisiana's disappearing coastal wetlands. The following graph, based on my calculations based of a recent USGS report³ and not analysis by the Commission, shows how wetland loss spiked during the 1970s following a period of intensive dredging of canals for drilling access and transportation. Annual losses during this period substantially exceed the dramatic wetland losses resulting from the devastating hurricanes Katrina, Rita, Gustav and Ike in 2005 and 2008. I'll return to the need for comprehensive restoration of Gulf ecosystems that goes beyond NRDA requirements later in my testimony.



²http://www.oilspillcommission.gov/sites/default/files/documents/Natural%20Resource%20Damage%20Assessment%20Evolution%20Current%20Practice%20and%20Preliminary%20Findings%20Related%20to%20the%20Deepwater%20Horizon%20Oil%20Spill_0.pdf

³ U.S. Geological Survey. 2011.

In crafting its recommendations concerning the need for fair, transparent compensatory restoration based on Natural Resource Damage Assessment, the Oil Spill Commission noted the requirements of the Oil Spill Act for, wherever possible, “in-place” and “in-kind” restoration of natural resource injuries and the lost use of public resources. In other words, the Act favors restoration measures with a connection to oil spill impacts. The Commission observed that the NRDA for the Deepwater Horizon spill is unprecedented in that five Gulf States were affected, each with its own restoration agenda, even though most of the coastal and nearshore damage appeared to occur in Louisiana. We pointed out that, even as we wrote this report in December, the Trustees responsible for the damage assessment were under pressure to approve projects with an “equitable” allocation (i.e., each state receives an equal portion) of resources that may not be entirely consonant with the “in-place, in-kind” requirement. The Commission further noted that the Trustees will be challenged in assessing and providing compensatory restoration for the potentially significant marine and deepwater impacts associated with the spill that are largely outside of the practical experience of the NRDA process.

Based on these considerations, the Oil Spill Commission recommended that the Trustees should ensure that compensatory restoration under the NRDA process is transparent, appropriate and, to the degree possible, apolitical by:

- a. Appointing an independent scientific auditor to ensure that projects are authorized on the basis of their ability to mitigate actual damages caused by the spill, with special care taken to assess and compensate poorly understood marine impacts.
- b. In any potential settlement agreement, providing for long-term monitoring of affected resources for a period of at least three to five years and for “enhancement” beyond the baseline.
- c. Hewing as closely as possible to the “in-place” and “in-kind” principles that underpin NRDA regulations to help ensure that injured public resources, and the communities that rely on them, are made whole to the fullest extent possible, regardless of state and federal boundaries.

In addition to these recommendations of the Oil Spill Commission, I commend consideration of the ten suggestions concerning the NRDA process offered during last July’s hearing of this Subcommittee by Dr. Robert Spies⁴. These suggestions were based on lessons derived by a group of scientists with intimate experience in the Exxon Valdez NRDA. In addition, because I

⁴ http://epw.senate.gov/public/index.cfm?FuseAction=Hearings.Testimony&Hearing_ID=f1ff5117-802a-23ad-4228-4fd76a477376&Witness_ID=d72c4fd1-9f71-4177-a80e-b90738a463c6

am currently Chair of the National Research Council's Ocean Studies Board, I would be remiss if I did not also bring to your attention the NRC's ongoing study on the Effects of the Deepwater Horizon Mississippi Canyon-252 Oil Spill on Ecosystem Services in the Gulf of Mexico⁵. This study is being conducted in response to mandates of the Supplemental Appropriations Act of 2010 and is addressing new approaches to place value on the ecosystem services affected by the oil spill that may escape the traditional NRDA process.

Early Restoration of Natural Resource Damages

On April 21, 2011, the federal and state Trustees entered into an agreement with BP that provides a framework for early restoration projects to address injuries related to natural resources caused by the Deepwater Horizon oil spill. Under this agreement, BP will provide \$1 billion to support early restoration and under a separate agreement it was determined that each of the five Gulf Coast States and the two Federal Trustees (the Department of the Interior and National Oceanic and Atmospheric Administration) will be allocated \$100 million each, with the remaining \$300 million to be divided between DOI and NOAA for use on projects proposed by the States.

The agreement to support early restoration presents a very promising opportunity to begin to restore impacted resources without waiting years for the full completion of the NRDA when restoration may prove less effective. However, it also presents opportunities for misallocation and misapplication of these resources. To start, it divides the early restoration funding equally among the states and federal trustees, thus already comprising the "in-place and in-kind" principle in a way that concerned the Oil Spill Commission. In other words, Texas, which seems to have seen little or no oil from the Deepwater Horizon spill, would receive the same allocation as those states that were more substantially impacted. The framework agreement clearly states that early restoration projects proposed must be consistent with Section 1006 of the Oil Pollution Act in meeting criteria for making the public whole for injuries resulting from the spill and addressing one or more specific injuries associated with the incident. The agreement also requires that the projects be approved by a majority (four of the seven members) of the Trustee Council. However, this politically expedient allocation solution naturally raises suspicions about the degree to which the projects supported by funds already apportioned will be required to truly address natural resources damages and about the potential for logrolling among the Trustees. In other words, State A might be more than happy to approve questionable projects proposed by State B under the *quid pro quo* assumption of reciprocal support.

⁵ <http://dels.nas.edu/Study-In-Progress/Effects-Deepwater-Horizon-Mississippi/DELS-OSB-10-02>

To avoid just such problems, the Oil Spill Commission recommended appointing an independent scientific auditor or review board to ensure that projects are authorized on the basis of their ability to mitigate actual damages caused by the spill. A scientific audit could also independently evaluate the degree to which the Natural Resource Damage Offsets for these projects are measured, calculated and documented using best available science as required under 15 C.F.R. Part 990. By the same token, implementing the Commission's recommendation concerning monitoring of the affected resources and the effectiveness of restoration projects would help improve the design and outcomes of subsequent NRDA restoration efforts.

Comprehensive Ecosystem Restoration

As I mentioned earlier, the impacts of the Deepwater Horizon oil spill come on top of longer-term degradation of important habitats and resources of the northern Gulf of Mexico, including loss of coastal wetlands, recurrent hypoxia (commonly referred to as the Dead Zone), and over-fished populations and endangered species. Taking note of the need to restore this ecosystem and improve its resilience to future oil spills and other insults, the Oil Spill Commission identified the need for a long-term restoration effort that is well funded, scientifically grounded and responsive to regional needs and public input. Our recommendations in this regard are consistent with those of the report to the President by Secretary of the Navy Ray Mabus entitled *America's Gulf Coast: A Long-Term Recovery Plan after the Deepwater Horizon Oil Spill*⁶. Specifically the Oil Spill Commission recommended that Congress should dedicate 80 percent of the Clean Water Act penalties in long-term restoration of the Gulf of Mexico and that Congress and federal and state agencies should build the organizational, financial and public outreach capacities needed to put the restoration effort on a strong footing. As I am sure members of this subcommittee are aware, the President has subsequently created the Gulf Ecosystem Restoration Task Force, chaired by EPA Administrator Lisa Jackson, to coordinate intergovernmental (both federal and state) efforts to improve the efficiency and effectiveness in the implementation of Gulf Coast ecosystem restoration actions and present a Gulf of Mexico Regional Ecosystem Restoration Strategy, due in October, 2011.

Unfortunately, it appears that legislation to dedicate the Clean Water Act penalties to a restoration fund and establish a Gulf Coast Ecosystem Restoration Council to administer it is stalled in Congress, in part because a lack of consensus among Gulf state members over the scope of permissible use of these funds and, once again, allocations among the states. The Oil Spill Commission deliberated quite a bit on these questions and recommended that it was only compelling from a national perspective if the application of these funds was limited to ecosystem

⁶ <http://www.restorethegulf.gov/sites/default/files/documents/pdf/gulf-recovery-sep-2010.pdf>

restoration as opposed to economic development projects or even scientific research and monitoring other than needed to support ecosystem restoration. We argued that the criteria for selecting projects for funding include: (1) national significance; (2) contribution to achieving ecosystem resilience; and (3) the extent to which national policies such as related to flood control, oil and gas development, agriculture and navigation, directly contributed to the environmental problem that requires redress.

To provide the maximize effectiveness, advance transparency and enhance credibility, the Commission recommended the establishment of a Gulf Coast Ecosystem Restoration Science and Technology Program, supported by the restoration fund, that would guide and ensure the restoration effort in three ways: (1) by creating a scientific research and analysis program that is operated to support the design of scientifically sound restoration projects; (2) by creating a scientific panel to evaluate restoration plans for technical effectiveness and consistency with the comprehensive restoration strategy; and (3) by supporting adaptive management based on monitoring of outcomes.

This concludes my testimony, Mr. Chairman. I am privileged to appear before you today and happy to address any questions the members of the Subcommittee may have.