

Prominent recommendations included a requirement that key regional and federal authorities develop and implement coastal and marine spatial planning, for ocean users and the public. This system is designed to optimize marine productivity. More broadly, scientific advice grounded in peer-reviewed empirical research inform strategy and decision-making in ocean management, including for energy, shipping, national defense, sustainable fisheries, and conservation.

Recommendation

The appropriate federal agencies, including EPA, Interior, and NOAA, and the Trustees for Natural Resources should better balance the myriad economic and environmental interests concentrated in the Gulf region going forward. This would include improved monitoring and increased use of sophisticated tools like coastal and marine spatial planning. Many of these tools and capacities will also be important to manage areas of the OCS outside the Gulf.

The Commission recommends that, as a part of management and restoration efforts in the marine environment, greater attention should be given to new tools for managing ocean resources, including monitoring systems and spatial planning. Marine scientists have emerged from the *Deepwater Horizon* incident with more precise questions to investigate and a better sense of monitoring needs in the Gulf of Mexico, which because of its multiple uses and economic value should be a national priority. To that end, the National Ocean Council should work with the responsible federal agencies, industry and the scientific community to expand the Gulf of Mexico Integrated Ocean Observing System, including the installation and maintenance of an in situ network of instruments deployed on selected production platforms. Participation in this system by industry should be regarded as a reasonable part of doing business in nation's waters.

Coastal and marine spatial planning has the potential to improve overall efficiency and reduce conflicts among ocean users. Congress should fund grants for the development of regional planning bodies at the amount requested by the President in the fiscal year 2011 budget submitted to Congress. Ocean management should also include more strategically sited Marine Protected Areas, including but not limited to National Marine Sanctuaries, which can be used as "mitigation banks" to help offset harm to the marine environment. Given the economic and cultural importance of fishing in the Gulf region—and the importance of Gulf seafood to the rest of the country—scientifically valid measures, such as catch share programs, should be adopted to prevent overfishing and ensure the continuity of robust fisheries.

Marine spatial planning was designed to ensure that myriad ocean management decisions are compatible and consistent, that they make sense. In the decades since marine protection began, scientists have developed a much more robust understanding of the Gulf's physical and ecological processes. Now, for example, Marine Protected Areas can be used—and should be used—to ensure the continuity and robustness of fisheries into the future. Rationalizing ocean use around this much improved scientific understanding—for example, by identifying which parts of the ocean are appropriate (or inappropriate) for certain uses—should serve to maximize the productivity of natural systems and end inefficient or harmful practices that have accumulated over time.