Research Brief

Managing the Oceans From the Shore

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Most people don't consciously think of themselves as part of an ecosystem. They hear about an ecosystem and think of something remote. Yet people are the most influential part of any ecosystem. Whether through direct contact as our numbers swell and cities grow, or through climate change due to anthropogenic emissions, we affect systems across the planet. We are also highly dependent on ecosystem services, from energy extraction to food production to recreation. Yet many of the technological and industrial advances that spread our impacts farther and wider have also disconnected us from seeing and feeling them.

The disconnect is particularly strong when it comes to the marine environment. Many people love the sea and the seashore and even greater numbers rely upon the services they provide. But it is still difficult for someone living in a landlocked area to feel she is part of that ecosystem – despite the fact that municipal sewage may exit into a river that runs to the sea, greenhouse gas emissions are raising the acidity of ocean waters around the world, and the fish offered at the local market may have been caught hundreds of miles offshore.

Simultaneously, one of the challenges of managing our ocean and coasts is that we have limited capacity to enforce laws on the water. Ocean jurisdictions are enormous – the U.S. exclusive economic zone is over 3.4 million square nautical miles, larger than the terrestrial area of the 50 states– and most nations have limited at-sea enforcement resources spread across these enormous swaths. We cannot depend on detection and deterrence alone. We must also work to develop systems led by the resource users themselves, so that the people who have the most to lose, the most to gain, and intimately know the ecosystems create and support the regulatory tools designed to sustain them.

A healthy ocean and coastal ecosystem consists of both productive and resilient natural resources and productive and resilient communities. Each depends on the other. Much of ELI's work on ocean and coastal governance focuses on supporting local development and implementation of systems that realize this – identifying areas where the connection between people and marine resources is strong, and working with those communities to develop locally-led, participatory marine management processes that support healthy people and healthy places.

For example, the Gulf of Mexico is a region marked by decades of intense coastal and marine development. It is also home to myriad communities intertwined with the marine environment, from fish and shellfish harvesters and processors to those who reside and recreate along the coast. For the past three years, ELI has worked to support public engagement in the regional restoration and recovery processes initiated after Deepwater Horizon. Successful long-term restoration requires the input, knowledge, and support of the coastal communities who live, fish, and play in the Gulf, and must meet their needs and concerns. ELI's research and education activities in the Gulf strive to break down and open up these processes. From Brownsville, Texas, to Punta Gorda, Florida, Staff Attorney Teresa Chan and I have traveled back and forth along the Gulf Coast to educate people about why, when, and how they might choose to participate.

While the environs could not be more different, the U.S. Arctic faces similar challenges. In the midst of a rapidly changing climate, Alaska Native coastal communities face growing industrial interest and altered ecological and socioeconomic circumstances that may dramatically alter their ways of life and livelihoods. Contrasted against the highly developed Gulf of Mexico, the Bering, Chukchi, and Beaufort Seas are relatively unindustrialized, and also less well understood. Yet the coastal communities that have made their homes there for generations are deeply interconnected with the land, the water, the ice, and the animals. Their knowledge is critical to successful management, and successful management is critical to ensuring the resources that support them are protected. Over the past five years, Dr. Kathryn Mengerink (with whom I co-direct the Ocean Program) and I have researched relevant frameworks and traveled to Barrow, Nome, and Anchorage to learn from community members and resource managers, in order to find ways to support Alaska Native voices and leadership in offshore governance systems.

Over 70 percent of the planet is covered by ocean. We have neither the capacity nor the technology to patrol all the waters. Nor would that help us achieve truly healthy ecosystems. What we can do, however, is support the creation of broadly inclusive and sustainable management processes, led by local communities, that will have the buy-in and support necessary to achieve long-term success.

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