

## ELI Research in Action

### Supporting Healthy Marine Ecosystems in Arctic Communities



*“As someone who was born on Lake Erie, grew up on the Gulf Coast, and made a home on the West Coast, I very personally understand that there is no one-size-fits-all solution to regional ocean governance.*

*Each region has unique environmental, economic, and social attributes that require individualized solutions.”*

—Kathryn Mengerink,  
Director of ELI's Ocean  
Program

*“We have protected the bowheads and their habitat for decades. As conditions change and threaten the subsistence resources that are core to our culture and communities, ELI is helping us explore law and policy options to continue safeguarding them. We partner with ELI not just because they have legal expertise, but because they respect our communities and way of life. They understand that successful efforts must be led by the community and incorporate our knowledge.”*

— Harry Brower, Jr., Chair,  
Alaska Eskimo Whaling  
Commission

Against a backdrop of perpetual night and unimaginable cold, ELI staff sit down with a community fighting to maintain its subsistence traditions and pristine ecosystems in the wake of global change and expanding ocean industries. Jordan Diamond, the Assistant Director of ELI's Ocean Program, has journeyed to Barrow, Alaska—the northernmost city in the United States—to meet with the Alaska Eskimo Whaling Commission and fellow Alaska Native whalers. Jordan and the Commission are exploring ways in which ELI can support the community's efforts to ensure the Arctic marine environment continues to provide necessary ecosystem services. As the project unfolds, ELI and the Commission begin to develop concrete approaches to coastal and marine spatial planning (CMSP) that build from the extensive knowledge held by the people who deeply understand the environment in a holistic way.

The Arctic initiative is just one part of a journey that started in 2006 with the development of our Ocean Program. Now, the program is leading the way to help the ocean and coastal community identify effective legal and policy tools that will implement regional ocean governance.



*Many Arctic communities depend on subsistence resources, such as walrus. However the marine habitats that support these populations may be threatened by both climate change and increasing human activities in the region.*

#### National Analysis

When she created the Ocean Program at ELI, Dr. Kathryn Mengerink teamed with Senior

Attorney Jay Austin to explore the legal and institutional opportunities for managing marine ecosystems through a science-based, comprehensive approach. The ELI team developed a handbook that would offer a variety of different options for those wishing to undertake the complex task of implementing ecosystem-based management. In the winter of 2009, the team developed recommendations for using one of the chief ocean resources laws—the Coastal Zone Management Act—as a framework for ecosystem-based management implementation.

The team went on to examine federal legal authorities for implementing coastal and marine spatial planning. During the same week that the Obama Administration's Interagency Ocean Policy Task Force published its recommendations on a national coastal and marine spatial planning framework, ELI published its report, “Marine Spatial Planning in U.S. Waters: An Assessment and Analysis of Existing Legal Mechanisms, Anticipated Barriers, and Future Opportunities.”

#### What Is Ecosystem-Based Management and Coastal and Marine Spatial Planning?

Because traditional sector-based marine management strategies have failed to adequately manage human impact on the marine environment, there have been calls by many scientists, scholars, and policymakers for ecosystem-based management (EBM) and coastal and marine spatial planning (CMSP). The marine scientific consensus statement defines ecosystem-based management as “an integrated approach to management that considers entire ecosystems, including humans. But as Kathryn Mengerink, Director of ELI's Ocean Program states: “At the heart of it, CMSP and EBM are about managing human activities in ways that cause the least impact to ecosystems and human well-being.” The goal is to maintain an ecosystem in a healthy, productive, and resilient condition so that it can provide the services humans want and need. Ecosystem-based management differs from current approaches that usually focus on a single species, sector, activity, or concern; it considers the cumulative impact of different sectors.



*“One of the central purposes of the Ocean Program is ensuring the ocean can continue to support biological diversity and vital ecosystem services. Humans have relied on marine resources throughout their existence, and nowhere do you see that inspiring connection as clearly as between Arctic communities and the marine environment.”*

—Jordan Diamond  
Staff Attorney  
Environmental Law Institute  
(on location in Barrow, Alaska)



*Diverse coral and sponge-based community off Adak Island, Alaska. (Alberto Lindner, NOAA/Marine Photobank)*

### Taking It to the Regions

Because EBM and CMSP are regional approaches that must take into account the unique attributes and conditions of the regional ecosystems, economies, and people, ELI is taking its wealth of marine knowledge to the large marine ecosystems (LMEs)—the dozen or so scientifically designated marine ecosystems in the United States that are often considered the appropriate ecological boundaries for regional ocean governance.

In addition to co-convening regional governance meetings in the Mid-Atlantic, the Gulf of Mexico, and the West Coast, ELI has launched specific regional law and policy projects focused on the California Current LME and the Chukchi and Beaufort Seas LMEs. To support the California Current project, for example, the team is drawing from the expertise of regional ocean law and policy experts and scientific communities to craft recommendations for a comprehensive cumulative impacts framework.

### Supporting Arctic Communities in Advancing Arctic Coastal and Marine Spatial Planning

Our Program is now supporting the development of a community-based approach to EBM and CMSP in the U.S. Arctic. The Arctic is undergoing rapid environmental, social, and industrial changes, many of which ultimately stem from climate change. The altered conditions threaten the marine resources upon which Arctic communities depend. At present, Arctic governance takes a single-sector approach that neither adequately accounts for the cumulative impacts of changing circumstances and increasing activities, nor prioritizes the needs and concerns of the Arctic community.

New activities in the Arctic have prompted concern about the sustainability of the ecosystem and the subsistence culture of the Alaska Native communities. A comprehensive, adaptive, and community-based approach is needed to preserve the Arctic marine ecosystem including subsistence resources. Our project

is designed to ensure that new or expanding ocean industries do not impair subsistence harvests and ecosystem function.

### Moving Forward

Environmental laws and policies are designed to minimize unacceptable human impacts on ecosystems, but have had varying degrees of success. These laws and policies strive to achieve this goal by, for example, directly regulating pollutant discharges; creating extraction limits as well as placing limits on when, where, and how resources are extracted; regulating development; preserving special ecosystems; and conducting environmental assessment of potential impacts in order to make informed decisions. As CMSP and EBM grow in theory and in practice, so too does the ELI Ocean Program’s efforts to inform the ocean community about the law and policy opportunities for and challenges to implementation of regional ocean governance frameworks. We will continue to work at the national and regional levels to answer the critical legal and policy questions that arise as EBM and CMSP transform the seascape.

### Federal Authorities for Coastal and Marine Spatial Planning

In June 2009, President Obama established an Interagency Ocean Policy Task Force (IOPTF) to be led by the CEQ. Within 90 days, the Task Force was to develop recommendations for a comprehensive national policy that protects ocean and Great Lakes ecosystems, a framework for coordinating the efforts, and an implementation strategy. Within 180 days, the Task Force was to “develop, with appropriate public input, a recommended framework for effective coastal and marine spatial planning,” which “should be a comprehensive, integrated, ecosystem-based approach.” In response to this charge, the IOPTF issued its Interim Framework for Effective Coastal and Marine Spatial Planning in December 2009. The Interim Framework lays out national goals and guiding principles for CMSP and creates a process to develop regional CMSP at the large marine ecosystem scale. It also identifies essential elements of the planning process and essential elements of the regional coastal and marine spatial plans.