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TABLE OF CONTENTS

Articles

Cover image of the U.S. Mid-Atlantic Coastal Region; courtesy of the MARCO Data Portal: http://portal.midatlanticocean.org/portal.

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Regional Ocean Governance Symposium: Legal and Policy Solutions for the Mid-Atlantic Ocean

Introduction to the Special Issue

Tony MacDonald & Marc R. Poirier[1]

In July 2010 the President issued an Executive Order creating the first ever National Policy for the Stewardship of the Ocean, Our Coasts, and the Great Lakes. The order established an interagency National Ocean Council and adopted the framework developed by the federal Interagency Ocean Policy Task Force for "effective coastal and marine spatial planning that establishes a comprehensive, integrated, ecosystem-based approach to address conservation, economic activity, user conflicts and sustainable uses of the ocean, coasts and Great Lakes Resources."[2] Twelve principles guide the coastal and marine spatial planning framework and serve as the building blocks for a process to support regional ocean governance.

In June 2009, the governors of the Mid-Atlantic States (New York, New Jersey, Delaware, Maryland and Virginia) created the Mid-Atlantic Regional Council on the Ocean (MARCO) to achieve more effective regional collaboration on ocean planning and management.[3] MARCO has developed a set of priorities and actions, the Actions, Timelines and Leadership to Advance the Mid-Atlantic Governors' Agreement on Ocean Conservation, which identify multi-use regional ocean planning, siting of offshore wind energy facilities, and habitat conservation as priority issues. In addition, in December 2011, the Monmouth University Urban Coast Institute and its partners received a grant from NOAA's Regional Ocean Partnership Program to work with MARCO to enhance a Marine Mapping and Planning Portal for the region through which all states and stakeholders can view data layers and information to aid in regional ocean planning.[4]

In March 2012, partners from the Environmental Law Institute, Monmouth University Urban Coast Institute, New Jersey Sea Grant Consortium, and Seton Hall University School of Law, approached the National Sea Grant Law Center for funding for a collaborative symposium to provide state and local decision-makers with legal and policy analyses to inform approaches that can be taken to enhance implementation of ocean planning in the Mid-Atlantic Region.[5] The resulting symposium, *Regional Ocean Governance Symposium: Legal and Policy Solutions for the Mid-Atlantic Ocean*, builds on ongoing efforts in New Jersey and by MARCO to address critical issues relating to the management of regional ocean resources and the economic benefits they provide. These issues include, but are not limited to,

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[1] Tony MacDonald is Director, Monmouth University Urban Coast Institute, West Long Branch New Jersey. Marc Poirier is Professor of Law and Martha Traylor Research Scholar, Seton Hall University School of Law. Professor Poirier and Mr. MacDonald would like to thank the other members of the Steering Committee, Jordan Diamond, Environmental Law Institute, and Pete Rowe, New Jersey Sea Grant Consortium (NJSGC), for assisting with Symposium planning; and all of the folks at Seton Hall University School of Law and the NJSGC whose logistical support and general advice made the Symposium possible.

[2] THE WHITE HOUSE COUNCIL ON ENVIRONMENTAL QUALITY, FINAL RECOMMENDATION OF THE INTERAGENCY OCEAN POLICY TASK FORCE 3 (2011), *available at* http://www.whitehouse.gov/files/documents/OPTF_FinalRecs.pdf.

[3] MARCO provides a forum for the member states to work together to improve ocean health and contribute to the high quality of life economic vitality of the region. *See* MID-ATLANTIC REGIONAL COUNCIL ON THE OCEAN, http://www.midatlanticocean.org/ (last visited Sept. 6, 2013).

[4] *See* MARCO MID-ATLANTIC OCEAN DATA PORTAL, http://portal.midatlanticocean.org/portal/ (last visited Sept. 6, 2013).

[5] Funding for the symposium was provided by the National Sea Grant Law Center under award number NA09OAR4170200 from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

reducing conflicts among multiple ocean uses, siting of offshore alternative energy facilities, habitat characterization and protection, and the sustainability of fisheries and other living marine resources.

In advance of the symposium, practitioners, academics, and students in the field of law and others with expertise in ocean and environmental policy were invited to submit paper proposals and abstracts on relevant topics addressing aspects of regional ocean governance with applicability to the Mid-Atlantic region. Authors of selected proposals were invited to present their paper and participate with other invited experts at the symposium, which was held at the Seton Hall University School of Law on April 12, 2013.[6] Symposium panel presentations and discussions were organized around the themes of Regional Ocean Planning in the Mid-Atlantic, Offshore Energy Development, and Managing Living Marine Resources. A panel entitled Emerging Voices on Ocean Issues provided an opportunity for law students to present a paper.

This special issue of the *Sea Grant Law and Policy Journal* features eight articles that emerged from the *Regional Ocean Governance Symposium*. The first article is an adaptation of a primer for Symposium participants authored by Jordan Diamond, Co-director of the Ocean Program at the Environmental Law Institute (ELI), and Chelsea Tu, a recent graduate of American University Washington College of Law and, at the time, a law clerk at the ELI. Their article provides an introduction to the need for comprehensive regional ocean governance in the Mid-Atlantic region. After summarizing the existing coastal and ocean governance framework in the Mid-Atlantic region, they describe the natural resources of the region, including fisheries and aquaculture and offshore energy, both oil and gas and offshore renewable energy. They note the resource requirements imposed by additional coastal development, and assess the benefits for place-based conservation in the form of wildlife reserves and sanctuaries, estuarine research reserves, and national seashores. Diamond and Tu also discuss briefly how concerns about coastal climate change mitigation and adaptation may impact regional ocean governance.

The next three articles in the special issue focus on Regional Ocean Planning in the Mid-Atlantic. In *Mid-Atlantic Ocean Policy: Protecting the Mid-Atlantic Ocean's Clean Ocean Economies and Ecosystems with Existing Tools and Innovative Legal Frameworks*, Sean Dixon, Coastal Policy Attorney at Clean Ocean Action, based in Sandy Hook, N.J., and Angela Bransteitter, May 2014 J.D. Candidate at Pace Law School, begin with a history of jurisdictional disputes over ocean governance, and then describe the development of a national ocean policy in the past decade, culminating in President Obama's Executive Order on the Stewardship of the Ocean, Our Coasts, and the Great Lakes in July, 2010,[7] and the adoption of a National Ocean Policy Final Implementation Plan in April, 2013.[8] Obama's 2010 Order established the National Ocean Council, and charged Regional Planning Bodies with developing regional Coastal and Marine Spatial Plans, as well as other duties. The article describes the interests of the states involved in managing the mid-Atlantic Ocean region, and explores questions of overlapping jurisdiction and various regional jurisdiction schemes under a number of federal laws. The article summarizes the framework for managing the Mid-Atlantic Ocean region under the Clean Air Act; the Clean Water Act; the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund); and the Marine Protection, Research, and Sanctuaries Act. It also examines

[6] A copy of the full symposium agenda is available at http://www.njseagrant.org/extension/coastal-concerns/regional-ocean-governance-symposium.

[7] Exec. Order No. 13,547, 75 Fed. Reg. 43,023 (July 19, 2010). The Order implements recommendations of the U.S. Commission on Ocean Policy contained in An Ocean Blueprint for the 21st Century (2004), as well as those of the Pew Oceans Commission contained in their comprehensive review, America's Living Oceans: Charting a Course for Sea Change (2003).

[8] NATIONAL OCEAN COUNCIL, NATIONAL OCEAN POLICY FINAL IMPLEMENTATION PLAN (2013), *available at* http://www.whitehouse.gov//sites/default/files/national_ocean_policy_implementation_plan.pdf.

state control of marine activities under the Coastal Zone Management Act and the Deepwater Port Act. Dixon and Bransteitter then assess the policies and priorities of MARCO, compared to those expressed in the National Ocean Policy Final Implementation Plan. They recommend improvement in land-based planning that affects coastal and ocean waters; and note the tensions produced by proposed Liquefied Natural Gas ports and by potential offshore oil and gas exploration. Finally, their article recommends two further legal actions. One is the adoption of a Clean Ocean Zone initiative now pending in Congress. This Act would redress what are perceived to be inadequacies in the Clean Water Act and the Outer Continental Shelf Lands Act, and would better protect marine ecosystems and promote clean ocean economies. The other recommendation is the use of Presidential Proclamations under the Antiquities Act to create more protected Marine National Monuments.

Morgan Gopnik is an Environmental Policy Consultant. She served as Senior Advisor to the U.S. Commission on Ocean Policy, as well as Senior Vice-President of the Ocean Conservancy. Her article summarizes parts of her recent Ph.D. dissertation in Marine Science and Conservation from Duke University. In *What Regional Ocean Planners Can Learn from U.S. Public Lands Management*, Dr. Gopnik puts marine spatial planning in the larger context of ecosystem-based management of natural systems. She describes the development of national ocean policy from 2009 to 2013. Gopnik compares U.S. ocean management to the management of public lands in this country. The closest analogy in terms of the range of uses managed and the challenges faced is the National Forest Service, which she uses as her point of comparison. Basically, multiple-use management presents similar challenges in forests and in the oceans. Governance structures are similar, and demands for participation in policymaking are parallel. Gopnik argues that fundamental choices about the structure of natural systems management must be made along three axes: (1) scale, from national to local; (2) choice of process, including national elections, technocratic decision-making, judicial management, and local collaboration; and (3) degree of uniformity, from standardized to flexible. She asserts that multiple-use management of natural systems is complex, uncertain, and deeply context-dependent. There is no simple best one-size-fits-all approach. Gopnik stresses in particular attention to public participation at different levels of scale as marine spatial planning and other aspects of ecosystem-based management of oceans move forward.

Briana Collier, an Environmental Protection Specialist with the National Park Service, summarizes the implementation of Coastal and Marine Spatial Planning (CMSP) in the United States. In *Orchestrating Our Oceans: Effectively Implementing Coastal and Marine Spatial Planning in the U.S.*, she situates the fundamental need for coastal marine spatial planning in the context of marine spatial planning projects worldwide. After describing the history of ocean management in the United States, she describes the region-based structure of United States efforts. In the second half of the article, Collier surveys each region's progress towards CMSP implementation. Regions vary widely in the amount of effort and the progress they have made, although in some regions efforts build on strong pre-existing state planning efforts. Collier then assesses the successes and obstacles to CMSP in the United States.

Catherine Janasie is an Ocean and Coastal Law Fellow with the Mississippi-Alabama Sea Grant Legal Program at the University Of Mississippi School Of Law. In *The Development of Wind Energy in the Mid-Atlantic Region: The Legal Process and Lessons from the Cape Wind Project*, she provides a survey of the status of development of offshore wind energy in the mid-Atlantic region, examining the legal process and lessons learned from the bellwether Cape Wind project. After assessing the status and potential for offshore wind to contribute to the nation's electric generating capacity generally, she explores why the Cape Wind site off the coast of Massachusetts in Horseshoe Shoals seemed promising. She examines the development of a well-funded local opposition to the Cape Wind project. Janasie summarizes the leasing process for offshore wind projects and shows how it was tested and modified in light of the Cape Wind application. She then describes additional hurdles to offshore wind

projects. First, she considers financial issues, including obtaining funding, the possibility of government loan guarantees, and tax incentives. There are other hurdles due to additional regulatory processes, including consistency review under the Coastal Zone Management Act; review under the Endangered Species act; a number of other federal laws that might potentially apply; and state approvals of various kinds. Janasie assesses the many challenges the Cape Wind project has faced – regulatory, environmental, and related to state utility regulation. She discerns lessons to be learned from Cape Wind, and notes that as a general matter, offshore wind projects are likely to generate conflicts among environmentalists, who will weigh differently the costs and benefits of offshore wind projects.

Sarah Chasis is Senior Attorney and Director of the Oceans Initiative at the Natural Resources Defense Council. Caryn Brower is a third-year student at NYU School of Law. Their article focuses on the need for additional protection of valuable ocean habitat, especially marine canyons in the Mid-Atlantic region. In *Legal Mechanisms and Opportunities to Advance Ocean Habitat Protection in the Mid-Atlantic,* the authors survey the federal laws that could provide such protection. First, there are the Magnuson-Stevens Fishery and Conservation Management Act's provisions for Essential Fish Habitat; Habitat Areas of Particular Concern; and protection of deep sea corals. Next, they consider a provision of the Outer Continental Shelf Lands Act which allows the President to withdraw Outer Continental Shelf lands from leasing activities. Next, the Endangered Species Act, which permits the designation of critical habitat that is protected from adverse modification; and also prohibits takings of endangered or threatened species. Chasis and Brower then turn to the Coastal Zone Management Act's consistency provision, which allows coastal states to require federal activities or federally approved activities to be consistent with enforceable policies of the state's approved coastal zone management program. They discuss the Antiquities Act, which authorizes the President to designate National Monuments by Proclamation, and entails specific Monument Management Plans. They note that designation of National Monuments can lead eventually to protection under other federal laws, such as designation as a national park or a national marine sanctuary. Finally, Chasis and Brower describe the National Marine Sanctuaries Act, and endorse the reactivation of the Act's Site Evaluation List and the creation of more National Marine Sanctuaries.

The final two articles of the special issue are student articles featured on the Emerging Voices panel. Jonathan Blansfield is a third-year student at Vermont Law School. His article, *Incentivizing Offshore Wind with The Renewable Integration, Firming, and Transmission Infrastructure Credit*, focuses on an issue presented by wind energy generally and the development of new offshore wind in particular. Wind energy is desirable from the point of view of a national policy of developing renewable energy sources; but it is not reliably matched to load, and requires another source of electricity generation to firm it up. At the same time, the United States is experiencing an unexpected boom in the development of previously unavailable unconventional sources of natural gas. Because natural gas generation can easily be turned on when it is needed, in contrast to some other energy sources used for base load generation, Blansfield argues that the country's new natural gas resources should be encouraged to provide firming for offshore wind energy. He prefers this policy to using natural gas generation to replace coal-fired generation. His approach would provide federal support for constructing transmission infrastructure for new natural gas projects that are linked to firming offshore wind, and for transmission infrastructure for energy from offshore wind that is firmed by natural gas generation. Blansfield argues that the best mechanism for this incentive is a federal tax credit, specifically a "renewable integration, firming, and transmission infrastructure credit." A federal policy is necessary, he argues, because generation and transmission planning occurs regionally, not state-by-state. The subsidies he proposes are parallel to decades of federal subsidies to traditional fossil fuels. Blansfield situates his proposal in the current scheme of Production Tax Credit and Investment Tax Credit; describes the current Federal Energy Regulatory Commission regulatory regime for transmission planning; and suggests that regional Renewable Portfolio Standards could be used to

impose appropriate transmission and firming capability requirements. He gives separate attention to the New England Governors' 2009 Renewable Energy Blueprint. He also calls for streamlining the federal permitting process for offshore wind; and for more social acceptance of offshore wind.

Finally, Michael DeLoreto, a third-year student at Seton Hall University School of Law, focuses his analysis on the one successful court challenge to the Cape Wind project, *Town of Barnstable v. FAA*.[9] He sets out the role of the Federal Aviation Administration in permitting wind energy projects – to assure that they do not interfere with or obstruct air travel. As part of a general opposition to the project from many residents and municipalities in the region of Nantucket Sound, a lawsuit challenged the FAA's initial determination of "no hazard" from the Cape Wind project, despite its 440-foot tall windmill towers. While concerns about impact on radar could be mitigated, the FAA did not adequately address the potential for interference with flights operating under visual flight rules. The United States Court of Appeals for the District of Columbia Circuit held that the FAA had failed to follow its own guidance set out in the form of a Handbook. Consequently, the FAA's "no hazard" determination was arbitrary and capricious. The court refused to apply deference to the agency's interpretation of its own rule. On remand, the FAA again found no hazard, and the project opponents have again sought review from the D.C. Circuit. In DeLoreto's view, they will prevail again, because the FAA again failed to address interference with flights operating under visual flight rules. He attributes the problem to poor drafting of the FAA Handbook, and proposes revised guidance that would clarify for one and all, but especially to the FAA personnel, how they must go about assessing potential flight hazards from tall structures, including those that are part of offshore wind projects.

[9] 659 F.3d 28 (D.C. Cir. 2011).

Toward Comprehensive Regional Ocean Governance in the Mid-Atlantic: A Primer on Regional Interests, Challenges, and Approaches

Jordan Diamond & Chelsea Tu[1]

Abstract: Recent years have witnessed significant progress in the development and implementation of regional ocean governance in the Mid-Atlantic. This Article serves as an introduction to relevant priorities, concerns, challenges, and opportunities. It highlights key issues and existing and emerging management mechanisms in order to advance ongoing discussions of new approaches.

I. Introduction

As human uses of the ocean and coastal environment increase, the nation as a whole and the Mid-Atlantic states (Delaware, Maryland, New Jersey, New York, and Virginia) in particular have recognized the need for collaboration and coordination in order to maintain thriving coastal and ocean economies, as well as waterfront lands, infrastructure, and waterways, while protecting nearshore and marine resources and ecosystems. The *Mid-Atlantic Regional Ocean Governance Symposium* held at Seton Hall University School of Law on April 12, 2013, sought to contribute to the ongoing discussion in the Mid-Atlantic region between public and private managers and stakeholders about how to strengthen existing governance systems and prepare for coming changes. This primer was prepared to provide background for participant discussion; it is not intended to be a comprehensive summary of priorities, concerns, challenges, and opportunities. Rather, this article provides an overview of current coastal and marine management in the Mid-Atlantic region, highlighting the relevant national, regional, and state jurisdictions, authorities, and cooperative efforts that shape regional ocean governance. It also

[1] Jordan Diamond is the Co-Director of the Ocean Program at the Environmental Law Institute; she holds a J.D. with a Certificate in Specialization in Environmental Law from the U.C. Berkeley School of Law and a B.A. in Earth and Environmental Sciences from Wesleyan University. Chelsea Tu is the Legal Fellow for the Center for Biological Diversity in Washington D.C. She graduated in May 2013 from American University Washington College of Law, where she spent part of her Spring 2013 semester as a law clerk with the Environmental Law Institute; in addition to her J.D., she holds a B.S. in Environmental Sciences from U.C. Berkeley. This regional overview was prepared by ELI for the Symposium Steering Committee to provide Symposium participants with common background on critical regional marine management issues.

describes key ocean uses and management challenges that the region faces to set the stage for identifying potential paths forward.

II. Mid-Atlantic Ocean and Coastal Governance Framework

Ocean governance for the Mid-Atlantic Region interweaves policies, laws, jurisdictions, and regulatory entities across local, state, regional, tribal, and federal levels. The foundation of the framework is the boundary between state and federal jurisdiction: coastal states have primary responsibility for regulating the waters and submerged lands within their borders and out to three nautical miles from shore,[2] while the federal government has primary jurisdiction from the 3-nautical mile boundary out to 200 nautical miles from shore.[3] States own and have the right to use, develop, lease, and manage the lands and the natural resources underneath and within the boundaries of their coastal waters.[4]

On top of this jurisdictional foundation, the Coastal Zone Management Act (CZMA) creates a framework for integrating state and federal interests in state coastal waters. Each Mid-Atlantic state has a federally approved coastal management program, which was created in accordance with statutory priorities outlined in the CZMA, such as coastal and marine resources protection, the management of human development, and regulatory transparency and predictability.[5] Having an approved coastal management program endows each Mid-Atlantic state with consistency review authority – that is, authority to review proposed federal activities that may impact the uses or resources of the state's coastal zone to determine whether they are consistent with the state's enforceable coastal policies. If a proposed action is licensed, permitted, or funded by the federal government, the activity must be fully consistent with the state's enforceable policies; if the state objects, the Secretary of Commerce can override the objection only if the Secretary determines the activity is "consistent with the objectives of [the Act] or is otherwise necessary in the interest of national security."[6] If the proposed action is a direct federal activity, it must be consistent with enforceable policies "to the maximum extent practicable"; if the state objects, the federal agency may not proceed unless it determines either that federal law prevents the federal agency action from being consistent, or that the action is fully consistent even though the State objects.[7] States may also review a federal activity located in another state's land or waters, if the National Oceanic and Atmospheric Administration

[2] The federal government approved and confirmed state jurisdiction generally out to three miles through the Submerged Lands Act. *See* 43 U.S.C. § 1312. In the Gulf of Mexico, Texas and Florida have jurisdiction out to nine nautical miles.

[3] Exclusive Economic Zone of the United States of America, Proclamation No. 5030, 48 Fed. Reg. 10,605 (Mar. 10, 1983) (codified at 3 C.F.R. part 22 (Mar. 10, 1983)).

[4] 43 U.S.C. § 1311(a)(1).

[5] The CZMA requires states to develop comprehensive CMPs in order to receive consistency review authority and federal funding. 16 U.S.C. §§ 1454, 1455(d).

[6] 16 U.S.C. § 1456(c)(3)(A), (d); 15 C.F.R. §§ 930.50-930.66 (consistency for activities requiring a federal license or permit), §§ 930.90-930.101 (consistency for federal assistance to state and local governments).

[7] 16 U.S.C. § 1456(c)(1)(A); 15 C.F.R. §§ 930.30-930.46 (consistency for federal agency activities); *see also Federal Consistency Overview,* OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, http://coastalmanagement.noaa.gov/consistency/welcome.html (last visited Sept. 6, 2013).

(NOAA) has approved the reviewing state's list of activities that are routinely subject to interstate consistency review.[8]

This Mid-Atlantic ocean governance framework was further delineated by two major activities in 2009. First, President Obama established an Interagency Ocean Policy Task Force, the first step that led to the creation by Executive Order of the National Ocean Policy in July 2010.[9] Relevant priorities from the Order include: enhancing the sustainability of ocean and coastal economies; respecting and preserving maritime heritage; supporting sustainable use of and access to the ocean and coasts; and providing for adaptive management to respond to climate change and ocean acidification. The Order and final recommendations of the Task Force also call for the implementation of regionally based coastal and marine spatial planning, with plan development led by nine Regional Planning Bodies of federal, state, and tribal authorities. The Mid-Atlantic region is delineated as Delaware, Maryland, New Jersey, New York, Pennsylvania, and Virginia.[10]

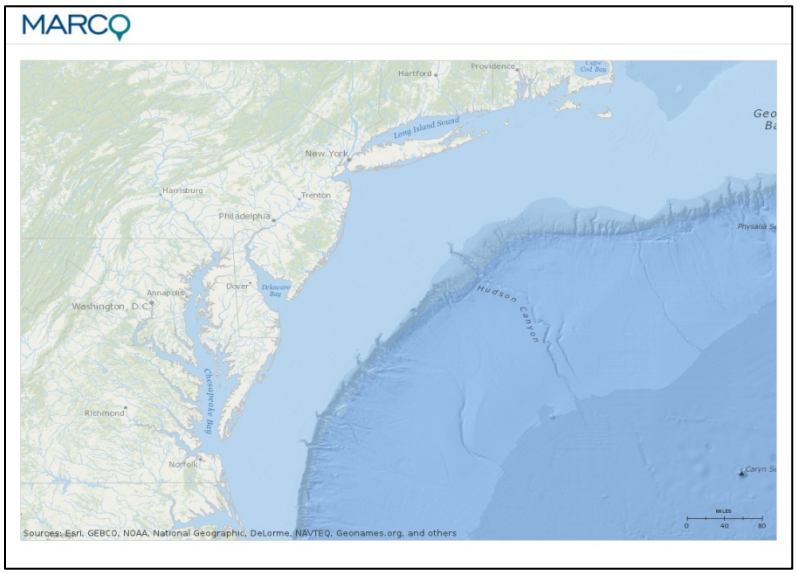

Image 1. The Mid-Atlantic region, as displayed in the Mid-Atlantic Ocean Data Portal (http://portal.midatlanticocean.org/planner/).

The second milestone of 2009 was the creation of the Mid-Atlantic Regional Council on the Ocean (MARCO). The Governors of Delaware, Maryland, New Jersey, New York, and Virginia established MARCO to "foster a cooperative and constructive relationship between the States, avoiding unintentional conflicts … [and with] great coordination lead[ing] to greater predictability and efficiency

[8] 15 C.F.R. §§ 930.150-930.156. Federal agencies, however, can override individual adverse consistency determinations under certain conditions. *See* 16 U.S.C. § 1456(c)(1)(a), (c)(3).

[9] Memorandum from President Barack Obama to the Heads of Executive Dep'ts and Agencies on Nat'l Policy for the Oceans, Our Coasts, and the Great Lakes (June 12, 2009), www.whitehouse.gov/assets/documents/2009ocean_mem_rel.pdf; Exec. Order No. 13,547, 75 Fed. Reg. 43,023 (July 22, 2010); COUNCIL ON ENVTL. QUALITY, FINAL RECOMMENDATIONS OF THE INTERAGENCY OCEAN POLICY TASK FORCE 53 (2009), *available at* www.whitehouse.gov/files/documents/OPTF_FinalRecs.pdf.

[10] *Id.*

in regulatory processes."[11] MARCO's priority actions include coastal and marine habitat protection, water quality improvement, offshore renewable energy development, and climate change adaptation.[12] Since its inception MARCO has invested significant resources in interstate coordination and planning tools, including the development of the Mid-Atlantic Ocean Data Portal, an online toolkit and resource center that aggregates data to support collaborative decision-making and planning throughout the region.[13] These efforts are supported by multiple entities including the Mid-Atlantic Regional Association Coastal Ocean Observing System (MARACOOS), which strives to increase knowledge and understanding of the coastal and marine environment.[14]

III. Ocean Uses and Impacts, Management Status, and Management Challenges

The Mid-Atlantic region's coastal and offshore environment includes meandering rivers, expansive estuaries, and a broad sandy continental shelf interspersed with deep submarine canyons. Its coastal and marine ecosystems provide critical nearshore and benthic habitats for a rich diversity of fish, crustaceans, birds, sea turtles, and cetaceans, as well as invertebrates such as sponges, shrimp, scallops, and deep sea corals.[15] These ocean resources sustain a spectrum of uses and activities including commercial fishing and aquaculture, recreational fishing and tourism, mineral and sand mining, shipping, military activities, offshore energy development, coastal development, and conservation and research. With the growing scope and types of uses of the Mid-Atlantic come potentially increasing impacts to the natural resources they rely on, and in turn the economic, socioeconomic, and public health of the region. The following section highlights key regional ocean uses and impacts, and the current management systems and challenges.

A. Fisheries and Aquaculture

Commercial and recreational fisheries are major economic drivers for the Mid-Atlantic region. Key Mid-Atlantic commercial species include, among many finfish and shellfish species, sea scallop, blue crab, summer flounder, menhaden, and squid, and commercial fishermen earned $527 million in landings revenue in 2011 alone.[16] Key recreational species, among others, include the summer flounder, Atlantic croaker, black seabass, and spot, and in 2011 recreational fishing generated $3.7 billion in sales revenues from fishing equipment and boat trips.[17]

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[11] MID-ATLANTIC GOVERNOR'S AGREEMENT ON OCEAN CONSERVATION 1 (June 4, 2009), *available at* http://www.midatlanticocean.org/agreement.pdf.
[12] *See generally id.*
[13] MID-ATLANTIC OCEAN DATA PORTAL, http://portal.midatlanticocean.org/portal/ (last visited July 25, 2013).
[14] MID-ATLANTIC REGIONAL ASSOCIATION COASTAL OCEAN OBSERVING SYSTEM, http://maracoos.org/ (last visited July 25, 2013).
[15] J.K. GREENE ET AL., THE NATURE CONSERVANCY, NORTHWEST ATLANTIC MARINE ECOREGIONAL ASSESSMENT: SPECIES, HABITATS, AND ECOSYSTEMS PHASE 1 (2010) *available at* http://www.nature.org/ourinitiatives/regions/northamerica/areas/easternusmarine/cover-ack-intro.pdf.
[16] NOAA, FISHERIES ECONOMIES IN THE U.S.: MID-ATLANTIC REGION 73 (2011), *available at* http://www.st.nmfs.noaa.gov/Assets/economics/documents/feus/2011/FEUS2011%20-%20Mid%20Atlantic.pdf.
[17] *Id.* at 75.

Management responsibilities of commercial and recreational fisheries, like the general management of coastal and marine environments, are divided among state and federal agencies. Under the Magnuson-Stevens Fishery Conservation and Management Act, the Mid-Atlantic Fishery Management Council (Mid-Atlantic Council)[18] manages commercial and recreational fisheries for eleven species in federal waters off the Mid-Atlantic coast according to species-specific fishery management plans.[19] State agencies manage commercial and recreational fisheries within state waters, and address interstate policy topics through the Atlantic States Marine Fisheries Commission.[20] Aquaculture in the Mid-Atlantic is primarily managed by state agencies and aquaculture associations, with federal funding and marketing support from NOAA's Aquaculture Program.

Commercial and recreational fisheries managers in the region are tasked with maintaining sustainable populations of target species while reducing bycatch (or incidental catch) of other species, such as through the use of alternative fishing gear and methods, and minimizing disturbance to benthic habitat and non-fishing areas. Indeed, both federal and state actors recognize these challenges and are addressing them through measures including restricting catch for certain declining species, incorporating bycatch prevention and monitoring measures in fishery management plans and enforcing the measures, and establishing an ecosystem and ocean planning committee to develop a better understanding of the ecological connections between fisheries and marine ecosystems.[21]

Some of the management challenges for fisheries include obtaining data for the status of and understanding the interplay between commercial and recreational target species, since many of them overlap, as well as improving collaboration among state and federal actors to manage all target species.[22] For instance, managers need but may lack funding or other resources to invest in, maintain, and coordinate collection and analysis of real-time stock status and spatial data. The difficulty in collecting data for recreational fisheries is especially prominent, which is addressed through educational and voluntary programs such as NOAA's Marine Recreational Information Program[23] and the Mid-Atlantic Council's Research Set-Aside Program.[24] In addition, the Mid-Atlantic Council is contemplating taking steps to move towards an ecosystem-based management approach, which

[18] The Council consists of 25 members (21 voting and 4 non-voting) representing State and Federal agencies as well as the public from New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina.
[19] MID-ATLANTIC FISHERY MANAGEMENT COUNCIL, *available at* http://www.mafmc.org/ (last visited July 25, 2013).
[20] MID-ATLANTIC FISHERY MANAGEMENT COUNCIL, STATE SPECIFIC MARINE FISHERY REGULATIONS, *available at* http://www.mafmc.org/regulations; *see also* ATLANTIC STATES MARINE FISHERIES COMMISSION, *available at* http://www.asmfc.org/ (last visited July 25, 2013).
[21] *See* Tom Hoff, Memorandum to Ecosystem and Ocean Planning Committee: February Council Meeting, at 3 (Jan. 21, 2011), *available at* http://static.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/51b88a1be4b0965cdfc94525/1371048475130/Tab_03_Ecosystem_Ocean_Planning_Committee.pdf.
[22] REGIONAL FISHERY MGMT. COUNCILS, US REGIONAL FISHERY MANAGEMENT COUNCILS: OPPORTUNITIES AND CHALLENGES 23-26, *available at* www.fisherycouncils.org/USFMCsections/USRFMCmafmc.pdf.
[23] *Marine Recreational Information Program*, NOAA OFFICE OF SCIENCE AND TECHNOLOGY, http://www.st.nmfs.noaa.gov/recreational-fisheries/index (last visited Sept. 6, 2013).
[24] REGIONAL FISHERY MGMT. COUNCILS, *supra* note 23.

requires an understanding of not just target and non-target species but also marine biological, physical, and chemical interactions and the cumulative impacts of all area activities.[25]

B. Offshore Energy and Renewable Energy Development

1. Offshore Oil and Gas Development

The Mid-Atlantic contains considerable non-renewable energy resource potential, notably for methane hydrates and oil and gas development. Although currently there are no approved[26] or active oil and gas explorations in the Mid-Atlantic Outer Continental Shelf (OCS), the Department of the Interior's (DOI) Bureau of Ocean Energy Management (BOEM)[27] has issued a draft programmatic environmental impact statement (PEIS) to evaluate potential significant environmental effects of geological and geophysical activities, including oil and gas, renewable energy, and rare minerals exploration development.[28]

2. Offshore Renewable Energy Development

The Atlantic OCS offers tremendous renewable energy potential.[29] Foremost among the potential renewable energy resources is offshore wind, which both federal and state actors have identified as presenting the most feasible utility-scale renewable marine energy source in the region. In 2009, the MARCO Agreement on Ocean Conservation established offshore wind development as a priority area for regional collaboration.[30] In February 2011, the Department of Energy and DOI announced a national strategy to "promote and accelerate responsible commercial offshore wind development in the U.S. in both federal and state waters."[31]

BOEM is leading federal efforts to accelerate offshore wind energy development on the Atlantic OCS, including initiatives to reduce cost and time for project approval and increasing the efficiency of

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[25] MID-ATLANTIC FISHERY MANAGEMENT COUNCIL, COUNCIL MEETING (Oct. 17, 2012), *available at* http://static.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/51657f3de4b0f2e667ba26dc/1365606205172/Council_Minutes_October_17-18_2012.pdf.

[26] *2012-2017 Lease Sale Schedule*, BUREAU OF OCEAN ENERGY MANAGEMENT, http://www.boem.gov/Oil-and-Gas-Energy-Program/Leasing/Five-Year-Program/Lease-Sale-Schedule/2012---2017-Lease-Sale-Schedule.aspx (last visited Sept. 6, 2013). Current lease sales for the 2012-17 period are located off the Gulf of Mexico and Alaska.

[27] The Bureau of Ocean Energy Management was formerly known as the Bureau of Ocean Management, Regulation, and Enforcement; before that, it was known as the Minerals Management Service.

[28] ATLANTIC GEOLOGICAL AND GEOPHYSICAL (G&G) ACTIVITIES PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT (2012), *available at* http://www.boem.gov/oil-and-gas-energy-program/GOMR/GandG.aspx.

[29] MARCO, ACTIONS, TIMELINES, AND LEADERSHIP TO ADVANCE THE MID-ATLANTIC GOVERNORS' AGREEMENT ON OCEAN CONSERVATION 16 (2011), *available at* http://www.midatlanticocean.org/summary-actions.pdf.

[30] MID-ATLANTIC GOVERNOR'S AGREEMENT ON OCEAN CONSERVATION, *supra* note 11, at 3.

[31] U.S. DEP'T OF ENERGY & U.S. DEP'T OF THE INTERIOR, BUREAU OF OCEAN ENERGY MGMT., REGULATION, AND ENFORCEMENT, A NATIONAL OFFSHORE WIND STRATEGY: CREATING AN OFFSHORE WIND ENERGY INDUSTRY IN THE UNITED STATES (Feb. 7, 2011), *available at* http://www1.eere.energy.gov/wind/pdfs/national_offshore_wind_strategy.pdf.

siting and permitting for proposed projects.[32] BOEM also develops implementing regulations and conducts relevant environmental analyses for offshore wind projects. In 2010 BOEM launched the "Smart from the Start" Initiative, which seeks to streamline responsible offshore wind projects in federal waters along the Atlantic by expediting leasing, increasing regional coordination, and identifying priority Wind Energy Areas most suitable for development.[33] BOEM has identified four priority Wind Energy Areas (WEAs) in the Mid-Atlantic region off of the New Jersey, Delaware, Maryland, and Virginia coasts.[34] Mid-Atlantic states are also taking actions to realize offshore wind energy potential within state jurisdictions.[35] As just one example, in March 2013 the Maryland Legislature approved the Maryland Offshore Wind Energy Act of 2013 that authorizes a $1.7 billion subsidy over the next 20 years for offshore wind projects.[36]

Offshore wind energy development may bring significant positive ecological and economic impacts, including creating artificial habitat for marine life, generating regional revenue, and reducing dependence on fossil fuel resources. There is much to be learned, however, about the potential impacts of offshore wind development. This is the motivation behind the implementation of several demonstration projects featuring innovative technologies, including two turbines in the Virginia WEA and the Fishermen's Energy Atlantic City Windfarm off the coast of Atlantic City, New Jersey.[37] The goal is to learn more about potential impacts to other ocean uses, marine ecosystems, and/or specific marine species, to ensure they are effectively accounted for and managed. For instance, wind turbine towers, surrounding areas, and transmission lines might create area restrictions for other activities, such as fishing and shipping. Loud noises, seafloor disturbances, and increased vessel traffic—particularly during the installation phase—could affect benthic ecosystems, the location of fish and other species, and require adjustments in other activities such as commercial and recreational fishing, shipping, and tourism.[38] Coastal siting of transmission lines and support facilities may alter coastal land use and nearshore habitats.

Facing the tremendous potential of offshore wind energy in the region, federal and state managers and stakeholders are working to ensure that existing governance systems adequately balance the

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[32] *Id.* at 9-11. Governing federal legislations for renewable energy development include the Outer Continental Shelf Lands Act, Federal Power Act, and the Energy Policy Act.

[33] *Id.* at 12.

[34] *See* BOEM, Atlantic OCS Wind Energy Areas (WEAs) (2012), *available at* www.boem.gov/uploadedFiles/BOEM/Renewable_Energy_Program/Smart_from_the_Start/Wind_Energy_Areas0607.pdf.

[35] For more information about the existing state frameworks for managing offshore wind development in the Mid-Atlantic, see ENVIRONMENTAL LAW INSTITUTE (ELI), DELAWARE OFFSHORE ALTERNATIVE ENERGY FRAMEWORK REVIEW & RECOMMENDATIONS (2011), *available at* http://www.elistore.org/reports_detail.asp?ID=11417; ELI, MARYLAND OFFSHORE ENERGY FRAMEWORK (2009), *available at* http://www.elistore.org/reports_detail.asp?ID=11389; and ELI, VIRGINIA OFFSHORE ENERGY DEVELOPMENT LAW & POLICY REVIEW & RECOMMENDATIONS (2008), *available* at http://www.elistore.org/reports_detail.asp?ID=11338.

[36] Michael Dresser & Timothy B. Wheeler, *O'Malley Offshore Wind Bill Passes*, BALTIMORE SUN (Mar. 18, 2013), http://articles.baltimoresun.com/2013-03-18/news/bs-md-wind-bill-passes-20130318_1_o-malley-offshore-wind-bill-wind-legislation-maryland-ratepayers.

[37] *Offshore Wind Technology*, U.S. DEP'T OF ENERGY, http://www1.eere.energy.gov/wind/offshore_wind.html (last visited Sept. 6, 2013); *see also Fishermen's Energy Atlantic City Windfarm*, FISHERMEN'S ENERGY, http://www.fishermensenergy.com/atlantic-city-windfarm.php (last visited Sept. 6, 2013).

[38] ELI, A GUIDE TO STATE MANAGEMENT OF OFFSHORE WIND ENERGY IN THE MID-ATLANTIC REGION 9-10 (in press).

multiple interests at stake. The challenge is to understand and plan for offshore wind energy development to ensure the maximization of benefits and minimization of adverse environmental and socioeconomic impacts.[39]

C. Coastal Development

The Mid-Atlantic coast is densely developed and populated—as of 2010 over 44.3 million residents of Delaware, New York, New Jersey, Maryland, Pennsylvania, and Virginia lived in a coastal county.[40] Coastal development includes diverse uses such as industrial and residential construction, agriculture, ports and marinas, and tourism. Nearshore tourism is critical for Mid-Atlantic states; for instance, it accounts for $21.6 billion in annual economic activity for New Jersey alone.[41] The development and management of ports in New York-New Jersey, Philadelphia, Wilmington, Baltimore, and Norfolk is also significant as they are key spokes of the nation's transportation system. For instance, in 2011 the Port of Wilmington brought $365 million in business revenue, $34 million in port revenue, and employed over 4,300 people.[42] Another essential coastal use within the Mid-Atlantic region is maritime security. The U.S. Coast Guard has bases in Norfolk, Baltimore, Cape May, and Staten Island, and the Naval Station at Norfolk hosts the largest concentration of Navy personnel in the country.[43]

Coastal development along the Mid-Atlantic shoreline has increased in recent decades. With a growing population comes growing pressure on nearshore resource and habitats. There is also potentially greater need for coordination between coastal uses and activities that may depend on overlapping areas.[44]

Coastal development is managed by a complex network of local, state, and federal processes. Among the myriad applicable federal laws are the Coastal Zone Management Act, Marine Mammal Protection Act, National Environmental Protection Act, Clean Water Act, Clean Air Act, Endangered Species Act, Ports and Waterways Safety Act, Maritime Transportation Security Act, and Magnuson-Stevens Fishery Conservation and Management Act. Each Mid-Atlantic state also manages state coastal development pursuant to its own laws, policies, and regulations.

Management challenges in coastal development for the Mid-Atlantic lie in the need to accommodate the diverse and sometimes competing uses over a development-saturated coastline, while minimizing individual and cumulative impacts on each other, coastal populations, and the nearshore and marine environment. Critical issues include increasing coastal resiliency in the face of sea level rise and increased flooding and inundation events, coordinating data to support real-time

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[39] MARCO, *supra* note 29, at 16-17.

[40] NOAA & U.S. CENSUS BUREAU, NATIONAL COASTAL POPULATION REPORT: POPULATION TRENDS FROM 1970 TO 2020, at 15 (Mar. 2013), *available at* http://stateofthecoast.noaa.gov/features/coastal-population-report.pdf.

[41] NEW JERSEY COMMERCE, ECONOMIC GROWTH AND TOURISM COMMISSION, TRAVEL AND TOURISM (2013), *available at* http://www.nj.gov/njwindpanel/docs/travtour.pdf.

[42] Diamond State Port Corp., *Port Sets a New Tonnage Record*, 19(2) PORT ILLUSTRATED 1 (2012), *available at* http://www.portofwilmington.com/HTML/our_port/port_illustrated_summer_2012.pdf.

[43] *Security*, MARCO MID-ATLANTIC OCEAN DATA PORTAL, http://portal.midatlanticocean.org/learn/security (last visited Sept. 6, 2013); *see also State and County Quick Facts: Philadelphia County, Pennsylvania,* U.S. CENSUS BUREAU, http://quickfacts.census.gov/qfd/states/42/42101.html (last visited Sept. 6, 2013).

[44] *Id.*

decision-making, and minimizing conflicts between various user groups. Another key challenge is addressing the impacts of freshwater uses to saltwater resources and habitats, such as from runoff and leakage from underground storage.

D. Placed-Based Conservation

Certain parts of the Mid-Atlantic region have been designated and protected for conservation, research, or other uses.[45] Place-based conservation can help maintain resilient marine ecosystems, including stable species populations, healthy habitats, and essential ecosystem services. It can yield both economic and socioeconomic benefits, such as increased tourism (e.g., to beautiful coastal areas) and fishing (e.g., by acting as nursery areas for key species).[46] Since place-based conservation may constrain user access, it can conflict with other activities such as coastal development, shipping, commercial and recreational fishing, and offshore energy and renewable energy extraction. Depending on the type and location of the protected marine area, however, these and other activities may be allowed so long as they are conducted in a manner that aligns with the conservation goals.

In the Mid-Atlantic, place-based conservation has primarily occurred through the designation of wildlife reserves and sanctuaries, estuarine research reserves, and national seashores. Conservation has also been resource- or species-focused (e.g., eelgrass conservation in Chesapeake Bay).[47] Two deep-water canyons in the Mid-Atlantic region are part of the national system of marine protected areas: Veatch Canyon east of New Jersey and Norfolk Canyon east of Virginia.[48] NOAA's Marine Protected Area (MPA) Center, within the Department of Commerce, in cooperation with the Department of the Interior and other federal, state, tribal, and territorial agencies, works to develop and implement a national MPA system; protected areas within the system range from multi-use to no-take or no-access.[49] For instance, Veatch Canyon and Norfolk Canyon include gear restrictions to protect tilefish

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[45] Relevant federal laws include the National Marine Sanctuaries Act, National Wetlands Act, Magnuson-Stevens Fishery Conservation and Management Act, Coastal Zone Management Act, Clean Water Act, Outer Continental Shelf Lands Act, Coastal Barrier Resources Act, National Park Service Organic Act, National Wildlife Refuge System Administrative Act, National Wildlife Refuge System Improvement Act, and the Antiquities Act.

[46] *See MPA Definition*, NAT'L MARINE PROTECTED AREAS CTR., http://marineprotectedareas.noaa.gov/aboutmpas/definition/ (last visited Sept. 6, 2013); *see also* NAT'L MARINE PROTECTED AREAS CTR., MPA BROCHURE (2012), *available at* http://www.mpa.gov/pdf/mpa-center/mpa_center_brochure_october2012.pdf.

[47] CHESAPEAKE BAY PROGRAM, STRATEGY TO ACCELERATE THE PROTECTION AND RESTORATION OF SUBMERGED AQUATIC VEGETATION IN THE CHESAPEAKE BAY (2003), *available at* www.chesapeakebay.net/publications/title/strategy_to_accelerate_the_protection_and_restoration_of_sav_in_the_chesape.

[48] *Ocean Canyon Protection—Four Fish Habitat Protection Areas Make the List*, NOAA HABITAT CONSERVATION, www.habitat.noaa.gov/media/news/oceancanyoncoralscape.html (last visited Sept. 6, 2013) [hereinafter *Ocean Canyon Protection*].

[49] *Priority Ocean Areas for Protection in the Mid-Atlantic*, NATURAL RESOURCES DEFENSE COUNCIL, www.nrdc.org/water/oceans/priority/poainx.asp; *U.S. Marine Protected Areas*, NOAA, www.mpa.gov/dataanalysis/mpainventory/mpaviewer (last visited Sept. 6, 2013).

habitats, under the Magnuson-Stevens Act and relevant fishery management plans;[50] the Edwin B. Forsythe National Wildlife Refuge along parts of the New Jersey coast contains no-take areas limiting commercial fishing and restricting recreational fishing;[51] and the nearby Jacques Cousteau National Estuarine Research Reserve contains a uniform restriction for commercial and recreational fishing.[52] The Mid-Atlantic states also protect designated areas at the state level through their respective natural resources and environmental departments, often in partnership with federal counterparts.[53] MARCO is making progress in building regional partnerships for identifying and protecting priority coastal and marine conservation areas in the region.[54]

One of the key management challenges for coastal and marine conservation in the Mid-Atlantic is providing adequate funding for effective monitoring and enforcement within these areas, to control impacts from other allowable uses within and outside of the areas themselves.[55] Adapting strategies to increasing users, climate change impacts including water temperature increase and ocean acidification,[56] and emerging uses such as offshore wind energy development are also prominent challenges to conservation management in the Mid-Atlantic.

E. Coastal Climate Change Mitigation and Adaptation

The impacts of climate change—in particular sea level rise and increased storm surges, flooding, and coastal subsidence from super storms such as Hurricane Sandy—are visible and have devastated coastal ecosystems and livelihoods across the Mid-Atlantic region. Since 1990, the Mid-Atlantic coast has been a "hot spot" for sea level rise that occurs at the rate of 2 to 3.7 millimeters per year, or 4 to 5 times faster than the global average.[57] For instance, parts of Virginia such as Norfolk are already

[50] *Ocean Canyon Protection*, *supra* note 48; *see also* REGIONAL FISHERY MANAGEMENT COUNCILS, U.S. REGIONAL FISHERY MANAGEMENT COUNCILS: DECADES OF KNOWLEDGE IN COASTAL AND MARINE SPATIAL PLANNING 5, *available at* http://www.fisherycouncils.org/MSPFlier.pdf.

[51] *U.S. Marine Protected Areas*, *supra* note 49. (search for "Edwin B. Forsynthe National Wildlife Refuge").

[52] *Id.* (search for "Jacques Cousteau National Estuarine Research Reserve"); *see also* JACQUES COUSTEAU NATIONAL ESTUARINE RESEARCH RESERVE, http://www.jcnerr.org/ (last visited Sept. 6, 2013).

[53] *See, e.g.*, *Delaware National Estuarine Research Reserve*, DELAWARE DEP'T NATURAL RES. & ENVTL. CONTROL, www.dnrec.state.de.us/DNREC2000/Divisions/Soil/DNERR/index.htm (last visited Sept. 6, 2013).

[54] MID-ATLANTIC REGIONAL COUNCIL ON THE OCEAN, 2011-2012 MARCO WORKPLAN 2-3 (2011), *available at* http://www.midatlanticocean.org/2011_2012_MARCOworkplan.pdf.

[55] *See, e.g.*, Charles Wahle, Presentation, *Place Matters: Emerging US Context for Conserving Special Ocean Places* (2012), *available at* http://www.mpa.gov/pdf/fac/wahle_place_matters_emerging_context_conserving_special_places.pdf.

[56] *See* NAT'L MARINE PROTECTED AREAS CTR., MARINE PROTECTED AREAS: BUILDING RESILIENCE TO CLIMATE CHANGE IMPACTS (2013), *available at* http://www.mpa.gov/pdf/helpful-resources/mpas_climate_change_march_2013.pdf.

[57] Press Release, U.S. Geological Survey, *Sea Level Rise Accelerating in U.S. Atlantic Coast* (June 24, 2012), *available at* www.usgs.gov/newsroom/article.asp?ID=3256&from=rss_home; *see also* Tal Ezer et al., *Gulf Stream's Induced Sea Level Rise and Variability Along the U.S. Mid-Atlantic Coast*, 118 J. GEOPHYSICAL RESEARCH: OCEANS 1-13 (2013) (identifying the slowing down of the Atlantic Gulf Stream as the reason for accelerated sea level rise in the Mid-Atlantic coast).

experiencing coastal subsidence[58] as well as flooding many days of the year.[59] As sea level in the region is expected to rise another 8 to 11.8 inches by 2100,[60] the ocean will continue to inundate both the natural and built environment from conservation areas to coastal developments, resulting in a variety of severe consequences including damages to industrial and personal property, and lost revenue from inundated beaches and seashore parks. Additionally, sea level rise, coastal subsidence, as well as increasing storm surges and flooding will further damage built coastal infrastructure such as ports, sewage treatment plant, airports, and roads. These environmental and economic impacts will in turn produce negative, cascading socioeconomic and public health effects.

Traditionally, states in the Mid-Atlantic have individually planned for and addressed climate change impacts and have intensified these efforts post Hurricane Sandy.[61] Additionally, the states have recently begun to undertake collaborative planning approaches through MARCO's Agreement on Ocean Conservation.[62] The main management challenge to addressing the oceanic and coastal risks and impacts of climate change is anticipating them given the increasing unpredictability in doing so, and planning for adaptation in a manner that balances financial realities as well as existing interests including private property rights, conservation, coastal development, and maritime security considerations. Another major difficulty is protecting the most vulnerable resources and habitats as well as communicating these risks and impacts to local communities, where land use decision-making is made and on-the-ground adaptation to climate change is needed. Federal and state funding and regional coordination is needed to implement localized preventative or remedial actions such as changing municipality zoning laws to restrict coastal development, require extreme weather preparedness plans, and investing in real-time monitoring and emergency response systems to sudden storm surges and flooding.

IV. Moving Forward with Regional Ocean Governance

There are myriad ways to approach regional ocean governance. Some approaches may be tailored to overcoming specific management challenges associated with a particular use or resource, while others may be broader-reaching and cut across uses, space, and time. Overall, the foundation of regional ocean planning is coordination and collaboration between the entities involved in managing the area's uses and resources. It can be difficult to develop flexible and adaptive systems that add to the

[58] Ron Williams & John M. Keifer, Presentation to Expert Advisory Panel: Coastal Flooding Mitigation (Feb. 16, 2012), *available at* http://www.norfolk.gov/DocumentCenter/View/1748; *see also* Kevin Smith, Presentation to Storm Water Working Group: City of Norfolk City-wide Coastal Flooding Study (Feb. 29, 2012), *available at* http://va-norfolk.civicplus.com/DocumentCenter/View/1752.

[59] *See* Ctr. Coastal Res. Mgmt., Va. Inst. of Marine Sci., *Recurrent Flooding Study for Tidewater Virginia* (2013), *available at* http://ccrm.vims.edu/recurrent_flooding/Recurrent_Flooding_Study_web.pdf.

[60] Press Release, U.S. Geological Survey, *supra* note 57.

[61] *See* MARCO, HIGHLIGHTS: MOVING IN THE RIGHT DIRECTION (2011), *available at* www.midatlanticocean.org/mitrd.pdf.

[62] MARCO, *supra* note 29, at 9-10.

existing authorities of the individual entities involved without constraining them. The desired result, however, is more efficient and effective decision-making leading to robust and resilient ecosystems, communities, and economies.

The goal of the *Mid-Atlantic Regional Ocean Governance Symposium* was to provide a forum for discussing existing and innovative law and policy approaches that support MARCO priorities and move regional ocean governance forward in the Mid-Atlantic. Recent years have seen significant progress on this front, including the creation of multiple systems and organizing bodies. Hopefully, these discussions and the resulting articles contained in this special issue of the *Sea Grant Law and Policy Journal* will build upon that progress and, through identification and debate of new approaches and contributors, help materialize the region's next steps.

Mid-Atlantic Ocean Policy: Protecting the Mid-Atlantic Ocean's Clean Ocean Economies and Ecosystems with Existing Tools and Innovative Legal Frameworks

Sean T. Dixon & Angela Bransteitter[1]

Abstract: The Mid-Atlantic Ocean, at the intersection of the Gulf Stream, Labrador Current, and some of the nation's oldest freshwater rivers, has a truly unique ecosystem. With centuries-old fishing, commerce, and recreational industries that anchor the region's coastal communities, the economy of the Mid-Atlantic is similarly unique. The focus of this paper is to take a brief look at the trends and trajectories of the management of these ecological and economic systems (past and present) under existing laws, the new national ocean policy, and innovative frameworks.

I. Introduction

The Mid-Atlantic Ocean (MAO) plays host to a unique confluence of economies, societies, and ecologies.[2] The MAO is home to centuries-old industries (onshore and at-sea), bordered by the most

[1] Sean T. Dixon is the Coastal Policy Attorney at Clean Ocean Action, based in Sandy Hook, NJ, and has an M.E.M. from Yale University's School of Forestry and Environmental Studies; a J.D. (with a Certificate in Environmental Law) and an LL.M. on Climate Change Law from Pace Law School; is a Senior Fellow in the Environmental Leadership Program; and is the 2014 Chair of the 43rd Annual Spring Conference on Environmental Law, held by the American Bar Association Section of Environment, Energy, and Resources. Angela Bransteitter is a J.D. Candidate at Pace Law School and expects to graduate in May 2014, with a Certificate in Environmental Law.

[2] For the purposes of this report, MAO will refer, generally unless stated otherwise, to the New York/New Jersey Bight, encompassing mainly the ocean and coastal waters off New York and New Jersey, and does not refer to any jurisdictional or legally established specific area.

densely populated stretch of U.S. coastline, and at the intersection of rich cold-water marine ecosystems and warm-water coastal ecosystems. Managing the MAO requires thorough implementation of existing laws and the development of new frameworks. Fortunately, there is no shortage of options for managers – at federal, state, and local levels – looking for tools to protect habitats, develop clean ocean economies, and adapt to changing climates.

One underlying theme driving the regionalization of ocean planning is the need to tailor management actions and policies to the local uses, users, threats, and values of the oceans. Along the Jersey Shore, South Shore of Long Island, and throughout the MAO, the confluence of population density and industry has forced a precarious balance between clean ocean economies (like fishing, surfing, swimming, and tourism) and ecological threats like coastal over-development, non-point source pollution, and ocean industrialization, such as offshore oil and gas activities or liquefied natural gas operations. These threats can lead to decreased fishery productivity, public health beach closures, and significant economic losses from displaced tourism.

On top of these threats, New Jersey and New York face a crisis of preparation. Hurricanes Sandy and Irene led to the literal redefinition of the habitability of MAO coastlines. With climate change, storms such as these will increase in severity and, when coupled with sea level rise, lead to more flooding, more damage, and more loss of life. Aging stormwater, wastewater, and energy systems in coastal watersheds were exposed in recent storms as overburdened and in need of billions of dollars of investment and repair. These vulnerabilities directly threaten the coastal ecosystems that coastal economies rely upon.

Overall, this Article explores the development of the National Ocean Policy (NOP) – why it came about and how it was built – and whether existing laws are sufficient to protect the economies and ecologies of the MAO. The Article also discusses how the NOP is being applied to the MAO and considers whether a citizen-developed piece of legislation called the Clean Ocean Zone or an Antiquities Act national monument designation could play a role in the management toolbox for the Mid-Atlantic. By activating existing regulatory programs and adopting new legal initiatives, the Mid-Atlantic Ocean's managers can support the clean ocean economies of today while protecting the coastal stakeholders of tomorrow.

II. A National Ocean Policy

A. History of At-Sea Boundary Creation

In discussing management of any ocean area, the bounds of what constitutes that ocean area must first be established. At the top of the list for any discussion of the management systems that govern the oceans is the 1982 United Nations Convention on the Law of the Sea (UNCLOS), which entered into force in 1994.[3] While the U.S. has not yet ratified UNCLOS, it has come to recognize many aspects of the treaty as customary international law.[4] The jurisdictional boundaries created through UNCLOS, for

[3] United Nations Convention on the Law of the Sea, Dec. 10, 1982, U.N. Doc. A/CONF.62/122, 21 I.L.M. 1261 (1982) [hereinafter UNCLOS].
[4] Sarei v. Rio Tinto PLC., 221 F. Supp. 2d 1116 (C.D. Cal. 2002).

use throughout the world's coastlines, included an Exclusive Economic Zone (EEZ), an area of ocean extending "to a distance 200 nautical miles from the baseline from which the breadth of the territorial sea is measured"[5] and a 12 nm ribbon of ocean along the coast called the "territorial sea" wherein nations have near universal control over the ocean.[6] Outside of the territorial sea, but within the EEZ limits, a state has

> sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds; [and] jurisdiction … with regard to: (i) the establishment and use of artificial islands, installations and structures; (ii) marine scientific research; (iii) the protection and preservation of the marine environment.[7]

Despite its failure to officially ratified UNCLOS, the U.S. has adopted many of the boundary mechanisms established therein. Under Presidential Proclamation No. 5030, President Reagan asserted authority over the U.S. EEZ.[8] With this declaration, the United States acceded to international customary legal control over the exploration, exploitation, conservation, and management of resources, living and non-living, within the EEZ.[9] Moving toward the coastline, Presidential Proclamation 5928 declared the U.S. intent to exercise sovereignty over the territorial sea.[10] This declaration gave the U.S. enhanced control over this approximately 22 million square kilometer area, subject only to the UNCLOS-driven right of innocent passage.[11]

The 1988 territorial sea proclamation did nothing, according to its own terms, to "alter" the rights and jurisdictions of states or federal programs in managing state waters and ocean resources.[12] Those jurisdictions were established over 30 years before the 1988 proclamation in the Submerged Lands Act (SLA) and the Outer Continental Shelf Lands Act (OCSLA). Enacted first, the SLA put to bed questions as to what authority states had over their coastal waterways. The SLA granted states "title to and ownership of the lands beneath navigable waters within the boundaries of the respective States, and the natural resources within such lands and waters" and gave states "right and power to manage, administer, lease, develop, and use" the resources and lands so granted.[13] This state authority extends

[5] Proclamation No. 5030, 48 Fed. Reg. 10605 (March 10, 1983).
[6] UNCLOS, *supra* note 3, at Art. 2. Control over the territorial sea is subject to, among some other limits, the right of innocent passage. *See id.* at Art. 17.
[7] *Id.* at Art. 56.
[8] Proclamation No. 5030, *supra* note 5.
[9] *Id*.
[10] Proclamation No. 5298, 54 Fed. Reg. 777 (Dec. 27, 1988).
[11] UNEP/GRID-ARENDAL, CONTINENTAL SHELF: THE LAST MARITIME ZONE 28 (2011), *available at* http://www.grida.no/_cms/OpenFile.aspx?s=1&id=1436.
[12] Proclamation No. 5298, *supra* note 10.
[13] 43 U.S.C. § 1311(a). Note that Congress retained authority for the federal government for "the purposes of navigation or flood control or the production of power…." 43 U.S.C. § 1311(d).

"three geographical miles distant" from the coastline, with some exceptions in the Gulf of Mexico and the Great Lakes.[14]

The OCSLA, which defined the outer continental shelf (OCS) as "all submerged lands lying seaward and outside of the" states' SLA jurisdictional control, was designed to make natural resources of the shelf "available for expeditious and orderly development, subject to environmental safeguards" and national interests.[15] This control over the continental shelf, and the resources therein, comports with one of the other main jurisdictional sections of UNCLOS. Under Article 77, UNCLOS grants coastal states "sovereign rights for the purpose of exploring [the continental shelf] and exploiting its natural resources."[16] The continental shelf, internationally, is defined as the "seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin."[17]

In establishing the lines in the sea for management and control, Congress recognized "the rights and responsibilities of all States and, where appropriate, local governments, to preserve and protect their marine, human, and coastal environments" through regulation by requiring federal OCS activities to consider and recognize the role of states in management of the OCS resources.[18] In this regard, the OCSLA both establishes marine jurisdictional boundaries and is one of the first laws to recognize the fact that establishing such zones cannot prevent pollution, exploitation, or adverse cumulative impacts from affecting multiple marine zones. This fundamental problem – that the use of part of the ocean can fit within geopolitical lines but the impacts cannot – later formed the basis of the National Ocean Policy.

From the EEZ and the OCSLA to the territorial sea and states' SLA authorities, the ocean is thoroughly demarcated. On the landward side of the water's edge, though, the situation becomes much more complicated. Jurisdictionally, land in the coastal zone is subject to a more complex and less uniform array of political boundaries as well as a series of issue-specific jurisdictional zones. Politically, in a state like New Jersey, there can be coastal areas subject to federal control (e.g., parks, recreation areas, Defense Department facilities, interstate highways and shipping lanes), state control (e.g., state parks, state highways, buildings, preserved open space, and inland waterways), county control (e.g., county parks, county roads and buildings), township control (e.g., boardwalks, roads, parks and, through zoning and planning, private houses). Furthermore, region-wide utility boards, federal commissions (e.g., Delaware River Basin Commission),[19] state authorities (e.g., the Highlands Council),[20] and public-private and bi-state authorities (e.g., the Port Authority of NY and NJ)[21] can all have separate geographic areas under their jurisdiction.

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[14] 43 U.S.C. § 1312. See also definition of coastline as the "line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters" (43 U.S.C. § 1301(c)).
[15] 43 U.S.C. § 1332(3).
[16] UNCLOS, *supra* note 3, at Article 77(1).
[17] UNCLOS, *supra* note 3, at Article 76(1) (note, however, if a nation's shelf does not extend beyond 200 nm from shore, the jurisdictional "continental shelf" ends at the end of the 200 nm EEZ).
[18] 43 U.S.C. § 1332(5).
[19] *See* DELAWARE RIVER BASIN COMMISSION, http://www.state.nj.us/drbc/ (last visited July 9, 2013).
[20] *See* NEW JERSEY HIGHLANDS COUNCIL, http://www.highlands.state.nj.us/ (last visited July 9, 2013).
[21] *See* PORT AUTHORITY OF NEW YORK & NEW JERSEY, http://www.panynj.gov/ (last visited July 9, 2013).

B. History of the National Ocean Policy

"Our oceans are in crisis, threatening coastal communities as well as key pillars of the U.S. economy," said the Honorable William Ruckelshaus, co-chair of the Joint Ocean Commission Initiative, former Director of the Federal Bureau of Investigation, and the first (and later, fifth) Administrator of the Environmental Protection Agency (EPA), on June 7, 2011; "when the oceans are unhealthy, fishermen, business owners, and the U.S. economy at large feel the impact."[22]

In the first comprehensive review of ocean policy to be released in the United States, the Pew Oceans Commission's *America's Living Oceans: Charting a Course for Sea Change* report stated in 2003 that "America's oceans are in crisis and the stakes could not be higher."[23] One year later, in September 2004, the U.S. Commission on Ocean Policy (USCOP) submitted *An Ocean Blueprint for the 21st Century* to President Bush as mandated by the Oceans Act of 2000. Developed with significant nationwide stakeholder and community input, the *Ocean Blueprint* concludes that "[t]he message from both experts and the public alike was clear: our oceans, coasts, and Great Lakes are in trouble and major changes are urgently needed in the way we manage them."[24]

Fast-forwarding to 2011, President Barack Obama proclaimed June to be National Oceans Month in order to "celebrate the value of our oceans to American life and recognize the critical role they continue to play in our economic progress, national security, and natural heritage."[25] This celebration of the ocean came a year after the President issued his Executive Order on the Stewardship of the Ocean wherein he tied our ocean's greatest single pollution event to the need to protect marine resources and promote a clean ocean economy.

> The *Deepwater Horizon* oil spill in the Gulf of Mexico and resulting environmental crisis is a stark reminder of how vulnerable our marine environments are, and how much communities and the Nation rely on healthy and resilient ocean and coastal ecosystems. America's stewardship of the ocean, our coasts, and the Great Lakes is intrinsically linked to environmental sustainability, human health and well-being, national prosperity, adaptation to climate and other environmental changes, social justice, international diplomacy, and national and homeland security.[26]

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[22] Joint Ocean Commission Initiative, Press Release, *Coastal Economies Depend on National Ocean Policy: New Report Calls for Effective Implementation of National Ocean Policy to Protect the Livelihoods of Millions of Americans,* June 7, 2011, *available at* http://www.jointoceancommission.org/news-room/news-releases/2011-06-07_America%27s_Ocean_Future.pdf.

[23] PEW OCEANS COMMISSION, AMERICA'S LIVING OCEANS: CHARTING A COURSE FOR SEA CHANGE V (2003), *available at* http://www.pewtrusts.org/our_work_report_detail.aspx?id=30009.

[24] U.S. COMMISSION ON OCEAN POLICY, AN OCEAN BLUEPRINT FOR THE 21ST CENTURY: FINAL REPORT 4 (2004), *available at* http://govinfo.library.unt.edu/oceancommission/documents/full_color_rpt/welcome.html [hereinafter OCEAN BLUEPRINT].

[25] Press Release, The White House, Presidential Proclamation—National Oceans Month (June 2,m 2011), *available at* http://www.whitehouse.gov/the-press-office/2011/06/02/presidential-proclamation-national-oceans-month.

[26] Executive Order on the Stewardship of the Ocean, Our Coasts, and the Great Lakes, Exec. Order No. 13547, 75 Fed. Reg. 43023 (July 19, 2010), *available at* http://www.whitehouse.gov/files/documents/2010stewardship-eo.pdf.

The National Ocean Policy, borne of discussions like the one above engaged in at varied levels of governance, changing tides of ocean pollution threats, and disasters like the *Deepwater Horizon*, was written to take the management of the oceans into the twenty-first century.

C. The National Ocean Policy

On July 19, 2010, President Obama signed an Executive Order adopting the Final Recommendations of the Interagency Ocean Policy Task Force and establishing a National Policy for the Stewardship of the Ocean, Coasts, and Great Lakes.[27] The stated purpose of the new National Ocean Policy (NOP) is to:

> ensure the protection, maintenance, and restoration of the health of ocean, coastal, and Great Lakes ecosystems and resources, enhance the sustainability of ocean and coastal economies, preserve our maritime heritage, support sustainable uses and access, provide for adaptive management to enhance our understanding of and capacity to respond to climate change and ocean acidification, and coordinate with our national security and foreign policy interests.[28]

The President's Executive Order established the National Ocean Council (NOC) and charged it with providing "appropriate direction to ensure that executive departments', agencies', or offices' decisions and actions affecting the ocean, our coasts, and the Great Lakes will be guided by the stewardship principles and national priority objectives set forth in the Final Recommendations, to the extent consistent with applicable law."[29] The NOP is implemented by the NOC at the national level and by regional planning bodies across the nation.

Regional Planning Bodies (RPBs), made up of federal, state, and tribal representatives, are charged in the Final Recommendations with developing regional Coastal and Marine Spatial Plans, engaging state and tribal partners, and acting as the formal mechanism for consultation with Regional Fishery Management Councils.[30] In carrying out the directive to implement the conclusions of the Final Recommendations, the NOC coordinated the development of a NOP and a NOP Implementation Plan (the Plan). According to the cover letter announcing the finalization of the NOP Implementation Plan, the Plan "represents specific actions Federal agencies will take to bolster our ocean economy, improve ocean health, support local communities, strengthen our security, and provide better science and information to improve decision-making."[31]

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[27] *See generally* NATIONAL OCEAN COUNCIL, NATIONAL OCEAN POLICY FINAL IMPLEMENTATION PLAN (2013), *available at* http://www.whitehouse.gov//sites/default/files/national_ocean_policy_implementation_plan.pdf [hereinafter NOP IMPLEMENTATION PLAN].

[28] Exec. Order No. 13,547, *supra* note 26.

[29] *Id.* at 5(b).

[30] COUNCIL ON ENVIRONMENTAL QUALITY, FINAL RECOMMENDATIONS OF THE OCEAN POLICY TASK FORCE 52-53 (2010), *available at* http://www.whitehouse.gov/files/documents/OPTF_FinalRecs.pdf [hereinafter OPTF FINAL RECOMMENDATIONS].

[31] NOP IMPLEMENTATION PLAN, *supra* note 27, at ii.

Regional coastal and marine spatial plans and maps developed by the RPBs are designed to "enable a more integrated, comprehensive, ecosystem-based, flexible, and proactive approach to planning and managing sustainable multiple uses across sectors and improve the conservation of the ocean, our coasts, and the Great Lakes."[32] Together, the integration of science in decision-making, enhanced coordination and communication among agencies, and initiatives to preserve sustainable uses, promote marine heritage, and respond to climate change are laudable goals. As with any plan, however, the details greatly affect the efficacy of overarching policies and goals.

D. Federal Scope, Regional Flexibility

Regional waterbodies, with unique stressors, unique jurisdictional boundaries, and unique economies, ecologies, and histories, should be afforded unique, tailored protections. As the U.S. Commission on Ocean Policy stated:

> [t]here is a growing awareness that regional approaches can benefit each of the nation's ocean and coastal regions. Focusing efforts within whole ecosystems, rather than arbitrary political boundaries, provides an opportunity for decision makers at all levels to coordinate their activities, reduce duplication of efforts, minimize conflicts, and maximize limited resources. It also promotes a sense of stewardship among government, private interests, and the public by encouraging a shared feeling of connection to a specific area.[33]

The USCOP highlights several regional approaches, including the Chesapeake Bay Program, the Delaware River Basin Commission, the California Bay-Delta Authority, the Gulf of Mexico Program, and the Great Lakes Program, each of which have "taken different approaches to address pressing regional issues, although a hallmark of most efforts is the establishment of measurable goals and clear implementation strategies for achieving healthier regional ecosystems."[34]

In recognizing that localities have different policy goals and management needs, the Implementation Plan focuses about 10% of its milestone action targets on supporting what the plan calls "local choices." According to the Plan, there are already "myriad tribal, State, regional, and local efforts to support and grow marine economies, protect and conserve the environment that supports quality of life, and sustain unique social and cultural identities."[35] The NOC, tasked in the Plan with providing "tools and services that support and build on" local initiatives, is less a director of local action, but rather a facilitator of existing programs.[36] In this sense, the NOC dictates that federal agencies will be providing data, analyses, and reports where more information is needed, and providing logistical and partnership-based support for regional ocean partnership activities and programs already underway.

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[32] Exec. Order No. 13,547, *supra* note 26.
[33] OCEAN BLUEPRINT, *supra* note 24, at 87.
[34] *Id.* at 88, box 5.1.
[35] NOP IMPLEMENTATION PLAN, *supra* note 27, at 19.
[36] *Id*.

Most significantly, the Plan emphasizes the NOC's intent to support locally chosen priorities through regional marine planning. The goal of marine planning would be to "provide a more coordinated and responsive Federal presence and the opportunity for all coastal and ocean interests in a region to share information and coordinate activities."[37] Built on existing programs and partnerships, marine planning is supposed to be "defined by the regions themselves, to solve problems that regions care about in ways that reflect their unique interests, capacity to participate, and ways of doing business," yet the NOC notes that "[i]n turn, regional actions will support national objectives to grow the ocean economy, increase regulatory efficiency and consistency, and reduce adverse impacts to environmentally sensitive areas."[38] This countervailing pressure to conform to the overall goals of the NOP leads to some questions as to whether local priorities could ever define the bounds of federal agency policy. If states (such as those of the MAO) choose to use existing partnerships and policies to limit uses like oil and gas activities, which are included in the federal definition of "ocean economy," – would federal agencies follow suit?

Given that the NOP "does not create new regulations, supersede current regulations, or modify any agency's established mission, jurisdiction, or authority," it is likely that if a region like the MAO were to move to preclude something like oil and gas activities on the OCS, federal agencies would still be bound by the OCSLA – and, essentially, required to move ahead under Congressionally determined policy.[39] Next, this Article turns to local application of the NOP, as well as other existing, innovative, or emerging tools for ocean management.

III. The MAO, NY/NJ Bight, and Charting a Way Forward

A. Current State of the MAO's Environment and Economy

On June 4, 2009, the Governors from New York, New Jersey, Maryland, Virginia, and Delaware signed the "Mid-Atlantic Governors' Agreement on Ocean Conservation" (MARCO) with the intent of fostering a cooperative and constructive relationship among the States to manage their ocean and coastal resources. The States' interest in managing their ocean and coastal resources is in part rooted in their need to protect and conserve the ecosystem and in part to further the States' economy. The tourism industry relies heavily on states' coastal resources as visitor destinations; in 2012, the State of New Jersey generated nearly $40 billion in revenue from tourism, directly supporting 318,500 jobs (10% of total employment).[40] The State estimates that coastal tourism, fishing, and recreation (and the indirect economies derived therefrom) at the Jersey Shore drives over 60% of the State's economy.

New Jersey coastal counties (Atlantic, Cape May, Ocean, and Monmouth) are home to over 1.5 million residents.[41] With New York City's harbor population and coastal Long Island, the northern half

[37] *Id*. at 21.
[38] *Id*.
[39] *Id.* at 2.
[40] PowerPoint Presentation, Tourism Economics, The Economic Impact of Tourism in New Jersey (2012) http://www.visitnj.org/sites/visitnj.org/files/2012-nj-tourism-ei-state-counties-v0701.ppt.
[41] Data drawn from Table 1 in U.S. CENSUS BUREAU, NEW JERSEY: 2010: SUMMARY POPULATION AND HOUSING CHARACTERISTICS (2012), *available at* http://www.census.gov/prod/www/decennial.html.

of the MAO is home to an additional 9.6 million people.[42] Millions of tourists from inland New York, New Jersey, vacationers from the rest of the nation, and millions of people from all over the world also travel to the shores of the MAO for business, pleasure, or both.

The coasts of New York and New Jersey along with the edge of the continental shelf slope break create a wedge within the MAO; this wedge is an area of water officially known as the New York Bight ("the Bight").[43] According to the US Fish and Wildlife Service, the Bight, and the greater MAO, "is vital to migratory birds, anadromous fish, and several species protected by the federal and State endangered species laws."[44] This biodiversity – 38 stocks of marine mammals and 5 species of sea turtles – includes several endangered and threatened species.[45] On top of these species of concern, the Bight is home to over 300 species of fish and nearly 350 species of birds. The coastal wetlands and shoreline habitats from Cape May to Montauk are attractive stopover points for countless species of migratory fish and birds.

Economically, the MAO is a powerhouse of activity, driving the region's commerce through trade, tourism, and resource development. The largest port on the U.S. east coast and the third-largest port in the nation, the Port of New York and New Jersey is at the apex of the MAO and moved over $208 billion in cargo in 2011.[46] The Port handled over 5.5 million cargo containers in 2011, bringing over 86 million tons of goods into and out of the Port.[47] The Port Authority, which manages the Port, estimates that the Port's economic impact supports over 279,000 jobs in the region.[48]

With all of this commerce, and because of the millions of people that live and travel to the MAO each year, the tourism industry is similarly robust – bringing in billions of dollars to the economies of New York and New Jersey. The hotels, motels, cabins, and resorts; the surfing, cycling, fishing, boating, and swimming businesses; and the restaurants, food carts, beach bars, and shops of the Bight all depend on a clean ocean and clean beaches.

Beyond commerce and tourism, the MAO also sustains multi-billion dollar commercial and recreational fisheries. In 2011, in New York State, the "recreational fishing industry generated $369 million in sales, contributed $212 million to gross state product, and supported 3,000 jobs across the broader state economy."[49] The commercial fishery, also in 2011, "generated $5 billion in sales,

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[42] *Id.*

[43] J.B. Pearce, *The New York Bight*, 41 MARINE POLLUTION BULLETIN 44-55 (2000).

[44] U.S. Fish and Wildlife Service, Hudson River-New York Bight Ecosystem Team 1 (2005), *available at* http://www.fws.gov/northeast/nyfo/hot/HudsonRiverNYBight.pdf.

[45] National Oceanic and Atmospheric Administration, Notice of Availability, Marine Mammal Stock Assessment Reports, 78 Fed. Reg. 19,446 (April 1, 2013). Table 1, which contains a summary of Atlantic Marine Mammal Stock Assessment Reports, is available at http://www.nmfs.noaa.gov/pr/sars/pdf/ao2012_summary.pdf.

[46] The Port Authority of NY & NJ, Trade Statistics of the Port of New York and New Jersey 1 (2011), *available at* http://www.panynj.gov/port/pdf/port-trade-statistics-bar-C2c-2011.pdf.

[47] *Id*.

[48] *Regional Economic Benefits of the Port Authority of NY & NJ*, THE PORT AUTHORITY OF NY & NJ, http://www.panynj.gov/port/regional-economic-benefits.html (last visited July 11, 2013).

[49] NOAA FISHERIES, REGIONAL IMPACT EVALUATION: AN INITIAL ASSESSMENT OF THE ECONOMIC IMPACTS OF SANDY ON NEW JERSEY AND NEW YORK COMMERCIAL AND RECREATIONAL FISHING SECTORS 1-2 (2013), *available at* http://www.st.nmfs.noaa.gov/Assets/economics/documents/sandy/Final_Report_Sandy_Regional_Impact_Evaluation_MSA.pdf.

contributed $1.8 billion to gross state product, and supported 42,000 jobs across the broader economy."[50]

In New Jersey, the fisheries impacts are even larger – owing to both the higher number of recreational fishing opportunities as well as the larger quantity of fish landed commercially. In 2011, "the commercial fishing industry generated $6.6 billion in sales, contributed $2.4 billion to gross state product and supported 44,000 jobs across the broader state economy."[51] Recreational fisheries "generated $1.7 billion in sales, contributed $871 million to gross state product and supported 10,000 jobs."[52] Among the 28 official "fishing communities" of New York and New Jersey are four of the nation's most economically valuable fishing ports (Point Pleasant Beach, Cape May, Montauk, and Barnegat Light).[53] Commercially and recreationally, the MAO's fishery value is unquestionable.

The MAO, and the Bight within it, is unique – economically and environmentally. Fed by the cold Labrador Current from the north, the Gulf Stream from the south, and the freshwater inputs from the Hudson River to the northwest, the region is a confluence of different species, ocean chemistries, and stresses. With mud flats, reefs, underwater canyons, shipwrecks, and hundreds of miles of beach, there is ample habitat diversity in the region. The fertile waters of the MAO need unique forms of protection that go beyond pollution prevention and control. When commerce, fisheries, robust tourism, and the most densely populated coastline in the nation mix, there are a host of overlapping jurisdictions and programs with interests in the outcome of NOP planning and policy development.

B. Jurisdictional Lines in the Waves

Environmentally (and therefore economically) there is a complex array of overlapping jurisdiction on the landward side of the coastline. From Clean Water Act (CWA) areas subject to Environmental Protection Agency (EPA) or Army Corps of Engineers (Corps) control to Coastal Zone Management Act (CZMA) program areas and endangered species habitats, the activities allowed even within one political area like a federal park are regularly subject to a variety of different issue-based jurisdictions. Beyond the overlaps in legal jurisdiction, the MAO is home to many administratively inconsistent program delineations. Agency jurisdictions for energy production, fisheries, and Liquefied Natural Gas ports and facilities, throughout the MAO, are misaligned.

At the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE), formerly the Minerals Management Service (MMS), New York and New Jersey are located within the Atlantic OCS region (one of four: Atlantic, Gulf, Pacific, and Alaska (though the agencies only have offices in the latter three)),[54] and, more specifically, the North Atlantic OCS planning

[50] *Id.*
[51] *Id.*
[52] *Id.*
[53] NATIONAL MARINE FISHERIES SERVICE OFFICE OF SCIENCE AND TECHNOLOGY, FISHERIES OF THE UNITED STATES: 2011 at 9 (2012), *available at* http://www.st.nmfs.noaa.gov/st1/fus/fus11/FUS_2011.pdf; *see also Mid-Atlantic Fishing Communities Profiles*, MID-ATLANTIC FISHERY MANAGEMENT COUNCIL, http://www.mafmc.org/fishing-communities (last visited July 11, 2013).
[54] *See BOEM Regions*, BUREAU OF OCEAN ENERGY MANAGEMENT, http://www.boem.gov/About-BOEM/BOEM-Regions/Index.aspx; *see also BSEE Regions*, BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT, http://bsee.gov/About-BSEE/BSEE-Regions/BSEE-Regions.aspx (last visited July 10, 2013).

area.[55] Based on a 2006 MMS rulemaking, every coastal state also has its own regulation-defined OCS adjacent coastal state area.[56]

Governed by the Magnuson-Stevens Fishery Conservation and Management Act (MSA), fisheries of the U.S. have a slightly different jurisdictional structure. Like mineral resources on the OCS are claimed under the OCSLA, jurisdiction over fisheries of the U.S. continental shelf and EEZ, with some limited exceptions for highly migratory species, is claimed pursuant to the MSA.[57] While states, under the Submerged Lands Act, can manage their own fisheries (within state waters), the MSA allows the National Oceanic and Atmospheric Administration (NOAA) fisheries agency, the National Marine Fisheries Service (NMFS, or NOAA Fisheries) to manage fisheries within state waters if a state's action or inaction affects a fishery that has a federal fishery management plan.[58]

For the fishery management decisions, there are three sets of maps and managers relevant to the MAO. First, NMFS's northeast regional office (NERO) is the agency's hub. Northeast regional science centers are coordinated from NERO, as are habitat, endangered species, budgets, and funding systems. NERO's geographic scope encompasses the MAO – it oversees NMFS's interests from the Gulf of Maine to North Carolina, as well as inland water states around the Great Lakes.[59] Second, unlike the administratively built NERO, eight regional Fishery Management Councils (FMCs) were statutorily created in 1976.[60] These FMCs have a variety of functions, from developing annual catch limits to interacting with the public.[61] The Mid-Atlantic FMC's geographic jurisdiction spans from New York to North Carolina.[62] Third, the Atlantic States Marine Fisheries Commission (ASMFC) has jurisdiction over a host of fisheries, solely or in conjunction with the Mid-Atlantic FMC, from Maine to Florida, including Washington, DC.[63] Added to shipping and commerce areas, energy areas, dumpsites, wrecks, reefs, and sand borrow pits, the MAO is replete with inconsistent and overlapping jurisdictions.

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[55] *See* Bureau of Ocean Energy Management, OCS Oil and Gas Leasing Program 2012-2017 Lower 48 State Planning Areas (2012), *available at* http://www.boem.gov/uploadedFiles/BOEM/Oil_and_Gas_Energy_Program/Leasing/Five_Year_Program/2012-2017/Program_Area_Maps/Lower%2048%20State%20Planning%20Area.pdf .

[56] U.S. Mineral Management Service, Federal Outer Continental Shelf (OCS) Administrative Boundaries Extending from the Submerged Lands Act Boundary seaward to the Limit of the United States Outer Continental Shelf, 71 Fed. Reg. 127, 129 (Jan. 3, 2006).

[57] 16 U.S.C. § 1811(a). *See also* 16 U.S.C. § 1812 on highly migratory species jurisdiction.

[58] *Id.* § 1856(b).

[59] *See NOAA Fisheries Northeast Regional Office*, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, http://www.nero.noaa.gov/nero/links/div.htm (last visited Sept. 13, 2013).

[60] 16 U.S.C. § 1852(a)(1).

[61] *Id.* § 1852(h).

[62] *Id.* § 1852(a)(1)(B).

[63] *See id.* §§ 5101 – 5108.

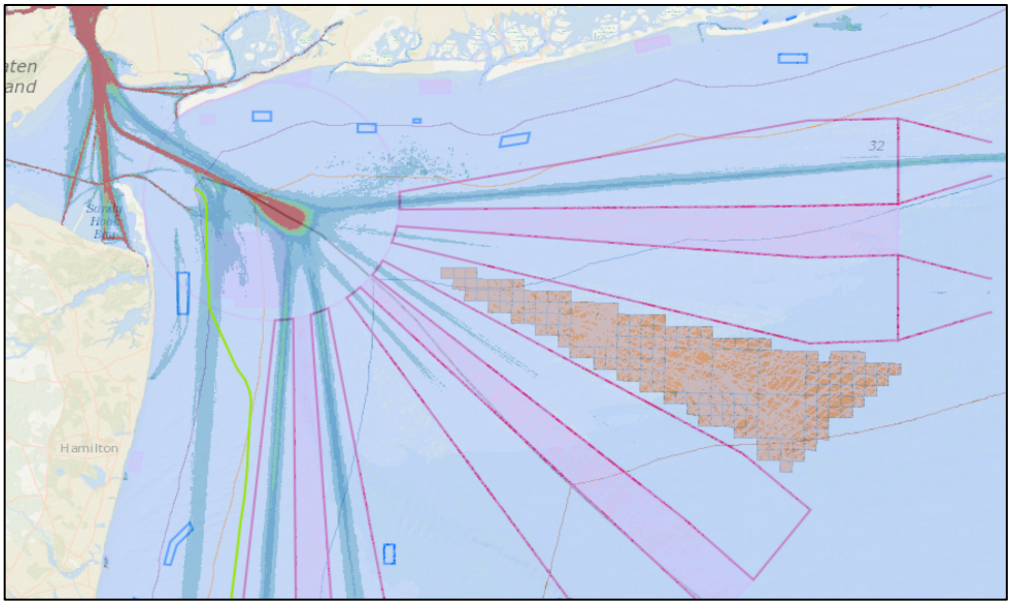

Figure 1. Map of overlapping jurisdictions in the MAO, showing shipping lanes, territorial seas, contiguous zone, AIS vessel tracking data, dumpsites and reefs, and offshore wind leasing areas (Source: MARCO Data Portal, 2013).

Defining "adjacent" (for the purposes of a states' involvement) is also inconsistent among federal programs. As noted above, under OCSLA and BOEM/BSEE regulations, coastal states have specifically defined adjacent ocean areas. Under the federal Deepwater Port Act (DPA), which governs the licensing of oil, gas, and Liquefied Natural Gas ports on the OCS, being declared an adjacent coastal state gives a coastal governor significant authority and input in federal decision-making. Unfortunately, unlike OCSLA rules, there are no regular maps of what is an adjacent coastal state; that determination is made on a case-by-case basis.[64] Under the Coastal Zone Management Act (CZMA), a federal "activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State management programs."[65] The "coastal zone" referenced in the CZMA is defined as the SLA state waters (the ocean out to three nautical miles) and onshore lands that "have a direct and significant impact on" such coastal ocean waters.[66] Because the consistency trigger depends on the effect of a project on a state's waters, much like the DPA, whether a state is adjacent to a project for CZMA review requires a case-by-case analysis.

Thus, even something as simple as determining which states' resources are affected (OCSLA, MSA), which governors get enhanced access to decisionmaking (DWPA), and which programs must be adhered to (CZMA), is inconsistently determined across federal agencies. While the jurisdictions

[64] 33 U.S.C § 1508. An adjacent coastal state is "any coastal State which (A) would be directly connected by pipeline to a deepwater port as proposed in an application, or (B) would be located within 15 miles of any such proposed deepwater port." *Id*. at § 1508 (a)(1).
[65] 16 U.S.C. § 1456(c)(1)(A).
[66] *Id.* § 1453(1).

present a checkerboard on a map of areas of influence, the authorities are very real. In examining what those tools are, a more fluid picture can be painted of the current MAO management system.

C. Federal Tools for Managing the MAO

Overall, environmental impacts to the MAO come from a variety of sources and the pollution control laws built to address those sources are similarly varied. From the CWA's beaches program amendments to new coal air rules, there are any number of ways pollution control laws can impact the MAO ecology and economy.

1. Clean Air Act

The Clean Air Act's (CAA) purpose statement includes the protection and enhancement of the Nation's air resources and the provision of assistance for the development and operation of regional air pollution prevention and control programs.[67] The basic structure of the CAA includes: (1) a harm-based approach (Title I) that relies on federal air quality standards to protect public health (NAAQSs – National Ambient Air Quality Standards) and state regulation of stationary air pollution, (2) a technology-based approach that requires "best available technology" for new stationary source performance standards or "maximum available control technology" for regulation of hazardous air pollutants, (3) technology-forcing (Title II) standards for reductions of automobile and truck tailpipe emissions, and (4) a market-enlisting (Title IV) emissions trading program, primarily for sulfur dioxide.[68] In terms of managing coastal ecosystems, and the oceans in particular, attention should focus on the harm-based approach, or NAAQSs. Currently, NAAQSs have been developed for the following pollutants: sulfur dioxides, nitrogen oxides, particulate matter, carbon monoxide, ozone, and lead.

On first impression, the CAA would not be considered an environmental statute utilized to manage coastal ecosystems and oceans, but due to climate change the CAA can play an important role in ocean management. Carbon dioxide (CO_2), one type of greenhouse gas, plays a critical role in climate change. Carbon dioxide is absorbed from the atmosphere into the ocean at a rate of 22 million tons each day.[69] The impact of increased CO_2 on the ocean results from the interaction of CO_2 with salt water causing the water to become more acidic.[70] Ocean acidification harms marine life and the wider ecosystem. Harms include the decline of coral reef growth, inhibiting the calcification of certain marine invertebrates (crabs, mussels), and additional stress to marine life increasing their susceptibility to disease and pollution.[71]

Carbon dioxide, however, is not a pollutant currently regulated under the NAAQS classification. In *Massachusetts v. EPA*, the Supreme Court held that the CAA authorizes EPA to regulate greenhouse gas emissions from new motor vehicles if the emissions contribute to climate change; and EPA must

[67] CAA § 101(b)(1)-(4), 42 U.S.C. § 7401(b)(1)-(4).
[68] ZYGMUNT J.B. PLATER ET AL., ENVIRONMENTAL LAW AND POLICY: NATURE, LAW, AND SOCIETY 465-66 (4th ed. 2010).
[69] Miyoko Sakashita, *Harnessing the Potential of the Clean Water Act to Address Ocean Acidification*, 36 ECOLOGY L. CURRENTS 239 (2009).
[70] *Id.*
[71] *Id.*

take regulatory action unless it determines that greenhouse gases do not contribute to climate change or provide a reasonable explanation as to why it cannot or will not exercise its authority.[72] On December 7, 2009, EPA announced that greenhouse gases threaten the health and welfare of Americans and that greenhouse gases that contribute to climate change can be regulated under the CAA.[73] The announcement that greenhouse gases threaten the health and welfare of humans and the Supreme Court's holding in *Massachusetts v. EPA* provide a foundation for the potential development of NAAQSs for greenhouse gases, including carbon dioxide. Armed with these tools for combating climate change, the EPA can tackle the cause of many of the problems facing the MAO, from coastal pollution to fisheries phenology shifts.

Over the short-term, CAA regulations should generate at least one water quality improvement in the MAO. In addition to carbon dioxide regulation under the CAA, Congress passed CAA Amendments on November 15, 1990 to impose a cap and trade approach to reduce sulfur dioxide emissions from power plants in order to reduce acid rain.[74] Most recently, EPA issued Mercury and Air Toxic Standards on December 21, 2011 to limit mercury and toxic air pollution (arsenic, acid gas, nickel, selenium, and cyanide) from coal- and oil-fired power plant emissions.[75] These pollutants can make their way into inland freshwater systems (rivers, streams, lakes) and interconnect with coastal water through bays and tidal salt marshes along the entire MAO coastline. Given that all water flows downhill, pollution from freshwater and brackish water systems affects the oceans and coasts, and reductions in the deposition of airborne toxic substances will lead to reductions of pollutants at sea.

2. Clean Water Act

The CWA stands as a model for water quality protection – one of the tenets of the NOP – and was drafted "to restore and maintain the chemical, physical, and biological integrity of the nation's water."[76] In order to meet this objective, the CWA requires permits for discharging any pollutant from a point source into waters of the United States. The "Waters of the United States" includes navigable waters, territorial seas, the contiguous zone, and the ocean.[77] Specifically within the MAO, advances in ocean water quality protection were made in February 2009, when EPA regulation exempting incidental vessel discharges from the permitting requirements of the CWA was vacated.[78] Discharges of sewage from vessels, effluent from marine engines, laundry, shower, galley sink wastes, and other discharges incidental to the normal operation of a vessel must now obtain a CWA permit prior to discharge in the ocean.[79] These permits are statutorily required (though this is not always achieved in practice) to gradually reduce the level of effluent permitted. Over time, permitted sources of pollution that affect the ocean should, as the result of the CWA, pose less and less of a problem to the marine ecosystem.

[72] Massachusetts v. EPA, 127 S. Ct. 1438 (2007).
[73] *Milestones in EPA and Environmental History*, U.S. ENVIRONMENTAL PROTECTION AGENCY, http://www2.epa.gov/aboutepa/epa-history (last visited July 10, 2013) [hereinafter *EPA Milestones*].
[74] *Id.*
[75] *Id.*
[76] CWA § 101(a), 33 U.S.C. § 1251(a).
[77] *Id.* § 1362(7)-(10).
[78] U.S. v. Adam Bros. Farming, Inc., 369 F. Supp. 2d 1166, 1174 (C.D. Cal. 2003).
[79] *Id.*

The problem with this idealistic statutory goal is that over-development leads to more and more point sources and more and more unregulated non-point sources, cumulatively affecting water quality. To date, especially in the over-developed MAO region, the CWA has not provided an answer to this problem.

The MAO can also be managed through national-level policymaking within the EPA's National Estuary Program.[80] Congress established the National Estuary Program in 1987 to improve the quality of estuaries of national importance. Pursuant to CWA § 320, the EPA can designate estuaries and develop management plans upon the determination "that the attainment or maintenance of that water quality in an estuary which assures protection of public water supplies and the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife and allows recreational activities, in and on water, requires that control of point and nonpoint sources of pollution to supplement existing controls of pollution."[81] Several states participate in the National Estuary Program (NEP), in which each designated estuary must develop a Comprehensive Conservation and Management Plan.[82] Along the MAO's coasts, there are three NEPs: the New York-New Jersey Harbor Estuary Program, the Barnegat Bay Partnership, and the Delaware Center for the Inland Bays. Without authority to issue permits, take enforcement action, or hold states accountable for violations, these programs are statutorily limited. They have, however, provided a wealth of information and serve as a springboard for collaboration between local, state, and federal partners. In this capacity, NEPs have critical roles to play in NOP implementation.

In 2000, the CWA was augmented through the Beaches Environmental Assessment and Coastal Health (BEACH) Act which was designed "to improve the quality of coastal recreation waters."[83] The MAO's population and land cover contributes to the environmental stress of the coastal region. During rainfall events runoff from the land enters the streams and rivers. The streams and rivers flow into to coastal areas. For instance, agricultural and urban runoff leads to increased nutrients (nitrogen and phosphorus) and pathogens in coastal waters. In particular, pathogens (fecal coliforms, *E. coli*, and *Enterococci spp.*) are monitored at beaches to ensure public health and unsafe levels will result in beach closures.

The BEACH Act program provides grants to states to monitor water quality at beaches and to notify the public when contamination levels exceed national criteria, which are set based on mandated studies of poor water quality impacts to public health.[84] While the program was authorized to distribute up to $30 million per year to states with approved sampling, notification, and protection programs, Congress has only usually appropriated around $10 million.[85] This program could be used to drive sewage infrastructure repair (after tracking down sources of sewage which lead to impairments), to protect coastal tourism (by protecting swimmers), and to encourage collaboration, informed decision-making,

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[80] *Estuaries and Coastal Watersheds*, U.S. ENVIRONMENTAL PROTECTION AGENCY, http://water.epa.gov/type/oceb/nep/index.cfm (last visited Sept. 13, 2013).
[81] 33 U.S.C. § 1330(2)(A).
[82] For more information on Comprehensive Coastal Management Plans for each National Estuary Program, *see* http://water.epa.gov/type/oceb/nep/index.cfm#tabs-2.
[83] P.L. 106-284 (2000).
[84] *Id.* at §§ 2-4.
[85] *Id.* at § 4.

and technology transfers among states and federal agencies. Recently, budget proposals from both the White House and Congress have proposed to zero out funding for this program, which would mean that states would be free to set public health standards below those deemed safe for swimming by the EPA.[86]

3. Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, commonly referred to as "Superfund") imposes retroactive liability on a broad group of individuals/entities, known as "responsible parties," to secure prompt environmental cleanups of hazardous substance releases into the environment. Responsible parties include owners and operators (past and present) of hazardous waste facilities, arrangers (persons who arrange for the disposal of hazardous waste), transporters, and insurers. CERCLA is based on the polluter-pays principle (PPP) meaning that costs of environmental harm be imposed on those whose actions caused the harm.[87] Under CERCLA, Congress acted to preserve offshore lands pursuant to natural resources liability and designation of public trustees of natural resources.[88] For instance, in *United States v. Montrose Chemical Corporation of California,* the United States and California were able to bring a lawsuit under CERCLA against ten owners and operators of manufacturing plants that released hazardous substances, such as DDT and PCBs, into offshore lands through county wastewater treatment systems.[89] Unfortunately, in the MAO, despite the numerous Superfund sites bordering the ocean, very few at-sea CERCLA-based actions have been brought to address water quality issues, though there are many river and estuary CERCLA actions.

One common scenario in which CERCLA provides protection to the oceans occurs during transport of hazardous waste by boat. Obviously if a hazardous waste spill occurs into the ocean during transport the transporter may be held liable. The same is true even if the hazardous waste "spill" into the ocean occurs through the loss of barrels of materials. The shipped containers/barrels holding the hazardous material are considered "facilities" within the meaning of CERCLA.[90] However, one limitation to CERCLA results from its exclusion of petroleum and its distillates from coverage.[91] Oil spills that occur, such as the BP *Deepwater Horizon* oil disaster, are regulated under the CWA and Oil Pollution Act.

4. Marine Protection, Research, and Sanctuaries Act

In 1972, Congress enacted the Marine Protection, Research, and Sanctuaries Act (or Ocean Dumping Act) to reduce pollution in the ocean.[92] Due to some of the highest coastal population density

[86] *See* OFFICE OF MANAGEMENT AND BUDGET, WHITE HOUSE, FY2013 Proposed EPA Budget 180 (2013), *available at* http://www.whitehouse.gov/sites/default/files/omb/budget/fy2013/assets/environmental.pdf.
[87] PLATER, *supra* note 68.
[88] CERCLA § 107(f)(1), 42 U.S.C. § 9607(f)(1) .
[89] U.S. v. Montrose Chemical Corp. of Cal., 835 F. Supp. 534 (C.D. Cal. 1993).
[90] U.S. v. M/V Santa Clara I, 887 F. Supp. 825 (S.C. Dist. Ct. 1995).
[91] 42 U.S.C. § 9601(14).
[92] *EPA Milestones, supra* note 73.

in the nation, the MAO's ecosystem and productivity is continually diminished by present and historical pollution and industrialization activities. The waters of the MAO had been used as a dumping ground since at least the 1800s and were the ocean dumping "Capital of the World" in the mid-1980s. With acid, medical waste, sewage sludge, and dredged material dumpsites literally littering the seascape, fisheries, diving, and tourism activities significantly decreased in the NY/NJ Bight. The Ocean Dumping Act requires a permit for any dumping of material into the ocean (beyond state waters).[93] Amendments made to the Act in 1988 prohibited the issuance of permits (by the EPA or the Army Corps of Engineers) for the dumping of industrial waste or sewage sludge.[94]

In the MAO, the former ocean dumping capital of the world, home of the largest port on the east coast, and near the oldest, most densely populated urban area of the nation, the Ocean Dumping Act has a vital role to play in federal management of the ocean. From special New York Bight protections[95] to dumping bans brought about by citizen action,[96] the Act was a key component of the fisheries, tourism, and recreation economic remediation in the MAO. Under the Act, the historic "mud dump" site, which had seen decades of dredged material disposal, was closed to dumping by the Army Corps and EPA in the 1990s, although it was later reopened as a remediation site called the "Historic Area Remediation Site." Because the site is no longer for "dumping" (it is a remediation site), the transport of material for dumping at sea does not violate the 1988 ban on new dumping authorizations. Technically, new dump sites could be allowed in parts of the MAO for a restricted number of types of materials. Ironically, the Ocean Dumping Act, long an example of the federal government stopping – and then remediating – pollution problems in the MAO, could still be used to burden the MAO with new sources of pollution.

Overall, these federal pollution statutes have two things in common. First, the cumulative effects of all of these sources of pollution are not adequately measured. Proposals like the Clean Ocean Zone (discussed below) attempt to address this, while initiatives like the NOP explicitly stay clear of generating new authorities or regulations. Second, decisions made under these laws (with respect to permits, permit conditions, regulations, standards, etc.) can all be taken back or weakened by changes in statutorily driven policy or by Congressional mandates. Without a system in place that sets clear standards for water, air, and ecosystem quality, ***and*** a system for following through on implementation, federal pollution control mechanisms cannot, by themselves, fulfill the goals of the people and industries of the MAO.

D. State Control over MAO Marine Activities

In the MAO, there are two statutes that give states direct control over federal activities in the MAO, the Coastal Zone Management Act and the Deepwater Port Act. "Within 50 nautical miles of the shore from New York to Virginia, there are roughly 410 gigawatts of wind energy potential covering an area

[93] 33 U.S.C. § 1411(a).
[94] *Id.* § 1414b(a).
[95] *Id.* § 1414a(a).
[96] *Id.* § 1414b(a).

of 82,000 square kilometers."[97] This potential recently led MARCO, the coalition of MAO governors, to take a hard look at their Coastal Zone Management Act (CZMA) policies to ensure that offshore wind development, and other offshore uses, were examined for consistency with state programs. As mentioned above, under the CZMA, "any federal activity, including authorized uses of federal waters, that may affect the uses or resources of a state's coastal zone must be consistent with that state's enforceable coastal management policies: federally leased or permitted activities must be fully consistent with the enforceable policies, while direct federal agency actions must be consistent with enforceable state coastal policies 'to the maximum extent practicable."[98]

According to MARCO, the coastal resources of the MAO states, including "beaches and dunes, fish, marine mammals, sea turtles, birds, critical habitats and migratory pathways, high quality air and water, scenic viewsheds, and areas of historical and archeological significance," are vital to the region's economy.[99] The "enforceable policies" common to all the MAO states, which govern activities like wind development or offshore LNG ports (to name two issues facing the region), are broadly summarized as:

- For submerged lands and wetlands, "minimizing and mitigating wetland degradation, preserving beaches and dunes, preventing erosion, and limiting the impact on submerged aquatic vegetation and terrestrial land uses and vegetation;"

- For habitat protection and migratory species, it is the position of the states "to minimize adverse impacts on significant fish and wildlife habitat, including areas important for reproduction, spawning, and migration," with policies that "protect water quality for fish and wildlife production, restrict dredging in and near sensitive habitat areas, and prohibit development that adversely affects shellfish habitat or impairs movement of designated species along migratory pathways;"

- For commercial and recreational fishing, the states prioritize protecting "water quality for aquatic life and recreational use, including limiting the introduction of pollutants that bioaccumulate in fish," such as mercury, discussed above under the CAA, while also requiring "electrical facilities to be sited and planned in a manner that protects access to and the productivity of areas valued for fishing, crabbing, and the gathering of other marine life useful in food production;" and

- For shipping, "the states commonly require electrical facilities to be sited and planned in a manner that minimizes adverse impacts on navigation and commerce, including addressing effects on ports and shipping uses."[100]

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[97] ENVIRONMENTAL LAW INSTITUTE, A GUIDE TO STATE MANAGEMENT OF OFFSHORE WIND ENERGY IN THE MID-ATLANTIC REGION 1 (2013), *available at* http://www.midatlanticocean.org/owe_April2013.pdf [hereinafter OWE GUIDE].
[98] *Id.* at i (citing 16 U.S.C. § 1456; 15 C.F.R. § 930).
[99] *Id*.
[100] *Id*. at ii.

Using these policies, the states can exert some control over federal agency decisions. There are significant limits, however, in practice and as the result of politics. Inconsistency is not often declared, and, even when declared, such a declaration is not always successful in blocking a project. Under the CZMA, an applicant for a license can appeal an inconsistency determination to the Secretary of Commerce.[101] Appeals seek a determination from the Secretary of Commerce that a license is consistent with the CZMA's goals or is necessary for national security; if either is found, the Secretary can overrule the state's inconsistency determination.[102] The placement of this condition on coastal zoning planning is very similar to the NOP caveat of support for local decisions – federal agencies will support local efforts wherever possible, given that those local outcomes help further the national agenda.

Despite the risk of Secretarial override, the CZMA can be used by states to control the outcome of federal agency decision-making. One example of a project blocked by a state under the CZMA was Broadwater LNG, a proposed FERC-licensed Liquefied Natural Gas (LNG) terminal which would have been located in Long Island Sound. The State of New York, during FERC review of the terminal, declared the facility to be inconsistent with the Long Island Sound Coastal Management Program – a finding that was supported, after appeal, by the Secretary of Commerce.[103]

The Deepwater Port Act (DPA), [104] enacted to provide for the licensing of oil and natural gas (as LNG) facilities located at sea beyond state waters, provides one of the clearest examples of state-level control over federal decision-making. Under the DPA, governors of states deemed "adjacent coastal states" are given the authority to entirely close the door on a license for a deepwater port. Adjacent Coastal States (ACS) are defined as those states that are within 15 miles of a deepwater port proposed location, or are directly connected to a port.[105] If a state is not declared an ACS upon the project's official public notice of application, a Governor can request such status.[106] The Secretary of Transportation then has 45 days to decide if "there is a risk of damage to the coastal environment of such State equal to or greater than the risk posed to" the declared ACSs.[107] Once declared, an ACS governor has the power to disapprove of a license – subject to one procedural backstop and one substantive limitation.[108] First, procedurally, a governor cannot "pocket veto" a deepwater port license by withholding approval. According to the DPA, "[i]f the Governor fails to transmit his approval or disapproval to the Secretary not later than 45 days after the last public hearing on applications for a particular application area, such approval shall be conclusively presumed."[109] This means that governors can approve a port, disapprove ("veto") a port, or let their decision be made for them by letting the statutory clock expire. Second, substantively, if a governor vetoes a port solely because it would not be

[101] 16 U.S.C. § 1456(c)(3).
[102] *Id*.
[103] Press Release, NOAA, Department of Commerce Upholds NY State Objection to Broadwater LNG Project (Apr. 13, 2009), *available at* http://www.noaanews.noaa.gov/stories2009/20090413_broadwater.html.
[104] *See* 33 U.S.C. §§ 1501-1524.
[105] *Id.* § 1508(a)(1).
[106] *Id*. § 1508(a)(2).
[107] *Id*.
[108] *Id.* § 1508(b)(1) ("The Secretary shall not issue a license without the approval of the Governor of each adjacent coastal State.").
[109] *Id*.

consistent with "programs relating to environmental protection, land and water use, and coastal zone management, the Secretary shall condition the license granted so as to make it consistent with such State programs."[110] In this case, the DPA has a loophole for LNG ports that the CZMA (see discussion of the Broadwater LNG terminal, above), did not; for at-sea LNG facilities, coastal zone inconsistency is not the last word. Nonetheless, under the DPA, if a governor decides that a proposal is not in the interests of a state, the state can tell the federal agencies "no" – a bottom-up veto not regularly seen in federal environmental laws.

The limitation of both of these state-level checks on federal agency decision-making in the MAO is that if a state prohibits an action under the CZMA or the DPA, the applicant for that permit, license, or authorization can always re-apply, triggering new review. In the MAO, over the past few decades, political control of the state governments of places like New York and New Jersey has run in cycles. If applicants, turned away by one administration, can re-start federal permit processes once a new state administration takes control, management of the ocean will forever be locked in a case-by-case series of analyses.

E. Implementation of the NOP in the MAO

Returning to the idea of NOP implementation in the MAO, it is important to reiterate that the NOC's mission is "to achieve greater efficiency and effectiveness, with a focus on reduced bureaucracy, improved coordination and integration, and fiscal responsibility" – not to re-write regulations or change statutorily mandated programs.[111] In the MAO, with a series of federal pollution prevention laws establishing minimum levels of pollution and two laws giving states some control over federal permits, licenses, and authorizations, the NOP's focus on existing partnerships and existing programs allows ocean managers to fill in the gaps.

If there are programs in place at the state level that NOC implementation activities can or should support, and these areas do not conflict with stated federal interests in building ocean economies (or do not conflict with existing federal programs like oil and gas development), there might be room for collaboration. In comparing the policies and priorities of MARCO and the NOP, there are many similarities (see Table 1, below). Both programs concede the connection between healthy ecosystems and healthy economies, the need for coordination, and the value in adapting to changing circumstances for future generations. Both sets of policies also agree that ecosystem-based management is the ideal basis for decision-making. Superficially, then, the NOP tracks well with local MAO policy. When examining priorities, the NOP also mirrors local MARCO priorities in areas of water quality, habitat protection, and acknowledgement of a changing climate. One important distinction is subtly made in the two priority lists: the issue of energy. Specifically, where MARCO emphasizes sustainable renewable energy development, the NOP supports all offshore energy development that provides positive economic return – without defining what that positive economic return will be measured as, or measured against.

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[110] *Id*.

[111] NOP IMPLEMENTATION PLAN, *supra* note 27, at 2.

Table 1. Comparison of policies and priorities of MARCO and the NOP.[112]

	MARCO	NOP Final Implementation Plan
Policies	The Mid-Atlantic region's resources and people are intrinsically linked components of larger ecosystems.	A healthy marine environment feeds our Nation, fuels our economy, supports our cultures, provides and creates jobs, gives mobility to our Armed Forces, enables safe movement of goods, and provides places for recreation.
	The Mid-Atlantic region faces a new generation of challenges and opportunities that require a commitment to an ecosystem-based management approach.	The goal of ecosystem-based management supported by [the NOP] is to maintain a healthy, productive, and resilient ocean that can continue to provide the benefits and resources humans want and need.
	The States within the Mid-Atlantic region desire to protect and conserve our ocean resources for current and future generations.	[The NOP] is designed to be adaptive to new information or changing conditions, and will be updated periodically ... as the Nation continually strives to improve the stewardship of the ocean, coasts, and Great Lakes for the benefit of current and future generations.
	Partnership with federal and external stakeholders is critical to success.	The [NOP] highlights our responsibility to improve and maintain the health of the ocean, coasts, and Great Lakes and recognizes the importance of working with States [and tribes] to tackle key challenges through common sense, science-based solutions.
	Coordination is essential to successful management at the regional level.	The [NOP] coordinates ... the ocean-related activities of Federal agencies to achieve greater efficiency and effectiveness, with a focus on reduced bureaucracy, improved coordination and integration, and fiscal responsibility.
Priorities	Coordinate protection of important habitats and sensitive and unique offshore areas on a regional scale.	The health and integrity of coastal habitats—such as coral reefs, wetlands, mangroves, salt marshes, and sea grass beds—are key to sustaining our Nation's valuable coastal and ocean ecosystems and the wealth of benefits they provide to us.
	Promote improvements in the region's coastal water quality as a necessary focal point for regional action.	Improve and preserve our Nation's coastal and estuarine water quality to provide clean water for healthier waterways, communities, and ecosystems.
	Collaborate on a regional approach to support the sustainable development of renewable energy in offshore areas.	Offshore energy industries will benefit from better data and information to identify potential development sites, more efficient leasing and permitting processes, and planning that facilitates safe access, safe operations, and reduced conflicts with other uses.
	Prepare the region's coastal communities for the impacts of climate change on ocean and coastal resources.	Assess the vulnerability of communities and ocean environments to climate change and ocean acidification and support and implement adaptation strategies to promote informed decisions.

[112] Comparisons drawn from two documents: the Mid-Atlantic Governors' Agreement on Ocean Conservation (2009), *available at* http://www.midatlanticocean.org/agreement.pdf and the NOP FINAL IMPLEMENTATION PLAN, *supra* note 27.

On paper, then, there is one major misalignment between the national interests and the local. In practice, there are a few more. In the MAO, two phases of NOP implementation have begun, and each phase has generated question about the effectiveness of the NOP at addressing the region's problems.

First, the Mid-Atlantic Regional Planning Body (RPB) has been organized and is beginning to work to fulfill its mandates (enabling better management and stewardship and developing spatial plans that fulfill the NOP goals). The Mid-Atlantic RPB is led by the Bureau of Ocean Energy Management (BOEM), the agency in charge of offshore minerals (oil and gas), wind, and energy development, which has announced the Mid-Atlantic RPB's intention to carry out its RPB functions without including coastal and estuarine areas in the planning process. In the Final Recommendations of the Task Force, which the NOC and RPBs are charged with implementing, the Task Force states that "[e]ffective management of environmental health and services, maritime economies, commerce, national and homeland security interests, and public access necessitate connecting land-based planning efforts with ocean, coastal, and Great Lakes planning."[113] Successful implementation of the NOP "would ultimately depend upon a better integration of coastal planning that considers influences from, and activities within, coastal watersheds and other contributing land areas."[114]

The Task Force in its Final Recommendations clearly states that "[l]and-based watershed planning efforts (e.g., components of the Great Lakes Restoration Initiative Action Plan) should inform and influence [spatial planning] within each region."[115] In the MAO, coastal development, aging water infrastructure, and non-point source pollution lead to significant environmental and economic problems and should not be excluded from NOP planning.

Second, the Final Implementation Plan has been released. The National Ocean Council, as noted above, is charged with making sure that the Plan, and the NOP in general, is implemented by all agencies, departments, and offices, within the bounds of existing law. The Plan's appendix contains specific "planned actions … [which] will produce benefits in the short-term that respond to immediate needs of communities, ocean stakeholders, and the public" and "create building blocks to support key outcomes in the medium- to long-term."[116] The Plan contains 213 planned actions, called milestones, detailing the actions that over 40 federal agencies, workgroups, and task forces are supposed to complete to implement the NOP.[117] These milestones encompass all of the federal government's plans for moving the "Nation ahead toward resolving the most pressing challenges facing the ocean, our coasts, and the Great Lakes, and benefitting the people, communities, and businesses that rely on them."[118]

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[113] OPTF FINAL RECOMMENDATIONS, *supra* note 30, at 50.
[114] *Id*.
[115] *Id*.
[116] NOP IMPLEMENTATION PLAN, *supra* note 27, at 4.
[117] *See* NATIONAL OCEAN COUNCIL, NATIONAL OCEAN POLICY IMPLEMENTATION PLAN APPENDIX (2013), *available at* http://www.whitehouse.gov//sites/default/files/national_ocean_policy_ip_appendix.pdf [hereinafter IMPLEMENTATION PLAN APPENDIX].
[118] NOP IMPLEMENTATION PLAN, *supra* note 27, at 4.

Over the past six years, four LNG ports, governed by the Deepwater Port Act, have been proposed within the Bight.[119] Licenses for deepwater LNG ports are granted by the Maritime Administration and the U.S. Coast Guard, yet within the Plan's milestones list, the Maritime Administration is not responsible for any NOP implementation objectives, and none of the Coast Guard's actions are related to the deepwater ports program.[120] The Coast Guard is tasked with over 19 milestones (solely or in part), covering data sharing, coastal hazard resilience, marine debris management, vessel pollution reduction, shipping lane studies, several Arctic Ocean studies and projects, aquaculture, and international ocean information sharing.[121] The Federal Energy Regulatory Commission (FERC), which is in charge of permitting land- and state water-based LNG facilities, similarly escapes inclusion in the NOP by being assigned only one task: determining the benefits of aquaculture, renewable energy, and biotechnology for coastal communities (along with five other agencies and federal Departments).[122] With 12 existing LNG import/export terminals, 6 approved, and 23 proposed or potential facilities across the nation, this industrial use of the ocean presents security, economic, and environmental threats yet is entirely left out of the NOP.[123]

Oil and gas exploration, managed under the OCSLA by BOEM, is another fossil fuel-related ocean industrialization proposal left out of the Plan and the milestones list. In early 2012, BOEM issued a Draft Programmatic Environmental Impact Statement (DPEIS) for geological and geophysical ("seismic") activities off the Mid-Atlantic and South Atlantic coasts.[124] These seismic surveys, which consist of firing underwater air-gun arrays to generate sound blasts louder than any non-explosive man-made source, are used in pinpointing oil and gas deposits below the seafloor for future extraction.[125] In the NOP Plan, BOEM has one responsibility – to "[i]nitiate interagency research and integration of data to improve models for spill trajectory, oil fate, and weathering, and natural resource maps based on Arctic conditions in order to feed scenario development and risk assessment."[126] The Bureau of Safety and Environmental Enforcement (BSEE), the "sister" agency of BOEM, has four milestone responsibilities which are also confined to the Arctic Ocean.[127] Thus, while the Plan's milestones for implementation are supposed to lead to short-term benefits and long-term changes, BOEM, like FERC, MARAD, and the Coast Guard, seems to be free to carry on with its permitting activities outside of the NOP process.

Beyond LNG facilities and offshore oil activities, the MAO and the Bight are bounded by numerous National Parks, yet the National Park Service only has three milestone responsibilities, and they all

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[119] Atlantic Sea Island Group's Safe Harbor Energy (*see* docket USCG-2007-28535), ExxonMobil's *BlueOcean Energy* (*see* Jad Mouawad, *Wary of Protests, Exxon Plans Natural Gas Terminal in the Atlantic*, THE NEW YORK TIMES, Dec. 12, 2007, *available at* http://www.nytimes.com/2007/12/12/business/12exxon.html?_r=1), and one proposal by Liberty Natural Gas, submitted twice (*see* dockets USCG-2010-0993 and USCG-2013-0363). The U.S. Coast Guard dockets can be accessed at http://www.regulations.gov/.

[120] *See generally,* IMPLEMENTATION PLAN APPENDIX, *supra* note 116.

[121] *Id*.

[122] *Id*.

[123] *See LNG*, Federal Energy Regulatory Commission, http://ferc.gov/industries/gas/indus-act/lng.asp (last visited July 11, 2013).

[124] Bureau of Ocean and Energy Mgmt., Geological and Geophysical Exploration on the Atlantic Outer Continental Shelf (OCS), 77 Fed. Reg. 19,321 (Mar. 30, 2012).

[125] *See generally* NATIONAL RESEARCH COUNCIL, OCEAN NOISE AND MARINE MAMMALS (2003).

[126] *See* IMPLEMENTATION PLAN APPENDIX, *supra* note 116

[127] *Id*.

pertain to the Chesapeake Bay.[128] These areas provide significant ecological benefits to the MAO's ecosystem, and, as such, the agency managing these parks should have developed MAO objectives and goals as part of the NOP Plan.

The laudable goals of the NOP clearly overlook, during implementation, issues important for the MAO region. Without FERC, MARAD, and Coast Guard input related to Mid-Atlantic LNG ports, without National Park Service input on MAO coastal protected areas, and with an RPB lead whose only NOP actions pertain to the Arctic Ocean, there are gaps in the Plan which leave the communities and economies of the MAO vulnerable. Without inclusion of state waters and estuaries, the MAO regional spatial planning process will be ignoring land-based sources of pollution and coastal over-development; two issues which lead to a majority of the region's historic and present environmental problems.

For the MAO, the NOP was introduced as something that would help collaboratively support existing programs. While this will likely occur for the many programs where there is NOP/MARCO overlap, there are gaps. The first was identified in the policies – that there would be federal energy interests beyond simply renewable energy. In leaving Atlantic Ocean activities out of NOP milestones and in allowing short-term oil and gas seismic surveys to progress toward approval, federal agencies are already occupying this gap. The second gap was identified at the regional planning level when land-based pollution and coastal habitats and water quality were left out of MAO federal planning. Of the four main MARCO priorities, one is excluded from NOP planning consideration (coastal water quality) and one is undercut (only at-sea habitat will be included).

This analysis is not meant to portray the NOP as disconnected from the needs of the economies and ecologies of the MAO – the NOP is indeed a refreshing federal commitment of the time, effort, and focus that the oceans need for their long-term sustainability. In applying the NOP, though, there are certain policies which federal agencies will be statutorily bound to pursue (i.e., OCS energy development) and certain limitations on the extent to which ocean planning can affect positive change (i.e., federal ocean agencies cannot change coastal land use development patterns that affect wetland loss). As such, this Article next explores the innovative options, beyond the NOP, which give agencies the flexibility to make MAO-specific decisions but which also rigidly hold federal decisions to locally determined regimes.

IV. Innovative Options for MAO Management

A. The Clean Ocean Zone Initiative

Given the polluted history of the Bight, and the turnaround that was achieved through pollution reduction and prevention, a coalition of organizations throughout the NY and NJ coastal zone came together with members of Congress to develop and propose a "Clean Ocean Zone" (COZ) initiative. The COZ would be, if enacted, in effect the nation's first pollution- and industry-free zone of the ocean, and it would be built on strong bipartisan, multi-user-group support.

The underlying premise behind the COZ initiative is that laws like the Clean Water Act or the OCSLA cannot sufficiently *proactively* protect the waters of the MAO. Under the Clean Water Act, point

[128] *Id.*

sources of pollution receive permits that fail to drive discharges to zero (as mandated in the CWA) and new ocean dumpsites for contaminated materials are regularly proposed. OCSLA rules and regulations do not allow BOEM to proactively close regions of the ocean to oil drilling if such drilling can be shown to be in the public interest. These sources of pollution each at one time had a foothold in the MAO, but were expelled over the course of several decades. In order to make the clean ocean trajectory of the MAO permanent, the COZ initiative was launched. Recently, a version of a bill implementing the COZ goals was introduced in the 110th Congress.[129]

As proposed, the COZ initiative is split into three themes: reducing pollution, protecting ecosystems, and supporting clean ocean uses.[130] For pollution reduction within the Bight, the COZ bill first declares that neither federal nor state agencies "may issue a permit for ocean dumping, nor designate or establish any new disposal site, within the [Bight]."[131] In addition, any existing disposal sites (approved by the EPA or the Army Corps of Engineers) would be congressionally closed.[132] Second, the COZ bill prohibits the "discharge of a pollutant into the [Bight] from a point source constructed or put into use after the date of enactment;" closing the door to new point source discharges like direct-to-ocean sewer pipeline outfalls or other industrial discharges.[133] This point source control section also prohibits point sources from increasing discharge capacity or weakening effluent limitations.[134]

The COZ would be an innovative adjustment to existing tools. The CWA already regulates point sources, but often cannot achieve (through permit issuance or guidance) the protections needed for an ocean ecosystem. The COZ bill, therefore, adjusts the language of the CWA, closes permits, and prohibits actions that would worsen the MAO's ecological health.

The second theme of the COZ initiative is to protect and promote marine ecosystems through strict control of the natural and energy resources of the region. To accomplish this goal, the COZ bill prohibits "the permanent extraction of any nonrenewable natural resource from the [Bight] for commercial or industrial use is prohibited."[135] There are exceptions allowed for "such removal … undertaken for the primary purpose of maintaining or establishing navigation channels," or for "beach replenishment activities, flood control activities, erosion control activities, or habitat restoration projects on or along the shores of the [Bight]."[136] Overall, fossil fuel industries, as well as the appurtenant facilities that come along with those industries, would be prohibited from accessing any resources within the Bight's clean ocean zone.[137]

Third, the COZ bill sets promotion of clean ocean economies and uses as a major theme of the initiative. According to the bill as proposed, nothing in the bill could be used to limit underwater

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[129] H.R. 2854, 110th Cong. (1st Sess. 2007), *available at* http://beta.congress.gov/bill/110th-congress/house-bill/2854/text.

[130] *See Clean Ocean Zone Bill*, CLEANOCEANZONE.ORG, http://cleanocean.wordpress.com/cleanoceanzone/cozbill/ [hereinafter *COZ Bill*].

[131] *See COZ Bill*, § 4(a)(1).

[132] *Id*.

[133] *Id*. at § 4(b)(1).

[134] *Id*. at § 4(b)(2).

[135] *Id*. at § 4(c)(1).

[136] *Id*. at § 4(c)(1)-(2).

[137] *Id.* at § 4(d), on nonrenewable energy facilities.

research and exploration, recreational uses (e.g., fishing, swimming, surfing), or commercial uses (e.g., commercial fishing, artificial reefs, boating).[138]

As a whole, the COZ initiative is built so that the Bight would be treated very much like a national marine monument (see discussion of the Antiquities Act below); uses and users can be spelled out quite specifically and management measures built around those sets of rules. Under the COZ, unlike the NOP, Antiquities Act, or the Marine Sanctuaries program, there would be no new authority created – the laws governing where and when an agency can grant a permit would simply be amended to reflect the new priorities of the MAO region and the pollution reduction trends of the last few decades. Like the NOP, the COZ looks to create a plan of use rules in the ocean whereby polluters cannot pollute but users may use. Like the Antiquities Act, the COZ results in a series of unique protections and management rules designed for the people of the region, oftentimes by the people of the region.

B. Marine Monuments

Use of the authority granted in the Act for the Preservation of American Antiquities (Antiquities Act) to create a national monument of the waters of the MAO or the Bight would allow the President substantial latitude in addressing the problems facing the region. Under the Antiquities Act, the President is authorized to declare "objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments."[139] The unique scientific, ecological, historic, and national interest values of the MAO self-evidently make this region a perfect candidate for national monument protection. Congress, it is important to note, could also form an Antiquities Act monument. This, in effect, is what the "Clean Ocean Zone" proposal would achieve if Congress amends laws like the CWA or OCSLA with respect to the Bight or the greater MAO.

According to a 2010 Congressional Research Service (CRS) report, "the overriding management goal of all monuments is protection of the objects described in the proclamation."[140] The President, in such a proclamation, could tailor management of an area like the MAO in any way deemed appropriate for protecting the MAO's resources. Aside from the Antiquities Act reservation that monuments must only encompass "the smallest area compatible with the proper care and management of the objects to be protected," there are no other limitations or statutory guidelines for how to apply the Act.[141] Federal courts have ruled that the judiciary does have jurisdiction to review Presidential action with respect to this minimum-area measure, but not to the designation itself.[142] In fact, Antiquities Act monument authority is not only very difficult to review in the courts, it does not trigger National Environmental Policy Act review. [143]

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[138] *Id*. at § 5.
[139] 16 U.S.C. § 431.
[140] CAROL HARDY VINCENT & KRISTINA ALEXANDER, NATIONAL MONUMENTS AND THE ANTIQUITIES ACT, CONG. RESEARCH SERV. R41330 (2010), *available at* http:// www.fas.org/sgp/crs/misc/R41330.pdf.
[141] 16 U.S.C. § 431; *See also* 16 U.S.C. § 431a (barring monuments in Wyoming), 16 U.S.C. § 3213 (subjecting monuments greater than 5,000 acres in Alaska to be subject to Congressional approval).
[142] Tulare County v. Bush, 306 F.3d 1138, 1142 (D.C. Cir. 2002).
[143] *See* Alaska v. Carter, 462 F. Supp. 1155 (D. Alaska 1978).

While the only legal action needed to create a national monument is a Presidential Proclamation, the long-term protection and management of a monument depends on several factors. According to the conclusions of another CRS report on marine protected areas, applying the Antiquities Act to marine areas "will still require 'negotiation, education, and consensus-building' including congressional funding commitments and involvement of local committees representing interested and affected parties."[144] For the Papahānaumokuākea Marine National Monument (Northwestern Hawaiian Islands Marine Monument), the CRS report concludes that the broad financial and political support for the monument was made possible because "the public had already been involved during earlier consideration of the area as a national marine sanctuary."[145]

Within the MAO, there is already robust public and political support for many management ideals; generally, supporting fisheries economies, tourism, and pollution prevention. Within the Bight itself, there is support for a wider range of prohibitions and protections – including bipartisan opposition to offshore oil and gas extraction, and bipartisan support for BEACH Act funding.

Both of these initiatives address the goals of MARCO – habitats can be protected, economically valuable fisheries can be promoted and protected, and water quality would likely improve. Both programs would be flexible enough to support sustainable renewable energy, and both would be amendable and adaptable to future conditions – supporting coastal and ocean resources for future generations. A Clean Ocean Zone or a national monument would lock-in support for the economy and ideal-ecology of the MAO in exactly the manner proposed by the policies and priorities of MARCO.

Similarly, both of these initiatives would comport with the NOP. First and foremost, they are both forms of ocean planning. A Clean Ocean Zone is a planning system built on pollution prevention whereas a monument is a planning system that defines specific management goals and sets specific uses. These are both existing authorities that would redefine how the ocean is managed in the MAO, potentially reducing inefficiencies and saving money. These initiatives, however, would require the establishment of some new authorities and regulations. The NOP specifically disavows anything beyond utilization of existing authority. Overall, either a new pollution control system like the COZ or a national monument would be a workable component of a regional MAO ocean policy (supporting the improvements that the MARCO states, citizens groups, and businesses have made over the last few decades), or a unique substitute for NOP regional marine spatial plans (focusing on pollution abatement or management systems developed from the ground-up).

V. Conclusions

Taken together, when looking to manage the MAO, the Bight, or the nearshore waters of a state's ocean, the strategies discussed in this Article provide agencies, the public, and the states with tools to address many short- and long-term threats. All tools, however, are not equally applicable. The need for robust, efficient, coordinated, and collaborative ocean policy development and marine planning is clear. There are many ocean uses that support many ocean economies, but with climate change and an

[144] HAROLD F. UPTON & EUGENE H. BUCK, MARINE PROTECTED AREAS: AN OVERVIEW, CONG. RESEARCH SERV. RL32154, at 1 (2010) (*quoting* Jeff Brax, *Zoning the Ocean: Using the National Marine Sanctuaries Act and the Antiquities Act to Establish Marine Protection Areas and Marine Reserves in America*, 29 ECOLOGY LAW QUARTERLY 71 (2002)).
[145] *Id*.

expanding population, overcrowding is to be expected. The NOP, therefore, was developed to support local choices for local ocean economies while promoting certain national interests.

Care should be taken in the MAO to ensure, however, that the NOP is implemented in a way consistent with local needs and expectations; federal agencies have no new mandates, no new laws, and no new authorities under the NOP, so they are still bound by their statutory mandates – whether or not those are in line with the goals of the MAO. In some cases states have little say over federal decisions; in others there is robust authority to guide or even decide federal outcomes. In the end, whether through the National Ocean Policy's support of existing regional partnerships or through innovative strategies like the Clean Ocean Zone, the MAO is a unique environment that is home to centuries-old, billion-dollar economies deserving of our full attention.

What Regional Ocean Planners Can Learn from U.S. Public Lands Management

Morgan Gopnik[1]

Abstract: Launched with an Executive Order in 2009, the federal government has promoted marine spatial planning of U.S. ocean waters, to be carried out under the direction of nine Regional Planning Bodies (RPBs). To help the RPBs succeed in the delicate task of balancing economic and environmental goals while satisfying a wide range of ocean stakeholders, this Article looks at the equally complex, and frequently contentious, history of public lands management in the United States, finding striking similarities between the two settings and suggesting lessons regional planners can draw on for more effective implementation of marine spatial planning.

I. Introduction to Marine Spatial Planning in the U.S.

Ocean challenges such as declining fish stocks, the loss of large marine predators, changes in marine biodiversity, endangered ocean species, coastal habitat loss, hypoxic "dead zones," ocean acidification, and many more have been documented in hundreds of scientific publications[2] and

[1] Dr. Gopnik is an Environmental Policy Consultant based in Washington, DC. She served previously as Senior Advisor to the U.S. Commission on Ocean Policy and Senior Vice-President of the Ocean Conservancy. The research behind this article was made possible through generous support from the Duke University Marine Lab, the Nicholas Institute for Environmental Policy Solutions, and the Gordon and Betty Moore Foundation.

[2] *See, e.g.*, NATIONAL RESEARCH COUNCIL, UNDERSTANDING MARINE BIODIVERSITY (1995); Daniel Pauly et al., *Fishing Down Marine Food Webs*, 279 SCI. 860-63 (1998); COASTAL HYPOXIA: CONSEQUENCES FOR LIVING RESOURCES AND ECOSYSTEMS, Coastal and Estuarine Studies, vol. 58 (Nancy N. Rabalais & R. Eugene Turner, eds., 2001).

thoroughly summarized in two definitive commission reports.[3] Explanations for these problems point primarily to human causes such as overfishing, coastal development, point and non-point source pollution, and fossil fuel combustion, while proposed solutions vary from tighter regulation and better enforcement,[4] to market-based solutions,[5] community-based management,[6] or marine protected areas.[7]

Ecosystem-based management (EBM) has also been widely advanced as a more effective approach for managing complex and highly inter-connected marine ecosystems.[8] A consensus statement describes marine EBM as "an integrated approach to management that considers the entire ecosystem, including humans."[9] However, despite several attempts to define the necessary elements of EBM, widely disparate programs have been labeled as such, including the California Marine Life Protection Act process, the National Marine Sanctuaries Program, the Chesapeake Bay Program, and other efforts that share little more than an intent to be more holistic than traditional management approaches.[10] An ambitious, collaborative project recently analyzed EBM efforts around the world, summarizing many of their common features and suggesting lessons learned.[11]

A related approach for achieving more integrated marine management—sometimes referred to as a "tool" for implementing EBM—is marine spatial planning (MSP).[12] The idea of undertaking multiple-use spatial planning as a means to cope with the complexities of ocean ecosystems actually predates the term EBM.[13] Almost forty years ago, Young and Fricke wrote that "sea use planning … is a necessary intellectual tool … to seize hold of some of the problems that so far have been too slippery," concluding that "because of the multiplicity of competitive, and potentially damaging uses, sea use now needs to

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[3] *See* PEW OCEANS COMMISSION, AMERICA'S LIVING OCEANS: CHARTING A COURSE FOR SEA CHANGE (2003), *available at* http://www.pewtrusts.org/uploadedFiles/wwwpewtrustsorg/Reports/Protecting_ocean_life/POC_Summary.pdf, and U.S. COMMISSION ON OCEAN POLICY, AN OCEAN BLUEPRINT FOR THE 21ST CENTURY: FINAL REPORT (2004), *available at* http://jointoceancommission.org/documents/USCOP_report.pdf [hereinafter AN OCEAN BLUEPRINT].

[4] *See* U.S. COMMISSION ON THE BP DEEPWATER HORIZON SPILL AND OFFSHORE DRILLING, DEEP WATER: THE GULF OIL DISASTER AND THE FUTURE OF OFFSHORE DRILLING: REPORT TO THE PRESIDENT vii (2011).

[5] *See* Peter H. Pearse, *From Open Access to Private Property: Recent Innovations in Fishing Rights as Instruments of Fisheries Policy*, 23(1) OCEAN DEV. & INT'L LAW 71 (1992).

[6] *See* Svein Jentoft, *The Community: A Missing Link of Fisheries Management*, 24(1) MARINE POL'Y 53 (2000).

[7] *See* NATIONAL RESEARCH COUNCIL, MARINE PROTECTED AREAS: TOOLS FOR SUSTAINING OCEAN ECOSYSTEMS (2001).

[8] *See, e.g.,* PEW OCEANS COMMISSION, *supra* note 3, at 44; AN OCEAN BLUEPRINT, *supra* note 3, at 63-65; ECOSYSTEM-BASED MANAGEMENT FOR THE OCEANS (Karen McLeod & Heather Leslie eds.2009).

[9] COMPASS, Scientific Consensus Statement on Marine Ecosystem-based Management 1 (2005), *available at* http://www.compassonline.org/sites/all/files/document_files/EBM_Consensus_Statement_v12.pdf.

[10] *See* Katie K. Arkema, Sarah C. Abramson, & Bryan M. Dewsbury, *Marine Ecosystem-based Management: From Characterization to Implementation*, 4(10) FRONTIERS IN ECOLOGY 525 (2006).

[11] *See Marine Ecosystem-based Management in Practice*, ECOSYSTEM MANAGEMENT INITIATIVE, UNIVERSITY OF MICHIGAN SCHOOL OF NATURAL RESOURCES AND ENVIRONMENT, http://webservices.itcs.umich.edu/drupal/mebm/ (last visited Sept. 17, 2013).

[12] *Comprehensive Ocean Zoning: Answering Questions about this Tool for EBM*, 2(1) MARINE ECOSYSTEMS AND MGMT. 1 (2008).

[13] *See, e.g.,* SEA USE PLANNING (Elizabeth Young & Peter Fricke, eds., 1975); Robert W. Knecht & T. Kitsos, *Multiple-Use Management in the EEZ*, OCEANUS Vol. 27, no. 4 (Winter 1984/85); Lawrence Juda & R. H. Burroughs, *The Prospects for Comprehensive Ocean Management*, 14(1) MARINE POL'Y 23 (1990).

be ordered and controlled … in the interests of the community as a whole."[14] These words seem prescient in light of recent developments.

At the time of the U.S. Commission on Ocean Policy's deliberations, between 2001 and 2003, the relatively new concept of MSP was not widely discussed in U.S. policy circles. The term does not appear anywhere in the Commission's final report, although one recommendation suggests that "Congress … should establish a balanced, ecosystem-based, offshore management regime that sets forth guiding principles for the coordination of offshore activities."[15] Nevertheless, MSP was already beginning to be implemented in Canada[16] and a number of European countries,[17] and a few academics were promoting the related idea of ocean zoning.[18] Although characterizations of MSP vary slightly from author to author, one commonly cited definition states that "MSP is a public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process."[19]

In 2009, a memo from U.S. President Barack Obama created an interagency taskforce and directed it to develop a new National Ocean Policy, including a "framework for effective coastal and marine spatial planning."[20] The final recommendations of that task force[21] were adopted through Executive Order 13,547 in July 2010, including the establishment of a National Ocean Council (NOC) with representatives from eleven cabinet-level departments and an additional sixteen federal agencies and offices. After considerable delay and extensive rewriting of earlier drafts, the NOC issued its Final Implementation Plan for U.S. ocean policy in April 2013.[22]

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[14] SEA USE PLANNING, *supra* note 13, at 3.

[15] AN OCEAN BLUEPRINT, *supra* note 3, at 103.

[16] *See* R. J. Rutherford, G. J. Herbert, & S. S. Coffen-Smout, *Integrated Ocean Management and the Collaborative Planning Process: The Eastern Scotian Shelf Integrated Management (ESSIM) Initiative*, 29(1) MARINE POL'Y 75 (2005).

[17] *See* FRANK MAES ET AL., A FLOOD OF SPACE: TOWARDS A SPATIAL STRUCTURE PLAN FOR SUSTAINABLE MANAGEMENT OF THE SEA, BELGIAN SCI. POL'Y (2005); Fanny Douvere & Charles N. Ehler, *New Perspectives on Sea Use Management: Initial Findings from European Experience with Marine Spatial Planning*, 90(1) J. OF ENVTL. MGMT. 77 (2009).

[18] *See, e.g.*, Eliot A. Norse, *A Zoning Approach to Managing Marine Ecosystems*, *in* PROCEEDINGS FROM THE WORKSHOP ON IMPROVING REGIONAL OCEAN GOVERNANCE IN THE US 53 (2002), *available at* http://www.ceoe.udel.edu/cmp/pdf/RegionalProceedings.pdf; Gary R. Russ & Dirk C. Zeller, *From* Mare Liberum *to* Mare Reservarum, 27(1) MARINE POLICY 75 (2003).

[19] CHARLES N. EHLER & FANNY DOUVERE, MARINE SPATIAL PLANNING: A STEP-BY-STEP APPROACH TOWARD ECOSYSTEM-BASED MANAGEMENT 18 (2009), *available at* http://www.unesco-ioc-marinesp.be/.

[20] *See* Memorandum from the President of the United States to The Heads of Executive Departments and Agencies, concerning A National Policy for the Oceans, Our Coasts, and the Great Lakes (June 12, 2009), *available at* http://www.whitehouse.gov/sites/default/files/page/files/2009ocean_mem_rel.pdf.

[21] COUNCIL ON ENVIRONMENTAL QUALITY, FINAL RECOMMENDATIONS OF THE INTERAGENCY OCEAN POLICY TASK FORCE (2010), http://www.whitehouse.gov/files/documents/OPTF_FinalRecs.pdf [hereinafter OPTF FINAL RECOMMENDATIONS].

[22] NATIONAL OCEAN COUNCIL, NATIONAL OCEAN POLICY IMPLEMENTATION PLAN (2013), *available at* http://www.whitehouse.gov//sites/default/files/national_ocean_policy_implementation_plan.pdf [hereinafter NOP IMPLEMENTATION PLAN]. These developments are described in greater detail elsewhere in this volume. *See* Briana Collier, *Orchestrating Our Oceans: Effectively Implementing Coastal and Marine Spatial Planning in the U.S.*, 6 SEA GRANT L. & POL'Y J. 77 (2013); Morgan Gopnik, From the Forest to the Sea: Lessons in Managing Public Space, PhD Dissertation, Duke University Marine Lab (2013) (Publication No. AAT 3557965).

One theme echoed in all these recent ocean policy documents is the importance of allowing mid- to large-sized regions—coinciding roughly with Large Marine Ecosystems[23]— to play a leading role in implementing sustainable, multiple-use management of ocean areas. These regions have also been suggested as the appropriate scale at which to conduct MSP, with planning regions that "extend landward to the mean high-water line … [and] include inland bays and estuaries."[24] Although the MSP framework issued by the Interagency Ocean Policy Task Force lays out very specific steps for the regions to follow in creating marine plans,[25] the final NOC implementation plan leaves virtually all decisions about how to conduct marine planning—or whether to engage in planning at all—to the members of the Regional Planning Body in each region.

Recognizing the growing importance of regional action, a symposium was held at Seton Hall University School of Law in April 2013 entitled "Regional Ocean Governance: Legal & Policy Solutions for Mid-Atlantic Ocean Planning," with the purpose of providing guidance to the Mid-Atlantic Regional Planning Body.[26] This Article, based on a presentation by the author at the symposium, is thus targeted primarily at regional planners. A related article, currently in development, will cover additional topics and is intended for a broader audience of ocean policymakers, managers, stakeholders, and scholars.[27]

A. Concerns about Marine Spatial Planning

Not everyone has embraced MSP as a desirable next step in ocean management.[28] Some ocean industry sectors, particularly offshore oil and gas and international shipping, worry that MSP "could create uncertainty and harm economic activity" and that "the policy is being developed without adequate congressional engagement and consideration of the views of ocean, coastal, Great Lakes, and inland user groups, including commercial and recreational interests."[29] A series of workshops organized by Duke University's Nicholas Institute for Environmental Policy Solutions brought together a broad array of ocean users who expressed similar concerns, albeit with greater optimism that they might be

[23] LMEs were conceived as "regions of ocean space encompassing coastal areas from river basins and estuaries on out to the seaward boundary of continental shelves and the seaward boundary of coastal current systems. They are relatively large regions on the order of 200,000 km² or larger, characterized by distinct bathymetry, hydrography, productivity, and trophically dependent populations." Kenneth Sherman, *Sustainability, Biomass Yields, and Health of Coastal Ecosystems: An Ecological Perspective*, 112 MARINE ECOLOGY PROGRESS SERIES 277, 280 (1994).

[24] OPTF FINAL RECOMMENDATIONS, *supra* note 21, at 49.

[25] *See id.* at 51-60.

[26] The Symposium was sponsored by the National Sea Grant Law Center, Seton Hall University School of Law, Monmouth University's Urban Coast Institute, the Environmental Law Institute, and the New Jersey Sea Grant Consortium.

[27] Morgan Gopnik, Public Lands Management and Marine Spatial Planning (manuscript in preparation).

[28] *See* Lauren Gardner, *Oceans Plan Meets Wave of GOP Resistance*, CQ WEEKLY – IN FOCUS, June 2, 2012, http://public.cq.com/docs/weeklyreport/weeklyreport-000004098268.html (last visited Sept. 17, 2013).

[29] Press Release, National Ocean Policy Coalition, National Ocean Policy Coalition Responds To Draft Ocean Action Plan (Jan. 12, 2012), *available at* http://oceanpolicy.com/2012/01/12/national-ocean-policy-coalition-responds-to-draft-ocean-action-plan/.

overcome.[30] The U.S. House of Representatives' Natural Resources Committee has held a number of hearings highly critical of this new direction in ocean policy[31] and released a number of disparaging—if not entirely accurate—factsheets and press releases deploring its adoption.[32] Groups representing fishermen decry efforts that might reduce their access to ocean waters,[33] and a conservative website ominously worries that: "[MSP] has the potential for the greatest encroachment on private property rights we have ever faced in this nation … [MSP] has the potential for turning over control of commercial and recreational fishing to the United Nations."[34]

Even groups generally supportive of MSP have worried that their constituencies' concerns may not be given sufficient weight. For example, the public comments on the NOC's proposed MSP framework reveal that environmental advocates want to ensure that ecosystem protection, including siting of additional marine protected areas, takes precedence over economic goals while renewable energy advocates worry that the new policies might slow down ongoing permitting processes.

B. Moving Forward with Marine Spatial Planning

If regions are to take the lead in MSP, they will have to balance its proposed benefits with the concerns expressed by some stakeholders, navigating a path forward that meets their needs. A number of efforts have been made to derive lessons about MSP from its implementation in Europe, Australia, Canada, and elsewhere, culminating in a widely referenced guide to MSP issued by the United Nations Educational, Scientific, and Cultural Organization.[35] However, research on similar trans-national policy

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[30] *See* Morgan Gopnik et al., *Coming to the Table: Early Stakeholder Engagement in Marine Spatial Planning*, 36(5) MARINE POL'Y 1139 (2012).

[31] *Oversight Hearing on "The President's New National Ocean Policy - A Plan for Further Restrictions on Ocean, Coastal and Inland Activities," Before the H. Comm. on Nat. Res.*, 112th Cong. (Oct. 4 and 26, 2011); *Oversight Hearing on "Empty Hooks: The National Ocean Policy is the Latest Threat to Access for Recreational and Commercial Fishermen," Before the Subcomm. on Fisheries, Wildlife, Oceans, and Insular Affairs of the H. Comm. on Nat. Res.*, 112th Cong. (Mar. 22, 2012); and *Oversight Field Hearing on "Alaska's Sovereignty In Peril: The National Ocean Policy's Goal to Federalize Alaska," Before the Subcomm. on Fisheries, Wildlife, Oceans, and Insular Affairs of the H. Comm. on Nat. Res.*, 112th Cong. (Apr. 3, 2012).

[32] Press Release, House Committee on Natural Resources, U.S. House of Representatives, Top 10 Things to Know About President Obama's Plan to Zone the Oceans (Sept. 30, 2011), *available at* http://naturalresources.house.gov/news/documentsingle.aspx?DocumentID=262435.

[33] *See, e.g.*, Press Release, Recreational Fishing Alliance, 12 Million U.S. Saltwater Anglers Ignored (Oct. 23, 2009), *available at* http://joinrfa.org/wp-content/uploads/2013/03/TaskForce_102309.pdf; Letter from the American Sportfishing Assn. et al. to the Council on Environmental Quality re: Comments on the Draft National Ocean Policy Implementation Plan (Mar., 27, 2012), *available at* http://www.joincca.org/articles/38.

[34] *What You Need to Know About LOST (Law Of the Sea Treaty),* BEAUFORT OBSERVER ONLINE (June 26, 2012), http://www.beaufortobserver.net/Articles-NEWS-and-COMMENTARY-c-2012-06-25-261157.112112-What-you-need-to-know-about-LOST-Law-Of-the-Sea-Treaty.html.

[35] *See generally* EHLER & DOUVERE, *supra* note 19.

transplantation efforts[36] indicates that lessons from international MSP may not be fully applicable in the very different U.S. political and cultural context, which includes a history of strong private property rights and substantial mistrust of government programs, federal mandates, and the very notion of central planning.

Another source of ideas comes from analogies between MSP and the more familiar and widespread practice of land use planning.[37] This comparison too is imperfect. Land use planning typically relies on a political process to guide the development of land, including substantial areas of private property, to achieve a better overall result for a particular community. But the ocean and its resources are already a public good, to be managed by the government for the welfare of all citizens.[38] The legal and political issues of primary concern to land use planners turn out to be quite different from those confronting coastal and ocean managers.

A more promising avenue of inquiry might be to compare U.S. ocean management to that undertaken for other public goods in this country—such as public lands, clean air, or telecommunications frequencies. As explained by Duff, "Ocean areas are public space. As a result, the more apt models that ought to be considered in assessing ocean space/resource management issues are those models that have been employed to manage other public areas and resources."[39]

The U.S. federal government controls 4.5 million square miles of open water in the Great Lakes and the ocean and 3.6 million square miles of land, approximately 27% of the nation's total land area.[40] This Article looks at U.S. public lands as one long-established example of multiple-use management of public space, exploring similarities to the ocean policy setting and applying "lessons learned" from land management to the challenge of implementing regional MSP.

II. U.S. Public Lands Management

Because the *Sea Grant Law and Policy Journal* speaks primarily to an audience of ocean and coastal policy experts, there is no need to repeat here the basic history and status of U.S. ocean laws and

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[36] *See, e.g.,* David Dolowitz & David Marsh, *Who Learns What From Whom: A Review of the Policy Transfer Literature,* 44 POL. STUD. 343 (1996); Richard Rose, *What is Lesson-drawing?*, 11 J. OF PUBLIC POL'Y 1 (1991); RICHARD ROSE, LESSON-DRAWING IN PUBLIC POLICY: A GUIDE TO LEARNING ACROSS TIME AND SPACE (1993); Colin J. Bennett & Michael Howlett, *The Lessons of Learning: Reconciling Theories of Policy Learning and Policy Change*, 25 POL'Y SCI. 275 (1992); DE JONG ET AL., THE THEORY AND PRACTICE OF INSTITUTIONAL TRANSPLANTATION: EXPERIENCES WITH THE TRANSFER OF POLICY INSTITUTIONS (2002).

[37] *See* DAVID TYLDESLEY & BEN HUNT, REVIEW OF HOW THE LAND USE PLANNING SYSTEM COULD INFLUENCE THE DEVELOPMENT OF A MARINE SPATIAL PLANNING SYSTEM FOR ENGLAND (2003).

[38] *See* Mary Turnipseed et al., *Reinvigorating the Public Trust Doctrine: Expert Opinion on the Potential of a Public Trust Mandate in U.S. and International Environmental Law*, 52 ENV'T 6 (2010).

[39] John Duff, *Offshore Management Considerations: Law and Policy Questions related to Fish, Oil, and Wind*, 31 B.C. ENVTL. AFF. L. REV. 385, 402 (2004).

[40] The precise nature of that control varies. At this time, based on shared traditions, national laws, and international treaties, there is no private ownership of ocean territory. *See* U.S. COMMISSION ON OCEAN POLICY, AN OCEAN BLUEPRINT FOR THE 21ST CENTURY: FINAL REPORT, APPENDIX 6: REVIEW OF U.S. OCEAN AND COASTAL LAW – THE EVOLUTION OF OCEAN GOVERNANCE OVER THREE DECADES (2004). It is significant that the terminology of "control" and "jurisdiction" over ocean areas differs from the concept of "ownership" on land.

agencies, which have been well documented elsewhere[41] and are well-known to this readership. However, extensive interviews conducted in connection with this study reveal that the history of public lands management is foreign to this audience and thus merits a quick overview.[42]

The United States government has, at various times, laid claim to and then given away huge tracts of land.[43] In the 19th century, the government's desire to encourage westward settlement of the country by European immigrants and their descendants fueled the drive to acquire land and make it available to homesteaders and railroad companies who generally claimed the most fertile, low-lying, accessible areas. By the end of that period of land transfer, often referred to as the "disposal" of government land, the areas remaining under federal ownership tended to be drier plains, desert zones, or steep, densely forested regions. Then, toward the close of the 19th century and into the 20th, the federal government shifted course and began to "reserve" certain areas of publicly owned land; in other words, remove them from the pool available for private grants or sales. This practice began with establishment in 1872 of the first national park, Yellowstone, and was followed by the creation of additional parks and Forest Reserves (later called the National Forests) between 1891 and 1910. By 1934, virtually all disposal of public lands had come to an end. At its peak in the 19th century, the federal government controlled 80% of the nation's land area; that proportion gradually declined and leveled off at around 30% by 1970.

As a result of shifting national goals over the last century, what we think of today as the federal public lands are overseen primarily by the National Park Service, the Forest Service, the Fish and Wildlife Service, and the Bureau of Land Management, agencies with missions respectively centered on recreation and preservation; forestry and watershed protection; birding, fishing, and hunting; and grazing (Table 1). Despite these varied founding motivations, all the federal land management agencies are governed by multiple-use mandates that require them to balance many different constituencies and public desires. This tension is central to the comparison between federal lands and the U.S. Exclusive Economic Zone (EEZ).

Based on an examination of the histories, purposes, management approaches, and ecosystem characteristics of the four major types of public land,[44] it appears that the range of uses in the National Forests, and the management challenges they have faced, most closely resemble those encountered in the ocean setting (see further discussion below). Thus, in the remainder of this Article, National Forests will be used as the point of comparison between public land and ocean management.

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[41] *See, e.g.,* EDWARD WENK, JR., THE POLITICS OF THE OCEAN (1972); LAWRENCE JUDA, INTERNATIONAL LAW AND OCEAN USE MANAGEMENT: THE EVOLUTION OF OCEAN GOVERNANCE (1996); Michael Orbach, *Beyond the Freedom of the Seas: Ocean Policy for the Third Millennium*, 16 OCEANOGRAPHY 20 (2003); AN OCEAN BLUEPRINT, *supra* notes 3 and 40.

[42] The history presented in this section has been synthesized from a variety of sources, primarily including: PAUL J. CULHANE, PUBLIC LANDS POLITICS: INTEREST GROUP INFLUENCE ON THE FOREST SERVICE AND THE BUREAU OF LAND MANAGEMENT (1981); MARTIN NIE, THE GOVERNANCE OF WESTERN PUBLIC LANDS: MAPPING ITS PRESENT AND FUTURE (2008); U.S. PUBLIC LAND LAW REVIEW COMM., ONE THIRD OF THE NATION'S LAND: A REPORT TO THE PRESIDENT AND TO THE CONGRESS (1970) [hereinafter PUBLIC LAND REPORT]; CYNTHIA NICKERSON ET AL., U.S. DEPT. OF AGRIC., ECON. RES. SERV., MAJOR USES OF LAND IN THE UNITED STATES, 2007 (2011).

[43] Of course, much of that land was previously occupied and used by Native Americans and Mexican communities who were not consulted about the conversion of those lands to U.S.-owned forests. JAKE KOSEK, UNDERSTORIES: THE POLITICAL LIFE OF FORESTS IN NORTHERN NEW MEXICO (2006).

[44] *See* Gopnik, *supra* note 22.

Table 1: Amount and percentage of public lands managed by the various federal land management agencies.[45]

Agency	Acres (millions)	% of public lands
Bureau of Land Management	247.9	39.0
Forest Service	192.9	30.3
Fish and Wildlife Service	88.9	14.0
National Park Service	79.7	12.5
All other agencies, departments, and bureaus	27.0	4.2
TOTAL	**636.4**	**100.0%**

III. Study Context and Approach

This Article presents a subset of the findings and arguments developed in the course of a larger, four-year research project. The study undertook a critical review and synthesis of historical and theoretical literature on U.S. public lands, particularly the National Forests; conducted three case studies of National Forests in different regions; examined government documents related to both land and ocean management; and analyzed 96 formal and informal confidential interviews with key informants in the forest and ocean management communities, including government agency staff, community members, issue advocates, resource-dependent workers, and academics. Forty-four of the interviews were formal, in-person, semi-structured conversations, recorded, transcribed, and analyzed using the qualitative analysis software package, NVivo, as well as traditional sorting of responses by themes and keywords.[46] In addition, three government-sponsored events related to the federal MSP initiative were observed and analyzed: (1) The National Coastal and Marine Spatial Planning (CMSP) Workshop, held in Washington DC on June 21, 2011; (2) The West Coast Regional CMSP Listening Session, held in Portland, Oregon on July 1, 2011; and (3) the inaugural meeting of the Northeast Regional Planning Body, held in Portland, Maine on November 19-20, 2012.

IV. Is the U.S. Exclusive Economic Zone like Public Land?

Many forest and ocean experts interviewed over the course of this study resisted the notion that these two seemingly different communities might learn from each other. What does a landscape of mountains, streams, and forests, with its associated loggers, hikers, and hunters and its area-based management system have in common with beaches, coral reefs, and wide-open waters, plied by surfers, boaters, fishermen, and container ships under sector-based management? Certainly, there are important differences, but a structured examination rooted in the fields of policy and institutional analysis reveals a number of ways in which these two settings are remarkably similar.

The process of crafting, implementing, and revising public policy involves interactions among many actors, with different perspectives and authorities, at different scales and over extended time periods.

[45] The data in the table is derived from RUSS GORTE ET AL., CONGRESSIONAL RESEARCH SERVICE, FEDERAL LAND OWNERSHIP: OVERVIEW AND DATA, CRS R42346 (2012).

[46] Some of these interviews were conducted in connection with a project on stakeholder involvement in marine spatial planning sponsored by the Nicholas Institute for Environmental Policy Solutions at Duke University and discussed in Gopnik et al, *supra* note 30.

When public policy also involves the use and protection of natural resources, these difficulties are exacerbated by the complexity of ecosystem behavior and our limited understanding of it. Many scholars have attempted to discern and explain patterns in the initiation and evolution of public policy, typically constructing a "framework" that identifies the variables and processes expected to be most important.[47] Two well-established and widely adopted rubrics for policy analysis are the Institutional Analysis and Design (IAD) framework, spearheaded by Nobel-prize winner Elinor Ostrom,[48] and the Advocacy Coalition Framework (ACF), advanced by Paul Sabatier and others.[49] The purpose of these efforts is to identify the basic building blocks of all policy situations, from U.S. government-run urban poverty programs to Indonesian community-based fisheries management. In Ostrom's words, "my deep conviction [is] that underlying the immense variety of surface differences, all repetitive situations faced by human beings are composed of nested layers composed of the same set of elements."[50]

As might be expected of two tools designed for the same general purpose, the IAD and ACF share similar concerns, such as why certain policies come into use and how they change, and focus on a number of related elements, such as the nature of individuals and organizations in a given policy setting, relevant external contextual elements, and the strategies and rules in operation that allow for particular outcomes. The basic unit of analysis is the *policy subsystem* (in the ACF) or *action situation* (in the IAD), both bounded by a geographic and substantive scope appropriate to the system being investigated. These policy frameworks and their application to ocean and public land settings are described in much greater detail in another document.[51] For the purposes of this Article, the outcomes of that analysis are presented to illustrate how the elements considered most important by policy theorists—the ecological, social, and governance settings; the goods and services provided; the participants engaged; and the coalitions present—manifest themselves in the two arenas. Some of the most important similarities and differences are summarized below.

A. Ecological Setting

National Forests and oceans both include diverse, complex ecosystems with huge variability depending on latitude, altitude (or depth), nutrients, and water characteristics. Biodiversity is high in both locations, including both sedentary and highly migratory species, but species mobility and connectivity are generally greater in the ocean, making human-drawn boundaries even more arbitrary than on land. Endangered species are found in both locations (with associated science, litigation, and management plans aimed at protecting them) but these issues have not played as central a role in EEZ management as they have in National Forests, where invocation of the Endangered Species Act has been a major driver of events. Both ecosystems are heavily affected by humans, including over-extraction of living resources in some areas, habitat degradation (decades earlier in forests because of

[47] *See* Edella Schlager, *A Comparison of Frameworks, Theories, and Models of Policy Processes*, *in* THEORIES OF THE POLICY PROCESS 293 (Paul Sabatier ed., 2nd ed. 2007).
[48] *See generally* ELINOR OSTROM, UNDERSTANDING INSTITUTIONAL DIVERSITY (2005).
[49] Paul Sabatier & Christopher Weible, *The Advocacy Coalition Framework: Innovations and Clarification, in* THEORIES OF THE POLICY PROCESS 189 (Paul Sabatier ed., 2007).
[50] OSTROM, *supra* note 48, at 185.
[51] *See* Gopnik, *supra* note 22.

their greater accessibility to humans), and regime-changing events, primarily fire and disease in the forest and large-scale fishing and oceanographic changes in the ocean, as well as climate change effects in both settings. Because of the large, often inhospitable areas involved, data collection is expensive in both environments and managers must make most of their decisions in the face of incomplete information and uncertain understanding. However, the added remoteness and difficulty of accessing the EEZ, particularly offshore, has further delayed ecological understanding compared to land-based systems.

B. Goods and Services

National Forests and the EEZ provide a remarkably similar set of goods and services. These include: commercially exploitable living resources (primarily timber and forage on land and fish in the sea); renewable and non-renewable energy sources; minerals, including high value ores and various types of aggregates; transportation corridors; and recreational opportunities, ranging from low-impact non-extractive activities to those requiring major infrastructure or involving resource extraction. Forests and oceans also provide important ecosystem services, such as water control, hazard mitigation, and climate control, and less tangible "services" such as aesthetic, spiritual, or existence values.

C. Social Setting

Perhaps the most evident difference between land and water is that humans live on the former and only intermittently venture into the latter. Only a small number of scuba divers and scientists are able to truly immerse themselves in ocean ecosystems and explore them in the way any hiker can observe forest conditions. Many analysts have suggested that people's emotional connections are thus stronger to forests than to oceans.[52] But even this difference is not as dispositive as some have claimed. Although the writings of John Muir, Henry Thoreau, and Ralph Waldo Emerson attest to America's deep cultural connections to the nation's forests, the ocean has also played a central role in literature, from Homer's Odyssey to Melville's Moby Dick and Hemingway's Old Man and the Sea. Oceans, like forests, are also depicted in art from pre-history to the present day.

Fifteen of the world's twenty largest cities, and seven of the ten largest in the U.S., are located on a coast, attesting to the fundamental role the ocean plays in human economic and social life. People do not currently live in the National Forests, but rather access the space temporarily for work or recreation and then return to their homes, as they do in the ocean. Forest-edge and coastal communities share many features, including a historic dependence on resource extraction that has shifted over time toward greater urbanization, a focus on recreation-related economies, and construction of vacation and retirement communities where there were once lumber towns or fishing ports. These shifts have led to similar clashes over goals and values. At this moment in time, there are somewhat lower levels of public

[52] *See* Bradley W. Barr & James Lindholm, *Conservation of the Sea Using Lessons from the Land*, 17 THE GEORGE WRIGHT FORUM 77 (2000); Orbach, *supra* note 41; and Janna M. Shackeroff, Elliott L. Hazen, & Larry B. Crowder, *The Oceans as Peopled Seascapes*, *in* ECOSYSTEM-BASED MANAGEMENT FOR THE OCEANS 33 (Karen McLeod & Heather Leslie eds., 2009).

awareness and national political and media attention in ocean settings than in the forests, perhaps due to the time lags that have occurred in gaining access to the ocean, recognizing marine resource limitations, and developing robust scientific and advocacy communities as discussed further below.

D. Governance Setting

The National Forests have one primary owner and manager, the U.S. Forest Service, which is charged with balancing multiple-uses throughout the area. In contrast, more than a dozen ocean agencies manage specific activities or functions throughout the EEZ (e.g., fisheries, shipping, safety, customs control, etc.). However, neither approach results in clear, undivided authority. In both arenas, disputes arise among federal, state, tribal, and local authorities, administrative units responsible for different areas or uses, and elected bodies with different constituencies and values. It may be easier for Regional Forest Supervisors to resolve conflicts between, say, the timber experts and ecologists working under them to implement different aspects of the Forest Service's mandate than it is for the White House to resolve conflicts between Cabinet agencies executing different statutes in the ocean. But the tradeoffs and compromises required are not altogether different.[53] Significantly, neither the National Forests nor the EEZ have been assigned a clearly dominant use by Congress unlike, for example, the National Parks. For the most part, managers are expected to accommodate a mix of potentially competing activities and users.[54]

Both National Forests and the oceans experienced transitions over the 20th century from conditions of open access, with little centralized control, to heavily regulated spaces. These changes, however, took place more recently in the ocean and access and ownership rights continue to be less clear. What is more, whatever their legal status, long-established traditional users and private businesses with leases or agreements (e.g., logging, fishing, drilling operations, dams, recreational facilities, fishing quotas) create expectations in both settings that are hard to reverse. Generally thought of as public trust resources (*de facto*, if not *de jure*), scholars of public lands and ocean space have long argued about how specific, binding, and actionable the government's public trust obligations should be, and whether or not a strict "public trust doctrine" applies in these areas.[55]

Management in both venues has followed a largely traditional, hierarchical regulatory model, with occasional experiments into alternatives such as market mechanisms, collaborative decision-making, or community-based management. One important difference arises as a result of the National Forests' longstanding emphasis on multiple-use, area-wide, prospective planning. This concept has just recently been introduced in the EEZ via MSP, which has not yet been implemented.[56]

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[53] Interviews with National Forest stakeholders from state government, industry, advocacy organizations, nearby communities, and Forest Service staff highlighted the frustration caused by competing statutes, regulations, and agencies operating within a single forest.

[54] Although both settings include some Presidential, agency, or Congressionally approved limited-use areas, such as wilderness and roadless areas in forests and marine protected areas in the ocean, they constitute a small fraction of the total area, rarely exclude all other activities, and do not resolve conflicts in the remaining areas.

[55] *See, e.g.,* Charles F. Wilkinson, *The Public Trust Doctrine in Public Land Law*, 14 U.C. DAVIS L. REV. 269 (1980), on public lands and Turnipseed et al., *supra* note 38, on ocean areas.

[56] Extensive planning does occur in connection with specific ocean uses, most notably oil and gas extraction and fishing and, to a lesser extent, marine protected areas, but multiple-use ocean planning is in its infancy.

E. Participants and Coalitions

The main categories of protagonists in the two settings overlap to a great extent, including local and national elected officials, agency leaders and career professionals, the courts, the science community, the media, non-profit advocacy groups, industry associations, and community members. In both places, disputes arise between those with different interests, different values, and different histories. Recurrent divides are found between economic and environmental interests, individual and corporate interests, locals and outsiders, extractive and non-extractive approaches to recreation, and proponents of nature-for-man and nature-for-itself.

Long-standing traditional users, such as loggers on land and fishermen in the sea, tend to clash with newer users looking for space, such as wealthy retirees or renewable energy developers. The former often have strong, multi-generational ties to the area but relatively little national power, while the latter are often able to press their agendas more effectively due to greater political access and resources.[57] Environmental non-governmental organizations (ENGOs) are active in both settings, but those advocating for land conservation are generally older, larger, more numerous, and better funded. Two established groups focused on forest issues are the Sierra Club, founded by writer and forester John Muir in 1892 with an annual budget today of around $100 million, and The Wilderness Society, founded by the independently wealthy activist Bob Marshall in 1935 with a budget today of $30 million. The two largest U.S. ocean advocacy groups are the Ocean Conservancy, founded in 1972, and Oceana, founded in 2001, both with current budgets of around $15 million.[58]

Another important contrast between participants in the two settings involves their approach to collaborative processes. Many National Forest communities meet the suggested pre-conditions for negotiated agreement,[59] including the presence of a "hurting stalemate," motivated leadership, incentives for participation, uncertainty about the future, and a sense of interdependence. Several of these communities are already implementing many of the process elements associated with successful collaboration, including trust building, transparency, and development of shared understanding. A case study of the Siuslaw National Forest in Oregon shows how these conditions enabled collaborative engagement among participants there.[60] The ocean community is only beginning to experience many of the pre-conditions for collaboration, due to increasingly intractable conflicts between commercial

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[57] Unlike the commercial fishing industry, which is made up of many widely dispersed participants with relatively few major companies, the timber industry includes both locally based mom-and-pop operators plus a few very large companies which have given it a larger voice in the political process.

[58] All dates and budget figures are from the organizations' annual reports and audited financial statements. A study commissioned by The Pew Charitable Trusts, Oak Foundation, Marisla Foundation, Turner Foundation, and Rockefeller Brothers Fund in 1999 found that less than one-half of one percent of resources spent by environmental groups in the United States went to ocean advocacy, although that number may have increased somewhat over the last 13 years. *See History*, OCEANA, http://oceana.org/en/about-us/history (last visited July 15, 2013).

[59] John M. Bryson, Barbara C. Crosby, & Melissa Middleton Stone, *The Design and Implementation of Cross-Sector Collaborations: Propositions from the Literature*, 66 PUB. ADMIN. REV. 44 (2006); Chris Ansell and Alison Gash, *Collaborative Governance in Theory and Practice*, 18 J. OF PUB. ADMIN. RES. AND THEORY 543 (2008).

[60] *See* Gopnik, *supra* note 22.

and recreational fishermen; between fishermen, the energy industry, and environmentalists; and between offshore wind energy and coastal communities. There is also considerable uncertainty for new ocean users, such as proponents for renewable energy and offshore aquaculture, who are looking for suitable space and operating permits. But elements such as trust and shared understanding remain rare commodities among ocean stakeholders.[61]

The overlaps discussed above in the two settings' ecology, goods and services, social settings, governance, and participants—the building blocks of policy analysis—are sufficient to believe that the 100-year history of forest management might offer some lessons, or at least cautionary tales, for ocean managers. The following sections summarize some of these lessons and suggest how they might influence the efforts of regional ocean planners.

V. The Challenges of Multiple-use Management

A multiple-use approach has been part of Forest Service practice since its earliest days, with five major uses, generally referred to by the shorthand of "wood, water, wildlife, range, and recreation," being accommodated as early as 1916. Forest Service leaders and managers embraced the idea that their mission required "management of … the national forests so that they are utilized in the combination that will best meet the needs of the American people" although those words were not put into law until the Multiple Use Sustained Yield Act (MUSY) was enacted in 1960.[62] The multiple-use mantra has been central to the training, values, and culture of the Forest Service[63] and has been reinforced by Congress and the courts over time as the guiding principle for National Forest management.[64]

Many participants and observers have endorsed the multiple-use approach.[65] MacCleery concluded that multiple-use "(1) provides administrative flexibility to shift management over time in response to changing public demands and preferences on public lands; and (2) sets the stage for significant debates over preferred use, especially as competing demands become intense."[66] However, the underlying assumption behind this approach—that impartial natural resource professionals will be able to

[61] *See* Gopnik et al., *supra* note 30.
[62] George C. Coggins & Parthenia B. Evans, *Multiple Use, Sustained Yield Planning on the Public Lands*, 53 U. COLO. L. REV. 411, 418-23 (1981).
[63] *See* CHARLES F. WILKINSON & H. MICHAEL ANDERSON, LAND AND RESOURCE PLANNING IN THE NATIONAL FORESTS (1987).
[64] Where Congress wished to exclude multiple-uses, they did so explicitly, for example by turning Forest Service lands into National Parks, Wilderness Areas, or military bases.
[65] *See, e.g.,* George R. Hall, *The Myth and Reality of Multiple Use Forestry*, 3 NAT. RESOURCES J. 276 (1963); Phillip L. Martin, *Conflict Resolution through the Multiple-Use Concept in Forest Service Decision-making*, 9 NAT. RESOURCES J. 228 (1969); DOUGLAS W. MACCLEERY, AMERICAN FORESTS: A HISTORY OF RESILIENCY AND RECOVERY (1992); JOHN FEDKIW, USDA FOREST SERVICE, MANAGING MULTIPLE USES ON NATIONAL FORESTS, 1905-1995: A 90-YEAR LEARNING EXPERIENCE AND IT ISN'T FINISHED YET, FS-628 (1999)
[66] Douglas W. MacCleery, *Re-Inventing the United States Forest Service: Evolution from Custodial Management, to Production Forestry, to Ecosystem Management, in* RE-INVENTING FORESTRY AGENCIES: EXPERIENCES OF INSTITUTIONAL RESTRUCTURING IN ASIA AND THE PACIFIC, RAP Publication 2008/05, 49 (Patrick Durst et al. eds. 2008).

implement a range of complementary uses on public land, based on objective analyses of sound data and science, in a way that maximizes public welfare—rests on shaky ground.[67]

At the heart of much of the criticism leveled against the multiple-use paradigm for National Forests, whether by academics, lawyers, advocates, or foresters, lie fundamental disagreements about the appropriate balance between different forest goals (ecological, economic, and social) and about the appropriate locus for decision-making.[68] Shortly after passage of MUSY, John Zivnuska summarized many of the potential problems it would create for the Forest Service, including the difficulty of comparing economic and non-economic uses, the impacts of lobbying on decisions, the pressure of Congressional budget targets, and disconnects between local and national values.[69] Nevertheless, Zivnuska concluded that the professional forester "through education and experience is qualified to judge the complex interactions of … the several uses of forests and wild lands and is aware of the various values resulting from management," and thus "has a more valid base for contributing to management decisions than any [other] individual or group."[70] Others have been less convinced that foresters possess such Solomonic skills.[71]

Writing in 1967, Behan concluded that multiple-use had become an empty buzzword and a panacea,[72] admonishing Forest Service staff to take greater advantage of MUSY's acknowledgement that "some land will be used for less than all of the resources." This view was echoed and strengthened in two related documents, a 1970 report from the Public Land Law Review Commission[73] and a 1973 article in The Yale Law Journal,[74] both of which called for dominant-use zones to be created on public lands. "Management of public lands should recognize the highest and best use of particular areas of land as dominant over other authorized uses."[75] The main difference between the two publications is that the Public Land Commission urges Congress to simply state priorities among uses, letting the *Forest Service* delineate the actual use zones, while the authors of the Yale Law Journal article would assign the zoning process directly to Congress, ostensibly to ensure "full representation of all users and interests regardless of their location," revealing a faith in Congress's impartiality that rivals Zivnuska's faith in the wisdom of foresters.

Like a National Forest, the EEZ is a fundamentally multiple-use space. The 2010 Presidential Executive Order on ocean policy addresses the multiple-use challenge in federal waters by creating a National Ocean Council and calling on all ocean-related agencies to work together to develop regional plans that "enable a more integrated, comprehensive, ecosystem-based, flexible, and proactive

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[67] *See* Michael J. Mortimer, *The Delegation of Law-Making Authority to the United States Forest Service: Implications in the Struggle for National Forest Management*, 54 ADMIN. L. REV. 907 (2002).
[68] *See* MATTHEW MCKINNEY & WILL HARMON, THE WESTERN CONFLUENCE: A GUIDE TO GOVERNING NATURAL RESOURCES (2004).
[69] *See* John A. Zivnuska, *The Multiple Problems of Multiple Use*, 59 J. OF FORESTRY 555 (1961).
[70] *Id.* at 560.
[71] *See generally* Christopher Curtis, *Managing Federal Lands: Replacing the Multiple Use System*, 82 YALE L. REV. 787 (1973), Mortimer, *supra* note 67.
[72] R. W. Behan, *The Succotash Syndrome, or Multiple Use: A Heartfelt Approach to Forest Land Management*, 7 NAT. RESOURCES J. 473, 478 (1967).
[73] PUBLIC LAND REPORT, *supra* note 42.
[74] Curtis, *supra* note 71.
[75] PUBLIC LAND REPORT, *supra* note 42, at 48.

approach to planning and managing *sustainable multiple uses* across sectors and improve the conservation of the ocean, our coasts, and the Great Lakes."[76] Like the text of MUSY, this guidance is inspiring, ambitious, and quite vague. Although several recent articles suggest that a single- or dominant-use approach could improve the management of ocean space,[77] the extent of government reorganization that would be required to establish single-use zones and corresponding agencies makes it likely that the EEZ will continue to be managed as a multiple-use space for the foreseeable future. If that is true, how can the downsides of that approach be minimized?

VI. Adapting Forest Experiences to the Ocean Context

What, if anything, have we learned from the National Forests about balancing multiple uses on public space? In 1905, Gifford Pinchot, first Chief of the U.S. Forest Service, wrote that, "where conflicting interests must be reconciled, the question will always be decided from the standpoint of the greatest good of the greatest number in the long run."[78] His inclusion of the words "in the long run" foreshadow modern-day calls for *sustainable* resource use but, in any time period, the question remains: long term sustainability *of* what and *for* what purpose?[79] Multiple-use management built on the presumption of equal priorities for all permitted uses cannot please everyone or meet all potential criteria for success including economic and administrative efficiency, equity, accountability, adaptability, and effectiveness in achieving desired outcomes.[80] As concluded by the U.S. Commission on Ocean Policy, "in any system with multiple competing objectives, it will not be possible to meet every one."[81] Tradeoffs must be made and these tradeoffs will require value judgments. The question then arises as to *how* choices will be made, and by *whom*.

Public lands experience reveals that fundamental choices must be made along three axes: (1) *Scale*, from national to local; (2) Decision-making *process*, from national electoral politics to local collaboration; and (3) Degree of *uniformity*, from standardized to flexible. The forest management community, including the federal and state agencies involved, stakeholders from vastly differing

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[76] Executive Order 13,547—Stewardship of the Ocean, Our Coasts, and the Great Lakes, 75 Fed. Reg. 43,023, 43,023 (July 22, 2010) (emphasis added).

[77] *See, e.g.*, Josh Eagle, *Regional Ocean Governance: The Perils of Multiple-use Management and the Promise of Agency Diversity*, 16 DUKE ENVTL. L. & POL'Y F. 143 (2006); Josh Eagle, *The Practical Effects of Delegation: Agencies and the Zoning of Public Lands and Seas*, 35 PEPP. L. REV. 4 (2008); Josh Eagle & Amanda Kuker, *Public Fisheries*, 15 ECOLOGY AND SOC'Y 10 (2010); James M. Sanchirico et al., *Comprehensive Planning, Dominant-Use Zones, and User Rights: A New Era in Ocean Governance*, 86 BULL. MAR. SCI. 273 (2010).

[78] Pinchot was borrowing from the utilitarian philosopher Jeremy Bentham who wrote in his 1789 treatise, *The Principles of Morals and Legislation*: "It is the greatest good to the greatest number of people that is the foundation of morals and legislation." *See Pinchot and Utilitarianism, The Greatest Good: A Forest Service Centennial Film*, U.S. FOREST SERVICE, http://www.fs.fed.us/greatestgood/press/mediakit/facts/pinchot.shtml (last visited July 16, 2013).

[79] Richard P. Gale & Sheila M. Cordray, *Making Sense of Sustainability: 9 Answers to What Should Be Sustained*, 59 RURAL SOC. 311 (1994).

[80] *See* Mark T. Imperial, *Institutional Analysis and Ecosystem-Based Management: The Institutional Analysis and Development Framework*, 24 ENVTL. MGMT. 449 (1999).

[81] AN OCEAN BLUEPRINT, *supra* note 3, at 296.

perspectives, elected officials at many levels, and interested scientists and scholars, has experimented with solutions at virtually all points along these policy continua.

A. Scale: National, Regional, State, or Local?

Selecting an appropriate scale for policy attention involves both ecological and institutional considerations. In forests, as in the ocean, important ecosystem processes take place at scales from organismal to planetary. Likewise, the institutions that affect these spaces range from informal interactions among neighbors to global, inter-governmental treaties. Different analysts have made forceful, often mutually contradictory, arguments for and against control at various levels, but all agree that choices will need to be made: "thorny issues … do not get any easier through delay or by forcing local managers to attempt to resolve national controversies."[82]

The fact that National Forests are under federal ownership creates "a *perceived* right and interest among all citizens on how these lands should be managed,"[83] namely, a presumption of federal control, accompanied by a large body of federal law, an assortment of responsible federal agencies, and "a forest policy-making structure heavily concentrated in Washington."[84] Those in favor of national level policymaking argue that it ensures greater consistency, better expresses national values (to the extent they can be discerned), and prevents parochial concerns from determining the use of public trust resources.[85]

But that federal focus has been challenged. Western states have never been happy with the preponderance of federally controlled lands within their borders. As part of the so-called "Sagebrush Rebellion,"[86] advocacy groups and Western officials periodically promote national legislation calling for the return of federal land to the states. More dispassionate analysts have identified potential advantages to this idea, based on the value of decentralization in promoting diversity and innovation.[87] Leshy (1987) and Salcido (2007) look at the role the courts have played in partitioning responsibilities for public lands between federal and state authorities, concluding that greater *cooperation* between

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[82] Christopher A. Wood, *Here We Go Again*, FOREST MAGAZINE "INNER VOICE" NEWSLETTER (2001), *available at* http://www.fseee.org/forest-magazine/200415.

[83] MacCleery, *supra* note 66, at 72 (emphasis added).

[84] *Id.*

[85] The term "public trust" is used here based on its colloquial meaning, not as a legal term. For more in-depth legal analyses of the public trust doctrine as it applies to public lands see Wilkinson, *supra* note 55, and as it applies to the ocean see Turnipseed et al., *supra* note 38.

[86] The Sagebrush Rebellion refers to a movement started in the 1960s in the Western United States which sought to have federally owned lands returned to the states. The "Sagebrush Rebellion" bill, passed in the 1979 Nevada Legislature with similar versions passed in other Western states, was designed to create a process for state control of lands within their boundaries, in hopes that such a transfer would be authorized at the national level. The movement reflected a feeling that federal land policies were catering to a national audience while ignoring Western concerns. *See generally* McKinney & Harmon, *supra* note 68; A WOLF IN THE GARDEN: THE LAND RIGHTS MOVEMENT AND THE NEW ENVIRONMENTAL DEBATE (Philip D. Brick & R. McGreggor Cawley eds., 1996).

[87] Robert Nelson, *End of the Progressive Era: Toward Decentralization of the Federal Lands*, *In* A WOLF IN THE GARDEN, *supra* note 86, at 215.

state and federal regulators, particularly from the earliest stages of the forest planning process, would be preferable to the minutely parsed outcomes of continued legal battles.[88]

Federal forest management also assigns a special status to adjacent jurisdictions, giving local governments opportunities to review forest plans for consistency with their own land use plans.[89] A large body of theoretical and case study-based research, combined with the work of many active practitioners, makes a case for stronger local participation as key to guiding public land management.[90] Not surprisingly, many of the forest community members interviewed for this study also expressed a preference for more local control. Arguments in favor of this position range from those based on the foundations of American democracy[91] to those based on personal observation of successful locally led efforts over the last two decades.[92] Supporters contend that cross-sectoral, community-level engagement, with local leadership, can transcend seemingly intractable disputes by: (1) building trust among those with shared connections to a particular place; (2) allowing community-based collective action to experiment with new approaches (such as restoration forestry); and (3) fostering seemingly small agreements that can contribute to a virtuous cycle of success. Many of these conclusions echo research findings from the wider fields of game theory and institutional analysis.[93]

Opponents of local control reply that such an approach excludes distant citizens, who have an equal claim on public trust resources, may have equally strong feelings about their management, and thus deserve an equal voice. Coggins states this unequivocally, "When the subject is every American's natural heritage, devolved local collaborationism is entirely inappropriate," and makes a legal case for why it should not be allowed.[94] Many national environmental advocates—vocal critics of giving communities a primary role in national forest management—also believe that local residents will neither understand nor care sufficiently about ecosystem protection and will be willing to sacrifice environmental protection for local economic gain.[95]

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[88] *See* John D. Leshy, Granite Rock *and the States' Influence over Federal Land Use*, 18 ENVTL. L. 99 (1987); Rachel E. Salcido, *Offshore Federalism and Ocean Industrialization*, 82 TUL. L. REV. 1355 (2007).

[89] Karen Bunn-Falen, *Protecting Community Stability and Local Economies: Opportunities for Local Government Influence in Federal Decision- and Policy-Making Processes*, *in* A WOLF IN THE GARDEN, *supra* note 86, at 73, 78.

[90] *See, e.g.,* JULIA M. WONDOLLECK & STEVEN L. YAFFEE, MAKING COLLABORATION WORK: LESSONS FROM INNOVATION IN NATURAL RESOURCE MANAGEMENT (2000); Steven L. Yaffee & Julia M. Wondolleck, *Collaborative Ecosystem Planning Processes in the United States: Evolution and Challenges*, 31 ENVIRONMENTS 59 (2003); Daniel Kemmis & Matthew McKinney, *Collaboration as an Emerging Form of Democracy*, 100 NAT'L CIVIC REV. 2 (2011); GRAHAM MARSHALL, ECONOMICS FOR COLLABORATIVE ENVIRONMENTAL MANAGEMENT: RENEGOTIATING THE COMMONS (2005); THOMAS C. BEIERLE & JERRY CAYFORD, DEMOCRACY IN PRACTICE: PUBLIC PARTICIPATION IN ENVIRONMENTAL DECISIONS (2002).

[91] Kemmis and McKinney look to the writings of 18th Century philosophers such as Montesquieu and U.S. constitutional framers Hamilton and Madison for support of greater local control. Kemmis & McKinney, *supra* note 90, at 2.

[92] *See, e.g.,* Gerald J. Gray, Maia J. Enzer, & Jonathan P. Kusel, *Understanding Community-Based Forest Ecosystem Management: An Editorial Synthesis*, 12 J. OF SUSTAINABLE FORESTRY 1 (2001); Yaffee & Wondolleck, *supra* note 90.

[93] *See, e.g.,* ELINOR OSTROM, ROY GARDNER & JAMES WALKER, RULES, GAMES, AND COMMON-POOL RESOURCES (1994); OSTROM, *supra* note 48.

[94] George C. Coggins, *Regulating Federal Natural Resources: A Summary Case Against Devolved Collaboration*, 25 ECOLOGY L.Q. 602, 603 (1999).

[95] *See, e.g.,* Michael McClosky, *Local Communities and the Management of Public Forests*, 25 ECOLOGY L.Q. 624 (1999).

Similar debates have played out in the EEZ. Management has a strong federal focus, with state roles negotiated through "consistency" provisions in the Coastal Zone Management Act, leading to periodic dissatisfaction on both sides.[96] Since virtually all activities in the EEZ must be mediated through a coastal port, processing plant, or other transfer station, the impacts of offshore activities are felt at the shoreline and this relationship continues to be tested. Salcido urges the ocean community to work together in blurring, rather than reinforcing, the boundaries between state and federal waters and decisions.[97] States and multi-state regions have been given strong roles in fisheries through the Regional Fishery Management Councils, have taken the lead in promoting offshore renewable energy, and are central players in the Regional Planning Bodies being convened under the new National Ocean Policy.

To date, local coastal communities have not had a strong say in management of the EEZ, although some EBM projects have benefited from incorporation of local and traditional ecological knowledge.[98] Recent work by St. Martin and Hall-Arber, which documents and maps the connections between specific fishing ports and distinct offshore areas may also help policymakers recognize the relevance of local perspectives to ocean planning.

A thoughtful paper by Kagan reviews the many pros and cons of implementing environmental protection at different levels of government, including comparisons to outcomes in other federalist systems abroad. He concludes that intractable disagreements persist in the U.S. to a greater degree than elsewhere because "interest groups and politicians—and perhaps the electorate at large—want to have it both ways."[99] He goes on: "They prize local democracy [and] want to allow local and state governments discretion to make difficult tradeoffs," but do not necessarily trust these decision-makers to protect broader national values.[100] Kagan's solution is to rely on the legal system to arbitrate disputes between local, state, and federal goals, which shifts the debate from being about the appropriate *scale* of decision-making to the appropriate *manner* of decision-making, a different set of tradeoffs.

B. Decision-making Process: Political, Technocratic, Judicial, or Participatory?

The U.S. Constitution, with its subsequent 225 years of accreted interpretation, allows for a number of different bodies, operating under different mandates, to make overlapping and potentially contradictory decisions. Over time, strong claims have been made for each venue being the most appropriate for making decisions regarding public space and resources. Some point to elected officials as the true representatives of citizens' interests.[101] Some put their faith in a combination of scientists and agency professional staff as the most impartial and objective decision-makers.[102] Others—generally

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[96] Salcido, *supra* note 88, at 1390-92.
[97] *Id.* at 1439-44.
[98] *Marine Ecosystem-based Management in Practice*, *supra* note 11.
[99] Robert A. Kagan, *Trying to have it Both Ways: Local Discretion, Central Control, and Adversarial Legalism in American Environmental Regulation*, 25 ECOLOGY L.Q. 718, 730 (1999).
[100] *Id.* at 730-31.
[101] Curtis, *supra* note 71, at 799; Mortimer, *supra* note 67, at 981.
[102] *See, e.g.,* GIFFORD PINCHOT, BREAKING NEW GROUND (1947), and his philosophical followers.

lawyers—favor a more central role for the courts in interpreting often-ambiguous statutory language and overseeing presumptively partial agency leaders.[103] A more recent, but growing, cadre of participants and scholars promote the value of place-based collaborative decision-making, which emphasizes broad citizen participation, facilitated dialogue, and a preference for compromise.[104]

Because multiple-use land management requires difficult, values-based choices to be made, many have suggested that elected officials must take the lead through a *political* decision-making process.[105] According to Nie, public land laws should express clear policy choices and specify desired outcomes, to be implemented with little discretion by agencies.[106] Coggins goes so far as to accuse legislators of "embracing the multiple-use philosophy in part because it enabled them to avoid the inevitable, and politically volatile, hard choices."[107] Starting in the 1960s, environmental advocates looked to Congress as the champion of non-economic goals, such as wilderness preservation and ecosystem services, believing that economic interests would continue to dominate any agency-led multiple-use process. Howard Zahniser, a high-profile environmental advocate in the 1950s and 1960s who played a major role in advancing the Wilderness Act, explained that enacting legislation is a huge undertaking, "not because it goes so far, but because it must be taken by so many.... We [do not] disregard the reluctant ones. Rather, we persuade, we confer, we try to understand, we cooperate."[108] It is hard to imagine that Zahniser would observe the same level of comity today, or find the same level of support for environmental protection; nevertheless, because of the hurdles he cites, laws in the U.S. have generally been more stable and accepted as having greater legitimacy, than agency regulations.

Congressional battles and compromises have also played a central role in U.S. ocean management. In fact, a recurrent theme in many criticisms of MSP is its lack of support—and in some cases vociferous objections—from members of Congress. The Executive Branch has continued to move forward based on Executive Orders and agency action, but the need for Congressional appropriations is likely to hinder this strategy. It is unclear whether this temporary workaround in the face of a highly politicized Congress will prove to be a long-term barrier to the success of MSP.

A *technocratic* decision-making process was favored by progressive conservationists, led by Chief Forester Gifford Pinchot, whose thinking dominated forest management in the early 20th century. At that time, the promotion of science, impartial agency professionalism, and rational decision-making provided a welcome contrast to the previous era's combination of "first in time, first in right" land grabs and the influence of a small number of wealthy landowners and industrialists on politics. One important component of the progressive approach was their reliance on planning, using estimates of forest growth and timber demand to calculate sustainable harvest levels and forecast the demand for services by recreational hunters, hikers, and tourists. Through the 1970s and 1980s some observers continued to

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[103] *See, e.g.*, George C. Coggins, *Of Succotash Syndromes and Vacuous Platitudes: The Meaning of Multiple Use, Sustained Yield for Public Land Management*, 553 U. COLO. L. REV. 229 (1981).
[104] *See, e.g.*, WONDOLLECK & YAFFEE, *supra* note 90.
[105] *See, e.g.*, GARY C. BRYNER, U.S. LAND AND NATURAL RESOURCES POLICY: A PUBLIC ISSUES HANDBOOK (1998); Mortimer, *supra* note 67; Nie, *supra* note 42.
[106] *See generally* Nie, *supra* note 42.
[107] Coggins, *supra* note 103, at 241.
[108] Howard Zahniser, *Wilderness Forever, in* WILDERNESS: AMERICA'S LIVING HERITAGE 155 (David Brower ed., 1961).

believe that land agency experts could make multiple-use work if only they had more data, better analytic methods, and new computer-based decision tools to calculate the optimum mix of uses.[109]

However, by the late 1980s many forest scientists were rejecting traditional models of forest growth in favor of concepts such as ecosystem complexity, uncertainty, adaptability, and resilience, all of which were much more difficult to quantify and model. The prospect of including even less well-understood factors, such as economic, sociological, and cultural impacts, where data are limited and forecasts notoriously unreliable,[110] made it even less likely that purely technical solutions could be found.[111] Thus the era of faith in public land agency decisions based on "objective" analyses waned. "Scientific research can define the biological and physical decision space for ecosystem decision-making, but it cannot determine decisions that must also reflect the values of society, its interests groups, landowners, and managers."[112] The forest management community came to realize there is no such thing as an "optimal solution" discernible through technical analyses; instead, there are many different, equally defensible balances between varied, and often divergent, interests.[113]

Ocean managers have gone through similar phases of reliance on, and dissatisfaction with, the power of science and expertise to achieve sustainable multiple-use. Building on the Stratton Commission's exhortations to increase U.S. exploitation of offshore fisheries resources,[114] stock assessment scientists have been at the heart of NOAA's effort to achieve maximum sustainable yields. Reports from the National Research Council are filled with advice for refining and improving stock

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[109] *See generally* Dennis E. Teeguarden, *Benefit-Cost Analysis in National Forest System Planning: Policy, Uses, and Limitations*, 17 ENVTL. L. 393 (1986).

[110] *See* James Justus et al., *Buying into Conservation: Intrinsic Versus Instrumental Value*, 24 TRENDS IN ECOLOGY & EVOLUTION 187 (2009).

[111] Another danger of granting agencies considerable discretion in planning and decision-making is that it exposes them to charges of "capture," a concept developed by MARVER BERNSTEIN, REGULATING BUSINESS BY INDEPENDENT COMMISSION (1955), but discussed extensively in the context of public lands by Culhane, *supra* note 42; Joseph Feller, *Til the Cows Come Home: The Fatal Flaw in the Clinton Administration's Public Lands Grazing Policy*, 25 ENVTL. L. 703 (1995); Paul A. Sabatier, John Loomis, & Catherine McCarthy, *Hierarchical Controls, Professional Norms, Local Constituencies, and Budget Maximization: An Analysis of United States Forest Service Planning Decisions*, 39(1) AM. J. OF POL. SCI. 204 (1995), CHARLES DAVIS, WESTERN PUBLIC LANDS AND ENVIRONMENTAL POLITICS (2d ed. 2001); Nie, *supra* note 42, and others. At various times, the Forest Service has been accused of being captured by the timber industry, the Minerals Management Service (recently renamed the Bureau of Ocean Energy Management) of being captured by the oil industry, and the National Marine Fisheries Service of being captured by the fishing industry. It can be very difficult, however, to distinguish between true *capture*—an agency ignoring its public obligations in order to favor its friends—and *judgment*, whereby an agency makes legitimate choices within a multiple-use context in response to a wide range of constituent voices. One author who otherwise levels plenty of criticism at the Forest Service concludes on this question that foresters were "responding in variable and locally appropriate ways to heterogeneous communities." Culhane, *supra* note 42. Most agency staff, including all those interviewed for this study, vociferously defend their choices as reflecting the complex, often contradictory directions provided by the public—either directly or through elected representatives—as well as possible at any given time.

[112] FEDKIW, *supra* note 65, at 277.

[113] Yaffee & Wondolleck, *supra* note 90, at 61.

[114] THE COMMISSION ON MARINE SCIENCE, ENGINEERING AND RESOURCES, OUR NATION AND THE SEA: A PLAN FOR NATIONAL ACTION (1969), commonly referred to as the Stratton Commission Report.

assessments.[115] The Ocean Commission also concluded that "accurate, reliable science is critical to the successful management of fisheries," decrying the fact that "social, economic, and political considerations have often led the [Regional Fishery Management] Councils to downplay the best available scientific information."[116]

Most guides to MSP also emphasize the importance of objective science, GIS-based mapping, and scenario analyses.[117] One eloquent statement in favor of technically proficient professional planning for the National Forests might have been made today by MSP supporters: "The public wants beauty, recreation, and wildlife, ... we have reached a national commitment to preserve endangered and threatened species, ... [and] the public also wants [commercial products] from these same [areas] ... How can we possibly address issues of that magnitude, and achieve an acceptable mix of all the many commodity and non-commodity values, without extensive planning?"[118]

In the U.S., *judicial* decision-making has also been critical in the management of public lands. Courts can resolve conflicts by interpreting often unclear statutory language and applying constitutional principles, thereby creating durable decisions. But judges are also people, with personal histories, perspectives, and political allegiances that inform their analyses. Clever lawyers and advocates proudly practice venue shopping to identify courts most likely to be receptive to their positions. Proponents of strong legal involvement in forest management, often attorneys and law professors,[119] point to a number of benefits in relying on courts to resolve conflicts: (1) As secure, lifetime appointees, federal judges may be more independent and objective than elected officials or agency staff; (2) Courts can consider the validity of both the *process* and *outcomes* of agency decision-making, either of which may be at the heart of a dispute; and (3) At the end of a full round of court proceedings and appeals, an issue is generally resolved in a fairly durable way. Coggins concluded that forest ecosystems would be better protected if courts were *more* willing to review agencies' discretionary decisions.[120]

But there have also been significant downsides to relying on the courts: delays of months, years, and even decades in reaching decisions; significant costs, which disadvantage individual or small-group interests; and a focus on adversarial interactions and win-lose outcomes that can poison the atmosphere for later compromise. As Yaffee and Wondolleck remind us, the legal system may work well for dispute resolution, but not for relationship building.[121] McKinney and Harman find that many

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[115] *See, e.g.,* NATIONAL RESEARCH COUNCIL (NRC), IMPROVING THE MANAGEMENT OF U.S. MARINE FISHERIES (1994); NRC, REVIEW OF NORTHEAST FISHERY STOCK ASSESSMENTS (1998); NRC, IMPROVING FISH STOCK ASSESSMENTS (1999); NRC, IMPROVING THE COLLECTION, MANAGEMENT, AND USE OF MARINE FISHERIES DATA (2000).

[116] AN OCEAN BLUEPRINT, *supra* note 3, at 277.

[117] *See generally* Ehler & Douvere, *supra* note 19; JENNIFER MCCANN & SARAH SCHUMANN, THE RHODE ISLAND OCEAN SPECIAL AREA MANAGEMENT PLAN: MANAGING OCEAN RESOURCES THROUGH COASTAL AND MARINE SPATIAL PLANNING: A PRACTITIONERS GUIDE (2013), *available at* http://seagrant.gso.uri.edu/oceansamp/pdf/Practitioner_Guide.pdf.

[118] Charles F. Wilkinson, *The National Forest Management Act: The Twenty Years Behind, the Twenty Years Ahead*, 68 U. COLO. L. REV. 659, 681-82 (1997).

[119] *See, e.g.,* Coggins, *supra* note 103; Kagan, *supra* note 99; Davis, *supra* note 111.

[120] Coggins, *supra* note 103, at 279-80.

[121] Yaffee & Wondolleck, *supra* note 90, at 61.

public lands stakeholders have turned to the courts to resolve essentially non-legal disputes.[122] They document a history of parties attempting to re-frame fundamental *values* questions under cover of rights and legal mandates. The only way they see to avoid this misdirected emphasis, and thus honestly address differences in goals and values, is through greater public dialogue.

Legal challenges to agency decisions have also been important in ocean management, notably in the area of fisheries.[123] Advocates for a given position—commercial fishermen, recreational fishermen, conservationists, or others—frequently praise or decry intervention by the courts depending on how a particular ruling has affected their interests. A report from the National Academy of Public Administration concluded that fisheries management "is increasingly exercised by the courts through litigation … and by constituencies that seek redress through these forums," with rulings that sometimes favor increased emphasis on conservation, sometimes lean toward maintaining catch levels, and sometimes simply defer to agency judgment.[124] Sanchirico et al. and Eagle and Kuker suggest that greater reliance on property rights and the relatively well-defined processes associated with them, including support from the judicial system, could resolve marine use conflicts in a more definitive way than is possible under the current system.[125]

Over time, faith in technocratic decision-making waned, frustration with court delays grew, and people realized that multiple-use forest management required someone to define "the public good." Many observers suggested that the public itself might be the best source of guidance, pointing to a more *participatory* decision-making process. Since then, there has been an explosion of experiments, case studies, analyses, and theory-building regarding the most effective role for the public, in public policy generally and specifically in National Forest management. Beginning after World War II, statutory requirements were put in place to facilitate public participation in National Forest decisions, such as those in the Administrative Procedure Act (1946), Freedom of Information Act (1966), and National Environmental Policy Act (1970).

Through the 1970s and 1980s formal opportunities for public comment were made available for virtually all agency proposals. But the trend on public lands over the last 20 years has been toward increasingly flexible, participatory efforts, referred to alternatively as place-based collaboration, community-based management, interest-based negotiation, grass-roots ecosystem management, environmental conflict resolution, and collaborative governance.[126] New communities of knowledge and practice emerged, drawing on the latest research in political science, behavioral economics,

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[122] MCKINNEY & HARMON, *supra* note 68, at 21.

[123] To date, the courts have not been called on to consider the validity of integrated ocean planning efforts.

[124] NATIONAL ACADEMY OF PUBLIC ADMINISTRATION, COURTS, CONGRESS, AND CONSTITUENCIES: MANAGING FISHERIES BY DEFAULT xi (2002).

[125] Sanchirico et al., *supra* note 77; Eagle & Kuker, *supra* note 77.

[126] *See, e.g.,* Barbara Gray, *Conditions Facilitating Interorganizational Collaboration*, 38 HUMAN RELATIONS 911 (1985); LAWRENCE SUSSKIND, SARAH MCKEARNEN, & JENNIFER THOMAS-LARMER, THE CONSENSUS BUILDING HANDBOOK: A COMPREHENSIVE GUIDE TO REACHING AGREEMENT (1999); WONDOLLECK & YAFFEE, *supra* note 90; Gray, Enzer & Kusel, *supra* note 92; Michael Hibbard & Jeremy Madsen, *Environmental Resistance to Place-Based Collaboration in the US West*, 16 SOC'Y & NAT. RESOURCES 703 (2003); Marcus B. Lane & Geoff McDonald, *Community-based Environmental Planning: Operational Dilemmas, Planning Principles and Possible Remedies*, 48 J. OF ENVTL. PLAN. & MGMT. 709 (2005); and Kirk Emerson, Tina Nabatchi & Stephen Balogh, *An Integrative Framework for Collaborative Governance*, 22 J. OF PUB. ADMIN. RES. AND THEORY 1 (2012).

sociology, psychology, communications, and education. Where managers previously focused on isolated land units, "… relying on technical models to maximize production of a narrow set of goods," now "management is moving toward an ecosystem-scale perspective where agency officials collaborate with a range of groups to manage for a broad set of values across a fragmented landscape."[127]

If indeed, the locus of decision-making is to be "the public," then legitimate questions follow about what that means. If the public means *all* citizens, elections are the traditional tools for gauging their views. But if, as many have suggested, truly meaningful participation requires face-to-face, collaborative dialogue,[128] who should be at the table and who decides? Some possibilities include: communities of *place* who share a strong connection to a specific location; communities of *interest* who share a set of goals (similar to the "advocacy coalitions" proposed in Sabatier and Weible[129]); or communities of *expertise* who focus exclusively on a specific issue, such as timber management or recreational fishing. Each of these overlapping groups of individuals will have legitimate interests in many disputes. But when the aim is to agree on an appropriate mix of uses in a federally owned or managed space, public participation experts often look to communities of *place* as the logical forum.[130] This is where the drivers for collaboration are most intense and where the prospects for enduring trust and relationship-building are greatest.

Extensive case study research, primarily in the context of public land management, has identified features commonly associated with the successful initiation, maintenance, and success of collaborative public participation in natural resource management:

- Participants must have the capacity (i.e., skills, training, and information) for joint action;
- There must be a shared problem to be solved which provides the incentive to overcome the costs of continued dialog;
- Leaders and facilitators must allow for relationship and trust building apart from direct problem-solving efforts; and
- The process should be inclusive, transparent, negotiation-based, and consensus-seeking, while accepting that full consensus may not be achieved.[131]

When they work well, collaborative efforts can break through longstanding gridlock, result in greater stakeholder satisfaction with both the process and subsequent decisions,[132] and decrease time

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[127] Yaffee & Wondelleck, *supra* note 90, at 60.

[128] *See, e.g.,* STEVEN E. DANIELS & GREGG B. WALKER, WORKING THROUGH ENVIRONMENTAL CONFLICT: THE COLLABORATIVE LEARNING APPROACH (2001); ROSEMARY O'LEARY & LISA B. BINGHAM, THE PROMISE AND PERFORMANCE OF ENVIRONMENTAL CONFLICT RESOLUTION (2003).

[129] Sabatier & Weible, *supra* note 49.

[130] WONDOLLECK & YAFFEE, *supra* note 90, at 16; Kemmis & McKinney, *supra* note 90, at 4-5; *see* Graham Marshall, *Nesting, Subsidiarity, and Community-Based Environmental Governance Beyond the Local Scale*, 2 INT'L J. OF THE COMMONS 75 (2007); Beierle & Cayford, *supra* note 90, at 4.

[131] *See, e.g.,* Yaffee & Wondelleck, *supra* note 90, at 66-69; William D. Leach, *Public Involvement in USDA Forest Service Policymaking: A Literature Review*, 104 J. OF FORESTRY 43 (2006); Emerson, Nabatchi, & Balogh, *supra* note 126.

spent in administrative appeals.[133] Based on their detailed history of public lands management in the West, McKinney and Harmon conclude that the way to "produce wise, durable decisions over the use of natural resources is to bring together the right people with the best available information in constructive forums that focus on the places and issues people care about."[134]

Nevertheless, serious practical concerns about collaboration in public lands management have been raised. Critics complain that highly participatory processes, by their nature, will exclude some perspectives, either because those individuals are not aware of the proceedings or cannot be present.[135] Large national conservation groups have been some of the strongest opponents, believing that "the shift toward local control disenfranchises distant stakeholders … Most of those who own the public forests are excluded from the process."[136] Critics also imply that local communities will inevitably be more focused on economic concerns than on environmental protection.[137] One evaluation of EBM initiatives across the U.S. (both terrestrial and marine) concluded that strong political, regulatory, or judicial authority actually achieved greater levels of environmental protection than collaborative efforts.[138]

Community members reply that large, well-funded groups have chosen to concentrate their resources and power in Washington D.C. and have become disconnected from the realities on the ground, a common complaint expressed in the case study interviews conducted as part of this study. Another challenge arises in trying to merge the benefits of a flexible collaborative approach into the existing highly structured legal and political system. Although Nie worries that delegation to local processes may allow "political representatives [to avoid] responsibility for the tough choices that must be made," he supports collaboration as a useful supplement to traditional decision-making processes.[139] Even strong believers in the added benefits of collaboration believe that its outcomes are best used as one input to established administrative processes.[140]

The criticism of locally led efforts is also couched in more philosophical terms, decrying the devolution of federal government responsibilities as out of keeping with the American form of government. For example, Manring fears that "the focus on the community of place … [will] undermine the democratic accountability of the forest planning processes."[141] Others look to the public trust doctrine and emphasize the need to allow *all* its beneficiaries to assert their legal rights. However, it is worth noting that many of the critiques of local decision-making are advanced by individuals associated

[132] *See, e.g.,* Toddi A. Steelman, *Elite and Participatory Policymaking: Finding Balance in a Case of National Forest Planning*, 29 POL'Y STUD. J. 71 (2001) ; Toddi A. Steelman & Melissa A. DuMond, *Serving the Common Interest in US Forest Policy: A Case Study of the Healthy Forests Restoration Act*, 43 ENVTL. MGMT. 396 (2009).
[133] *See* Kevin L. Gericke and Jay Sullivan, *Public-Participation and Appeals of Forest Service Plans: An Empirical-Examination*, 7 SOC'Y & NAT. RESOURCES 125 (1994).
[134] MCKINNEY & HARMON, *supra* note 68, at 277.
[135] *See* Nancy J. Manring, *The Politics of Accountability in National Forest Planning*, 37 ADMIN. & SOC'Y 57 (2005).
[136] McClosky, *supra* note 95, at 629.
[137] BRYNER, *supra* note 105, at 22; MCCLOSKY, *supra* note 95, at 626; Manring, *supra* note 135.
[138] *See* JUDITH A. LAYZER, NATURAL EXPERIMENTS: ECOSYSTEM-BASED MANAGEMENT AND THE ENVIRONMENT (2008).
[139] NIE, *supra* note 42, at 76.
[140] *See, e.g.,* WONDOLLECK & YAFFEE, *supra* note 90, at 77; MCKINNEY & HARMON, *supra* note 68, at 63.
[141] Manring, *supra* note 135, at 57.

with particular policy preferences—whether for increased environmental protection or fewer restrictions on extraction—who may be concerned that their desired *outcomes* will be under-represented at the local level. One astute observation about the motivations behind collaborative efforts reminds us that, ultimately: "People act collaboratively as a strategy for achieving their own interests, including their interest in [achieving] a creative and durable solution."[142]

To date, the ocean management community has not widely embraced inclusive, collaborative governance. The processes for regulating ocean activities—from leasing offshore sites to determining shipping routes to regulating fishing—still follow a largely traditional public hearing, notice-and-comment approach to public participation. In 2002, the National Academy of Public Administration concluded that: "The view of many of [the National Marine Fisheries Service's] partners and constituents is that [the agency] does not reach out to involve them in meaningful participation in its activities. [It] does not engage them in designing policies and programs, implementing projects, and evaluating results."[143] There have been some exceptions. For example, the National Marine Fisheries Service has experimented with cooperative fishery research, which brings fishermen directly into the stock assessment process and the National Marine Sanctuary program actively engages its stakeholder advisory groups. The Regional Fishery Management Councils themselves constitute a form of participatory governance, although it is far from inclusive. In addition, a number of marine EBM efforts have experimented successfully with more inclusive processes.[144]

Although the 2010 Executive Order on MSP calls for "participation of State, tribal, and local authorities, regional governance structures, nongovernmental organizations, the public, and the private sector," implementation so far has relied on traditional outreach mechanisms. These include public hearings during which government representatives make presentations and allow short public statements, and release of draft documents with limited, written public comment periods. It is reasonable to believe, given similarities in the mix of stakeholders, types of uses present, and relevant authorities in the National Forests and the EEZ that more collaborative approaches may also prove useful in the latter setting.

In the real world, political, technocratic, judicial, and participatory approaches are usually operating simultaneously. Advocates use their resources and influence to take advantage of any opening to advance their cause. Perhaps without fully realizing it, each group then tends to praise whichever venue is best suited to their ends at any given time. For example, after boasting of the environmental movement's successful use of political tools such as grassroots mobilization, media outreach, public demonstrations, and intensive lobbying to finally gain passage of the Wilderness Act, Scott proclaims that, "A law … represents a national social consensus. […] Congressional procedures … [produce laws that] are not susceptible to willy-nilly change with the ebbs and flows of American politics."[145] Not surprisingly, industry associations express similar views, praising the solidity of legislation, the

[142] Yaffee & Wondolleck, *supra* note 90, at 69.
[143] NATIONAL ACADEMY OF PUBLIC ADMINISTRATION, *supra* note 124, at xxi-xxii (2002).
[144] *See* Leila Sievanen et al., *Linking Top-down and Bottom-up Processes through the New U.S. National Ocean Policy*, 4 CONSERVATION LETTERS 298 (2011).
[145] DOUGLAS W. SCOTT, A WILDERNESS-FOREVER FUTURE: A SHORT HISTORY OF THE NATIONAL WILDERNESS PRESERVATION SYSTEM II.C27 (2001).

impartiality of agency decisions, the wisdom of the courts, or the power of the people, depending on which of these bodies is most in tune with their interests at any moment.

C. Degree of Uniformity: Harmonization or Flexibility?

In addition to the questions about scale and process discussed above, a third difficult set of tradeoffs must be made between the desire for harmonization, with the certainty and predictability that accompany such standardization, and the search for more flexible approaches, associated with greater adaptability and innovation. Early forest managers embraced standardization, rulemaking, and coordination, all of which connote a degree of order and predictability. These concepts are also very much in tune with progressive conservationist ideals[146] and the related "modernist" view[147] that, through science, the rule of law, proactive planning, functional design, and rational analysis, society can transcend the messiness of unmediated human behavior and maximize human welfare. Scientists and engineers are enlisted to predict maximum sustainable yields or design optimum use profiles, while mapmakers are relied on to create orderly spatial representations of ecosystems and human uses.[148] One obvious advantage to uniformity is the assurance that high priority *national* goals will not be ignored in favor of local or regional interests. Good examples of this were the creation of wilderness areas and heightened protection of endangered species in the forests. Policymakers recognized that once wilderness is destroyed or a species is lost, there is little hope of reversing course, warranting a limit on flexibility in exchange for a heightened level of precaution.

Improved coordination and consolidation are also suggested as solutions to the proliferation of overlapping and seemingly redundant jurisdictions, statutes, or responsible authorities, all tasked with some aspect of forest management.[149] MacCleery observes that as forest management moved toward more ecosystem-based goals, the former divisions of responsibility no longer functioned well.

> A timber sale, formally the responsibility of the timber staff (and funded by a timber sale budget line item), may now be the mechanism to reduce forest fuels — a task which was previously the responsibility of the fire staff (funded by the fire budget line item). The same activity may also advance the objectives of restoring watershed conditions or enhancing wildlife habitat (under the purview of the watershed and wildlife staffs, respectively). It has

[146] PINCHOT, *supra* note 102.
[147] *See* JAMES C. SCOTT, SEEING LIKE A STATE: HOW CERTAIN SCHEMES TO IMPROVE THE HUMAN CONDITION HAVE FAILED (1998).
[148] Many scholars have noted that maps can obfuscate as much as they clarify by including only those features deemed important by the maps' creators. *See* MARK MONMONIER, HOW TO LIE WITH MAPS (2d ed. 1996). For example, National Forest maps do not highlight areas whose ownership is disputed by prior inhabitants, *see* Kosek, *supra* note 43, and ocean maps are notoriously spotty in their coverage, *see* NATIONAL RESEARCH COUNCIL, A GEOSPATIAL FRAMEWORK FOR THE COASTAL ZONE: NATIONAL NEEDS FOR COASTAL MAPPING AND CHARTING (2004), and limited in what they depict. *See* Kevin St. Martin & Madeleine Hall-Arber, *The Missing Layer: Geo-Technologies, Communities, and Implications for Marine Spatial Planning*, 32 MARINE POL'Y 779 (2008).
[149] *See, e.g.,* Curtis, *supra* note 71, at 799-801.

> sometimes been difficult for the existing functional disciplines … to rationalize and clarify their roles under the new mission focus.[150]

Although this observation describes disconnects *internal* to the Forest Service, similar problems occurred among agencies with overlapping forest-related missions, including the Fish and Wildlife Service, National Marine Fisheries Service, state fish and game departments, etc.

However, attempts to coordinate, centralize, or merge authorities also have critics who argue, for philosophical and practical reasons, that resource management will fare better by maintaining greater diversity among agencies and allowing more flexible, place-based solutions to develop. In his case study of so-called "government inefficiency," Chisholm discovered that widespread and effective coordination was already occurring, through "informal channels, behavioral norms, and personal agreements," and that such decentralized systems actually "increased innovation, encouraged public participation, and strengthened local government capacity."[151] Suggestions for reorganization, he concludes, are often not based on a careful study of existing institutions but reflect instead a kind of moral judgment about what a "good" organization should look like. Other writers reach similar conclusions.[152] DeShazo and Freeman found "not lone agencies making isolated decisions in a cocoon of bureaucratic insularity," but agencies intervening effectively in each other's decision-making.[153]

Related to tradeoffs between uniformity and diversity are debates about how natural resource managers can best ensure system resilience and facilitate adaptive management. From the 1970s on, a new generation of ecologists turned to concepts such as complexity, networks, cycles of growth and reorganization, multiple-equilibria, diversity, and resilience to explain natural systems.[154] Social scientists were also updating older client-agent, cause-and-effect models of policy change, looking instead to public choice theory, institutional analysis, behavioral psychology, and political ecology.[155] New findings supported the importance of flexible, context-specific, multiple-scale governance in increasing resilience to unexpected events and promoting nimbleness in adapting to changes in economic, ecological, social, or political conditions over time. Nie concludes that, by their very nature, EBM and adaptive management of public lands will require greater agency discretion, acknowledging the implication that agencies would then have to be empowered to make some fairly subjective decisions.[156] Unfortunately, flexible, adaptive management does not mesh well with traditional

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[150] MacCleery, *supra* note 66, at 70.

[151] *See* DONALD CHISHOLM, COORDINATION WITHOUT HIERACHY (1989).

[152] *See, e.g.*, EUGENE BARDACH, GETTING AGENCIES TO WORK TOGETHER: THE PRACTICE AND THEORY OF MANAGERIAL CRAFTSMANSHIP (1998); CRAIG W. THOMAS, BUREAUCRATIC LANDSCAPES: INTERAGENCY COOPERATION AND THE PRESERVATION OF BIODIVERSITY (2003); J.R. DeShazo & Jody Freeman, *Public Agencies as Lobbyists*, 105 COLUMBIA L. REV. 2217 (2005).

[153] DeShazo & Freeman, *supra* note 152, at 2303.

[154] *See, e.g.,* C.S. Holling, *The Resilience of Terrestrial Ecosystems: Local Surprise and Global Change*, *in* SUSTAINABLE DEVELOPMENT OF THE BIOSPHERE (W.C. Clark & R.E. Munn eds. 1986); LANCE H. GUNDERSON, C. S. HOLLING, & STEPHEN S. LIGHT, BARRIERS AND BRIDGES TO RENEWAL OF ECOSYSTEMS AND INSTITUTIONS (1995), Heather M. Leslie & Ann P. Kinzig, *Resilience Science*, *in* ECOSYSTEM-BASED MANAGEMENT FOR THE OCEANS 55 (Karen McLeod & Heather Leslie eds., 2009).

[155] *See* OSTROM, *supra* note 48; PAUL A. SABATIER, THEORIES OF THE POLICY PROCESS (2d ed. 2007).

[156] *See generally* NIE, *supra* note 42.

political, regulatory, and legal structures due to "short-term risk intolerance,"[157] "inherent cultural and institutional barriers … [within] management and regulatory agencies,"[158] and conflict with the legal system's "mission … to provide social stability."[159]

Very similar debates about the value of centralization/standardization versus devolution/flexibility take place in the ocean setting. The Ocean Commission repeatedly decries the lack of coordination among ocean agencies and proposes that it detracts from both environmental and economic goals. Their report devotes entire chapters to topics such as "Coordinating Management in Federal Waters" and "Strengthening the Federal Agency Structure," recommending a number of new federal bodies and proposing a long-term goal of "consolidation of all natural resource functions, including those applicable to oceans and coasts, [to] enable the federal government to move toward true ecosystem-based management."[160] However, the case studies of marine EBM documented in Wondolleck and Yaffee and discussed in Sievenan et al., demonstrate the value of flexibility, diverse approaches, and nested institutional arrangements in achieving desired outcomes.[161]

VII. Conclusion

How can 100 years of management and study of the National Forests help the eight existing Regional Ocean Partnerships and emerging Regional Ocean Planning Bodies be successful?[162] The notion of pursuing integrated, sustainable, multiple-use management of U.S. ocean areas, whether through the range of approaches encompassed under EBM or through the more specific tool of MSP, is still in its infancy, with considerable promise and plenty of opportunities for mistakes. An important theme that emerges from an examination of National Forest history and relevant policy theory is that multiple-use management of natural systems and related human communities is complex, uncertain, and deeply context-dependent. A multi-dimensional continuum of plausible management options exists, with no simple, one-size-fits-all, "best" approach for planning and managing the use of public space in the interests of all citizens. In the ocean setting, political, ecological, and cultural variability is

[157] MacCleery, *supra* note 66, at 68.
[158] Thomas, *supra* note 152.
[159] J.B. Ruhl, *Panarchy and the Law*, 17 ECOLOGY AND SOC'Y 31 (2012), *available at* http://www.ecologyandsociety.org/vol17/iss3/art31/.
[160] Proposed new bodies included a National Ocean Council; Committee on Ocean Science, Education, Technology, and Operations; Office on Ocean Education; Office on Ocean Information; Committee on Ocean Resource Management; International Committee; and Presidential Council of Advisors on Ocean Policy. *See* AN OCEAN BLUEPRINT, *supra* note 3, at 475-76.
[161] *Marine Ecosystem-based Management in Practice*, *supra* note 11; Sievanen, *supra* note 144.
[162] As mentioned above, this Article is based on a talk given at the *Regional Ocean Governance Symposium: Legal & Policy Solutions for Mid-Atlantic Ocean Planning*, held at Seton Hall University School of Law on April 12, 2013. Its recommendations are thus aimed primarily at regional ocean decision-makers. A companion article (*Public Lands Management and Marine Spatial Planning*, in prep.) will speak to the broader ocean community. Existing regional ocean partnerships include the Caribbean Regional Ocean Partnership, Great Lakes Regional Collaboration, Governors' South Atlantic Alliance, Gulf of Mexico Alliance, Mid-Atlantic Regional Council on the Ocean, Northeast Regional Ocean Council, Pacific Regional Ocean Partnership, and the West Coast Governors Alliance on Ocean Health. Three Regional Planning Bodies have been formed to date pursuant to the new National Ocean Policy in the Northeast, Mid-Atlantic, and Pacific Islands.

likely to lead to decision-making *processes* that look different from place to place. Likewise, the *outcomes* of any given policy choice will not be the same in every place or in different time periods.

But this complexity and variability does not mean that careful policy analysis has nothing to offer, or that the results of particular policy options are completely unforeseeable. Rather, ocean planners should educate themselves about the range of policy choices available and the likely consequences of selecting alternatives at different points in the broad decision space. Public land experiences highlight three important considerations:

- **The scale of problem definition and resolution**, where *national* level decision-making is more likely to express broad, majoritarian public values and preclude narrow local concerns from dictating the use of federal public trust resources while more *local* decision-making allows for stronger community engagement, greater diversity in policy solutions, and the emergence of innovative approaches and has a greater potential to build trust among diverse stakeholders. Intermediate scales will provide combinations of these large/national and small/local attributes.

- **The "who" and "how" of decision-making**, where *elected officials* come closest to representing the interests of all citizens, imbuing their decisions with a level of legitimacy, but are generally removed from on-the-ground realities and can be swayed by wealthy, organized constituencies; *professional agency staff* can be more objective and are trained to rely on science and technical skill, but are less well-suited to make value judgments; *the courts* can interpret ambiguous statutory language and adjudicate the validity of agency decisions relatively independently, but provide little transparency or accountability to the public; and *the community*, through participation and collaborative dialogue, can access localized knowledge, build trust, and craft innovative solutions but may exclude some interested parties and favor local over national interests.

- **The extent of flexibility allowed**, where *standardized* procedures and organizational structures can achieve greater consistency and predictability while *diversified* context-specific approaches can be better suited to local conditions, foster innovation, and increase nimbleness in adapting to changing conditions.

Different choices among the range of options described above will result in different internal and external outcomes, with different levels of success with respect to: resolving conflicts, satisfying participants, improving efficiency, meeting timelines, ensuring accountability, generating revenues, protecting ecosystems, increasing resilience, promoting civic engagement, facilitating monitoring and compliance, defending the interests of vulnerable minorities, or any of dozens of other worthy, but potentially conflicting, goals.

The ocean community is struggling with many of these tradeoffs now, as different constituencies argue for approaches to marine planning they believe will better suit their needs. The Interagency Framework for MSP and earlier drafts of the NOC's Implementation Plan put forth very detailed, top-

down prescriptions for the regions to follow.[163] In reaction to vociferous criticism from industry, Congress, and some states, the final version of the National Ocean Policy Implementation Plan—a virtually complete rewrite of previously released drafts—embraces the need for regional variability, stating that: "Marine planning will … address regionally determined priorities, based on the needs, interests, and capacity of a given region. […] Each region has flexibility to build the elements of its plans over time in response to what the region wants to accomplish [and] the resources available."[164] This approach acknowledges the importance of place-based governance central to institutional analysis, but the extent of devolution—from federal agencies to large regional compacts of state, tribal, and federal representatives—remains quite limited. One sentence in the Interagency Framework states that regions have the "flexibility to develop sub-regional plans, provided that these plans are encompassed in an overarching regional plan and overseen by the regional planning body," but the idea of multi-level, sub-regional nested planning is not mentioned, despite National Forest experience with the importance of nested plans and substantial research that validates such an approach.[165] Issues of great local significance can be overlooked at the larger scale, while novel resolutions may be found through collaboration among parties at smaller scales. The regions should allow such local initiatives to emerge and then develop mechanisms for reconciling any disparities that arise between adjacent sub-regions. This approach also supports the principle of subsidiarity,[166] whereby local input takes precedence for decisions with primarily local effects (e.g., allocation of nearshore space for fixed gear[167]), while increasingly broad regional to national input is heeded as the scale of potential impacts increases (e.g., climate change, endangered species).

The extent and style of public participation in marine planning also remains in question. Increased public participation is listed by the Interagency Ocean Policy Task Force as one of the expected benefits of marine planning and is mentioned repeatedly throughout the Framework. However, although participation is recommended in part "to strengthen mutual and shared understanding," a phrase that hints at a more collaborative approach, other details in the Framework indicate that the process envisioned will rely on fairly traditional techniques. Elements suggested include informational workshops, public hearings, public comment processes, document availability, educational materials, webinars, and guidance manuals. The final Implementation Plan also states that "robust stakeholder engagement and public participation are essential," but offers no additional detail.[168] In addition, at the three public events observed during the course of this study, all of which were billed as opportunities for stakeholder input, more than half the available time was filled by statements and presentations from agency representatives, with very limited windows for brief statements from the public. None of the documents released or the statements made at these public events embraced the kinds of collaborative

[163] For a detailed analysis of the Interagency Framework and early drafts of the NOC Implementation Plan, *see* Gopnik, *supra* note 22.
[164] NOP Implementation Plan, *supra* note 22, at 22.
[165] *See, e.g.*, ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION (1990); Oran Young, *Vertical Interplay Among Scale-Dependent Environmental and Resource Regimes*, 11 ECOLOGY AND SOC'Y 27 (2006); Sievanen, *supra* note 144.
[166] *See* Marshall, *supra* note 130.
[167] *See* JAMES ACHESON, CAPTURING THE COMMONS: DEVISING INSTITUTIONS TO MANAGE THE MAINE LOBSTER INDUSTRY (2003).
[168] NOP IMPLEMENTATION PLAN, *supra* note 22, at 23.

effort likely to help a wide range of potentially competing or conflicting partners reach a shared vision, as has been done successfully in some National Forests[169] and a few ocean programs.[170] Regions will need to go beyond formalistic approaches if they hope to foster real cross-sector learning and dialogue.

Finally, regional ocean planning requires access to reliable data, sound analytic methods, and ever-evolving scientific understanding. The Interagency Task Force and National Ocean Council documents devote considerable attention to these topics and the launch of national and regional ocean data portals may be the most tangible success of marine planning efforts to date. To date, these efforts have focused primarily on natural sciences data, including oceanographic features, species identification, habitat types, and other physical, chemical, and biological information. However, the study of forest management reminds us that balanced, multiple-use management is a fundamentally *social* process, underscoring the importance of understanding the social, cultural, and behavioral aspects of ocean communities. While natural science findings will remain critical to understanding the ecosystems and resources involved, they tell managers nothing about the human factors that drive activities in the ocean and the institutions that govern them. Regional partnerships should reach out actively to the social science community to fill these gaps, noting that the costs of acquiring data in these areas is modest compared to those associated with oceanographic data collection, and the gains could be fundamental.

Proactive ocean planning is a new concept, but there is a storehouse of untapped knowledge and experience acquired in other policy arenas available to those seeking improvement in our stewardship of the ocean and its resources. This study draws on some of that knowledge and experience to help improve the prospects for regional multiple-use marine planning in U.S. waters.

[169] *See generally* WONDOLLECK & YAFFEE, *supra* note 90; DANIELS & WALKER, *supra* note 128.

[170] J.M. Delaney, *Community Capacity Building in the Designation of the Tortugas Ecological Reserve*, 14 GULF AND CARIBBEAN RES. 163 (2003); Sievanen, *supra* note 144.

Orchestrating Our Oceans: Effectively Implementing Coastal and Marine Spatial Planning in the U.S.

Briana W. Collier[1]

Abstract: Ocean and coastal ecosystems in the United States suffer from ill health. In response to fisheries collapse, wetlands loss, human use conflict, and scientific consensus on the need for ecosystem-based management, President Barack Obama's administration has set the U.S. on course to implement coastal and marine spatial planning (CMSP). The goal of CMSP is to bolster ocean health—to make human use more sustainable and uses more harmonized with one another—so that the ecological system may replenish itself and continue providing its essential services. An executive order now directs federal agencies to participate in this new planning process and encourages regions to convene planning bodies and voluntarily develop coastal and marine spatial plans (CMS plans) by 2015. This Article surveys progress towards implementation of CMSP in the United States, including the support the federal government has made available and the progress of state and regional planning bodies. It highlights a few successes where governing bodies have employed CMSP, and describes some drawbacks of the CMSP approach that have dissuaded others from utilizing ocean planning as a management tool. Finally, the Article assesses whether CMSP efforts seem likely to achieve their goal of bolstering ocean health.

[1] Briana W. Collier studied environmental law and policy at Vermont Law School and now works as an Environmental Protection Specialist with the National Park Service. She would like to thank L. Kinvin Wroth, Professor of Law and Director of the Land Use Institute at Vermont Law School, for his guidance in preparing this Article.

I. Introduction

The United States recently embarked on a new approach to ocean governance. Although a few individual states have long engaged in coastal and marine spatial planning (CMSP) efforts, the U.S. had not pursued the CMSP management approach on a grander scale. In the last four years, however, the federal government has rolled out a National Ocean Policy with CMSP as a centerpiece, and has encouraged and supported the development of CMSP at the regional level. Regional planning is now underway along much of the U.S. coastline and in ocean spaces, and many are hopeful that this new approach will benefit both ocean health and human use of marine ecosystem services.

Regional CMSP is a new concept in the U.S. and, although it is gaining momentum, it has not been fully embraced. One important reason for this is that not all stakeholders agree that CMSP will be useful or effective. Many believe that it will represent a new layer of bureaucracy to contend with, in a system that is already difficult to navigate. Such opposition presents a unique problem for those pursuing CMSP implementation because CMSP is, by definition, a collaborative and participatory process. More importantly, because CMSP is still a new management process in the U.S., it remains an open question how the governance regime will be structured and on what values it will focus. This particular set of circumstances presents opportunity for stakeholders to become involved and to help shape the CMSP process to work effectively for their particular region. It also means that unsupported CMSP efforts could die on the vine in areas where regional players decide to opt out. This Article seeks to increase understanding of CMSP and to provide a snapshot of where CMSP efforts to date are headed and what they have accomplished.

Part II of this Article explains the basic concept of the National Ocean Policy for governance through ecosystem-based, coastal and marine spatial planning. It first describes the reasoning behind pursuing this new model of governance for our oceans and coasts. Next, it provides a broad definition of CMSP and gives examples of CMSP projects currently in progress around the world. Finally, Part II provides background on the development of CMSP in the United States and details the component parts of a CMSP regime for the United States, as envisioned by the Obama White House. Part III of the Article surveys progress to date of states and regions toward implementing CMSP. Part IV explores where states and regions have found success with CMSP and where they have encountered obstacles working with this new governance regime. The Article then concludes in Part V with an overarching assessment of CMSP efforts in the U.S. to date.

II. Coastal and Marine Spatial Planning Basics

To provide a foundation for discussions in later sections, this section sets forth the basic concept of ecosystem-based, coastal and marine spatial planning. It describes the Obama Administration's reasoning behind pursuing this new model of governance for U.S. oceans and coasts. It provides the general definition of CMSP and gives examples of CMSP projects currently in progress. This Part also provides background on the development of CMSP in the United States.

A. The Need for CMSP

Human use and resource extraction have deteriorated marine and coastal ecosystems in every region of the United States. In Alaska, commercial harvesting of fish and fur seals for pelts has led to species decline, population stress, and food stress in the North Pacific and Arctic Ocean ecosystems.[2] Loss of sea ice due to climate change increasingly exacerbates these habitat stresses.[3] The Puget Sound ecosystem off the coast of Washington State is contaminated from fertilizers and chemicals such as flame-retardants and plasticizers.[4] Coastal development in California has caused decline in the health of many estuarine systems in the West.[5] The Gulf of Mexico remains battered from the massive BP oil spill, nitrogen-loading from fertilizer and manure run-off that the Mississippi River releases, and sinking wetlands deprived of sediment by structural flood control improvements.[6] Destructive impacts of invasive species plague the Great Lakes.[7] Intense fishing pressure and destructive fishing practices such as bottom trawling have wreaked havoc on Atlantic fish populations and coral reef systems from Florida to Maine.[8]

Marine conservation experts write that many of these problems of coastal degradation "result from the 'frontier mentality of governance' that characterizes U.S. coastal and ocean management."[9] Thought of as a frontier, "the oceans have historically been viewed as 'an inexhaustible cornucopia' of

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[2] Patrick A. Parenteau et al., *Legal Authorities for Ecosystem-Based Management in U.S. Coastal and Ocean Areas*, *in* OCEAN AND COASTAL LAW AND POLICY 597–600 (Donald C. Baur et al. eds., 2007).

[3] *Id.*

[4] *Health of the Salish Sea Ecosystem Report*, EPA, http://www.epa.gov/pugetsound/indicators/index.html (last visited Sept. 18, 2013).

[5] Parenteau, *supra* note 2, at 600.

[6] Nathaniel E. Ostrom, *The Dead Zone: The Deepwater Horizon Oil Spill Versus the Dead Zone in the Northern Gulf of Mexico - which is Worse?*, PRAIRIE FIRE NEWS (Sept. 2010), *available at* http://www.gulfhypoxia.net/news/default.asp?XMLFilename=20100913081 6.xml; John Tibbetts, *Louisiana Wetlands: A Lesson in Natural Appreciation*, 114 ENVTL. HEALTH PERSP. A40 (2006), *available at* http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1332684/.

[7] *Predicting Invasive Species in the Great Lakes*, EPA RESEARCH & DEVELOPMENT, http://www.epa.gov/ord/gems/scinews_great_lakes.htm (last visited Sept. 18, 2013).

[8] Parenteau, *supra* note 2, at 600.

[9] *Id.* at 604 (citing Elliot A. Norse, *A Zoning Approach to Managing Marine Ecosystems*, *in* WORKSHOP ON IMPROVING REGIONAL OCEAN GOVERNANCE IN THE UNITED STATES 53–57, at 53 (Biliana Cicin-Sain et al. eds., 2003) [hereinafter Norse, *A Zoning Approach*]); *see also,* Elliot A. Norse, *Ending the Range Wars on the Last Frontier: Zoning the Sea*, *in* MARINE CONSERVATION BIOLOGY: THE SCIENCE OF MAINTAINING THE SEA'S BIODIVERSITY 422, 423 (Elliot A. Norse and Larry B. Crowder eds., 2005) [hereinafter Norse, *Ending the Range Wars*].

natural resources and that viewpoint has led to management regimes based on the premise that 'society, therefore, should give primacy to supporting consumptive users.'"[10] We now know that ocean resources are, in fact, exhaustible.

Giving primacy to supporting consumption without allowing a species to properly regenerate itself can lead to the swift end of that type of consumption, as well as grave cascading effects that reverberate throughout the ecosystem.[11] The most well-known instances of ocean resource exhaustion are probably the collapse of the Atlantic cod and Atlantic bluefin tuna species due to overfishing.[12] A 2006 study published in *Science* found that, due to overfishing, pollution, or habitat encroachment, or a combination of the three, human use of the oceans in the last fifty years has driven 29% of the marine species that we consume to the point of collapse.[13] In other words, those species currently exist at 10% or less of their previous levels.[14] The study even went so far as to extrapolate the data of the 2006 fishing rates into the future, which showed a 100% collapse of all marine species currently harvested by the year 2048 if rates of consumption continued to increase unchecked worldwide.[15] This study helped to highlight both the dire straits of ocean health and the failure of the ocean management regime in place. The media coverage it received helped alert the public to the issue of overfishing and to draw consumer attention to conscious choice guides.[16]

The Magnuson–Stevens Fishery Conservation and Management Act, first enacted in 1976, purported to regulate the fishing industry through regionally established catch limits.[17] However, the language of the law allowed the regional councils to set "maximum sustainable yield" caps "as modified

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[10] *Id.* (citing Norse, *Ending the Range Wars*, *supra* note 9, at 423).

[11] *See, e.g.,* Daniel Pauly, *Aquacalypse Now: The End of Fish*, THE NEW REPUBLIC, Sept. 28, 2009, *available at* http://www.tnr.com/article/environment-energy/aquacalypse-now ("[T]he removal of top predators from marine ecosystems has effects that cascade down, leading to the increase of jellyfish and other gelatinous zooplankton and to the gradual erosion of the food web within which fish populations are embedded." Also, "the removal of small fish in the Mediterranean to fatten bluefin tuna in pens is causing the 'common' dolphin to become exceedingly rare in some areas, with local extinction probable.").

[12] *See* Ransom A. Myers et al., *Why Do Fish Stocks Collapse? The Example of Cod in Atlantic Canada*, 7 ECOLOGICAL APPLICATIONS 91 (Feb. 1997); Carl Safina & Dane H. Klinger, *Collapse of Bluefin Tuna in the Western Atlantic*, 22 CONSERVATION BIOLOGY 243 (2008).

[13] Boris Worm et. al., *Impacts of Biodiversity Loss on Ecosystem Services*, 314 SCIENCE 787–90 (2006). Study summarized by Cornelia Dean, *Study Sees 'Global Collapse' of Fish Species*, N.Y. TIMES, Nov. 3, 2006, *available at* http://www.nytimes.com/2006/11/03/science/03fish.html.

[14] Worm, *supra* note 13.

[15] *Id.*

[16] Paul Greenberg, *Tuna's End*, N.Y. TIMES, June 22, 2010, *available at* http://www.nytimes.com/2010/06/27/magazine/27Tuna-t.html; Elizabeth Kolbert, *The Scales Fall: Is there any Hope for our Overfished Ocean*, THE NEW YORKER, Aug. 2, 2010, *available at* http://www.newyorker.com/arts/critics/books/2010/08/02/100802crbo_books_kolbert. *See also Atlantic Cod,* MONTEREY BAY AQUARIUM SEAFOOD WATCH, http://www.montereybayaquarium.org//cr/SeafoodWatch/web/sfw_factsheet.aspx?gid=14 (last visited Sept. 18, 2013); *Bluefin Tuna*, MONTEREY BAY AQUARIUM SEAFOOD WATCH, http://www.montereybayaquarium.org//cr/SeafoodWatch/web/sfw_factsheet.aspx?gid=76 (last visited Sept. 18, 2013).

[17] Josh Eagle, *Domestic Fishery Management*, *in* OCEAN AND COASTAL LAW AND POLICY 275, 280 (Donald C. Baur et al. eds., 2007) (citing 94 Pub. L. No. 265, §3(18)(B); 90 Stat. 331, 335).

by any relevant social, economic, or ecological factor."[18] Regional councils chose to weight economic factors more heavily than ecological factors and many fish populations steeply declined.[19] Amidst reports of the New England cod population collapse, Congress amended the law with the Sustainable Fisheries Act in 1996, which required regional fishery management plans (FMPs) to end overfishing.[20] Since their implementation, these plans have shown some results in rebounding fish stocks, increasing over time. In 2006, a scientific report showed the FMPs led to a full rebound of three out of 67 overfished species populations, the cessation of overfishing and overexploitation among nine stocks without a corresponding population rebound, and the continued overfishing and overexploitation of the remaining 55 overfished stocks.[21] In comparison, a recent survey from this year reports that 21 stocks have now successfully rebuilt under the regional FMPs, another seven stocks are showing significant progress, and 16 stocks remain that have not reached 50% of their rebuilding plan population targets.[22] The heavily consumed Atlantic cod has not yet recovered.[23]

From an environmental health standpoint, the depletion of U.S. fish stocks is one of the more prominent ocean management failures of the past era, and their current recovery trajectory is perhaps one of the early successes of more careful regional planning and more attention to ecosystem health. Congress reauthorized and amended the Magnuson–Stevens Act again in 2006, in a further attempt to protect overfished populations.[24] The regional planning efforts initiated by the 1996 amendments seem to be to contributing to fish stock rebuilding, at least to a degree. Whether the 2006 amendments will effect further positive change for the fisheries is still to be seen. For cod, the saga continues as fishermen exert legal and political pressure against stricter quotas.[25] What is clear is that this struggle to manage our unending appetite for fish has forced ocean managers to face the reality of a "universally unsatisfactory collective action dilemma" in the U.S.[26] We allow unchecked human use of the oceans at

[18] *Id.* (quoting 94 Pub. L. No. 265, §3(18)(B); 90 Stat. 331, 335).

[19] Eagle, *supra* note 17, at 280; Mary Turnipseed et al., *The Silver Anniversary of the United States' Exclusive Economic Zone: Twenty-Five Years of Ocean Use and Abuse, and the Possibility of a Blue Water Public Trust Doctrine*, 36 ECOLOGY L.Q. 1, 53 (2009).

[20] Turnipseed, *supra* note 19, at 54.

[21] *Id.* at 55 (citing Andrew A. Rosenberg et al., *Rebuilding US Fisheries: Progress and Problems*, 4 FRONTIERS IN ECOLOGY & ENV'T 303, 307 (2006)). The three recovery species are the Atlantic sea scallop, the Pacific whiting, and the Pacific lingcod. *Id.* at n.314.

[22] BRAD SEWELL, NATURAL RES. DEFENSE COUNCIL, BRINGING BACK THE FISH: AN EVALUATION OF U.S. FISHERIES REBUILDING UNDER THE MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT (2013), *available at* http://www.nrdc.org/oceans/rebuilding-fisheries.asp.

[23] *Id*. at 19. *See also* Travis Andersen, *Ailing New England Fisheries Face Steep Cuts to Cod Quotas*, BOSTON GLOBE, Jan. 31, 2013, *available at* http://www.bostonglobe.com/metro/2013/01/31/new-england-fishermen-hit-with-severe-cuts-cod-quotas/ADzwmFMso2bbs3LoFMlO7M/story.html.

[24] Turnipseed, *supra* note 19, at 55. The implementing agency, the National Marine Fisheries Service, revised regulations in 2010, and other revisions are still underway. *Magnuson-Stevens Fishery Conservation and Management Act Reauthorized*, NOAA FISHERIES, http://www.nmfs.noaa.gov/msa2007/otherprovisions.html (last visited Sept. 18, 2013).

[25] Massachusetts Attorney General Martha Coakley filed suit on behalf of the fishermen against NMFS for its most recent quota, and the fishermen have petitioned Congress to defund the NMFS Northeast Regional Office. Laura Petersen, *Mass. AG sues Obama over cod quota*, GREENWIRE, May 31, 2013.

[26] Parenteau, *supra* note 2, at 605 (quoting Norse, *Ending the Range Wars*, *supra* note 9, at 429).

our own peril. In light of this and other serious ocean health issues, the question of the new century has become: How can we better manage the sea?[27]

In answer, policymakers recently have latched on to a more holistic approach to ocean management—ecosystem-based management, to be implemented through coastal and marine spatial planning (CMSP)—that they hope may offer a better fate for fish and other natural resources than our frontier mentality has in the past. In short, ecosystem-based management broadens management efforts to consider multiple human use activities across a large marine ecosystem (LME) region, breaking step with the United States' heretofore sector-by-sector, state-by-state management approach.[28] Theoretically, once it is implemented ecosystem-wide science will underlie and inform ecosystem-based management. Geographically, managers will approach decision-making at a regional level in light of the impacts of uses, both individual and cumulative, on the LME region as a whole.[29]

B. What Is Coastal Marine Spatial Planning?

CMSP is a tool that governments can employ to implement ecosystem-based management. The United Nations Educational, Scientific, and Cultural Organization's (UNESCO) Marine Spatial Planning Initiative website describes CMSP eloquently as follows:

> Demand for outputs (goods and services such as food and energy) usually exceeds the capacity of marine areas to meet all demands simultaneously. Marine resources are "common property resources" with open or free access to users. Free access often, if not always, leads to excessive use, e.g., over fishing, and eventual exhaustion of the resources.
>
> Because not all of the outputs from marine areas, especially natural services such as wildlife habitat and nutrient cycling, can be expressed in monetary terms, markets cannot perform the allocation tasks. Some public process must be used to decide what mix of outputs from the marine area will be produced over time and space. That process is marine spatial planning.[30]

For example, in the U.S. "container ship traffic is projected to double in tonnage by 2020, and other industries, such as offshore aquaculture, wind farms, and liquefied natural gas terminals, are increasingly coming online."[31] As one author explains, "[m]any of these enterprises require security of investment, which generally comes in the form of leases and exclusionary rights."[32] As the use demand has increased on a finite amount of ocean space, CMSP has gained popularity among ocean managers

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[27] *Id.*

[28] Andrew A. Rosenberg, *Regional Governance and Ecosystem-Based Management of Ocean and Coastal Resources: Can We Get There from Here?*, 16 DUKE ENVTL. L. & POL'Y F. 179, 179–81 (2006). For more information on LMEs, see *infra* note 117.

[29] WILLIAM F. FOX ET AL., STATEMENT OF CONCERNED SCIENTISTS ON THE REAUTHORIZATION OF THE MAGNUSON FISHERY CONSERVATION AND MANAGEMENT ACT 1–2 (1989).

[30] *Marine Spatial Planning*, UNESCO MARINE SPATIAL PLANNING INITIATIVE, http://www.unesco-ioc-marinesp.be/marine_spatial_planning_msp (last visited Sept. 18, 2013).

[31] Turnipseed, *supra* note 19, at 66.

[32] *Id.*

as a method to create and apportion rights to use and extract ocean resources within a comprehensive management framework.[33]

In his July 2010 Executive Order, "Stewardship of the Ocean, Our Coasts, and the Great Lakes," President Barack Obama described CMSP as "a comprehensive, adaptive, ecosystem-based, and transparent spatial planning process, based on sound science, for analyzing current and anticipated uses of ocean, coastal, and [large lake] areas."[34] Further, he explained that "[c]oastal and marine spatial planning identifies areas most suitable for various types or classes of activities in order to reduce conflicts among uses, reduce environmental impacts, facilitate compatible uses, and preserve critical ecosystem services to meet economic, environmental, security, and social objectives."[35] President Obama also refers to CMSP as a "public policy process" to determine sustainable use and protection of oceans and coasts "now and for future generations."[36] The following sections provide some brief examples of marine spatial planning projects currently in progress worldwide, the development of the CMSP concept in the U.S., and the component parts of the nascent U.S. CMSP process.

C. Marine Spatial Planning Projects Worldwide

Human uses of several marine areas around the world have already been planned and managed with different varieties of spatial planning. The following section briefly describes a sampling of spatial planning regimes, some of which share attributes of the new regional CMSP model initiated in the U.S. It should be noted, however, that most of these examples employ zoning, which the Obama Administration does not include in its framework guidance. Nonetheless, a brief review of ocean management in these areas, Australia, the North Sea, China, and the U.S., is helpful to put the Obama CMSP model in context.

1. Australia

Australia is home to one of the first and best-known examples of marine spatial planning: the Great Barrier Reef Marine Park (GBRMP).[37] Australia established the park in 1975 in response to threats to the ecosystem from oil drilling, limestone mining, shipping and land-based pollution, increased fishing, and increased tourism activity.[38] The park manages its aquatic lands through a mixture of management

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[33] *Id.*

[34] *See* Exec. Order No. 13,547, 75 Fed. Reg. 43,023 (July 19, 2010); WHITE HOUSE COUNCIL ON ENVTL. QUALITY, FINAL RECOMMENDATIONS OF THE INTERAGENCY OCEAN POLICY TASK FORCE (2010), *available at* www.whitehouse.gov/files/documents/OPTF_FinalRecs.pdf [hereinafter OPTF FINAL RECOMMENDATIONS]; WHITE HOUSE COUNCIL ON ENVTL. QUALITY, INTERIM REPORT OF THE INTERAGENCY OCEAN POLICY TASK FORCE (2009), *available at* http://www.whitehouse.gov/assets/documents/09_17_09_Interim_Report_of_Task_Force_FINAL2.pdf [hereinafter CEQ, INTERIM REPORT].

[35] *Id.*

[36] *Id.*

[37] *Australia (Great Barrier Reef)*, UNESCO MARINE SPATIAL PLANNING INITIATIVE, http://www.unesco-ioc-marinesp.be/spatial_management_practice/australia_great_barrier_reef (last visited Sept. 18, 2013).

[38] *Id.*

plans, zoning, and permit systems.[39] The zones in the GBRMP range from "general use," with few restrictions, to "preservation zones," where almost no use is permitted.[40] Park managers used spatial planning to create the zoning scheme according to a number of management objectives.[41] The spatial planning process then continued through phases of adaptive management where ecosystem degradation was reassessed and the zones were adjusted accordingly.[42] Between 1998 and 2003, managers increased the designated "no-take areas" from 4.5% to 33% of the park.[43] The park schedules amendment of its zoning plans to occur every seven years "to provide stability for businesses and affected communities."[44]

Unfortunately, this program of marine zoning is proving itself ineffective in protecting the Great Barrier Reef. Australia's intense mining and exportation of coal have led to development plans for new ports and coal export terminals just landward of the reef. [45] Building these terminals will route the cargo ship traffic through supposedly protected areas.[46] Coastal development and dredging are cumulative impacts exacerbating the deleterious effect of agricultural run-off and warmer water temperatures on the increasingly fragile reef. [47] Although the government has pledged to create a second plan by 2015 that will improve water quality and direct sustainable coastline development, it will likely be too little too late, as multi-billion dollar coal and gas projects are also slated for completion in the area by 2015.[48] UNESCO considers these development plans to be a danger to the world heritage value of the reef, and its World Heritage Committee will vote on placing the reef on its "in danger" list in June.[49]

2. The North Sea: Belgium, Germany, and the Netherlands

Another CMSP approach, driven by wind energy development, can be found in Europe. Belgium, Germany, and the Netherlands have employed marine spatial planning to orchestrate the use of the busy North Sea. Developing offshore wind farms motivated each of these three countries to plan for

[39] *Id.*
[40] *Id.*
[41] *Id.*
[42] *Id.*
[43] *Id.*
[44] *Id.*
[45] David Fickling, *New Ports Threaten Great Barrier Reef Heritage Site, UNESCO Says*, BLOOMBERG NEWS, May 4, 2013, *available at* http://www.bloomberg.com/news/2013-05-04/new-ports-threaten-great-barrier-reef-heritage-site-unesco-says.html.
[46] Samatha Shafy, *"Death By a Thousand Cuts": Coal Boom Could Destroy Great Barrier Reef*, ABC NEWS, May 25, 2013, *available at* http://abcnews.go.com/International/death-thousand-cuts-coal-boom-destroy-great-barrier/story?id=19248789#.UaWHHYVgjek.
[47] Graham Readfeam, *Great Barrier Reef is at Risk even if it doesn't make UNESCO's Danger List*, PLANETOZ BLOG, THE GUARDIAN, May 13, 2013, *available at* http://www.guardian.co.uk/environment/planet-oz/2013/may/13/great-barrier-reef-unesco-danger.
[48] Shafy, *supra* note 46.
[49] Readfeam, *supra* note 47.

uses in their coastal waters.[50] Belgium first began planning in its territorial sea (0-12 nautical miles offshore) and exclusive economic zone (12-200 nautical miles offshore) in the North Sea in 2003. Belgium's planning activities were driven by a goal of facilitating the development of wind farms, but also to protect marine habitats and shipwrecks that support biodiversity and create a sustainable sand and gravel mining policy.[51] Belgium zones its waters by way of a Master Plan, which contains habitat management directives.[52] For example, sand and gravel mining is sequentially rotated between areas of the most intensive extraction.[53] Zones are also closed to extraction seasonally to allow for uninterrupted fish spawning.[54]

Since 2007, German states have planned the use of coastal waters in the territorial sea and the German federal government has planned the use for the exclusive economic zone.[55] Managers design the plans around principles stated in Germany's Federal Land Use Planning Act, which include developing wind energy offshore, securing natural resources and maritime traffic, and optimizing the use of space in marine areas.[56] Germany uses three zones to meet its objectives: 1) "priority areas," where managers prioritize one use over others; 2) "reservation areas," where managers evaluate multiple uses, but give some uses special consideration; and 3) "marine protected areas," where managers require users to apply measures to reduce environmental impacts.[57]

In the Netherlands, managers similarly employed CMSP to site wind farms while still protecting sensitive marine areas.[58] They foresaw increased use of the Dutch area of the North Sea occurring in the near future, and sought to create a plan that contemplated wind development, mineral extraction, water recreation, mariculture, natural resource protection, and the effects of sea level rise from climate change.[59] The Netherlands' Policy Document on the North Sea 2009 – 2015 lays out the variety of ocean uses occurring in the North Sea and how they affect one another.[60] It provides an assessment framework for policy choices that includes the employment of other tools that the country's managers have developed, such as vision maps, and a compensation program for those users harmed by other legal but conflicting ocean activities.[61] Thus, the countries of the North Sea also employ spatial plans to

[50] *Belgium*, UNESCO MARINE SPATIAL PLANNING INITIATIVE, http://www.unesco-ioc-marinesp.be/spatial_management_practice/belgium (last visited Mar. 31, 2013); *Germany*, UNESCO MARINE SPATIAL PLANNING INITIATIVE, http://www.unesco-ioc-marinesp.be/msp_practice/germany_north_baltic_seas (last visited Mar. 31, 2013); *The Netherlands*, UNESCO MARINE SPATIAL PLANNING INITIATIVE, http://www.unesco-ioc-marinesp.be/spatial_management_practice/the_netherlands (last visited Mar. 31, 2013).
[51] *Belgium*, *supra* note 50.
[52] *Id.*
[53] *Id.*
[54] *Id*.
[55] *Germany*, *supra* note 50.
[56] *Id.*
[57] *Id.*
[58] *The Netherlands*, *supra* note 50.
[59] *Id.*
[60] DUTCH CENTRAL GOVERNMENT, 2009–2015 POLICY DOCUMENT ON THE NORTH SEA 44 (2009), *available at* www.rijksoverheid.nl/bestanden/documenten-en-publicaties/brochures/2010/08/12/beleidsnota-noordzee-2009-2015-engels/12pd2010g202.pdf.
[61] *Id.* at 51–53.

manage their busy waters, aided by mapping tools, and in the Netherlands, the interesting remedy of harmed-user compensation.

3. China

On the other side of the globe, China has its own unique system of CMSP in place. Under national law, the Chinese government requires users to apply for authorization to use marine areas.[62] To be approved, the use must conform to the functional zoning scheme for the region.[63] The State also charges a user fee to partake in the authorized use.[64] The Chinese law directs revenues from user fees to be split: 70% goes to local governments and 30% goes to the national government to be reinvested in marine development, protection, and management projects.[65] Thus, China's CMS program includes a component to fund continuing planning efforts.[66]

4. The United States: The Florida Keys and Massachusetts

UNESCO's Marine Spatial Planning Initiative website has long recognized two CMSP projects in the United States: the Florida Keys National Marine Sanctuary (FKNMS)[67] and the Massachusetts coastal planning efforts.[68] The United States established the FKNMS in 1990 to protect a coral reef ecosystem—critical to many fish and marine animal species—from pollution, over-fishing, the physical impacts of ship groundings, oil drilling proposals, and deteriorating water quality, as well as from the impacts of three million tourists visiting the Florida Keys each year.[69] The FKNMS management plan designates each area of the 2,900 square nautical mile sanctuary as one of five zones types, similar to the Great Barrier Reef Marine Park CMSP system, each affording a different level of protection.[70] The International Maritime Organization also declared the FKNMS a Particularly Sensitive Sea Area (PSSA) in 2002,[71] which means that authorities may institute specific protection measures to control maritime activities, such as vessel routing, and that the international regulatory body will support enforcement of the measures against vessels from all nations.[72]

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[62] *China*, UNESCO MARINE SPATIAL PLANNING INITIATIVE, http://www.unesco-ioc-marinesp.be/spatial_management_practice/china (last visited Apr. 8, 2013).
[63] *Id.*
[64] *Id.*
[65] *Id.*
[66] *Id.*
[67] *United States (Florida Keys)*, UNESCO MARINE SPATIAL PLANNING INITIATIVE, http://www.unesco-ioc-marinesp.be/spatial_management_practice/united_states_florida_keys (last visited Apr. 8, 2013).
[68] *United States (Massachusetts)*, UNESCO, MARINE SPATIAL PLANNING INITIATIVE, http://www.unesco-ioc-marinesp.be/msp_practice/united_states_massachusetts (last visited Apr. 8, 2013).
[69] *United States (Florida Keys)*, *supra* note 67.
[70] *Id.*
[71] *Id.*
[72] *Particularly Sensitive Sea Areas*, INT'L MAR. ORG., http://www.imo.org/OurWork/Environment/PollutionPrevention/PSSAs/Pages/Default.aspx (last visited, Apr. 8, 2013).

To the north, Massachusetts has developed a robust and comprehensive marine planning effort over the last decade.[73] This planning approach has been heralded by many as a model for future ocean management in the U.S.[74] Like the federal government, Massachusetts convened an ocean management task force to make recommendations.[75] These recommendations provided the basis for the Massachusetts Ocean Act, which the Massachusetts Legislature enacted in 2008.[76]

The Massachusetts Ocean Act established an Ocean Advisory Commission, made up of seventeen "state legislators, agency heads, commercial fishing, environmental, and renewable energy representatives, and coastal regional planning agencies," to assist the Executive Office of Energy and Environmental Affairs (EEA) in developing an Ocean Plan.[77] In addition, the Act established a Science Advisory Council to "assist the [EEA] in developing environmental, economic and social baseline data" that the state can use to provide the "foundation for long-term, science-based ocean management."[78] The Act also set out the components that the Ocean Plan shall contain, stated a set of principles by which the Ocean Plan shall manage users and activities, and set deadlines for the Plan's development.[79]

Following the principle of encouraging public participation, the EEA held listening sessions all over the Commonwealth to gather public input.[80] That input was incorporated into the final version of the Massachusetts Ocean Plan, completed in December of 2009.[81] The state and the National Oceanic and Atmospheric Administration (NOAA) have integrated the Ocean Plan into the state's existing coastal zone management plan and they intend to "enforce[it] through the state's regulatory and permitting processes, including the Massachusetts Environmental Policy Act (MEPA) and Chapter 91, the state's waterways law."[82] More information about this effort and regional planning in the Northeast is discussed below.

D. The Development of CMSP in the U.S.

President Obama's recent Executive Order and the accompanying reports from the Interagency Ocean Policy Task Force,[83] which introduce a national ocean policy of ecosystem-based management and CMSP, grew out of an effort that began in the U.S. more than twenty years ago. The scientific

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[73] *United States (Massachusetts)*, *supra* note 68.
[74] EASTERN RESEARCH GROUP., INC. (ERG), MARINE SPATIAL PLANNING STAKEHOLDER ANALYSIS 3 (2010) [hereinafter ERG MSP STAKEHOLDER ANALYSIS], *available at* http://www.csc.noaa.gov/digitalcoast/_/pdf/msp-stakeholder-analysis.pdf. NOAA's Coastal Services Center in Charleston, South Carolina contracted this study. *See also* Turnipseed, *supra* note 19, n.363; Lucia Fanning & Rita Heimes, *Ocean Planning and the Gulf of Maine: Exploring Bi-National Policy Options*, 15 OCEAN & COASTAL L.J. 293, 306-09 (2010) (citing the Oceans Act of 2000, Pub. L. No. 106-256, 114 Stat. 644 (2000) (codified as amended at 33 U.S.C. § 857-19 (2001)).
[75] *United States (Massachusetts)*, *supra* note 68.
[76] *Id.*
[77] *Id.*
[78] *Id.*
[79] *Id.*
[80] *Id.*
[81] MASS. EXEC. OFFICE OF ENERGY AND ENVTL. AFFAIRS, MASSACHUSETTS OCEAN MANAGEMENT PLAN (2009).
[82] *Massachusetts Ocean Plan*, NOAA COASTAL AND MARINE SPATIAL PLANNING, http://www.msp.noaa.gov/examples/massachusetts.html (last visited Apr. 8, 2013).
[83] OPTF FINAL RECOMMENDATIONS, *supra* note 34; CEQ, INTERIM REPORT, *supra* note 34.

community began pressing Congress in 1989 to rewrite the Magnuson–Stevens Act to better account for ecosystem consequences,[84] when "forty-one of the world's leading marine biologists testified jointly on the reauthorization of the [] Act, calling for a new regulatory approach … 'to promote a total ecosystem perspective in managing the Nation's fish stocks.'" [85] The request went unheeded at that time.

Under the Oceans Act of 2000, Congress created the U.S. Commission on Ocean Policy (USCOP) to recommend a comprehensive national ocean policy.[86] The USCOP released a report in 2004,[87] and the non-governmental Pew Oceans Commission released a sister report in 2003,[88] stressing the importance of restructuring ocean governance into an ecosystem-based management regime. Two hundred and seventeen scientists and academics added their voices in 2005, issuing a "Scientific Consensus Statement on Marine Ecosystem-Based Management."[89] Thus, lawmakers found clear agreement across the policy and scientific communities on the type of management system needed for more successful ocean governance.[90] However, the path forward for designing and implementing the regulatory regime was less clear.

The current landscape of ocean management in the U.S. was then and is still now a tangle of "over twenty federal agencies and thirty-five coastal states and territories operating under dozens of statutory authorities."[91] This landscape has made tackling the question of how to implement ecosystem-based management of ocean and coastal resources difficult. The USCOP took the first step in its Blueprint Report, identifying that "eleven of fifteen cabinet-level departments and four independent agencies play important roles in the development of ocean and coastal policy," that "[t]hese agencies interact with one another and with state, territorial, tribal, and local authorities in sometimes haphazard ways," and that "[i]mproved communication and coordination would greatly enhance the effectiveness of the nation's ocean policy."[92] Since "no multi-issue, interagency mechanism" existed at the time, USCOP recommended that "Congress establish a National Ocean Council (NOC)" of cabinet members to "provide high-level attention to ocean, coastal, and Great Lakes issues, develop and guide the implementation of appropriate national policies, and coordinate the many federal departments."[93]

The USCOP Blueprint Report also recommended that the NOC "develop and promote a flexible, voluntary process that groups of states could use to establish regional ocean councils."[94] In tandem, it

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[84] Parenteau, *supra* note 2, at 600.
[85] *Id.* (quoting WILLIAM F. FOX ET AL., STATEMENT OF CONCERNED SCIENTISTS ON THE REAUTHORIZATION OF THE MAGNUSON FISHERY CONSERVATION AND MANAGEMENT ACT 3 (1989)).
[86] Fanning & Heimes, *supra* note 74, at 317.
[87] U.S. COMM'N ON OCEAN POL'Y, AN OCEAN BLUEPRINT FOR THE 21ST CENTURY: FINAL REPORT 3–9 (2004) [hereinafter USCOP BLUEPRINT REPORT].
[88] PEW OCEANS COMM'N, AMERICA'S LIVING OCEANS: CHARTING A COURSE FOR SEA CHANGE vii–x (2003), *available at* http://www.pewtrusts.org/our_work_detail.aspx?id=130.
[89] Parenteau, *supra* note 2, at 601 (citing Scientific Consensus Statement on Marine Ecosystem-Based Management (Mar. 21, 2005)).
[90] *Id.*
[91] Turnipseed, *supra* note 19, at 1.
[92] USCOP BLUEPRINT REPORT, *supra* note 87, at 5.
[93] *Id.* at 7–8.
[94] *Id.* at 8.

encouraged federal agencies to better align and coordinate their own regional-level efforts including the spatial break-up of regions.[95] This alignment would facilitate information sharing among the federal agencies, as well as between federal agencies and the states, and might also allow for the creation of regional ocean information programs.[96] The USCOP also recognized the opportunity for ocean managers to utilize the integrated ocean observing system (IOOS) technology that NOAA, NASA, and other federal agencies had been developing over the course of the decade to collect data and monitor changes occurring in the oceans.[97]

Keeping with the theme of better coordinated governance, the USCOP Blueprint Report remarked that "a comprehensive offshore management regime is needed that enables us to realize the ocean's potential while safeguarding human and ecosystem health, minimizing conflicts among users, and fulfilling the government's obligation to manage the sea in a way that maximizes long-term benefits for all the nation's citizens."[98] USCOP recommended that this regime be one that "considers all uses, addresses the cumulative impact of multiple activities, and coordinates the many authorities with interests in offshore waters."[99] Although USCOP did not call for marine spatial planning by name, this report articulated the need for a U.S. policy to coordinate multiple offshore uses to better promote ecosystem health and minimize conflicts, thus setting the stage for the administration to choose coastal and marine spatial planning as the implementing policy tool to achieve these stated objectives.

No national-scale, ecosystem-based ocean management efforts reached the implementation stage at the federal level during the administration of President George W. Bush.[100] However, many states, and a few regions, acted upon the recommendations from the USCOP Blueprint Report, the Pew Report, and President Bush's U.S. Ocean Action Plan[101] and initiated ocean management programs during this time, several of which incorporated the new concept of marine spatial planning.[102] When President Barack Obama convened the Interagency Ocean Policy Task Force in June of 2009, the Task Force used public meetings and roundtables to get up to speed on these current efforts occurring around the country.[103] The Task Force then set about crafting an implementation strategy for the national ocean policy that the USCOP put forth in its Blueprint Report five years earlier.[104]

In the Task Force's Interim Report, the first of the implementation strategy's "nine priority objectives" is to "[a]dopt ecosystem-based management as a foundational principle for the

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[95] *Id.* For example, the Department of Interior regions include Northeast, Southeast, Southwest, Pacific Southwest, Pacific Northwest, Inter-Mountain, Rocky Mountain, and Alaska. These regions only partially overlap with NOAA's National Marine Fisheries Service regions of Northeast, Southeast/Caribbean, Southwest, Pacific Islands, Northwest, and Alaska.

[96] *Id.* at 9.

[97] *Id.* at 394. *See IOOS About – Governance and Management*, IOOS INTEGRATED OCEAN OBSERVING SYSTEM, http://www.ioos.noaa.gov/about/governance/welcome.html (last visited Apr. 5, 2013).

[98] USCOP BLUEPRINT REPORT, *supra* note 87, at 9.

[99] *Id.* at 10.

[100] ERG MSP STAKEHOLDER ANALYSIS, *supra* note 74, at 3.

[101] U.S. OCEAN ACTION PLAN: THE BUSH ADMINISTRATION'S RESPONSE TO THE U.S. COMMISSION ON OCEAN POLICY (2004).

[102] *Id.*

[103] CEQ, INTERIM REPORT, *supra* note 34, at 3–4 (discussing Memorandum on National Policy for the Oceans, Our Coasts, and the Great Lakes, 2009 DAILY COMP. PRES. DOC. 458 (June 12, 2009)).

[104] *Id.* at 2, 7–8.

comprehensive management of the ocean."[105] The second priority objective is to "[i]mplement comprehensive, integrated, ecosystem-based coastal and marine spatial planning and management in the United States."[106] To this end, the Task Force also developed an Interim Framework for Effective Coastal and Marine Spatial Planning, which it published in December 2009.[107] This framework evolved into the Final Recommendations of the Interagency Ocean Policy Task Force.[108] The Final Recommendations provide more specific guidance on how the marine spatial planning process will work, as well as timelines for implementation.

President Obama signed Executive Order 13,547 on July 19, 2010, the same day that the Task Force published its Final Recommendations.[109] The Executive Order adopted the Final Recommendations and officially created a National Ocean Council (NOC), modeled after the USCOP's recommendation.[110] The Final Recommendations' guidelines for CMSP implementation include a step-by-step timeframe, which encourages regional planning bodies to convene and to submit CMS plans to the NOC for certification within three years, with implementation of the plans to begin by 2015.[111] The NOC has been actively involved in implementation of CMSP since the body was stood up, convening a Governance Coordination Committee and an Ocean Research Advisory Panel to help coordinate inter-jurisdictional issues and the integration of science in CMS plans, and developing additional guidance.[112] Just recently, on April 16, 2013, the NOC released the final version of its National Ocean Policy Implementation Plan, which outlines the steps the federal agencies will take to coordinate and streamline permitting and other regulatory processes.[113]

No additional regulatory authority accompanied the Executive Order, so states are under no obligation to participate in regional CMSP. Though working with regional planning bodies fits best with the national plan to streamline and coordinate efforts, an individual state's decision not to participate will be respected. The National Ocean Policy Implementation Plan explains:

> Should all States within a region choose not to participate in a regional planning body within their region, a regional planning body will not be established. Instead, Federal agencies will

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[105] *Id*. at 7.
[106] *Id.*
[107] INTERAGENCY OCEAN POLICY TASK FORCE, WHITE HOUSE COUNCIL ON ENVTL. QUALITY, INTERIM FRAMEWORK FOR EFFECTIVE COASTAL AND MARINE SPATIAL PLANNING (2009), [hereinafter CMSP INTERIM FRAMEWORK], *available at* http://www.whitehouse.gov/sites/default/files/microsites/091209-Interim-CMSP-Framework-Task-Force.pdf.
[108] *See* OPTF FINAL RECOMMENDATIONS, *supra* note 34.
[109] Exec. Order No. 13,547, *supra* note 34.
[110] *Id.* The NOC consists of: the Secretaries of State, Defense, the Interior, Agriculture, Health and Human Services, Commerce, Labor, Transportation, Energy, and Homeland Security; the Attorney General; the Administrators of the EPA and NASA; the Chairs of CEQ, FERC, and the Joint Chiefs of Staff; the Directors of OMB, National Intelligence, OSTP, and the NSF; the Assistants to the President for National Security Affairs, Homeland Security and Counterterrorism, Domestic Policy, Economic Policy, and Energy and Climate Change; the Undersecretary of Commerce for Oceans and Atmosphere (NOAA Administrator); and an official designated by the Vice President. *Id.*
[111] CEQ, FINAL RECOMMENDATIONS, *supra* note 34, at 69–76.
[112] *About the Nat'l Ocean Council,* THE WHITE HOUSE, http://www.whitehouse.gov/administration/eop/oceans/about (last visited Apr. 20, 2013).
[113] *Nat'l Ocean Policy and Implementation Plan,* NAT'L OCEAN COUNCIL (April 2013), http://www.whitehouse.gov/administration/eop/oceans/implementationplan.

> identify and address priority science, information, and ocean management issues associated with marine planning as described in the Executive Order. In doing so, Federal agencies will coordinate with non-Federal partners and authorities, including States, federally-recognized tribes and Fishery Management Councils, and stakeholders, to ensure that Federal actions support and advance both regional and national objectives.[114]

E. Component Parts of a U.S. CMSP Regime

In the United States, the National Ocean Council's CMSP efforts aim to stand up regional councils to create plans to manage human uses under a set of environmentally minded principles, with guidance and oversight from the federal government. Each region is encouraged to incorporate objectives into its plan that local stakeholders in the region choose.[115] Thus, the Final Recommendations introduce CMSP as a new management approach, "national in scope to address national interests, but also scalable and specific to regional and local needs."[116]

The Final Recommendations divide the United States into nine regional planning areas, corresponding roughly to the size and location of the NOAA-defined large marine ecosystems (LMEs)[117] and existing regional governance structures already in place.[118] The regional planning areas include the following:

1. **Alaska/Arctic Region:** Alaska
2. **Caribbean Region:** Puerto Rico and U.S. Virgin Islands
3. **Great Lakes Region:** Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin
4. **Gulf of Mexico Region:** Alabama, Florida, Louisiana, Mississippi, and Texas
5. **Mid-Atlantic Region:** Delaware, Maryland, New Jersey, New York, Pennsylvania, and Virginia
6. **Northeast Region:** Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont
7. **Pacific Islands Region:** Hawaii, Commonwealth of the Northern Mariana Islands, American Samoa, and Guam
8. **South Atlantic Region:** Florida, Georgia, North Carolina, and South Carolina
9. **West Coast Region:** California, Oregon, and Washington[119]

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[114] *Id.* at 22.
[115] OPTF FINAL RECOMMENDATIONS, *supra* note 34, at 46–47.
[116] *Id.* at 42.
[117] LMEs are "relatively large areas of ocean space of approximately 200,000 [square km] or greater, adjacent to the continents in coastal waters where primary productivity is generally higher than in open ocean areas." NOAA scientists have defined 64 LMEs around the world, basing the physical extent of the LME and its boundaries on four linked ecological criteria: bathymetry, hydrography, productivity, and trophic relationships. *Large Marine Ecosystems of the World*, NOAA http://www.lme.noaa.gov/index.php?option=com_content&view=article&id=47&Itemid=41 (last visited Mar. 28, 2013).
[118] OPTF FINAL RECOMMENDATIONS, *supra* note 34, at 51.
[119] *Id.* at 53.

Each region is encouraged to form a regional planning body. The Final Recommendations task the NOC to work with state and federal agencies to convene resource managers, coastal zone managers, fisheries managers, scientists, transportation managers, and public health officials to staff the regional planning bodies, preferably with representation from each state in the region should all states choose to participate.[120] These bodies are to engage indigenous community representatives who have relevant interests and to coordinate with local planning authorities.[121] They should also consult with the Regional Fishery Management Councils.[122] Each of these regional planning bodies can then initiate the development of a CMS plan by first identifying "a set of specific and measurable regional objectives" that may "serve as a statement of purpose" to guide the planning process forward.[123]

The Final Recommendation imagine a range of possible ocean uses which could be managed through the CMSP process including:

- Aquaculture (fish, shellfish, and seaweed farming);
- Commerce and Transportation (e.g., cargo and cruise ships, tankers, and ferries);
- Commercial Fishing;
- Environmental/Conservation (e.g., marine sanctuaries, reserves, national parks, and wildlife refuges);
- Maritime Heritage and Archeology;
- Mining (e.g., sand and gravel);
- Oil and Gas Exploration and Development;
- Ports and Harbors;
- Recreational Fishing;
- Renewable Energy (e.g., wind, wave, tidal, current, and thermal);
- Other Recreation (e.g., boating, beach access, swimming, surfing, nature and whale watching, and diving);
- Scientific Research and Exploration;
- Security, Emergency Response, and Military Readiness Activities;
- Subsistence Uses;
- Tourism;
- Traditional Hunting, Fishing, and Gathering; and
- Working Waterfronts.[124]

The Final Recommendations envision "robust public and stakeholder engagement" in determining the future uses of the ocean and coastal areas.[125] The Task Force states several times that CMSP is meant

[120] *Id*. at 52–53.
[121] *Id*. at 53.
[122] *Id*.
[123] *Id.* at 55.
[124] *Id.* at 42.
[125] *Id.* at 47.

to be both transparent and inclusive and should "improve opportunities for community and citizen participation in open planning processes."[126]

The Task Force intends "to improve ecosystem health and services" by managing these human uses collaboratively with CMSP.[127] The hope is that CMS plans will reduce the cumulative impacts on ocean ecosystems by incorporating environmental stewardship and ecosystem-based management principles, including the following:

1. Protect, maintain, and restore the health, productivity, and resiliency of ocean, coastal, and Great Lakes ecosystems;
2. Manage uses "in a manner that seeks to prevent or minimize adverse environmental impacts";
3. Employ the precautionary principle set forth in the Rio Declaration of 1992 so that "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation";
4. Avoid environmental damage wherever practicable;
5. Internalize environmental costs, "taking into account the approach that those who cause environmental damage should generally bear the cost of that damage"; and
6. "[A]ccount[] for the interdependence of the land, air, water, ice, and the interconnectedness between human populations and these environments."[128]

It is interesting to compare the Interagency Ocean Policy Task Force's approach in its CMSP guidance with UNESCO's. The UNESCO Marine Spatial Planning Initiative's guidance identifies six components of CMSP: (1) a CMS plan, which is a temporal and spatial "vision of the future"; (2) an inventory of areas and resources; (3) a list and assessment of conflicts and compatibilities between uses and the environment; (4) zoning maps; (5) new regulations to implement the CMS plan; and (6) a permit system.[129] The Task Force's Final Recommendations stop short of encouraging the designation of zones within which certain human activities may or may not occur. They do, however, encourage the regional planning bodies to map out alternative future spatial management scenarios and to evaluate the scenarios against one another, comparing the tradeoffs in each.[130] This comparison should integrate consultations with scientists and analysis of data concerning impacts of uses on ecosystem services.[131] A few regions already have achieved the ability to compare alternative future scenarios with online mapping tools. A few regions have also collected baseline data to measure current conditions against which they can make permitting decisions.

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[126] *Id.* at 45, 56.
[127] *Id*. at 44.
[128] *Id.* at 16.
[129] *See generally* CHARLES EHLER AND FANNY DOUVERE, STEP-BY-STEP APPROACH FOR MARINE SPATIAL PLANNING TOWARD ECOSYSTEM-BASED MANAGEMENT (2009), *available at* http://www.unesco-ioc-marinesp.be/msp_guide?PHPSESSID=b9f4f53c75b9dae1d1661d2a9a74b0bd.
[130] OPTF FINAL RECOMMENDATIONS, *supra* note 34, at 57.
[131] *Id.*

III. Survey of Progress Toward CMSP Implementation in the U.S.

The Final Recommendations of President Obama's Interagency Ocean Policy Task Force suggest a five-year schedule for CMSP implementation. The Task Force has recommended that regional planning bodies convene and create CMS plans by mid-2013, in order to be certified by the NOC and implemented by mid-2015.[132] The Task Force further suggested that regions accomplish the following three phases of CMS plan development: (1) lay a foundation for planning by convening representatives, developing MOU agreements, convening workshops, designating members for the regional planning body, assessing capacity, and creating a process for stakeholder and scientific participation; (2) build capacity for planning by developing and submitting to the NOC regional work plans identifying areas of need for support; and (3) "build out and scale up" efforts to establish the CMSP process by putting work plans into action, providing and receiving feedback, instituting best practices, and adapting management.[133]

With the significant groundwork and diverse participation required to create a CMS plan, none of the regions will meet the target of creating CMS plans by mid-2013. However, many have accomplished the groundwork described in the three phases of CMS plan development. To date, stakeholders in all nine regions have been introduced to CMSP. All regions except for the Great Lakes have received at least some funding from NOAA in the form of grants. Seven of the nine regions have convened ocean partnership groups to do the initial legwork of identifying priorities, developing data, and engaging stakeholders.[134] Several are working on developing stakeholder participation processes. Five of these groups have established websites, hired staff, and created regional work plans.[135] Six regions have developed or are currently developing data portals. Four regions have convened regional planning bodies to write CMS plans.

The Northeast region has developed the most comprehensive CMSP program so far, followed by the Mid-Atlantic region. The Gulf of Mexico, South Atlantic, and West Coast regions have achieved an intermediate level of progress, while the Caribbean and Pacific Islands regions have only more recently initiated CMSP efforts. The Great Lakes and the Alaska/Arctic regions have not expressed much interest in CMSP, and in those regions, federal agencies are working on coordinating themselves and streamlining their processes without a parallel state-led effort. The follow sections outline regional progress to date with respect to: (1) creating a regional ocean partnership; (2) applying for funding; (3) creating a website and hiring staff; (4) writing a regional work plan; (5) developing a regional data bank; (6) creating a portal to share data; (7) engaging with stakeholders; and (8) creating a regional planning body. A summary table is provided at the end of the section for ease of comparative analysis. (See Table 1 on page 112).

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[132] *Id.* at 69.
[133] *Id.* at 70–74.
[134] *See* NORTHEAST REGIONAL PLANNING BODY, SUMMARY OF DISCUSSIONS, NORTHEAST REGIONAL PLANNING BODY INAUGURAL MEETING, NOV. 19–20, 2012, at appx. A (2002), *available at* http://northeastoceancouncil.org/wp-content/uploads/2012/12/Summary-NE-RPB-Meeting-Nov-19-20-20121.pdf.
[135] *Id.*

A. Northeast

The Northeast region includes the coastal states of Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut, as well as inland Vermont.[136] Between the individual planning projects in Massachusetts and Rhode Island and the regional planning work of the Northeast Regional Ocean Council, the Northeast has the most developed CMSP efforts in the country.[137] The sections below describe some of the efforts occurring at the state and regional levels in the Northeast, as well as some of the early successes those efforts have achieved.

1. State Efforts in the Northeast

As stated above, Massachusetts passed its Ocean Act in 2008 and has subsequently created an Ocean Management Plan to implement CMSP. Massachusetts successfully convened state legislators, agency heads, and representatives from commercial fishing, environmental groups, and renewable energy interests to advise on the Ocean Plan.[138] The state also convened a Science Advisory Council to collect baseline data, which will enable it to measure use impacts and carry those measurements forward into permit decision-making.[139]

Just to the south, Rhode Island is also already well-versed in CMSP. Rhode Island began planning its ocean space in 1983 when the state passed legislation authorizing Special Area Management Plans (SAMPs), and so stands as the first state in the U.S. to legally authorize CMSP.[140] With "outstanding" winds for wind power siting and the interest of both the state and the renewable energy industry in developing wind farms off the coast, energy development has driven much collaborative planning in Rhode Island in recent years.[141] Ocean managers have brought such diverse stakeholders as energy developers and fishermen together to map out optimal siting of wind farms where uses will conflict least.[142] The state adopted its first Ocean Special Area Management Plan in 2010, and the plan received approval from NOAA in July of 2011.[143] Thus, Massachusetts and Rhode Island provide models of the full CMSP process.

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[136] ERG MSP STAKEHOLDER ANALYSIS, *supra* note 74, at 9.
[137] *Id.*
[138] U.S. (*Massachusetts)*, *supra* note 68.
[139] *Mass. Ocean Plan,* NOAA COASTAL AND MARINE SPATIAL PLANNING, http://www.msp.noaa.gov/examples/massachusetts.html (last visited Mar. 28, 2013).
[140] ERG MSP STAKEHOLDER ANALYSIS, *supra* note 74, at 10.
[141] *Id.*
[142] Grover Fugate, Exec. Dir., R.I. Coastal Res. Mgmt. Council (RI CRMC), Presentation at the Vermont Law School Ocean Law Conference (Apr. 1, 2011). These managers even brought fishermen from the North Sea in Europe, where wind farms had been sited successfully without disrupting fish catches, to speak with the Rhode Island fishing community about integrating the wind farms into the marine space. *Id.*
[143] *Latest News,* NOAA COASTAL MARINE SPATIAL PLANNING, http://cmsp.noaa.gov/news.html (last visited Apr. 10, 2013).

2. Regional Efforts in the Northeast

The governors of the New England states created the Northeast Regional Ocean Council (NROC) in 2005 in response to President George W. Bush's U.S. Ocean Action Plan and the USCOP Blueprint Report published in 2004—a full five years ahead of Obama's call to action.[144] The NROC is a partnership group comprised of representatives from federal and state agencies,[145] as well as private and non-profit partnership groups.[146] This group has focused on laying the foundation for future CMSP efforts of a regional planning body by engaging stakeholders and developing data collection and sharing mechanisms.[147]

The NROC convened its first "Ocean Congress" with all stakeholders in 2007 to "identify priority issues that demanded a regional response."[148] The Ocean Congress identified ecosystem health, coastal hazards resilience, and energy planning as the three top priority issues to work on collaboratively.[149] The NROC created a committee for each issue, as well as a fourth ad hoc committee on CMSP, and tasked each committee to create a two-year work plan, first for the 2009–2010 time period, and then for future time periods.[150] All four committees of the NROC have now completed several work plans, including work plans for 2013–2014, which are currently posted on the NROC website.[151]

To solicit funding for their efforts, the NROC submitted a grant proposal to the NOAA Regional Ocean Partnership Grant Funding Opportunity in December 2010 requesting $6.09 million, which "would complete the critical Phase I CMSP foundational work [outlined in the Interagency Ocean Policy

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[144] *About*, NORTHEAST REGIONAL OCEAN COUNCIL, http://collaborate.csc.noaa.gov/nroc/about/default.aspx (last visited Mar. 28, 2013).

[145] *Member States and Agencies*, NORTHEAST REGIONAL OCEAN COUNCIL, http://collaborate.csc.noaa.gov/nroc/about/member-states-agancies/default.aspx (last visited Mar. 28, 2013).

[146] Regional entity partners to the NROC include the Northeast Regional Association of Coastal Ocean Observing Systems (NERACOOS) and the New England Fisheries Mgmt. Council. NORTHEAST REGIONAL OCEAN COUNCIL, NORTHEAST REGIONAL OCEAN COUNCIL WORKSHOP: ADVANCING REGIONAL COASTAL AND MARINE SPATIAL PLANNING (2010) [hereinafter NROC WORKSHOP: ADVANCING REGIONAL CMSP]. Other NROC partners include area universities, the Massachusetts Ocean Partnership, the Conservation Law Foundation, the Gulf of Maine Research Institute, the Provincetown Center for Coastal Studies, the Island Institute, Ocean Visions, and the U.S. Offshore Wind Collaborative. *Id.*

[147] NORTHEAST WORKSHOP ON REGIONAL OCEAN PLANNING: SUMMARY OF WORKSHOP DISCUSSIONS, ROGER WILLIAMS UNIVERSITY SCHOOL OF LAW, BRISTOL, R.I. 18–19 (2012).

[148] *About*, NORTHEAST REGIONAL OCEAN COUNCIL, *supra* note 144.

[149] *Id.*

[150] NORTHEAST REGIONAL OCEAN COUNCIL, 12 PRIORITIES FOR THE NE. V5, *available at Collaboration Websites*, NOAA COASTAL SERVICES CENTER http://collaborate.csc.noaa.gov/nroc/Shared%20Documents/Forms/AllItems.aspx (last visited Sept. 18, 2013) (click on "About NROC," then "12 Priorities for the Ne. v5"); *Home*, NORTHEAST REGIONAL OCEAN COUNCIL, http://northeastoceancouncil.org/ (last visited Mar. 28, 2013).

[151] For 2010–2012 work plans, visit NE. REG'L OCEAN COUNCIL, http://collaborate.csc.noaa.gov/nroc/default.aspx (follow "Health," then "Work Plan," "Hazards," then "Work Plan," "Ocean Planning," then "Work Plan," and "Publications," then "NROC Committee – Ocean Planning," then "NROC 2010 CMSP Work Plan – Final"). For 2013–2014 work plans, visit NE. REG'L OCEAN COUNCIL, http://northeastoceancouncil.org/ (drop down "Committees" list, then click on each committees' link and follow "Download work plan").

Task Force's Final Recommendations] for NROC."[152] NOAA and the Gordon and Betty Moore Foundation granted the Council $2.5 million in November 2011 for further development of a stakeholder involvement process and the baseline characterization of the region's ocean resources.[153] The Council has used some of that grant money to contract facilitation experts through the Udall Foundation's U.S. Institute for Environmental Conflict Resolution to support the design and pilot implementation of a bipartisan, inclusive, public engagement process, involving stakeholder surveys and the preparation of white papers on the energy sector and other highly involved interest groups.[154] Furthermore, NROC received a second grant from NOAA of $1.5 million in January 2012 to develop "a first-stage regional ocean plan supporting ecosystem-based management of New England's marine environment and its human uses and to expand partnerships and public participation in NROC activities."[155]

The NROC has also been meeting regularly and collaborating with its partners. The Council held a full "community" CMSP Working Session in the fall of 2009 to share ideas and data.[156] Since that meeting, it has been at work inventorying human uses, analyzing data gaps, creating a regional data portal, and defining the new information needed to move forward in its planning process.[157] Representatives such as Maine Coastal Program Director Kathleen Leyden have conducted outreach, presenting to the New England Fishery Management Council in June 2010.[158] The NROC held a workshop in November 2010 to discuss the five-year framework for regional implementation of CMSP published that fall.[159] In January 2011, the NROC solicited applications for a newly created CMSP managing director position.[160] Since then, NROC has hired an Ocean Planning Director, plus an Ocean Planning Project Manager, and a NROC Coordinator, for a total of three full-time staff members. NROC also signed MOUs with Northeast Regional Association of Coastal and Ocean Observing Systems (NERACOOS), the Northeast Sea Grant Consortium, and the Gulf of Maine Council on the Marine

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[152] Press Release, Ne. Reg'l Ocean Council, Advancing Coastal and Marine Spatial Planning in the Ne. (Dec. 10, 2010) [hereinafter NROC Advancing CMSP Press Release].

[153] *Latest News, supra* note 143.

[154] *Ocean Planning,* NE. REG'L OCEAN COUNCIL, http://northeastoceancouncil.org/committees/ocean-planning/ (access links to white papers on the energy, aquaculture, and maritime industries in the "Marine Industry Engagement" section. For example, http://northeastoceancouncil.org/wp-content/uploads/2013/03/Energy-White-Paper.pdf).

[155] NOAA FISHERIES OFFICE OF SUSTAINABLE FISHERIES, 2012 COUNCIL COORDINATION COMM. MEETING, BACKGROUND PAPER ON THE NATIONAL OCEAN POLICY AND COASTAL AND MARINE SPATIAL PLANNING (MAY 1, 2012), [hereinafter NOAA BACKGROUND PAPER] *available at* http://www.nmfs.noaa.gov/sfa/reg_svcs/Councils/ccc_2012m/TAB%204/NOP_CMSP.pdf.

[156] NE. REG'L OCEAN COUNCIL, NORTHEAST REGIONAL OCEAN COUNCIL MARINE SPATIAL PLANNING WORKING SESSION (2010).

[157] Kathleen Leyden, Chair of the Northeast Regional Ocean Council, Presentation to the Northeast Fishery Mgmt. Council on Opportunities for Collaboration (June 2010), *available at* http://www.nefmc.org/press/council_discussion_docs/June%202010/Leyden%20NEFMC%20NROC%20June%2022%202010.pdf.

[158] *Id.*

[159] NROC WORKSHOP: ADVANCING REGIONAL CMSP, *supra* note 1464; NROC Advancing CMSP Press Release, *supra* note 152.

[160] Northeast Regional Ocean Council, Meeting Materials – Jan. 11, 2012, at 13 (2012), *available at* http://northeastoceancouncil.org/library/.

Environment,[161] launched a new website, and redesigned and relaunched its data portal in December of 2012.

Perhaps most importantly, the NROC appointed members to a Regional Planning Body in 2012 including: two representatives from each state, mostly from the Departments of Environment or Fish and Game; one representative from each federal agency; one representative from each of nine tribes; and one representative from the Northeast Fisheries Management Council.[162] The Regional Planning Body has met twice to date, for an inaugural meeting in November 2012, and on April 11-12, 2013.[163] The inaugural meeting produced a draft Charter,[164] and the April meeting focused on identifying draft goals for regional ocean planning, as well as mechanisms for receiving public input about those draft goals through the early summer months of 2013.[165]

3. Achievements in the Northeast

Massachusetts, Rhode Island, and the Northeast Regional Ocean Council have claimed several early victories for the states and region regarding current CMSP efforts. For example, the Northeast region has been able to look to and build upon Massachusetts's 2007 success of working with NOAA, the Stellwagen Bank National Sanctuary Program, the U.S. Coast Guard, the Whale Center of New England, the Provincetown Center for Coastal Studies, the Massachusetts Port Authority, the shipping industry, and liquefied natural gas companies to narrow and shift a shipping lane away from the heavily used baleen and right whale feeding ground and to slow vessel traffic in the area, in order to prevent whale and ship collisions.[166] The effort, referred to as the Traffic Separation Scheme (TSS), led to "reduced risk of collision by an estimated 81% for all baleen whales and 58% for endangered right whales. Industry TSS transit times increased by only 9 – 22 minutes (depending on speed) and conflict with deepwater ports was eliminated. In addition, the new route decreased the overlap between ships using the TSS, commercial fishing vessels, and whale watch vessels, thereby increasing maritime safety."[167] The Northeast region has benefited from these working partnerships. Moreover, ocean managers on the West Coast took note of the success and pursued this collaborative effort for themselves in 2012, shifting shipping lanes leading in to the ports of San Francisco, Los Angeles, Long Beach and Santa Barbara to reduce whale strikes.[168]

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[161] *Overview,* NORTHEAST REGIONAL OCEAN COUNCIL, http://northeastoceancouncil.org/about/nroc-overview/ (last visited June 20, 2013).
[162] Northeast Regional Planning Body Inaugural Meeting, *supra* note 134.
[163] *Northeast Regional Planning Body Meeting Information,* NE. REG'L OCEAN COUNCIL, http://northeastoceancouncil.org/regional-planning-body/meetings/.
[164] Northeast Regional Planning Body Inaugural Meeting, *supra* note 134, at 12.
[165] *Northeast Regional Planning Body Meeting Information, supra* note 163.
[166] *See* Douglas A. Moser, *Shipping Lanes Tweaked to Protect Whales*, GLOUCESTER TIMES (June 29, 2007); *Science: Shifting the Boston Traffic Separation Scheme (TSS),* STELLWAGEN BANK NAT'L MARINE SANCTUARY, http://stellwagen.noaa.gov/science/tss.html (last visited June 5, 2013).
[167] OPTF FINAL RECOMMENDATIONS, *supra* note 34, at 45.
[168] *Shipping Lanes off California Tweaked to Protect Whales*, ASSOCIATED PRESS (Dec. 27, 2012), *available at* http://www.dailybulletin.com/california/ci_22268455.

More generally, Kathleen Leyden, Director of the Maine Coastal Program and 2009–2010 Chair of the NROC, listed the following achievements of recent NROC work in an outreach presentation to the New England Fishery Management Council: (1) improved state/federal relationships; (2) alignment of priorities and resources between agencies; (3) increased visibility for the NROC; (4) the creation of formal partnerships; (5) successful workshops held on hazards, LIDAR, marine spatial planning, and ocean health indicators; (6) ability to influence the form of CMSP and the implementation of the National Ocean Policy; (7) opportunities to receive grant funds from a regional LIDAR proposal; and (8) a growing partnership with other regional ocean councils.[169] In addition to these successes, NROC has facilitated the development of the Northeast Data Portal, a robust interactive spatial mapping and data-sharing tool that has data layers from numerous government partners and is easily accessible online to all ocean users and decision-makers.[170] The new regional planning body in the Northeast also has the Massachusetts and Rhode Island state-level CMS plans to reference and work from in developing a regional plan. For example, the regional body has lined up the lists of goals from the two state plans and the National Ocean Policy for the members to reference and consider as they choose the region's goals for CMSP.[171]

Shared concerns of overfishing and wind energy project siting objectives have long driven the coastal states in the Northeast to collaborate. The achievements of states in the Northeast have benefited ocean users and the environment, as well as facilitated the regional groups' efforts to collaborate with partners. In turn, as the first area to successfully employ CMSP, this region has indeed influenced and will continue to influence the shape that CMSP policy will take around the U.S.

B. Mid-Atlantic

1. State Efforts in the Mid-Atlantic

The majority of the Mid-Atlantic states, New York, New Jersey, Delaware, Maryland, and Virginia, are moving forward on CMSP efforts. New York's Ocean and Great Lakes Ecosystem Conservation Council is working on mapping natural resources and researching use impacts along its coasts.[172] New York and Connecticut joined in a bi-state CMSP effort for the Long Island Sound.[173] Maryland is partnering with The Nature Conservancy on a CMSP project called "The Blue Infrastructure Near-shore Assessment," which is spatially mapping and assessing coastal habitat, critical resources, and human

[169] Leyden, Opportunities for Collaboration, *supra* note 157, at slide 6.
[170] NE. OCEAN DATA PORTAL, http://northeastoceandata.org/ (last visited Apr. 7, 2013).
[171] NORTHEAST REGIONAL PLANNING BODY, SUMMARY OF DISCUSSIONS: NORTHEAST REGIONAL PLANNING BODY MEETING MATERIALS, APRIL 11-12, 2013 (2013), *available at* http://northeastoceancouncil.org/regional-planning-body/meetings/.
[172] N.Y. OCEAN AND GREAT LAKES ECOSYSTEM CONSERVATION COUNCIL, SPATIAL PLANNING FOR N.Y. OCEAN AND GREAT LAKES, *available at* http://www.oglecc.ny.gov/media/Spatial%20Planning%20Onepager.pdf.
[173] *See generally*, LONG ISLAND SOUND ASSEMBLY, FINAL REPORT FOR 2012 (2013), *available at* http://www.lisassembly.org/reports/LISA%202012%20FINAL%20FINAL%20Jan11%272013%283%29.pdf.

uses.[174] Moreover, many of the Mid-Atlantic states have contributed resources and staff hours to help build the regional program from the ground up.

2. Regional Efforts in the Mid-Atlantic

The Mid-Atlantic Regional Ocean Council (MARCO) convened to begin laying the foundation for collaborative regional ocean management in 2008. New York sent out the initial call to form a regional ocean partnership in July of that year.[175] It commissioned a white paper to assess existing regional ocean partnerships and to identify priority issues in the region.[176] The states then convened an "Ocean Forum" in December of 2008 in Baltimore, which led to the governors signing a regional agreement on ocean conservation at a summit in New York the following June.[177] The Mid-Atlantic state governors created MARCO in the regional agreement.[178] The Governors from New York, New Jersey, Delaware, Maryland, and Virginia comprise the Council.[179] To assist the Council in its planning efforts, MARCO also includes an Executive Committee of state secretaries and agency heads, a Management Board of state CZM directors, and five Action Teams staffed by policy experts in the priority issue areas. [180]

In August 2009, MARCO staff published an "Actions, Timelines, and Leadership" report, which created interstate workgroups and set initial timelines for work on the identified priority issues.[181] Between June and December of 2009, the New Jersey CZM program created a MARCO website and the Virginia CZM program developed and linked to the website a very robust GIS Mapping and Planning Portal for electronic information sharing, with funding from a Nature Conservancy grant.[182] In December 2009, MARCO sponsored a stakeholder's conference in New York to gather public and stakeholder input on the Actions, Timelines, and Leadership report.[183] Also in the winter of 2009–2010, Maryland's CZM program funded a second ocean management white paper, focused on climate change and sea level rise projected for the region.[184] Later in 2010, the MARCO Management Board convened twice to "refine MARCO['s] governance structure, work on [a] two-year action plan, and form [the] five 'action teams.'"[185]

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[174] *Blue Infrastructure Near-shore Assessment*, MD. DEP'T OF NATURAL RES., http://www.dnr.state.md.us/ccp/bi.asp (last visited Apr. 7, 2013).
[175] *Highlights: Moving in the Right Direction,* MID-ATLANTIC REGIONAL COUNCIL ON THE OCEAN (2011) [hereinafter MARCO HIGHLIGHTS REPORT], *available at* http://www.midatlanticocean.org/mitrd.pdf.
[176] *Id.*
[177] *Id.*
[178] *Id.* at 2–3.
[179] *Id.* at 3.
[180] MARCO HIGHLIGHTS REPORT, *supra* note 175, at 2 (discussing MID-ATL. REGIONAL COUNCIL ON THE OCEAN, ACTIONS, TIMELINES, AND LEADERSHIP TO ADVANCE THE MID-ATLANTIC GOVERNORS' AGREEMENT ON OCEAN CONSERVATION (2009)). The priority issues for the Mid-Atlantic are: (1) offshore renewable energy, (2) habitat protection, (3) climate change adaptation, and (4) water quality improvement. *Id.*
[181] *Id.*
[182] *Id.* (describing the mapping and planning portal at http://maps.tnc.org/MARCO/index.html (last visited Mar. 10, 2011), updated to http://portal.midatlanticocean.org/portal/ (last visited Apr. 7, 2013)).
[183] *Id.*
[184] *Id.*
[185] *Id.*

Last year was also a productive year for advancing ocean planning in the Mid-Atlantic region. MARCO and partner Monmouth University received a $1.5 million grant from NOAA to enhance its online Mapping and Planning Portal in January.[186] NOAA engaged in a "mapping blitz" from February to August 2012, to collect geospatial bathymetric data on the regions undersea canyons.[187] In September, the Sea Grant Mid-Atlantic Ocean Research Planning Project released its Mid-Atlantic Ocean Research Plan, identifying and analyzing the region's research needs.[188] The regional council has also released the latest of its two-year action plans, for 2013–2014.[189] In these plans and other efforts, MARCO's action teams work collaboratively with their partners on four priority issues: offshore renewable energy, habitat protection, climate change adaptation, and water quality improvement.[190] A fifth action team spearheads CMSP efforts.[191] MARCO has also hired a full-time Program Manager and is now soliciting applications for a Program Assistant.

Most recently, MARCO has begun to name members of its regional planning body.[192] The group of designated federal and state members and others closely involved in planning efforts met with key stakeholders in a workshop at the beginning of April 2013.[193] The group discussed the new body, shared goals, and strategies for stakeholder engagement throughout the planning process.[194]

3. Achievements in the Mid-Atlantic

As in the Northeast, "offshore energy development is a major driver of current MSP efforts in the Mid-Atlantic region," with Delaware and New Jersey siting wind farms, and Virginia exploring for natural gas.[195] The Mid-Atlantic region has led the way in developing web mapping capabilities in its partnership efforts with The Nature Conservancy and Monmouth University, and many other regions have followed suit. The online tools that the region has developed are all the more impressive because the individual states collaborated to fund and create them before regional bodies were in place to support the efforts. This region has made considerable headway towards CMSP that will soon come to fruition when a regional planning body convenes to further the existing planning efforts.

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[186] NOAA BACKGROUND PAPER, *supra* note 155, at 1.

[187] NOAA ATLANTIC CANYONS UNDERSEA MAPPING EXPEDITIONS, 2012 FRAMEWORK 1 (2012), *available at* http://www.midatlanticocean.org/NOAA_ACUMEN.pdf

[188] *Sea Grant Mid-Atlantic Ocean Research Planning Project*, MID-ATL. REGIONAL OCEAN RESEARCH PLAN 1 (2012), *available at* http://www.midatlanticoceanresearchplan.org/sites/www.midatlanticoceanresearchplan.org/files/u6/MidAtlanticRegionalOceanResearchPlan-Final.pdf.

[189] MID-ATLANTIC REGIONAL COUNCIL, MARCO OCEAN PLANNING ACTION TEAM 2012-1014 WORK PLAN (20120, *available at* http://www.midatlanticocean.org/MARCOOceanPlanningWorkplan_8-2-12.pdf.

[190] *Id.* at 5–8.

[191] MARCO HIGHLIGHTS REPORT, *supra* note 175, at 3.

[192] *See Home,* MID-ATLANTIC OCEAN PLANNING WORKSHOP, http://midatlanticocean.org/workshop.htm (last visited Apr. 20, 2013) (describing federal agency member designations); *Agenda,* MID-ATLANTIC REGIONAL OCEAN PLANNING WORKSHOP *(*Apr. 4–5, 2013), *available at* http://midatlanticocean.org/MAWorkshopFinalAgenda0404-0513.pdf (listing, throughout the agenda, members from states and federal agencies that had been appointed to the regional planning body).

[193] *Agenda,* MID-ATLANTIC REGIONAL OCEAN PLANNING WORKSHOP, *supra* note 192, at 4.

[194] *Id.* at 1.

[195] ERG MSP STAKEHOLDER ANALYSIS, *supra* note 74, at 13.

C. South Atlantic

The South Atlantic region includes the states of North Carolina, South Carolina, Georgia, and Florida. The Southeast states had not initiated CMSP projects on their own prior to the recent National Ocean Policy push toward CMSP.[196] These states took their first real step toward CMSP together in 2009 when the governors convened to form the Governors' South Atlantic Alliance (GSAA).[197] Structurally, the governors from the four states lead the Alliance as the Executive Group.[198] NOAA, EPA, and the U.S. Geological Survey (USGS) serve as regional supporting partners.[199] Staff designated by the governors form a Steering Group, which in turn is aided by Issue Area Technical Teams.[200] Other partners include universities in the region, NGOs, regional organizations, and private industry groups.[201]

The GSAA selected four priority issues to begin its planning effort: (1) healthy ecosystems, (2) working waterfronts, (3) clean coastal and ocean waters, and (4) disaster-resilient communities.[202] After holding public hearings in 2010 in each of the four states to gather stakeholder input, the GSAA published its Action Plan in December 2010.[203] The Action Plan lays out several objectives for each of the four priority issues, as well as actions to take to reach the objectives.[204]

The GSAA further fleshed out the Action Plan's goals, objectives, actions, and implementation strategies in its July 2011 Implementation Plan.[205] Since that publication, the GSAA Issue Area Technical Teams and Project Teams have met and continue to meet to work on GSAA Action Plan implementation.[206] The GSAA also secured two grants in January 2012 for its region totaling $1.06 million to develop a framework for ocean planning and continue developing its Alliance partnership group, and was able to hire a Regional Coordinator in 2012.[207] Finally, the region is developing a Regional Information Management System (RIMS) and decision support tools to "enable ready access

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[196] *Id.* at 15–16.

[197] GOVERNORS' SOUTH ATLANTIC ALLIANCE, GOVERNORS' SOUTH ATLANTIC ALLIANCE ACTION PLAN 3 (2011) [hereinafter GSAA ACTION PLAN], *available at* http://www.southatlanticalliance.org/docs/12.17.10%20Action%20Plan%20Final%20with%20Forward.pdf. The GSAA partnership agreement is available at http://www.southatlanticalliance.org/docs/GSAA-Partnership-Agreement-May-2009.pdf.

[198] *About Us - Leadership,* GOVERNORS' SOUTH ATLANTIC ALLIANCE, http://www.southatlanticalliance.org/about/leadership.htm (last visited Apr. 20, 2013).

[199] *About Us - Background,* GOVERNORS' SOUTH ATLANTIC ALLIANCE, http://www.southatlanticalliance.org/about/background.htm (last visited June 7, 2013).

[200] GSAA ACTION PLAN, *supra* note 197, at 3.

[201] *Id.*

[202] *Id.* at 4.

[203] *Priorities - Action Plan,* GOVERNORS' S. ATL. ALLIANCE, http://www.southatlanticalliance.org/priorities/action-plan.htm (last visited Apr. 20, 2013).

[204] GSAA ACTION PLAN, *supra* note 197, at 5–12.

[205] GOVERNORS' SOUTH ATLANTIC ALLIANCE, IMPLEMENTATION PLAN (2011), *available at* http://www.southatlanticalliance.org/docs/07.06.11_South_Atlantic_Alliance_Implementation_Plan.pdf.

[206] *Events - Technical and Project Team Meetings,* GOVERNORS' SOUTH ATLANTIC ALLIANCE, http://www.southatlanticalliance.org/events/upcoming.htm (last visited Apr. 20, 2013).

[207] Press Release, Governors' South Atlantic Alliance Receives 1.06 M from NOAA, Funding to Support Organizational Framework, Coastal and Ocean Planning Efforts (Jan. 20, 2012), *available at* http://www.southatlanticalliance.org/docs/SAA-NOAA%20Awards-PressRelease.pdf.

to new and existing data and information."[208] This project, along with an assessment of geospatial data and technological needs, is due to be completed in October 2013.[209]

This nascent regional effort has successfully coordinated to implement CMSP in the coming years. The Southeast has also made efforts to coordinate with the Caribbean region on common interests,[210] and will surely work more closely with federal agencies in the future as siting areas are proposed for offshore wind projects. However, the Southeast faces some obstacles that the other eastern regions do not, such as lack of data development and a negative public perception of planning.[211] This region will be one to watch for stakeholder engagement, to see if the interested groups will come on board to support the CMSP efforts.

D. Gulf of Mexico

The Gulf of Mexico region is comprised of Alabama, Louisiana, Mississippi, Texas, and Florida's west coast, including the Florida Keys National Marine Sanctuary.[212] The federal government spearheaded the protection of FKNMS to conserve its ecological value, establishing the sanctuary in 1990.[213] Likewise, the State of Florida has managed its rich ecological ocean resources toward conservation, and has reaped economic benefit from maintaining reef and wetlands health through related tourism revenues.[214] Texas, Louisiana, Mississippi, and Alabama have a history of managing their offshore lands for oil and gas leasing.[215] With the existence of these competing interests of conservation and oil and gas development, the widespread interest in commercial, recreational, and subsistence fishing, hypoxic summer water conditions, and the high vulnerability of the Gulf coast to hurricanes, the Gulf region presides over a very diverse and complex set of issues for ocean management.

The states of this region initiated the Gulf of Mexico Alliance (GOMA) in 2004 to "enhance the ecological and economic health of the Gulf of Mexico."[216] Gulf Alliance partners include NOAA, the National Aeronautics and Space Administration (NASA), the Department of the Interior (DOI), the Department of Defense (DOD), the Environmental Protection Agency (EPA), the Department of Transportation (DOT), the Army Corps of Engineers, private non-governmental organizations, universities, and state agencies from each of the five states.[217] By March of 2006, the GOMA had

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[208] *Projects - Regional Information Management System,* GOVERNORS' S. ATL. ALLIANCE, http://www.southatlanticalliance.org/projects/rims.htm (last visited Apr. 20, 2013).
[209] *Id.*
[210] *News,* GOVERNORS' SOUTH ATLANTIC ALLIANCE, http://www.southatlanticalliance.org/news.htm (last visited Apr. 20, 2013).
[211] ERG MSP STAKEHOLDER ANALYSIS, *supra* note 74, at 17.
[212] *Id.* at 21.
[213] *History of the Florida National Marine Sanctuary*, NOAA, http://floridakeys.noaa.gov/history.html?s=about (last visited Apr. 23, 2013).
[214] ERG MSP STAKEHOLDER ANALYSIS, *supra* note 74, at 21.
[215] *Id.*
[216] *About the Alliance*, GULF OF MEXICO ALLIANCE, http://gulfofmexicoalliance.org/about/about.html (last visited Apr. 9, 2013).
[217] *Partnerships*, GULF OF MEXICO ALLIANCE, http://gulfofmexicoalliance.org/partnerships/partnerships.html (last visited Apr. 19, 2013).

developed its first Action Plan for Healthy and Resilient Coasts,[218] identifying six regionally significant priority issues on which to focus: (1) water quality, (2) habitat conservation and restoration, (3) ecosystem integration and assessment, (4) nutrient impacts, (5) coastal community resilience, and (6) environmental education.[219] This first Action Plan included several collaborative actions for the region to implement over a three-year period.[220]

The Gulf states found that the collaboration achieved much that the states alone could not and that the Action Plan model was successful.[221] GOMA then built upon the collaborative foundation laid in the first Action Plan, creating a five-year, regional Governors' Action Plan II in 2009, which expands existing partnerships and charts actions to improve the region's capacity to manage the priority issues.[222] The Alliance published a mid-course accomplishment report on the new plan's progress in 2010, outlining steps taken in year one,[223] and held workshops to obtain public input.[224] The Gulf of Mexico Alliance also adopted two initiatives after the Deepwater Horizon oil spill: it provides administrative support for the Gulf of Mexico Research Initiative, launched in May of 2010 with funding from BP to study oil spill and spill response impacts on the environment and public health,[225] and the Gulf Coast Ecosystem Restoration project, for which the state and federal Interagency Ocean Task Force released a restoration strategy in December of 2011.[226] The Alliance has a website with links to tools such as the Gulf of Mexico Data Atlas, which provides geospatial data to facilitate "assessments of the physical environment, marine resources, and economic activity around the Gulf."[227] GOMA also recently hired a Program Manager and a Business Manager to assist with its new responsibilities toward implementing CMSP.[228]

For the last five years, GOMA has collaborated effectively and has found success in its Action Plan approach. However, one consideration for this region going forward is that public perception of planning in the Gulf can be quite negative. When interviewed on the Gulf Coast Ecosystem Restoration effort in the fall of 2010, Secretary of the Navy Ray Mabus "repeatedly referred to the rising public

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[218] *Id.* Access the "Action Plan for Healthy and Resilient Coasts" at http://gulfofmexicoalliance.org/community/pubs.html.

[219] *About the Alliance*, GULF OF MEXICO ALLIANCE, *supra* note 216. For priority issues, follow "six priority issues" link to *Home*, GULF OF MEXICO ALLIANCE, http://gulfofmexicoalliance.org/about/about.html (last visited Apr. 23, 2013).

[220] *ABOUT THE ALLIANCE*, GULF OF MEXICO ALLIANCE, *supra* note 216.

[221] *Id.*

[222] *Id.* Access the Governors' Action Plan II at http://gulfofmexicoalliance.org/community/pubs.html.

[223] *2010 Accomplishments Report,* GULF OF MEXICO ALLIANCE (2010), *available at* http://www.gulfofmexicoalliance.org/community/pdfs/2010GOMA%20Accomplishments%20Rpt_English.pdf.

[224] *Resources*, GULF OF MEXICO ALLIANCE, http://www.gulfofmexicoalliance.org/community/community.html (last visited Apr. 23, 2013). *See also Community Workshops*, GULF OF MEXICO ALLIANCE http://www.gulfofmexicoalliance.org/community/workshops.html (last visited Apr. 23, 2013).

[225] *Gulf of Mexico Research Initiative*, GULF OF MEXICO ALLIANCE, http://gulfofmexicoalliance.org/initiatives/gomri.html (last visited Apr. 23, 2013).

[226] GULF OF MEXICO REGIONAL ECOSYSTEM RESTORATION STRATEGY (2011), *available at* http://gulfofmexicoalliance.org/initiatives/gcertf.html.

[227] *Resources*, *Tools*, GULF OF MEXICO ALLIANCE, http://www.gulfofmexicoalliance.org/community/tools.html (last visited Apr. 23, 2013).

[228] *Contact Information*, *Staff*, GULF OF MEXICO ALLIANCE, http://gulfofmexicoalliance.org/contacts/staff.html (last visited Apr. 23, 2013).

impatience with plans unaccompanied by action."[229] He cited Gulf "plan fatigue," stating that Gulf residents "[ha]ve been planned to death."[230] Perhaps focusing on action will help Gulf stakeholders form a positive impression of CMSP in the region as efforts move forward. This is another region to watch in terms of stakeholder engagement.

E. Caribbean

The Caribbean region includes Puerto Rico and the U.S. Virgin Islands. Puerto Rico took the lead in initiating CMSP efforts in the region. In 2008, Puerto Rico released MSP Draft Guidelines for its submerged lands, as a collaborative effort with the Caribbean Fisheries Management Council, NOAA's Sea Grant program, and several Puerto Rican universities.[231] The guidelines direct Puerto Rican agencies to map submerged ecosystems such as coral reef areas, wetlands, and mangroves; to assess ecosystem health; to propose and evaluate zoning scenarios; to hold public hearings; and to designate new ocean reserves through legislation.[232]

Puerto Rico's Coastal Management Program (PRCMP) held its first conference on CMSP in 2010, attracting over 200 participants including both environmental organizations and academics.[233] In December 2010, PRCMP submitted an assessment and strategy document to NOAA for Enhancement Grants under Section 309 of the Coastal Zone Management Act during the fiscal years of 2011–2015.[234] Here, the agency discusses employing CMSP to enhance its ocean resources program and educating the public on CMSP through its outreach program.[235] The document states that the governors of the two island territories have committed to following the directives of the new National Ocean Policy, and so recognize the need to develop a regional ocean partnership for the Caribbean.[236] The PRCMP, the U.S. Virgin Islands, and The Nature Conservancy also state that together they will seek funding to initiate this partnership.[237]

The Caribbean Islands signed a formal Memorandum of Understanding to work together on CMSP in May 2012.[238] They launched the Caribbean Regional Ocean Partnership (CROP) in July 2012, with financial assistance from NOAA, agreeing to utilize technical assistance from The Nature Conservancy

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[229] NAT'L COMM. ON THE BP DEEPWATER HORIZON OIL SPILL AND OFFSHORE DRILLING REPORT TO THE PRESIDENT, DEEP WATER: THE GULF OIL DISASTER AND THE FUTURE OF OFFSHORE DRILLING 210 (2011).
[230] *Id.*
[231] PUERTO RICO, DEP'T OF NATURAL AND ENVTL. RES., MARINE SPATIAL PLANNING GUIDELINES FOR THE SUBMERGED LANDS OF PUERTO RICO (2008), *available at* http://www.drna.gobierno.pr/oficinas/arn/recursosvivientes/costasreservasrefugios/pmzc/humedales-1/marine%20spatial%20zoning%20guidelines.pdf.
[232] *Id.* at 5, fig. 1.
[233] PUERTO RICO COASTAL MGMT. PROGRAM, DRAFT ASSESSMENT AND STRATEGIES FOR FY2011 – FY2015, at 8 (2010).
[234] *Id.* at 2.
[235] *Id.* at 2, 9.
[236] *Id.* at 48.
[237] *Id.*
[238] *Caribbean Regional Ocean Partnership*, PUERTO RICO DEPT. OF NAT. RES. & ENVT., http://www.drna.gobierno.pr/oficinas/arn/recursosvivientes/costasreservasrefugios/pmzc/crop/caribbean-regional-ocean-partnership (last visited Apr. 8, 2013).

to enhance data sharing.[239] The islands also hope to develop a regional work plan, identify fisheries management issues, and discuss future uses such as offshore energy siting.[240]

CROP does not yet have its own website or data portal. However, the partnership currently posts documents on the Puerto Rico Coastal Program website, and several mapping tools such as the Caribbean Coastal Ocean Observation System (CARICOOS), the NOAA Center for Coastal Monitoring and Assessment Seafloor Characterization of the U.S. Caribbean, and the Caribbean Environmental Response Management Application (ERMA) are available online.[241] CROP held its first meeting in December 2012, which was focused on introducing local stakeholders to the initiative and soliciting their concerns and recommendations.[242] Participants included federal, state, and local government officials, utility managers, tourism industry representatives, and non-profit partners.[243] Those involved with ocean planning efforts have said informally that the Caribbean region has also formed a regional planning body, but no official sources have been published to confirm this information.

F. Great Lakes

The Great Lakes region is comprised of the states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin, and 35 tribal nations.[244] Several regional groups exist that collaborate on lake planning efforts; however, only offshore wind projects proposed in the last few years have spurred more formal CMSP efforts, now on the state level in Ohio and Michigan.[245] In Ohio, the Office of Coastal Management prepared spatial maps analyzing wind favorability, examining the location of shipping lanes, utility infrastructure, bird habitat, fish habitat, commercial fisheries, and other resources to aid decision-making on the wind energy proposals.[246] This project accompanied the development of an updated version of Ohio's Coastal Atlas, a robust online interactive mapping tool that utilizes GIS data to portray where human uses interact with natural resources.[247]

Michigan created its own version of an online Coastal Atlas in its Lakebed Alteration Decision Support Tool, with assistance from the University of Michigan.[248] The Lakebed Alteration Decision Support Tool contains a few interesting features. First, it "allows users to choose criteria for judging the suitability of sites for wind, dredging, and other offshore projects."[249] Second, "[i]t accommodates value judgments such as importance of criteria and desired setbacks."[250] The tool draws on physical,

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[239] *Latest News*, *supra* note 143.
[240] *Id.*
[241] *Regional Planning Efforts: Caribbean Region*, DATA.GOV, http://www.data.gov/ocean/page/regional-planning?field_alias_value=caribbean (last visited Apr. 8, 2013).
[242] CARIBBEAN REGIONAL OCEAN PARTNERSHIP, FIRST MEETING (2012), *available at* http://www.drna.gobierno.pr/oficinas/arn/recursosvivientes/costasreservasrefugios/pmzc/crop/1st%20PR%20Meeting/CROP%20Supporting%20Material.pdf.
[243] *Id.*
[244] ERG MSP STAKEHOLDER ANALYSIS, *supra* note 74, at 18.
[245] *Id.*
[246] *Id.* at 19.
[247] *Id.*
[248] *Id.* at 18.
[249] *Id.*
[250] ERG MSP STAKEHOLDER ANALYSIS, *supra* note 74, at 18.

political, and biological data sets.[251] It also "allows users to experiment with 'what if' scenarios and provides an accessible, user-friendly visualization tool for immediate feedback."[252] The current version has three mapping portals: the first with data for Michigan only; the second with data for all of the Great Lakes waters within the U.S., and the third with data for all of the Great Lakes waters in the U.S. and Canada.[253]

Recent news suggests that the Great Lakes region has begun to work together informally to create a CMS plan, and is negotiating an MOU to formalize the partnership.[254] The states have past partnerships to build from, such as the Great Lakes Commission that was created through joint legislative action in 1955.[255] The Commission added the adjoining Canadian provinces as members in 1999.[256] The Commission partnered with NOAA's Coastal Services Center in 2009 to integrate data, study smart growth opportunities, and priority plan habitat areas for restoration.[257] CMSP could build on this recent work. The states in the Great Lakes region also have a partnership in the Council of Great Lakes Governors, whose stated mission is "[t]o encourage and facilitate environmentally responsible economic growth."[258] This partnership could also be instrumental in kickstarting CMSP if it so chooses.

G. West Coast

1. State Efforts on the West Coast

California, Oregon, and Washington make up the West Coast region. All three states actively plan marine activities such as offshore oil and gas drilling.[259] Oregon utilizes an adaptive management approach to govern its state waters through its flexible Territorial Sea Plan (TSP).[260] Oregon created the original TSP document in 1994, but has allowed amendment "to include unanticipated future ocean uses."[261] The state amended the plan in 2000 to accommodate seafloor uses such as telecommunications cables, pipelines, and other utilities.[262] Oregon has begun collecting marine spatial planning data that it is now using to bolster its decade-long efforts to establish marine reserves along

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[251] *Id.*
[252] *Id.*
[253] GIS Group, *Lakebed Alteration Decision Support Tool*, INSTITUTE FOR FISHERIES RESEARCH, http://ifrgis.snre.umich.edu/projects/LADST/ladst.shtml (last visited Apr. 24, 2013).
[254] *Great Lakes Regional Coastal and Marine Spatial Plan, under National Ocean Policy*, OPEN CHANNELS: FORUM FOR OCEAN PLANNING AND MANAGEMENT, http://openchannels.org/case-studies/great-lakes-regional-coastal-and-marine-spatial-plan-under-national-ocean-policy (last visited June 7, 2013).
[255] *About Us*, GREAT LAKES COMMISSION, http://glc.org/about/ (last visited Apr. 24, 2013).
[256] *Id.*
[257] *Joint Project Agreement between GLC and NOAA Coastal Services Center*, GREAT LAKES COMMISSION, http://glc.org/noaaglcproject/ (last visited Apr. 24, 2013).
[258] *Mission*, COUNCIL OF GREAT LAKES GOVERNORS, http://www.cglg.org/Overview/mission.asp (last visited Apr. 24, 2013).
[259] ERG MSP STAKEHOLDER ANALYSIS, *supra* note 74, at 24–25.
[260] *Id.* at 24.
[261] *Id.*
[262] *Id.*

its coast.[263] Moreover, Oregon passed the second of two amendments to the Territorial Sea Plan addressing renewable energy facility siting in January 2013.[264]

California also has active CMSP processes, though without a legislative mandate. By way of legislation, California did enact the Marine Life Protection Act in 1999 that placed a moratorium on leasing new sites for offshore drilling.[265] Since the moratorium, California has developed mapping tools, such as its MarineMap and Ocean Uses Atlas, to aid planning for marine protected areas around existing lease blocks.[266] These mapping tools have allowed the state to collect more general marine spatial planning data; however, California has encountered difficulties sharing data across its agencies.[267] California recently passed Assembly Bill 2125 in September 2010 to mandate sharing of marine data, in hopes of overcoming this logistical hurdle.[268]

Like Oregon, Washington State passed the legislative mandate of the Ocean Resources Management Act in 1989 to "establish[] planning criteria for ocean resources," as well as to "ban[] leasing of Washington's outer coast waters for oil and gas exploration, development and production."[269] More recently, the state convened members of state agencies, county commissioners, stakeholders, and members of the legislature to form the Washington State Ocean Policy Work Group.[270] This Work Group published a report in 2006 recommending actions to improve conditions in Washington's coastal and marine areas.[271] With such legislative mandates, mapping tools, and collaborative work groups, the states in the West Coast region already have experience with the key ingredients needed to implement CMSP efforts.

2. Regional Efforts on the West Coast

The governors gathered to sign the West Coast Governors' Agreement on Ocean Health in 2006.[272] This agreement spurred initial actions and directed the creation of a regional Action Plan, which was

[263] Press Release, Oregon Wave Energy Trust, State of Oregon Adopts Territorial Sea Plan for Ocean Energy Development, Jan. 25, 2013, *available at* http://www.oregonwave.org/state-of-oregon-adopts-territorial-sea-plan-for-ocean-energy-development/.
[264] ERG MSP STAKEHOLDER ANALYSIS , *supra* note 74, at 24.
[265] *Id.* at 25.
[266] *Id.*
[267] Margaret Caldwell, Dir. Envtl. and Natural Res. L. & Pol'y Program, Stanford Law School, Exec. Dir. Ctr. Ocean Solutions, Presentation at the Vermont Law School Ocean Law Conference (Apr. 1, 2011). The Collaborative Geospatial Information and Tools for California Coastal and Ocean Managers Workshop Report in 2009, a collaborative federal, state, and private study funded by The Nature Conservancy, found that California state agencies did not, and could not, share data. COLLABORATIVE GEOSPATIAL INFORMATION AND TOOLS FOR CAL. COASTAL AND OCEAN MANAGERS WORKSHOP REPORT 14 (2009).
[268] Caldwell, *supra* note 267. AB 2125 will add to Sections 35620 and 35621 in Chapter 544 of the Public Resources Code.
[269] *Wash.'s Ocean Resources: History*, WASH. DEP'T OF ECOLOGY, http://www.ecy.wa.gov/programs/sea/ocean/history.html (last visited Apr. 9, 2013); The Ocean Resources Management Act, WASH. REV. CODE Ch. 43.143 (1989).
[270] *Wash.'s Ocean Res.: History*, WASH. DEP'T OF ECOLOGY, *supra* note 269.
[271] *Id.*
[272] *Home*, WEST COAST GOVERNORS' ALLIANCE ON OCEAN HEALTH, http://www.westcoastoceans.org/ (last visited Apr. 9, 2013).

accomplished and released in May 2008.[273] The Action Plan established Action Coordination Teams (ACTs) for several issue areas including: climate change, marine debris, ocean awareness and literacy, polluted runoff, renewable ocean energy, seafloor mapping, sediment management, and *Spartina* grass eradication.[274] Each of these ACTs released a work plan in May 2009 detailing the tasks and resources needed to achieve their objectives.[275] The Governors designated staff to be "state leads," to work together with "federal leads" in an Executive Committee, representing the region's actions.[276]

In addition to these collaborative efforts, the West Coast Governors' Agreement called for the development of a regional Coastal Siting Report for renewable energy projects.[277] To solicit stakeholder input for this report, Washington hosted the Marine Spatial Planning for Renewable Energy on the West Coast Workshop in October 2009. The workshop steering committee was made up of representatives from the state environmental agencies, NOAA, the Minerals Management Service (now the Bureau of Ocean Energy Management), and The Nature Conservancy.[278] The West Coast region also submitted a grant proposal in December 2010 requesting funding from NOAA entitled "Achieving Sustainable Coastal Communities by Advancing Regional Ocean Priorities and Coastal and Marine Spatial Planning on the West Coast."[279]

More recently, the West Coast region produced a two-year progress report on its 2008 Action Plan in April 2011.[280] It received $250,000 in grants from NOAA in January of 2012 "to aid its work on regional priority development and work towards better regional data access and delivery in support of those priorities."[281] The West Coast region was also able to hire four Sea Grant fellows in 2010 to assist with regional work.[282] The partnership is now soliciting applications to hire a full time Project Coordinator, as well.[283] Thus, although the Pacific states cover a large area and each has strong individual planning programs, the West Coast region continues to makes strides forward with CMSP efforts.

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[273] *Id.* (follow "Documents," then "Action Plan Documents," then "WCGA Action Plan 7/29/2008").

[274] *Action Coordination Teams*, WEST COAST GOVERNORS' ALLIANCE ON OCEAN HEALTH, http://www.westcoastoceans.org/index.cfm?content.display&pageID=68 (last visited Apr. 9, 2013).

[275] *Executive Overview of Action Coordination Teams Draft Work Plans*, WEST COAST GOVERNORS' ALLIANCE ON OCEAN HEALTH, http://www.westcoastoceans.org/media/WCGA_Executive_Overview-FINAL.pdf (last visited Apr. 9, 2013).

[276] *About Us*, WEST COAST GOVERNORS' ALLIANCE ON OCEAN HEALTH, http://www.westcoastoceans.org/index.cfm?content.display&pageID=71 (last visited Apr. 9, 2013).

[277] WEST COAST GOVERNORS' AGREEMENT, MARINE SPATIAL PLANNING FOR RENEWABLE ENERGY ON THE WEST COAST: WORKSHOP REPORT 1 (2009).

[278] *Id.* at front materials.

[279] WEST COAST GOVERNORS' AGREEMENT ON OCEAN HEALTH (2006), *available at* http://www.westcoastoceans.org/media/WCOceanAgreementp6.pdf.

[280] *Latest News, supra* note 143.

[281] NOAA, GRANT AWARDS: NOAA REGIONAL OCEAN PARTNERSHIP FUNDING PROGRAM 2 (2012), *available at* http://www.csc.noaa.gov/funding/_pdf/RegionalOceanPartnershipFundingProgramGrantAwardsAnnouncement.pdf.

[282] *Accomplishments,* WEST COAST GOVERNORS' ALLIANCE ON OCEAN HEALTH, http://www.westcoastoceans.org/index.cfm?content.display&pageID=118 (last visited Apr. 9, 2013).

[283] *Home*, WEST COAST GOVERNORS' ALLIANCE ON OCEAN HEALTH, *supra* note 272.

H. Alaska / Arctic

The Alaska/Arctic region is comprised solely of the state of Alaska and its associated tribal groups. With only one state, the idea of "regional planning" is somewhat imprecise. However, CMSP still presents an opportunity for the state to gather with tribal representatives and other stakeholders to harmonize marine uses. In addition, the group can consult with the North Pacific Fishery Management Council, whose membership includes Alaska, Oregon, and Washington.[284]

Stakeholder groups and the North Pacific Fishery Management Council have shown a mixture of interest and hesitance in becoming engaged with CMSP efforts in Alaska. At a meeting with the Assistant Administrator of NOAA in the winter of 2010 and in a follow-up interview, North Pacific Fishery Management Council Executive Director Chris Oliver worried that the CMSP concept represented a repetitive and unnecessary new layer of bureaucracy.[285] Oliver spoke of the Fishery Management Council's efforts to close one million square miles of Alaskan marine area to fishing of various species or with certain gear types as marine spatial planning.[286] He expressed concerns that, even though the Fishery Council had been engaged in CMSP work already, going forward it would be consulted only "pro forma" and would not have a vote in CMSP decision-making for the region.[287] He also expressed concerns that funding, which the Fishery Management Council was actively pursuing for observer systems that were "a fundamental underpinning of our whole [fishery] management system," would be diverted to new CMSP efforts.[288] Oliver stated that the North Pacific Fishery Management Council wanted assurances it would have a seat at the table in CMSP efforts, and was also encouraging the state to take "the driver's seat" in the process.[289]

Stakeholders are becoming active on the issue of CMSP in Alaska as well, some vocally opposing zoning and others expressing concern over tribal subsistence use rights. On the industry side, a number of groups including the Alaska State Chamber of Commerce, the Alaska Support Industry Alliance, the American Petroleum Institute, and the Chevron Corporation, have joined the National Ocean Policy Coalition to lobby the federal government on how the new National Ocean Policy can best be implemented.[290] This Coalition lists in its Statement of Principles that a "sound, balanced ocean policy" will "conserve[] natural resources and marine habitat" "without exclusionary zoning" and without federal authority "infring[ing] on state authority to manage resources and activities under state jurisdiction."[291]

Despite chilly reception by some, others from environmental stakeholder groups, federal agencies, state agencies, and local agencies have convened to discuss CMSP in Alaska. The Environmental Law

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[284] *Members*, *Council Members*, NORTH PACIFIC FISHERY COUNCIL, http://alaskafisheries.noaa.gov/npfmc/membership/council-members.html (last visited Apr. 25, 2013).
[285] Andrew Jensen, *Confusion Lingers for Council About New Ocean Policy*, ALASKA J. OF COM. (Dec. 3, 2010), *available at* http://classic.alaskajournal.com/stories/120310/loc_clfc.shtml.
[286] *Id.*
[287] *Id.*
[288] *Id.*
[289] *Id.*
[290] *Members*, NAT'L OCEAN POLICY COAL., http://oceanpolicy.com/members (last visited Apr. 25, 2013).
[291] *Statement of Principles*, NAT'L OCEAN POLICY COAL., http://oceanpolicy.com/statement-of-principles/ (last visited Apr. 25, 2013).

Institute hosted a Seminar in March 2011 entitled "Arctic Coastal and Marine Spatial Planning and the Role of the Arctic People."[292] In attendance were representatives from the Alaska Eskimo Whaling Commission, NOAA, the North Slope Borough Department of Wildlife Management, Oceana, the Marine Mammal Commission, the Eskimo Walrus Commission, the U.S. Coast Guard, the Department of Interior, the North Slope Borough Assembly, and the Village of Kaktovik.[293] These groups discussed "existing co-management practices;" "rights, traditions, and experiences of Arctic people;" and the needs of subsistence communities that are in conflict with other uses.[294]

These diverse interest groups have yet to come together with government to move forward on CMSP in Alaska. The federal agencies and the Alaska Department of Natural Resources Coastal Management Program have mapping tools in place, such as the Alaska Ocean Observing System[295] and Alaska ShoreZone,[296] which can aid the spatial planning work of agencies and stakeholders, and could also be utilized to create and vote on different use scenarios for the future. Collaboration on a statewide CMSP effort in Alaska is possible, but much groundwork would be needed to build trust and relationships as a first step. Government leaders must shape the program to fit local interest group needs and encourage stakeholders to work together in a non-threatening manner in this area where state sovereignty is jealously guarded.

I. Pacific Islands

Hawaii, the Commonwealth of the Northern Mariana Islands, American Samoa, and Guam comprise the Pacific Islands region. Like the Caribbean region, the Pacific Islands region just recently formed a regional partnership group in September of 2012.[297] The Pacific Regional Ocean Partnership agreement establishes a state-led partnership group, with a supporting Executive Group, Steering Group, and Action Coordination Teams.[298] This partnership grew out of state efforts in Hawaii, which helped lay some of the building blocks for regional action.

Hawaii's Coastal Zone Management Program prepared an Ocean Resource Management Plan (ORMP) in 2006, which "seeks to integrate the management of coastal and marine areas by connecting land and sea management, preserving ocean heritage, and promoting collaborative governance."[299] This plan "maps incremental 5-year management priorities," decided upon and implemented collaboratively through a bottom-up, community partnership-led approach.[300] For this effort, the Hawaii Coastal Zone Management Program created a Policy Group and a Working Group, each

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[292] *Envtl. Law Institute Events*, ENVTL. LAW INST., http://www.eli.org/seminars/past_event.cfm?eventid=539 (last visited Apr. 25, 2013).
[293] *Id.*
[294] *Id.*
[295] *Home*, Alaska Ocean Observing System, http://www.aoos.org (last visited Apr. 25, 2013).
[296] *Alaska ShoreZone*, NOAA, http://mapping.fakr.noaa.gov/szflex/ (last visited Apr. 25, 2013).
[297] *Latest News*, *supra* note 143.
[298] GOVERNORS' PACIFIC ISLANDS REGIONAL OCEAN PARTNERSHIP, ESTABLISHMENT 2 (2012), *available at* http://manage.hawaii.gov/gov/newsroom/press-releases/PROP_signed_082212.pdf.
[299] ERG MSP STAKEHOLDER ANALYSIS, *supra* note 74, at 27.
[300] *Ocean Resources Mgmt. Plan*, HAWAII CZM PROGRAM, http://planning.hawaii.gov/czm/ocean-resources-management-plan-ormp/ (last visited Apr. 25, 2013).

composed of federal, state, and local stakeholder agencies.[301] The Hawaii Office of Planning is set to release a 2012 ORMP Update in June 2013.[302] Other recent projects of these groups include the Working Group's November 2009 publication of "A Framework for Climate Change Adaptation in Hawaii."[303]

In addition to Hawaii's ORMP governance structure, Hawaii had a Hawaii Ocean Observing System up and running online for several years, [304] and recently merged this system with the broader Pacific Islands Ocean Observing System.[305] Both systems offer access to oceanographic data as well as mapping tools that could be supplemented with CMSP-related data sets or GIS mapping layers. The Pacific Islands Ocean Observing System also has a Governing Council with seats for representatives from American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and Hawaii,[306] which might be built upon for regional CMSP efforts. Like the Caribbean region, those involved with ocean planning efforts have said informally that the Pacific Islands region has also formed a regional planning body, but no official sources have been published to confirm this information.

Table 1. Summary of CMSP Progress to date by Region.

CMSP Milestone	Regional Ocean Partnership	Funding	Website	Action Plan	Staff	Data Dev.	Stakeholder Engagement	Data Portal	Regional Planning Body	CMS Plan
Northeast	NROC	✓	✓	✓	✓	✓	✓	✓	✓	In Dev.
Mid-Atlantic	MARCO	✓	✓	✓	✓	✓	✓	✓	✓	
South Atlantic	GSAA	✓	✓	✓	✓	✓	✓			
Gulf of Mexico	GOMA	✓	✓	✓	✓	✓	✓			
West Coast	WCGA	✓	✓	✓	✓	✓				
Caribbean	CROP	✓							✓	
Pacific Islands	Pacific Islands ROP	✓							✓	
Alaska		✓								
Great Lakes										

[301] HAWAII CZM PROGRAM, ORIENTATION PACKET, HAW. OCEAN RES. MGMT. PLAN POLICY AND WORKING GROUPS 1 (2012), *available at* http://files.hawaii.gov/dbedt/op/czm/ormp/reports/ORMP_Orientation_Packet_updated_062012.pdf.

[302] *2012 ORMP Update*, HAWAII OFFICE OF PLANNING, http://planning.hawaii.gov/czm/ocean-resources-management-plan-ormp/2012-ormp-update/ (last visited Apr. 25, 2013).

[303] OCEAN RESOURCES MGMT. PLAN WORKING GROUP & UNIVERSITY OF HAWAII, A FRAMEWORK FOR CLIMATE CHANGE ADAPTATION IN HAWAII (2009), *available at* http://files.hawaii.gov/dbedt/op/czm/ormp/reports/climate_change_adaptation_framework_final.pdf.

[304] *Home*, HIOOS HAWAII OCEAN OBSERVING SYSTEM, http://www.soest.hawaii.edu/hioos/index.php (last visited Apr. 25, 2013). This page now redirects the visitor to the Pacific Islands Ocean Observing System site, http://www.soest.hawaii.edu/pacioos/index.php.

[305] *Home*, PACIFIC ISLANDS OCEAN OBSERVING SYSTEM, http://www.soest.hawaii.edu/pacioos/index.php (last visited Apr. 25, 2013).

[306] *Organizational Structure*, PACIFIC ISLANDS OCEAN OBSERVING SYSTEM, http://www.soest.hawaii.edu/pacioos/about/structure.php (last visited Apr. 25, 2013).

IV. Successes and Obstacles

As mentioned in the previous section, many states and regions are on the road to implementing CMSP, and a few have claimed early victories where they have successfully used CMSP to achieve environmental sustainability. Other states and regions have encountered significant obstacles getting their CMSP efforts off the ground. This section revisits the outstanding successes and obstacles of CMSP regional efforts in the U.S. so far.

A. Successes

A common success attributed to CMSP among state and federal entities is the Northeast region's victory in decreasing whale-ship collisions around Stellwagen Bank National Marine Sanctuary. In this instance, the shipping industry, the health of the whale population, and the whale-watching public were all able to benefit greatly by a simple act of coordination that CMSP made possible. As stated above, this collaborative success was recently replicated at several ports on the West Coast. Ideally, CMSP benefits across regions will reflect this model, where multiple users can mutually benefit from coordinated decision-making without the need for major sacrifices from any side.

Similarly, states and stakeholder groups have benefited from the excitement surrounding CMSP, manifesting in the forms of funding and support from federal agencies and private organization. Rhode Island was able to jumpstart wind energy development off of its coast relatively inexpensively by leveraging state funding to attract universities and non-profit organizations to assist with research and federal grants from the Department of Energy.[307] The Nature Conservancy has supported CMSP efforts in the Northeast, Mid-Atlantic, and the Caribbean, and groups such as the Center for Ocean Solutions have supported efforts on the West Coast. Managers in these regions that have capitalized on current interest in CMSP in the policymaking community have encouraged other states and regions to jump on the opportunity as well.[308] Besides the availability of funding and research support, managers point to the chance for representatives to really shape the process in their region at this critical time in the national effort.[309]

States and regions should be aware of other existing federal resources that may be available to assist new CMSP efforts. One such resource is the Department of Interior's new Smart from the Start program, created to streamline offshore leasing for wind energy development.[310] Another federal resource that may be available to assist regions in launching CMSP efforts is the EPA Subcommittee on Integrated Management of Ocean Resources (SIMOR). The Northeast region, for one, has utilized

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[307] Presentation of Grover Fugate, *supra* note 142. Rhode Island spent $8 million starting the project, received a $660,000 grant from the DOE, and relied on non-profit support for research needs. *Id.*

[308] *Id.;* Eileen Sobeck, Deputy Assistant Sec'y for Fish and Wildlife and Parks in the Dep't of Interior, Presentation at the Vermont Law School Ocean Law Conference (Apr. 1, 2011).

[309] Presentation of Grover Fugate, *supra* note 142; Presentation of Eileen Sobeck, *supra* note 308.

[310] Press Release, Dep't of Interior, Interior Initiates Process for First "Smart from the Start" Lease for Commercial Wind Power Offshore Del. (Mar. 24, 2011), *available at* http://www.doi.gov/news/pressreleases/Salazar-Launches-Smart-from-the-Start-Initiative-to-Speed-Offshore-Wind-Energy-Development-off-the-Atlantic-Coast.cfm.

SIMOR to communicate "the priorities and needs for the Northeast" up to the federal level.[311] Regions developing CMSP efforts should look to these resources, and to their sister regional ocean councils, for support, information, and "best practices" models.

B. Obstacles

Regions with little to no CMSP development face a number of obstacles including concern over increased bureaucracy where CMSP goals overlap with fisheries council or coastal zone management goals, concern over increased and perhaps overreaching federal authority and regulation in areas of state jurisdiction, and "planning fatigue." Some CMSP proponents attribute these "marketing" problems to the uniqueness of the CMSP concept and the lack of understanding that still exists in the ocean and coastal policy-making community.[312] Others note that industry is opposed to efforts that will bring more regulation, as can occur with zoning, because of the costs of compliance and uncertainty of when the rules will change.[313] This uncertainty can interfere with industry's investment-backed expectations, especially with fixed-point commerce such as oil rigs.[314]

In addition to general problems managers face in marketing CMSP to constituent groups, some major logistical hurdles remain in the way of CMSP progress. Many regions need more data collection to fill gaps, more ability to share and integrate data, and better collaboration vertically and horizontally across government agencies and levels of government. Lack of funding streams and staffing infrastructure to take on new tasks are also impediments to CMSP progress. The lack of funding is an important issue, especially considering recent tightening of the federal budget. NOAA continues to ask for funding to support CMSP efforts in its budget requests each year, and members of Congress continue to propose amendments to eliminate that funding stream. Funding will become an increasing importantly factor for regions as they continue to hire staff, form regional planning bodies, and attempt to craft CMS plans.

V. Conclusion

Several regions have made significant progress towards implementing CMSP for their coastal and marine spaces. Many have efforts underway and are on track to create CMS plans. A few have not been as receptive to the idea and have not initiated planning efforts. With such obstacles as poor messaging and modest funding from the federal level, the questions loom—as regions inch slowly forward with CMSP, will they reform human uses of the ocean in time to stave off ecosystem collapse or will they indeed meet the knotty trials projected, such as "the end of fish"?[315]

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[311] *NROC Terms of Reference*, NE. REG'L OCEAN COUNCIL, http://collaborate.csc.noaa.gov/nroc/about/nroc-terms/default.aspx (last visited Apr. 25, 2013).

[312] Michael Sutton, Vice President, Ctr. for the Future of the Oceans, Monterey Bay Aquarium, Presentation at the Vermont Law School Ocean Law Conference (Apr. 1, 2011).

[313] Sarah Chasis, Senior Attorney, Natural Res. Def. Counsel, Presentation at the Vermont Law School Ocean Law Conference (Apr. 1, 2011).

[314] *Id.*

[315] Pauly, *supra* note 11.

This Article focuses primarily on the process our national, regional, and state governing bodies have engaged in towards CMSP and not on the results of CMSP on ocean health, largely because the U.S. is still in the process stage. Plans must be developed and implemented, and then monitored, before the effectiveness of CMSP in terms of safeguarding ecosystem services can be measured. The regions can look to the models of the Northeast states, and take warning from Australia's current predicament with the Great Barrier Reef, to learn some best practices. Ocean managers should strive to make the improvements that can be achieved through better collaboration, but they should not allow those improvements to overshadow the bigger picture of the work at hand. The deleterious effects of human uses on the ocean environment must be managed to preserve the environment and ecosystem services. Enhanced coordination does not necessarily equate with reduced environmental impact. The regions should remain cognizant that placing economic concerns above environmental protection can come with a serious price tag down the road.

Although very different from CMSP, the management framework established by the Magnuson–Stevens Act is interesting to think about in light of nascent efforts towards ecosystem-based management through CMSP. The Magnuson–Stevens Act developed a regime of fisheries governance at the regional level that, after years of what seemed to be failure, might be just beginning to achieve its objectives. Thus, the Magnuson–Stevens Act regime's difficulties in successfully managing fishing and fish population health until serious sustainability plans and fish stock rebuilding plans were put into place might foretell difficulties that also lie ahead for CMSP. CMSP efforts may need to mirror the fisheries management "stick" of quotas with a CMSP "stick" of zoning. The "carrot" of federal funding for coordination might not be enough to get the U.S. to the goal of protecting marine environments.

Critics of the Magnuson–Stevens Act cite inadequate monitoring, enforcement, and plan revision by the implementing agency as some of the law's weaknesses.[316] Specifically, critics point to a lack of incentive for the regional fisheries councils to enforce strict conservation. One critic suggests that these failings stem from the agency capture of fisheries biologists within the implementing agency by the fishing industry they are to regulate.[317] This could also mirror the early fate of CMSP efforts, as state and federal government representatives work hard to facilitate offshore energy development in many regions, perhaps at the expense of conservation.

It is too early to assess CMSP for structural failures. However, as they develop their programs, CMSP managers would do well to learn from the struggles of the Magnuson–Stevens Act. Federal monitoring and plan revision of regional efforts should be proactive, and watchful for red flags such as industry capture or plans lopsided toward one interest. Similarly, as interest groups fight over the inclusion of regulatory or zoning schemes in CMS plans, managers should avoid instituting rules that are not then enforced. These larger criticisms of the Magnuson–Stevens regime will be important to remember as the U.S. moves forward into its new ocean governance regime, which similarly seeks to harness regional, council-style management with federal oversight. CMSP proponents must remain vigilant to avoid the same pitfalls that have tripped up ocean resource managers in the past, and make the most of this opportunity for regional, multiple-use, multiple-stakeholder ocean management.

[316] Turnipseed, *supra* note 19, at 55.
[317] Pauly, *supra* note 11.

The Development of Wind Energy in the Mid-Atlantic Region: The Legal Process and Lessons from the Cape Wind Project

Catherine Janasie, J.D., LL.M.[1]

Abstract: Even though Cape Wind Associates, LLC proposed the U.S.'s first offshore wind project in 2001, the nation has yet to install its first offshore wind farm. However, the states of the Mid-Atlantic region have recognized the potential for offshore wind and have taken steps to develop this type of renewable energy in the region. In response to Cape Wind's delayed development, the federal leasing process has become more defined, but a Mid-Atlantic project will face a myriad of other statutes, regulations, and regulators, as well as an uncertain timetable, in developing an offshore wind project. A Mid-Atlantic project will also potentially encounter financing issues, litigation, and the hard tasks of weighing the environmental costs and benefits of a project. Finally, a streamlined regulatory process may negatively affect public support and places a heavy burden on the environmental reviews during the latter stages of a project.

[1] Ocean and Coastal Law Fellow, Mississippi-Alabama Sea Grant Legal Program at The University of Mississippi School of Law. Research for this Article was made possible by funding for the Mississippi-Alabama Sea Grant Legal Program under award number NA10OAR4170078 from the Mississippi-Alabama Sea Grant Consortium and the U.S. Department of Commerce, National Oceanic and Atmospheric Administration. The statements, findings, conclusions, and recommendations are those of the author and do not necessarily reflect the views of the U.S. Department of Commerce or NOAA.

I. Introduction

The United States produces about a quarter of the world's greenhouse gases, while only having about 4% of the world's population. With the implications of increased amounts of carbon dioxide in the atmosphere becoming more apparent, many see the need to cut down on the nation's carbon emissions. A potential solution to this problem is the development of low-carbon or carbon-free energy, and many view offshore wind as a strong alternative energy choice. Particularly, offshore wind has the potential to generate four times the amount of energy as the U.S.'s current total generating capacity.[2]

Despite this potential, the U.S. currently has no offshore wind capacity.[3] In comparison, at the end of 2012, Europe had over 50 offshore wind facilities with more than 1,600 turbines and a total capacity just shy of 5,000 MW.[4] The lack of offshore wind capacity in the U.S. is not due to a lack of trying. In 2001, Cape Wind Associates, LLC began the process for developing the first offshore wind farm in the U.S., planned to be located off the coast of Massachusetts. The project, however, has been tied up with regulatory struggles and litigation for 12 years and has yet to begin construction.[5]

Cape Wind has faced two main obstacles: financing and the regulatory process. Currently, Cape Wind is still trying to finance the project, and it only has power purchase agreements for about 78% of the project's power. The regulatory process has taken over a decade, and virtually each step has been challenged, mostly by local residents through an extremely well-funded citizen group. With all these delays, the question becomes, would a Mid-Atlantic wind farm face similar obstacles as the Cape Wind project? Part of Cape Wind's delay was the result of an unclear federal leasing process at the project's inception, and the federal government has since taken steps to speed up the leasing of the outer continental shelf for offshore wind projects. Outside of the leasing process, though, offshore wind projects still face a myriad of state and federal regulators and requirements.

Like all new development, residents, other ocean users, and other interested parties in the area are likely to have legitimate concerns with an offshore wind farm and may oppose a potential project. The effort to streamline the regulatory process may have the effect of making the public feel like they have been left out of the initial stages of the process. However, many of the statutes involved in the offshore wind regulatory process allow for citizen involvement, and private parties can often bring suits to enforce these statutory and regulatory requirements. Therefore, those concerned with a potential Mid-

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[2] NATIONAL RENEWABLE ENERGY LABORATORY, LARGE-SCALE OFFSHORE WIND POWER IN THE UNITED STATES, EXECUTIVE SUMMARY 1 (2010), *available at* http://www.nrel.gov/docs/fy10osti/49229.pdf.

[3] A floating, grid-connected offshore wind turbine was recently installed as a demonstration project off the coast of Maine. *See* Press Release, U.S. Department of Energy, Maine Project Launches First Grid-Connected Offshore Wind Turbine in the U.S. (May 31, 2013), *available at* http://energy.gov/articles/maine-project-launches-first-grid-connected-offshore-wind-turbine-us.

[4] EUROPEAN WIND ENERGY ASSOCIATION, THE EUROPEAN OFFSHORE WIND INDUSTRY – KEY TRENDS AND STATISTICS 2012, EXECUTIVE SUMMARY 3 (2013), *available at* http://www.ewea.org/fileadmin/files/library/publications/statistics/European_offshore_statistics_2012.pdf.

[5] For another article on the delays of the Cape Wind project, see Kenneth Kimmell, *The Cape Wind Offshore Wind Energy Project: A Case Study of the Difficult Transition to Renewable Energy*, 5 GOLDEN GATE U. ENVTL. L. J. 197 (2011).

Atlantic project will have the opportunity to police the project to ensure it is complying with these requirements and challenge a project if they are able to establish standing.

All in all, the leasing process is well underway for potential projects in the Mid-Atlantic; however, these projects will still face a lot of regulatory hurdles on the state and federal levels. While waiting for these approvals, a project could be stalled in a kind of regulatory limbo. Further, these projects will face some opposition, but it should be noted that the opposition faced by Cape Wind has been unique and it is not certain whether a similarly dedicated, well-funded group would form to stop a Mid-Atlantic project. Similar to an uncertain timeline for regulatory approvals, litigation can prolong the development process for an indefinite period of time. Like Cape Wind, a Mid-Atlantic project would also likely involve environmentalists fighting over the effects and benefits of the project, with some environmental groups supporting and some groups opposing the project. As with other renewable energy projects, a project may also face the difficult tasks of weighing environmental harms if the project would have a potential adverse environmental effect. Further, the efforts to streamline the environmental review for projects in the Mid-Atlantic may have a chilling effect on public buy-in for a potential project.

Part II of this Article will discuss the status of offshore wind in the U.S., with a focus on Cape Wind and potential projects in the Mid-Atlantic. Part III will lay out the leasing process for an offshore wind project. Part IV will outline the additional hurdles that a Mid-Atlantic Wind Farm might face. Part V will analyze whether there are lessons that a Mid-Atlantic project could learn from Cape Wind.

II. The Status of Offshore Wind Projects

The U.S. National Renewable Energy Lab estimates that the U.S.'s potential for offshore wind is four times greater than the country's current total generating capacity from all sources.[6] In comparison to onshore wind projects, offshore wind is an attractive power source for the U.S. since offshore wind can be located near areas that have the most electricity demand, as the coastal and Great Lakes states use 78% of the nation's energy. Further, offshore wind can meet peak energy demands, as ocean winds correspond with periods of high power demand, especially on hot summer days.

Despite the potential for offshore wind, the U.S. has yet to install an offshore wind farm. In response to the difficulties faced by Cape Wind, the Obama Administration and the U.S. Department of the Interior (DOI) have made the permitting of offshore wind a priority. For instance, Former Secretary of the Interior Ken Salazar stated in 2012: "Offshore wind holds incredible potential for our country, and we're moving full-steam ahead to accelerate the siting, leasing and construction of new projects."[7] In his recently released Climate Action Plan, President Obama stressed the importance of reducing greenhouse gas emissions and developing renewable energy. During the President's first term, the U.S. doubled its electricity generation from wind, solar, and geothermal energy, and the plan sets the goal

[6] NATIONAL RENEWABLE ENERGY LABORATORY, *supra* note 2, at 1.

[7] Press Release, U.S. Department of Interior, Obama Administration Announces Major Steps toward Leasing for Offshore Wind Projects in Mid-Atlantic (Feb. 2, 2012), *available at* http://www.doi.gov/news/pressreleases/Obama-Administration-Announces-Major-Steps-toward-Leasing-for-Offshore-Wind-Projects-in-Mid-Atlantic.cfm.

of doubling the nation's renewable energy generation again by 2020.[8] The President's plan also affirms the administration's focus on accelerating the permitting of clean energy projects.

A. Cape Wind

Cape Wind is planned to be located off the coast of Massachusetts in Horseshoe Shoals, which is surrounded by Cape Cod, Nantucket, and Martha's Vineyard. The project will have 130 wind turbines located 5 miles offshore. With the tips of their blades, the turbines will reach 440 feet in the air. The turbines will be located closest to Craigville Beach on Cape Cod, and on a clear day, they will be visible from shore.

The location was chosen for its shallow waters, as the water is generally less than 45 feet deep. Horseshoe Shoals is also protected from stormy seas by Nantucket and Martha's Vineyard. In this location, the energy generated does not need to be transmitted over long distances, and it is estimated that the Cape Wind project would provide Cape Cod with about 75% of its power.[9] The project will also be close to the metropolitan centers of the Northeast. Because of its location, though, Horseshoe Shoal is subject to many uses. Along with commercial uses like fishing, shipping, and air traffic, the area is also a popular destination for recreational uses like boating and fishing. The area is also home to protected species like the piping plover and the right whale. Finally, the area is a favorite playground for the wealthy.

One cause for the delay of the Cape Wind project has been the project's environmental review under the National Environmental Policy Act (NEPA). Under NEPA, when a federal agency undertakes a major federal action, the agency is required to consider the environmental impacts of the action.[10] As will be discussed in more detail in Part III, both the U.S. Army Corps of Engineers (Corps) and DOI have been the lead agency for the project. When the Corps claimed initial jurisdiction, it took several years to release its Draft Environmental Impact Statement (DEIS) under NEPA.[11] When DOI took over as the lead agency for the project, it decided to perform its own, separate environmental review, which it did not complete until 2009.[12]

Cape Wind has also been subject to strong opposition. Like most new development, residents and groups in the vicinity of Horseshoe Shoals have voiced their concerns with the project. The most notable of these opponents could be members of the Kennedy family, as both the late senator Ted

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[8] EXECUTIVE OFFICE OF THE PRESIDENT, THE PRESIDENT'S CLIMATE ACTION PLAN 6 (2013), *available at* http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf.

[9] BUREAU OF OCEAN ENERGY MANAGEMENT, CAPE WIND ENERGY PROJECT, NANTUCKET SOUND, MASSACHUSETTS: CONSTRUCTION AND OPERATIONS PLAN 2 (2011), *available at* http://www.boem.gov/uploadedFiles/BOEM/Renewable_Energy_Program/Studies/Final_Redacted_COP.pdf.

[10] 42 U.S.C. § 4332.

[11] Notice of Availability of the Draft Environmental Impact Statement for the Cape Wind Energy Project, Nantucket Sound and Yarmouth, MA, Application for Corps Section 10 Individual Permit, 69 Fed. Reg. 64,919-01 (Nov. 9, 2004).

[12] *See* MINERALS MANAGEMENT SERVICE, U.S. DEPARTMENT OF INTERIOR, CAPE WIND ENERGY PROJECT FINAL ENVIRONMENTAL IMPACT STATEMENT (2009). Some potential impacts that the environmental review considered in the Cape Wind process included the noise and traffic associated with the construction; the effect on views; the potential effect of the blades on migratory birds and bats; the potential effects of construction on fish; and the additional effects of transmission cables.

Kennedy and the environmentalist Robert Kennedy, Jr. have spoken out against the project due to its potential environmental effects.[13] However, the location of the Kennedy compound on Cape Cod has led to criticism of their position, with some accusing the Kennedys of being NIMBYS – Not in My Backyard Opponents.[14]

Several different parties have filed lawsuits against Cape Wind, including local residents, towns, and tribes. The main force behind the Cape Wind litigation has been the Alliance to Protect Nantucket Sound (Alliance). The Alliance is a well-funded organization of local residents who have sued Cape Wind at virtually every step of the development process. The Alliance claims that its "goal is to protect Nantucket Sound in perpetuity through conservation, environmental action, and opposition to inappropriate industrial or commercial development."[15] The Alliance has been very active in both grassroots organizing against the project and in bringing litigation.[16] For example, the Alliance has brought suits against Cape Wind Associates, LLC,[17] as well as multiple suits against the Corps,[18] the Massachusetts Department of Public Utilities,[19] and the Massachusetts Energy Facilities Siting Board.[20]

Some have criticized the Alliance due to the fact that one of its main funders is Bill Koch, a billionaire with a house in Osterville on Cape Cod who made his fortune in the oil industry. Others have questioned the Alliance's tactics and motivation, claiming that the Alliance's sole purpose is to stop Cape Wind. For instance, Kit Kennedy, an attorney with the Natural Resources Defense Council, a group that supports Cape Wind, has indicated that the Alliance, and not the project's lengthy environmental review, is to blame for Cape Wind's delayed development.[21]

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[13] *See* Robert F. Kennedy, Jr., *An Ill Wind Off Cape Cod*, THE NEW YORK TIMES, Dec. 16, 2005, *available at* http://www.nytimes.com/2005/12/16/opinion/16kennedy.html?_r=0; *see also* Robert F. Kennedy Jr., *Nantucket's Wind Power Rip-off*, THE WALL STREET JOURNAL, July 18, 2011, *available at* http://online.wsj.com/article/SB10001424052702304521304576447541604359376.html.

[14] *See Cape Wind Responds to Robert F. Kennedy, Jr.*, CAPE WIND, http://www.capewind.org/article108.htm (last visited July 19, 2013).

[15] *About Us*, SAVE OUR SOUND, http://www.saveoursound.org/about_us/mission/ (last visited July 19, 2013). The group has also supported having Nantucket Sound designated as a marine protected area.

[16] The group has a section on its webpage devoted to its "Victories" against the Cape Wind project. *See News: Victories over Cape Wind (APNS)*, SAVE OUR SOUND, http://www.saveoursound.org/news/reader.php?id=463 (last visited July 19, 2013).

[17] *See* Town of Barnstable v. Cape Wind Associates, LLC, 27 Mass. L. Rep. 111 (Mass. Super. 2010).

[18] *See* Alliance to Protect Nantucket Sound, Inc. v. U.S. Dep't of the Army, 398 F.3d 105 (1st Cir. 2005); Alliance to Protect Nantucket Sound v. U.S. Dep't of the Army, 288 F.Supp. 2d 64 (D.Mass. 2003).

[19] *See* Alliance to Protect Nantucket Sound, Inc. v. Dep't of Public Utilities, 959 N.E.2d 413 (Mass. 2011); Alliance to Protect Nantucket Sound, Inc. v. Dep't of Utilities, 959 N.E.2d 408 (Mass. 2011).

[20] *See* Alliance to Protect Nantucket Sound, Inc. v. Energy Facilities Siting Bd., 932 N.E.2d 787 (Mass. 2011); Alliance to Protect Nantucket Sound, Inc. v. Energy Facilities Siting Bd., 858 N.E.2d 294 (Mass. 2006).

[21] Tom Zeller, Jr., *Cape Wind: Regulation, Litigation and The Struggle to Develop Offshore Wind Power in The U.S.*, HUFFINGTON POST, March 1, 2013, http://www.huffingtonpost.com/2013/02/23/cape-wind-regulation-liti_n_2736008.html. Kit Kennedy has stated that: "The thorough and careful environmental review helped to outline the environmental benefits of the project, identify where mitigation measures were called for and allowed for full participation and input by the public. It gave us confidence that once the environmental review was done, we had all the information on the project's benefits and impacts that we needed to support the project. The delays in moving forward with Cape Wind stem not from NEPA but largely from the well-funded opposition of a single group, the Alliance to Protect Nantucket Sound, whose sole purpose – despite its name – is to try to stop Cape Wind." *Id.*

B. Mid-Atlantic Projects

There are also a number of potential offshore wind projects in the Mid-Atlantic, and several of these projects have already secured leases to engage in specified activities on the outer continental shelf. In November 2007, DOI issued an Interim Policy[22] to authorize leases that would allow the lessee to install technology testing and offshore data collection facilities on the outer continental shelf.[23] Under the Interim Policy, four leases with a five-year term were executed in November 2009 in the Mid-Atlantic region.[24] Since two of those leases were relinquished in 2012, the two remaining Interim Policy Leases are one with Deepwater Wind LLC and one with Fishermen's Energy of New Jersey LLC.[25]

In November 2012, the Bureau of Ocean Energy Management (BOEM) issued an Outer Continental Shelf commercial lease to Bluewater Wind Delaware LLC, which is a wholly owned subsidiary of NRG Energy, Inc.[26] The lease is for a 96,430-acre area off the coast of Delaware in federal waters. NRG had planned a 300 to 450 MW project thirteen miles off the coast of Delaware, but the company has placed the project on hold due to a lack of financing. While the company continues to seek investors, it has also cancelled a power purchase agreement that it had executed to sell the power generated by the project.

As an example of a project in state waters, Fishermen's Energy is in the process of developing an offshore wind farm off the coast of Atlantic City, NJ. This project is in addition to Fishermen's Energy's Interim Policy lease discussed above. The project would have five turbines that would produce 25 MW of energy.[27] The project is fully permitted, but is awaiting approval from the New Jersey Board of Public Utilities and the Division of Rate Counsel.[28] The wind farm is a small scale project in shallow waters that is intended to demonstrate the impacts of offshore wind projects on marine and avian species for stakeholders, with the idea that larger wind projects can then be adjusted in response to these observed impacts.

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[22] The Interim Policy will be discussed in more detail in Part III below.

[23] U.S. Mineral Management Service, Request for Information and Nominations of Areas for Leases Authorizing Alternative Energy Resource Assessment and Technology Testing Activities Pursuant to Subsection 8(p) of the Outer Continental Shelf Lands Act, as Amended, 72 Fed. Reg. 62,673 (Nov. 6, 2007) [hereinafter Request for Information and Nominations].

[24] *Renewable Energy Programs Current Projects*, BUREAU OF OCEAN ENERGY MANAGEMENT, http://www.boem.gov/Renewable-Energy-Program/Current-Projects/Index.aspx (last visited July 19, 2013). The leases gave the lessees no additional commercial rights.

[25] *Id.* The two relinquished leases were with Bluewater Wind Delaware LLC and Bluewater Wind New Jersey Energy LLC. Both leases were relinquished in October 2012.

[26] Bureau of Ocean Energy Management, Renewable Energy Lease Number OCS-A 0482 (2012), http://www.boem.gov/uploadedFiles/BOEM/Renewable_Energy_Program/State_Activities/Executed%20Lease%20OCS-A(1).pdf.

[27] *Fishermen's Energy Atlantic City Windfarm (FACW),* FISHERMEN'S ENERGY, http://www.fishermensenergy.com/atlantic-city-windfarm.php (last visited July 19, 2013).

[28] *See* Tom Johnson, *Reclassifying Proposal as Pilot Project Could Help Offshore Wind Get Under Way*, NJ SPOTLIGHT, Feb. 7, 2013, http://www.njspotlight.com/stories/13/02/06/reclassifying-proposal-as-pilot-project-could-help-offshore-wind-get-underway/.

There are also several other proposed projects in the region that have yet to obtain leases. For example, Deepwater Wind has proposed multiple projects.[29] The Hudson Canyon Wind Farm would generate power for approximately 350,000 homes in downstate New York, Long Island, and northern New Jersey. The project is planned to produce 1,000 MW of power with up to 200 turbines and would be located thirty-five miles south of Long Island's west end. The Garden State Offshore Energy Project would produce 1,000 MW of power and be sixteen to twenty miles off the coast of southern New Jersey near Avalon and Ocean City. Finally, the Deepwater Wind Energy Center is a proposed 150-200 turbine project that would produce 1,000 MW of electricity for Long Island and New England. The project would be far offshore, located thirty miles east of Montauk, NY and fifteen miles south of Martha's Vineyard.

Con Edison, the Long Island Power Authority (LIPA), and the New York Power Authority (NYPA) have also proposed a 350 MW project thirteen miles off the Rockaway Peninsula in New York.[30] The project is intended to serve New York City and surrounding areas. NYPA submitted an unsolicited request for a commercial lease to the BOEM, who is currently considering the application.[31]

Finally, there is a proposed transmission project in the region. The Atlantic Wind Connection is intended to provide an offshore high voltage direct current transmission system off the coasts of the Mid-Atlantic states of New York, New Jersey, Delaware, Maryland, and Virginia. Atlantic Grid Holdings LLC submitted an unsolicited right of way application in August 2011 to build the transmission project.[32] It supplemented its application in 2013, and BOEM is considering the application.

III. The Leasing Process

Pursuant to the Submerged Lands Act, Congress gave the coastal states title to the submerged lands three miles beyond the low-water mark along their coast.[33] The act reserved for the federal government title to the submerged lands beyond this point, which is known as the outer continental shelf (OCS). All projects on federal submerged lands must obtain a lease from the federal government, while projects in state waters must obtain a lease from the state. For example, since the Cape Wind project is to be located five miles offshore, the project is in federal waters and subject to the federal leasing process. In comparison, the Fishermen's Energy wind project off the coast of Atlantic City, NJ is to be sited less than three miles from the shoreline, which makes the project subject to leasing by the state of New Jersey.

Since it was the first proposed offshore wind project, Cape Wind was a test case for the federal regulatory process. When the project was introduced, uncertainty existed as to which federal agency

[29] *See Deepwater Wind Projects*, DEEPWATER WIND, http://dwwind.com/projects (last visited July 19, 2013).
[30] *See* LONG ISLAND-NEW YORK CITY OFFSHORE WIND PROJECT, http://linycoffshorewind.com/ (last visited July 19, 2013).
[31] *Renewable Energy Programs: New York Activities*, BUREAU OF OCEAN ENERGY MANAGEMENT, www.boem.gov/Renewable-Energy-Program/State-Activities/New-York.aspx (last visited July 19, 2013).
[32] Atlantic Grid Holdings, LLC, Unsolicited Right-of-Way Grant Application for the Atlantic Wind Connection Project (Aug. 10, 2011), *available at* http://www.boem.gov/uploadedFiles/BOEM/Renewable_Energy_Program/State_Activities/ROW%20Application_Restated_FINAL.pdf.
[33] The Submerged Lands Act also provided a mechanism for states to extend their boundary under certain narrow exceptions. Both Texas and the Gulf coast of Florida have extended boundaries under these exceptions.

had the authority to permit a renewable energy project on the OCS. In response to the lengthy regulatory process that Cape Wind encountered, both Congress and DOI have taken steps to clarify the leasing process for future projects.

A. Initial Regulatory Uncertainty

When Cape Wind Associates, LLC proposed its offshore wind project in 2001, the Corps claimed jurisdiction over offshore renewable energy projects pursuant to its authority under Section 10 of the Rivers and Harbors Act.[34] Section 10 gives the Corps regulatory authority to permit projects that obstruct navigation within the nation's navigable waters and on the OCS. Pursuant to this authority, Cape Wind sought a Section 10 permit from the Corps to build a data collection tower on the OCS to collect information on the feasibility of an offshore wind facility in the area. The Corps took several years to complete its environmental review under NEPA, and when the Corps finally issued the permit to Cape Wind, the Alliance challenged the Corps' authority to do so. The case was litigated, with the court ultimately deciding that the Corps did have the authority to issue such a permit.[35]

In 2005, the authority for the Cape Wind project changed hands. Congress passed the Energy Policy Act of 2005 (EPAct) to clarify the permitting process for renewable energy projects on the OCS. EPAct authorizes the Secretary of the Interior to grant leases, easements, and rights-of-way on the OCS for activities that produce or support the production, transportation, or transmission of energy from sources besides oil and gas, as well as to allow for alternate uses of existing facilities on the OCS.[36] EPAct also specified that the law did not alter the authority of federal agencies under separate federal laws. The EPAct, therefore, did not alter the Corps' Section 10 authority under the Rivers and Harbors Act or the authority of other federal agencies under laws like the Endangered Species Act.

Even though EPAct aimed to clarify the permitting process for renewable energy projects, there remained some uncertainty as to the jurisdiction of DOI and the Federal Energy Regulatory Commission (FERC) in connection to these projects.[37] As a result, DOI entered into a Memorandum of Understanding (MOU) with FERC in 2009 that clarified the two agencies' respective authorities.[38] The MOU gives DOI exclusive jurisdiction over all non-hydrokinetic renewable energy projects located on the OCS, including solar and wind projects. Likewise, the MOU gives FERC exclusive jurisdiction to

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[34] 33 U.S.C. §§ 407-687.

[35] Alliance to Protect Nantucket Sound, Inc. v. U.S. Dept. of Army, 288 F.Supp.2d 64, 75 (D. Mass. 2003).

[36] EPACT 2005, P.L. 109-58, § 388(e) (Aug. 8, 2005).

[37] This uncertainty became apparent in 2008 when FERC issued preliminary permits to a California energy company for a hydrokinetic project off the coast of California. FERC issued the permit pursuant to its authority under the Federal Power Act, which gives FERC the authority to permit hydroelectric projects on the "navigable waters of the United States." 16 U.S.C. § 817(b)(1) (FPA § 23(b)(1)). DOI challenged FERC's authority to issue the permit, claiming that DOI should have the authority to permit the project under EPAct due to its belief that the OCS was not within the U.S.'s navigable waters. In a FERC Order, FERC determined that the OCS was within the navigable waters of the U.S. and that EPAct did not displace FERC's authority to permit wave energy projects on the OCS under the Federal Power Act. Pac. Gas & Elec. Co., 125 FERC P 61045, 2008 WL 4612930 (FERC Oct. 16, 2008).

[38] Memorandum of Understanding Between the U.S. Department of the Interior and the Federal Energy Regulatory Commission (Apr. 9, 2009), *available at* http://www.ferc.gov/legal/maj-ord-reg/mou/mou-doi.pdf.

grant licenses for hydrokinetic projects; however, developers of these projects will also need to obtain an OCS lease from DOI for the use of the ocean bottom.[39]

B. DOI Regulation

After the passage of EPAct, the Secretary of the Interior delegated its authority under the act to the Minerals Management Service (MMS). However, following the 2010 Deepwater Horizon Oil Spill, there was concern that having one agency in charge of the revenue management, leasing, and enforcement functions for OCS projects had created conflict and impeded MMS in fulfilling its competing missions. As a result, DOI decided to re-organize the agency.

First, MMS was renamed the Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEMRE). In October 2010, DOI formed the Office of Natural Resources Revenue (ONRR) to take over the bureau's revenue management functions.[40] In October 2011, DOI completed the MMS reorganization by replacing BOEMRE with two new bureaus: the Bureau of Safety and Environmental Enforcement (BSEE) and the Bureau of Ocean Energy Management (BOEM).[41] With the reorganization, DOI aimed to give each of the new bureaus and offices a clear mission and the necessary resources to fulfill these missions.[42] Under the reorganization, BOEM now handles the leasing of the OCS.

1. 2009 DOI Regulations

In April 2009, DOI published its final rules for offshore renewable energy projects on the OCS. Governed by the Outer Continental Shelf Lands Act (OCSLA), the regulations detail the process for applicants to obtain leases, easements, and rights-of-way on the OCS, as well as for alternate uses of existing OCS facilities.[43] Under the regulations, a leaseholder will have to meet certain requirements depending on the type of lease and how the lease is issued. In addition, leaseholders will have to meet environmental and safety requirements, including mechanisms for monitoring, inspections, and facility assessments.[44]

BOEM's wind energy program has four separate stages: (1) Planning; (2) Lease Issuance; (3) Approval of a Site Assessment Plan (SAP); and (4) Approval of a Construction and Operations Plan (COP).[45] The first step is aimed at locating suitable areas for offshore wind projects. Under this step-

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[39] *Id.* at 1.

[40] Bureau of Ocean Energy Management, Regulation and Enforcement, Reorganization of Title 30, Code of Federal Regulation: Office of Natural Resources Revenue, 75 Fed. Reg. 61,051 (Oct. 4, 2010).

[41] U.S. Department of Interior, Reorganization of Title 30: Bureaus of Safety and Environmental Enforcement and Ocean Energy Management, 76 Fed. Reg. 64,432 (Oct. 18, 2011).

[42] Press Release, U.S. Department of Interior, Fact Sheet: The Reorganization of the Former Minerals Management Service, www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&pageid=260330.

[43] 30 C.F.R. part 585 (Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf).

[44] 30 C.F.R. §§ 585.800-833; *see also* STEPHANIE SHOWALTER &TERRA BOWLING, NATIONAL SEA GRANT LAW CENTER, OFFSHORE RENEWABLE ENERGY REGULATORY PRIMER (2009), *available at* http://nsglc.olemiss.edu/offshore.pdf.

[45] BUREAU OF OCEAN ENERGY MANAGEMENT, COMMERCIAL WIND LEASE ISSUANCE AND SITE ASSESSMENT ACTIVITIES ON THE ATLANTIC OUTER CONTINENTAL SHELF OFFSHORE NEW JERSEY, DELAWARE, MARYLAND, AND VIRGINIA: FINAL ENVIRONMENTAL ASSESSMENT iii (2012), *available at*

wise process, BOEM will next issue a wind energy lease; however, obtaining a lease does not mean a project is ready to begin construction, but rather, is simply the next step in the leasing process. Under the regulations, a developer can obtain a lease through a competitive or noncompetitive process.[46] BOEM will issue leases on a competitive basis, unless it determines that no competitive interest exists for a lease after public notice. If it makes this determination, BOEM will issue a noncompetitive lease.[47]

The regulations provide for two types of leases: commercial leases and limited leases. Commercial leases are intended for the commercial production of energy on the OCS and give the developer the right to produce, sell, and deliver power created from a renewable energy project on a commercial scale.[48] Limited leases, on the other hand, are for activities that support energy production but do not produce energy to be sold, distributed, or used in another way.[49] These leases are issued for a five-year period and give the lessee an easement over a part of the OCS to install substations, lines, and pipelines.[50]

Once a developer obtains a lease for an OCS renewable energy project, the regulations contain requirements for site assessment, construction, operation, and decommissioning, as well as provisions for lease payments. The next step for commercial lessees under the regulations is to submit a Site Assessment Plan (SAP).[51] A SAP describes the activities to characterize a commercial lease and test technological devices, such as by installing meteorological towers.[52] Once BOEM approves the SAP, the commercial lessee has a five-year period to conduct a site assessment.[53]

The next step for a developer will be to submit a Construction and Operations Plan (COP), which BOEM must approve before construction on the project can begin. A COP must describe the project's planned facilities, including the project's onshore and support facilities, as well as all of the project's additional planned activities.[54] Although the SAP and COP are separate steps under the regulations, the developer does have the option to submit its COP with its SAP.[55] If the developer did not submit a COP with its SAP, the developer must submit the COP during the five-year site assessment time period.[56] Once the COP is approved, commercial leases then provide a twenty-five year term for the developer to operate the facility.[57]

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http://www.boem.gov/uploadedFiles/BOEM/Renewable_Energy_Program/Smart_from_the_Start/Mid-Atlantic_Final_EA_012012.pdf [hereinafter ATLANTIC OCS FINAL EA].

[46] 30 C.F.R. § 201. Competitive leases must meet the requirements of 30 C.F.R. §§ 585.210-225. Noncompetitive leases must meet the requirements of 30 C.F.R. §§ 585.230-232, as amended by 76 Fed. Reg. 28,178 (May 16, 2011).

[47] *Id.* § 585.201.

[48] *Id.* § 585.112. The regulations define renewable energy as "energy resources other than oil and gas and minerals as defined in 30 CFR part 580. Such resources include, but are not limited to, wind, solar, and ocean waves, tides, and current." *Id.*

[49] *Id.* § 585.112.

[50] *Id.* § 585.236.

[51] *Id.* §§ 585.605 through 585.613.

[52] *Id.* § 585.605.

[53] *Id.* § 585.235.

[54] *Id.* § 585.620.

[55] *Id.* § 585.235(a). For competitive leases, once DOI issues the lease, the developer has six month to submit a SAP or combined SAP and COP, while a noncompetitive lease does not have this preliminary term.

[56] *Id.* § 585.235.

[57] *Id.* § 585.235.

Limited leaseholders will follow a different process under the regulations. These lessees are required to submit a General Activities Plan (GAP) for the developer's resource assessment activities and technology testing.[58] BOEM must approve a GAP before activities on a lease can begin. Once BOEM approves the GAP, the developer has five years to conduct the approved activities, and the possibility exists to renew the lease.[59]

For approval, any SAP, COP, or GAP must demonstrate that the proposed activities will:

- Conform to the lease provisions and applicable laws and regulations;
- Be safe;
- Have no unreasonable interference with other OCS uses;
- Will not unduly harm or damage natural resources; property; human life; wildlife; property; the human, coastal or marine environment; or structures, objects or sites with archaeological or historical significance; and
- Use the safest, best available technology, best management practices, and trained personal.[60]

2. Efforts to Streamline the Permitting Process

Due to Cape Wind's lengthy regulatory process and the Obama Administration's focus on renewable energy, DOI has taken steps to streamline the permitting process for proposed offshore wind projects. First, the Department has tried to increase coordination with the states by establishing state task forces to identify areas that appear best suited for potential offshore development. The aim of the task forces is to help coordinate among the different levels of government and move the leasing process for renewable energy projects forward by sharing information on environmental impacts and multiple uses. In addition, the Atlantic Offshore Wind Energy Consortium is an effort to promote a regional approach to offshore wind development. DOI and ten East Coast states formed the consortium in June 2010 when the parties entered into a Memorandum of Understanding (MOU). According to the MOU, the purpose of the group is to promote "the efficient, orderly, and responsible development of wind resources on the outer continental shelf."[61]

In hopes of speeding up the approval process for offshore wind projects on the OCS, DOI announced its Smart from the Start Initiative in November 2010.[62] The program seeks to speed up

[58] *Id.* § 585.640.
[59] *Id.* § 585.652.
[60] *Id.* §§ 585.606; 585.621; 585.641.
[61] Memorandum of Understanding Between the United States Department of the Interior and the States of Maine, New Hampshire, Massachusetts, Rhode Island, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina to Create an Atlantic Offshore Wind Energy Consortium to Coordinate Issues of Regional Applicability for the Purpose of Promoting the Efficient, Orderly, and Responsible Development of Wind Resources on the Outer Continental Shelf (2010), *available at* http://www.boem.gov/uploadedFiles/AtlanticConsortiumMOU.pdf.
[62] Press Release, U.S. Dep't of the Interior, Salazar Launches "Smart from the Start" Initiative to Speed Offshore Wind Energy Development off the Atlantic Coast (Nov. 23, 2010), http://www.doi.gov/news/pressreleases/Salazar-Launches-Smart-from-the-Start-Initiative-to-Speed-Offshore-Wind-Energy-Development-off-the-Atlantic-Coast.cfm.

offshore wind development by designating appropriate areas for projects, coordinating environmental studies, using large-scale planning, and expediting the approval process.[63] In addition to developing renewable energy, DOI has stated that the initiative's goals include strengthening national security, generating jobs in the U.S., and reducing carbon emissions.[64]

As part of the Smart from the Start process, BOEM will designate Wind Energy Areas (WEAs), through which the agency can identify areas with the best renewable energy potential and the least amount of conflicts with other uses like shipping routes and wildlife habitats. The WEA process allows for the participation of other federal agencies, and the information provided by these agencies can be used to either encourage or avoid renewable energy projects in identified areas.[65] For example, the U.S. Coast Guard may consult with DOI to determine if any of the proposed leasing areas will interfere with navigation and shipping routes, and the Department of the Defense (DOD) could consult on the leasing area's effect on training areas. Likewise, the U.S. Fish and Wildlife Service (FWS) would participate by identifying whether the area contains any critical habitat, and the National Marine Fisheries Service (NMFS) could consult on the effect on fisheries. Other agencies that could play a role include the National Oceanic and Atmospheric Administration (NOAA) and the Federal Aviation Administration (FAA). As part of the WEA program, BOEM will also undertake regional environmental assessments.

C. Current Leasing Status

Once DOI completed its final Environmental Impact Statement (EIS) for the project, Cape Wind has moved steadily along in the permitting process. BOEM granted Cape Wind the first U.S. commercial offshore wind lease in October 2010.[66] In April 2011, BOEM approved Cape Wind's Construction and Operations Plan.[67] On the state level, Cape Wind completed state and local permitting in 2009. Cape Wind also has entered into and had approved a power purchase agreement to sell a portion of the energy from the project. Finally, the project is currently working on obtaining financing.

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[63] *Id.*

[64] U.S. Dep't of the Interior, Frequently Asked Questions: 'Smart from the Start' Atlantic OCS Offshore Wind Initiative, *available at* http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&PageID=73317 [hereinafter Smart from the Start FAQs]. As part of the Smart from the Start initiative, DOI will also move to "aggressively" process applications for offshore transmission lines. *Id.*

[65] *Id.*

[66] Bureau of Ocean Energy Management, Regulation, and Enforcement, U.S. Dep't of Interior, Renewable Energy Lease Number OCS-A-478 (Oct. 6, 2010), *available at* http://www.boem.gov/uploadedFiles/BOEM/Renewable_Energy_Program/Studies/CapeWind_signed_lease.pdf.

[67] Bureau of Ocean Energy Management, U.S. Dep't of Interior, Cape Wind Energy Project: Record of Decision Approving Construction and Operations Plan (Apr. 18, 2011), http://www.boem.gov/uploadedFiles/BOEM/Renewable_Energy_Program/Studies/Record_of_Decision42011.pdf

The leasing process has also begun in the Mid-Atlantic, with BOEM taking steps in New York, New Jersey, Delaware, Maryland, and Virginia.[68] In November 2007, MMS issued an Interim Policy, which authorized MMS to issue leases to install technology testing and offshore data collection facilities on the OCS.[69] Under the Interim Policy, MMS completed an Environmental Assessment (EA) for the issuance of Interim Policy leases off the coasts of New Jersey and Delaware in June 2009.[70] MMS then offered five leases in June 2009 that had a five-year term and gave the lessees no additional commercial rights. MMS executed four of these leases in November 2009.[71] As mentioned above, since two of those leases were relinquished in 2012, the only remaining Interim Policy Leases are one with Deepwater Wind LLC and one with Fishermen's Energy of New Jersey LLC.[72]

Under the Smart from the Start Initiative, BOEM has designated WEAs in Rhode Island, Massachusetts, New Jersey, Delaware, Maryland, and Virginia. In addition, BOEM has completed a Finding of No Historic Properties Affected for the Issuance of Commercial Leases for the WEAs in New Jersey, Maryland, Virginia, and Delaware under Section 106 of the National Historic Preservative Act.[73] On February 2, 2012, DOI announced that it had completed its NEPA analysis for the WEAs off the coasts of Maryland, Virginia, New Jersey, and Delaware.[74]

The NEPA analysis involved an EA that combined an analysis for both the lease sale and site assessment steps of the offshore development process. By conducting a regional environmental review for the first two steps of the leasing process, DOI aimed to simplify the regulatory process for offshore wind projects in the Mid-Atlantic region. In the EA, DOI concluded that that there would not be any significant environmental and socioeconomic impacts from BOEM issuing leases or from the lessees' site assessment activities in these WEAs.[75] In its review, DOI looked at the potential impacts of issuing leases in the Mid-Atlantic WEAs, including looking at the reasonable and foreseeable consequences of site assessment activities, including biological, archeological, geotechnical, and geophysical surveys.

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[68] *See State Activities,* BUREAU OF OCEAN ENERGY MANAGEMENT, http://www.boem.gov/Renewable-Energy-Program/State-Activities/Index.aspx (last visited July 19, 2013). In emphasizing BOEM's commitment to developing offshore wind in the Mid-Atlantic, BOEM director Tommy P. Beaudreau has stated that: "We are moving toward commercial-scale offshore wind energy leasing in the mid-Atlantic and adding the necessary tools to offer those leases. We considered public input and conducted a thorough analysis to ensure future projects are sited in the right places, where the wind energy potential is significant and where environmental effects and conflicts with other uses can be minimized and managed." *See* U.S. Dep't of Interior, *supra* note 7.

[69] Request for Information and Nominations, *supra* note 23.

[70] MINERAL MANAGEMENT SERVICE, U.S. DEP'T OF INTERIOR, ISSUANCE OF LEASES FOR WIND RESOURCE DATA COLLECTION ON THE OUTER CONTINENTAL SHELF OFFSHORE: ENVIRONMENTAL ASSESSMENT (2009), *available at* http://www.boem.gov/uploadedFiles/FinalEA_MMS2009-025_IP_DE_NJ_EA.pdf.

[71] *Renewable Energy Programs Current Projects*, *supra* note 24.

[72] *Id.* With respect to Interim Policy leaseholders in New Jersey and Delaware, BOEM states that it will continue to work with these leaseholders in connection with Smart from the Start Initiative. For the interim leaseholders, BOEM is "committed to facilitating a review that ultimately results in a decision on construction as soon as possible. A full site-specific environmental impact statement would likely be required for each project proposed, but as we have experienced in the onshore solar fast-track effort, these types of reviews do not have to take multiple years to complete. As part of this initiative, the Department will commit to aggressive schedules for those reviews and the required dedication of staff and resources." Smart from the Start FAQs, *supra* note 64, at 6.

[73] 16 U.S.C. § 470(f).

[74] Atlantic OCS Final EA, *supra* note 45, at iii.

[75] *Id.* at xiv. *See also* U.S. Dep't of Interior, *supra* note 7.

The EA also assessed the potential environmental impacts of site assessment activities, including the potential effects from installing and operating meteorological towers and buoys on leases in the area.

Finally, in June 2013, DOI announced that it will be holding its first offshore lease sale at the end of July 2013. The sale will be for two leases in the Rhode Island and Massachusetts WEAs and is open to nine previously approved bidders.[76]

IV. Additional Hurdles

Although DOI has taken steps to streamline the leasing process and BOEM has completed the environmental review for the lease issuance and site-assessment steps, a Mid-Atlantic offshore wind project still faces additional hurdles. In addition to having to find financing and sell the power generated, these projects will be regulated by a myriad of state and federal regulators under a host of additional statutes and regulations. Further, a potential offshore wind project faces the potential for legal challenges, as the Cape Wind project has shown.

A. Financial Issues

First, financing has the potential to be a major issue for any offshore wind project.[77] The Cape Wind project is still trying to gain financing, and its difficulty may be a warning sign to other developers. In March 2013, Cape Wind Associates, LLC announced that it had entered into an agreement with the Bank of Tokyo-Mitsubishi UFJ for a "significant amount" of its debt financing. Barclays, a global financial services company headquartered in Britain, is working with Cape Wind as its financial advisor in efforts to gain the remaining debt and equity financing for the project, which is estimated to cost around $2.5 billion.[78]

As an example of another developer facing financial woes, NRG Energy placed the active development of its offshore wind project on a near-term hold.[79] In explaining its decision, NRG cited the inability to obtain an investment partner, stating that it had approached over two dozen potential investors for the project. While the project is on hold, NRG decided to maintain its development rights and continue to look for partners and investors for the project. However, the developer has cancelled the power purchase agreement it had entered into to sell the energy from the project.

The federal government is taking steps to help finance wind projects off the nation's coasts. The Department of Energy (DOE) is currently working with DOI on advancing offshore wind. DOE's efforts are aimed at reducing the barriers facing offshore wind development, including analyzing renewable

[76] Bureau of Ocean Energy Management, U.S. Dep't of Interior, Atlantic Wind Lease Sale 2 (ATLW2) Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Rhode Island and Massachusetts: Final Sale Notice, 78 Fed. Reg. 33,898 (June 5, 2013).

[77] For more information on the difficulties in financing offshore wind projects, *see* Ed Feo & Josh Ludmir, *Challenges in the Development and Financing of Offshore Wind Energy*, 14 ROGER WILLIAMS U.L. REV. 672 (2009).

[78] Matthew L. Brown, *Cape Wind Signs with Bank of Tokyo-Mitsubishi for Project Financing*, BOSTON BUSINESS J., Mar. 19, 2013, http://www.bizjournals.com/boston/news/2013/03/19/cape-wind-financing.html?s=print.

[79] Press Release, NRG Energy, Inc., NRG to Put Offshore Wind Development on Hold for the Near Term (Dec. 12, 2011), *available at* http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9MTE4MzE5fENoaWxkSUQ9LTF8VHlwZT0z&t=1.

energy markets and funding technology development, research, and demonstration projects. In 2012, DOE announced it had dedicated over $150 million in funding for seven offshore demonstration projects over the next 6 years. This funding is in addition to the $42 million DOE allocated to research and development projects in 2011.[80] DOE also awarded funding to projects in 2011 to help eliminate market barriers that are impeding the development of offshore wind in the U.S.'s coastal waters and in the Great Lakes region.[81]

DOE is also currently considering providing a loan guarantee to Cape Wind that would cover a portion of the project's costs.[82] Politicians in Massachusetts support the loan guarantee, as the state's 11-member congressional delegation sent a letter to the Secretary of Energy in support of the guarantee, citing Cape Wind's potential to bring jobs to the region and establish Massachusetts as a leader in new energy technology.[83] Certain environmental groups, such as the Massachusetts Audubon Society, the Sierra Club, and the National Wildlife Federation, have also urged DOE to approve the guarantee.[84] Other local groups, like the Alliance, are opposed to the loan guarantee, based on their general opposition to the project's potential adverse effects on the area and ability to produce expensive power.[85]

Another financial hurdle for offshore wind projects is the uncertain future existence of tax credits for renewable energy projects. Congress extended the current tax credit for wind projects until the end of 2013, but there is no guarantee that the tax credits will continue after this date. Under the credit, developers are able to choose between a production tax credit in the amount of 2.2 cents per kilowatt-hour or an investment tax credit of 30% of the project's construction costs.[86] The current tax credit differs from prior versions of the credit. Previously, projects had to be finished and providing energy to the grid to qualify for the tax credit, but under the current credit, projects only have to begin construction by the end of 2013. Since it is unknown whether the tax credit will be renewed again, projects like Cape Wind and Fishermen's Energy in New Jersey are anxious to begin construction by the end of 2013. Although it is estimated that a long-term renewal of the tax credit could cost the U.S.

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[80] *Offshore Wind Technology*, U.S. DEPARTMENT OF ENERGY, http://www1.eere.energy.gov/wind/offshore_wind.html (last visited July 19, 2013).

[81] *Id.*

[82] *EIS-0470: U.S. Department of Energy Loan Guarantee for the Cape Wind Energy Project on the Outer Continental Shelf of Massachusetts, Nantucket Sound,* U.S. DEP'T OF ENERGY, http://energy.gov/nepa/eis-0470-us-department-energy-loan-guarantee-cape-wind-energy-project-outer-continental-shelf (last visited July 19, 2013). In its review, DOE has adopted DOI's 2009 Final Cape Wind Energy Project EIS and the May 2010 and April 2011 Cape Wind Environmental Assessments as DOE's Final EIS. DOE has noted that "[t]he adequacy of the Department of the Interior final EIS is the subject of judicial action." *Id.*

[83] AP, *Mass. Lawmakers Back Cape Wind Loan Guarantee Bid*, BOSTON.COM, Apr. 5, 2013, http://www.boston.com/news/local/massachusetts/2013/04/05/mass-lawmakers-back-cape-wind-loan-guarantee-bid/USkxMLSkJ5rWuprRyixXFI/story.html (last visited July 19, 2013).

[84] Phil Taylor, *Cape Wind Project Announces Financial 'Milestone'*, ENVIRONMENT & ENERGY PUBLISHING, LLC, Mar. 19, 2013, *available at* http://www.capewind.org/news1315.htm. Other groups include Greenpeace, the Conservation Law Foundation, and the Natural Resources Defense Council.

[85] AP, *supra* note 83; *see also* http://www.saveoursound.org.

[86] For an in-depth analysis of renewable energy tax credits, *see* Kevin M. Walsh, *Renewable Energy Financial Incentives: Focusing on Federal Tax Credits and the Section 1603 Cash Grant: Barriers to Development*, 36 ENVIRONS ENVTL. L. AND POL'Y J 207 (2013).

Treasury around $12 billion over a ten-year time period, industry advocates argue that the projects will generate enough taxable activity to cover these costs.[87]

A final financial hurdle for an offshore wind project may be its ability to sell the electricity produced by the project. Compared to fossil fuels, wind energy has a relatively high cost, which results in higher electricity rates.[88] Cape Wind has currently secured power purchase agreements (PPAs) for 77.5% of the power that will be generated from the project.[89] Once a developer enters into a PPA, the agreement will have to be reviewed and approved by a state utility entity. In addition, citizens may challenge the utility board's approval of the PPA, as the Cape Wind project has shown.

B. Additional Regulation

Despite DOI's attempts to streamline the leasing process, offshore wind projects still face a plethora of state and federal regulators. On the federal level, besides DOI's authority under OCSLA and EPAct to lease the OCS for renewable energy projects, many other statutes and regulations are involved in the federal process. When EPAct gave jurisdiction to DOI for leasing, it also specified that federal agencies that had authorities under separate federal laws would retain their jurisdiction.

Several major federal environmental statutes will play a role in the federal regulatory process. For instance, NEPA applies to major federal actions and requires federal agencies to consider the environmental impacts of these actions.[90] When reviewing the action, the federal agency is supposed to consider the action's environmental impacts along with other factors and goals, including the social and economic responsibilities for future generations.[91] NEPA does not mandate that environmental goals have priority over other goals, and gives the federal government discretion in weighing these factors. NEPA is only procedural; it imposes no substantive mandates on federal agencies, but it does compel these agencies to consider the environmental effects of their actions.

In addition, the Coastal Zone Management Act (CZMA) allows states to be involved in the review of an offshore wind project. The CZMA is an example of cooperative federalism, as it is a state-federal partnership to manage coastal resources whose federal use may affect the state. State participation in the CZMA program is voluntary, but states are encouraged by federal grant money to develop coastal management programs. Under the CZMA, participating states develop a coastal management plan (CMP) and designate a coastal zone for the state. Once a state adopts a CMP, certain federal actions and activities must then be consistent with these plans. The activities and actions include:

- Federal Agency Activities;
- Federal Development Projects;
- Applications for Federal License or Permits;
- OCS Plans; and

[87] Matthew L. Wald, *The Wind Industry Gets to Draw Another Breath*, THE NEW YORK TIMES, GREEN BLOG, Jan. 3, 2013, http://green.blogs.nytimes.com/2013/01/03/the-wind-industry-gets-to-draw-another-breath/.
[88] *Offshore Wind Technology*, supra note 80.
[89] Taylor, *supra* note 84.
[90] National Environmental Policy Act, 42 U.S.C. §§ 4321-4370(h).
[91] 42 U.S.C. § 4332.

- Applications of local government for Federal assistance.[92]

The CZMA requires a consistency review for any of the above activities that will affect state coastal waters.[93] Federal agency activities and federal development projects must be consistent to the maximum extent practicable with the CMP's enforceable policies.[94] The federal agency must provide to the state agency a consistency determination for these actions.[95] Applicants for federal licenses and permits for activities that will affect the coastal zone must provide a certification that the proposed activity complies with and will be conducted in a manner that is consistent with the state's CMP. The federal agency cannot issue the license or permit until the state concurs or presumptively concurs with the certification, though there are procedures for the Secretary of Commerce to intervene.[96]

For applicants with OCS Plans, the applicant needs to attach to its application a consistency certification, and like federal licenses and permits, the Secretary can intervene if the state does not concur with the certification.[97] Finally, state and local governments submitting applications for federal assistance that will affect the coastal zone must indicate the views of the appropriate state or local agency concerning the relationship of the activities to the state's CMP. A federal agency cannot approve a project that is inconsistent with the CMP's policies, but the Secretary of Commerce can allow a project to go forward if it is in the interest of national security.[98]

For competitive leases under DOI regulations, BOEM will complete its NEPA review for the lease issuance and site assessment steps at the same time.[99] Similarly, BOEM will also complete the CZMA consistency reviews for the lease issuance and site assessment steps simultaneously for competitive leases.[100] However, if the SAP contains different impacts than those consider in the NEPA and CZMA reviews when the lease was issued, BOEM may decide that another NEPA and CZMA review needs to

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[92] 16 U.S.C. § 1456(c).

[93] *Id.* § 1452. Congress enacted the CZMA in 1972 "to preserve, protect, develop, and where possible, to restore or enhance, the resources of the Nation's coastal zone for this and succeeding generations." The CZMA was a response to the 1969 Santa Barbara blowout, to lure states into accepting OCS leases which were consistent with state plans for their own coastal zones.

[94] *Id.* §§ 1456(c)(1)(A) and 1456(c)(2).

[95] *Id.* § 1456(c)(1)(C). The federal agency must provide this certification at the "earliest practicable time" but no later than 90 days before final approval of the federal activity, unless the federal and state agencies agree to a different schedule. The CZMA does provide the President with the ability to exempt certain activities from this requirement if the activity is in the paramount interest of the U.S. *Id.* § 1456(c)(1)(B).

[96] *Id.* § 1456(c)(3)(A). This certification must be part of the application to the licensing or permitting agency, and the applicant needs to send a copy to the state or designated state agency. The state then has six months to review the certification and tell the federal agency whether the state concurs or objects to the applicant's certification. If the state does not act within six months, the state is presumed to have concurred with the certification.

[97] *Id.* § 1456(c)(3)(B). A copy of this certification must also go to the state. The state then has three months to concur or object to the certification. If the state does not act, its concurrence is presumed after three months. The state also has the ability to explain to the Secretary, the federal agency, and the applicant why its review is delayed.

[98] *Id.* § 1456(d).

[99] 30 C.F.R. § 585.611.

[100] *Id.* § 585.612. For non-competitive leases, the lessee needs to submit its CZMA consistency certification with its SAP and send a copy to the state agency that handles CZMA reviews. *Id.*

be completed.[101] In that case, the state would have another consistency review opportunity. Further, BOEM will perform a site-specific environmental review when the lessee submits its COP.[102]

The Endangered Species Act (ESA) will also likely play a role in the development of a Mid-Atlantic offshore wind farm. The purpose of the ESA is to protect and recover imperiled species and the ecosystems upon which they depend. One way the ESA protects endangered and threatened species and their habitats is by prohibiting the "take" of listed animals. The ESA defines "take" broadly and includes actions that "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or an attempt to engage in any such conduct."[103] However, the ESA contains a procedure for a person or entity to obtain a permit, known as an Incidental Take Permit, which allows the actor to lawfully take an endangered species if the main purpose of the activity is not to take the species.[104] The ESA also requires federal agencies to use their legal authorities to promote the conservation purposes of the ESA and to consult with the U.S. Fish & Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS), as appropriate, to ensure that the effects of any action the agency authorizes, funds, or carries out is not likely to jeopardize the continued existence of a listed species.[105]

The above statutes are only some examples of federal laws that could govern an offshore wind project. In addition, some other federal statutes that may come into play are the Magnunson-Stevens Fishery Conservation & Management Act; Migratory Bird Treaty Act; National Marine Sanctuary Act; Marine Mammal Protection Act; National Historic Preservation Act; Marine Protection, Research, and Sanctuaries Act; Clean Water Act; Clean Air Act; Federal Aviation Act; Federal Power Act; Ports and Waterways Safety Act; and the Rivers and Harbors Act. Some other agencies that may be involved include the U.S. Environmental Protection Agency, the Coast Guard, the National Oceanic and Atmospheric Administration and its sub-agencies like the Office of Ocean and Coastal Resource Management, the Federal Aviation Administration, and additional agencies in the Department of the Interior.[106]

On the state level, a project also has to go through additional hurdles. A project in federal waters will have to gain the appropriate state approvals for the portions of the project in state waters, such as transmission cables, or for any structures on land. Projects will also have to comply with other relevant state laws, such as environmental and land use laws. For example, the Fishermen's Energy Atlantic City Windfarm that will be located in state waters off the coast of New Jersey had to obtain a permit from the New Jersey Department of Environmental Protection, a New Jersey Green Acres Approval, a New Jersey Tidelands License, and an easement from Atlantic City. In addition, because a project completely in state waters may still have to obtain some federal permits, the Fishermen's Energy project had to obtain a Clean Water Act § 404 Permit from the U.S. Army Corps of Engineers for its dredge and fill

[101] *Id.*
[102] *Id.* § 585.627.
[103] 16 U.S.C. § 1532(19).
[104] *Id.* § 1539. An Incidental Take Permit gives the permit holder immunity from civil and criminal penalties under the ESA. Applications for a permit must include a Habitat Conservation Plan, which is meant to minimize or mitigate the proposed activity's harmful effects on the endangered species.
[105] *Id.* § 1536(a)(2).
[106] U.S. DEPT. OF ENERGY, A NATIONAL OFFSHORE WIND STRATEGY: CREATING AN OFFSHORE WIND ENERGY INDUSTRY IN THE UNITED STATES 11-12 (2011), *available at* https://www1.eere.energy.gov/wind/pdfs/national_offshore_wind_strategy.pdf.

activities.[107] Finally, states need to approve the project's utility-related approvals, like energy siting decisions and power purchase agreements. Although the Fishermen's Energy project has received all its permits, the project is still awaiting approval from the New Jersey Board of Public Utilities and the Division of Rate Counsel.[108]

C. Legal Challenges

With Cape Wind, the developers and government agencies have faced a litany of legal challenges by those who are concerned with the project's impact. For the most part, Cape Wind and the government have prevailed in these suits, but these legal challenges have slowed the progress of the project. Although Cape Wind was the first proposed offshore wind project, it seems reasonable to think the amount of litigation surrounding the project is extraordinary. However, Cape Wind has demonstrated the types of suits that could be brought against an offshore wind project. These claims can be broken into three broad categories: regulatory, environmental, and utility-related challenges.

1. Regulatory Challenges

Since offshore wind projects have to fulfill many statutory and regulatory requirements, a project can be challenged if it does not meet these requirements. Regulatory claims involve challenges questioning an agency's authority or whether the agency's action has followed the proper procedures (specific challenges under environmental statutes will be discussed below). With Cape Wind, the project's opponents have challenged the actions of regulators in issuing permits and approvals for the project, including challenges to the Corps' issuance of a permit under the Rivers and Harbors Act, Native American tribes' challenges under the National Historic Preservation Act, and challenges to the Federal Aviation Administration's No-Hazard Finding.

For example, the Wampanoag Tribe of Gay Head (Aquinnah) filed a lawsuit, claiming that BOEM had not followed the proper procedures set forth in Section 106 of the National Historic Preservation Act.[109] In its case, the tribe claimed that BOEM inadequately considered Cape Wind's potential impact on subsistence fishing and should have done a supplemental environmental review to look at the project's potential effects on cultural and historic resources.

The opponents to Cape Wind have also brought multiple cases against the Corps while it had initial jurisdiction over the project. For instance, the Alliance challenged the Corps' authority to issue a permit to build a structure to collect scientific data on the OCS, claiming that the OCSLA only provides the Corps with the authority to issue permits for structures that are related to mineral extraction.[110] The First Circuit rejected this claim, even though the court found that the OCSLA's language was not clear on the issue. In making this finding, the court relied on the act's legislative history, which revealed

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[107] *See Fishermen's Energy Atlantic City Windfarm, supra* note 27.
[108] *See* Johnson, *supra* note 28.
[109] Memorandum of Amici Curiae at 25, The Wampanoag Tribe of Gay Head (Aquinnah) v. Beaudreau, Civil No. 10-cv-01067-RBW-DAR (consolidated) (D. D.C. Dec. 14, 2012).
[110] Alliance to Protect Nantucket Sound, Inc. v. U.S. Dept. of the Army, 393 F.3d 105 (1st Cir. 2005).

Congress did not intend to limit the Corps' Section 10 authority to structures for mineral extraction.[111] Based on this, the court ruled that Section 10 applies to all artificial islands and fixed structures on the OCS.[112]

In another challenge to the Corps' authority, a group claimed that Cape Wind needed to consult with the state of Massachusetts on fishery issues and comply with other Massachusetts laws before construction on a scientific data tower could begin.[113] The plaintiffs argued that Massachusetts had authority over fishery issues under the Magnunson-Stevens Fishery Conservation and Management Act (MSA) even if the tower would be in federal waters, due to the tower's effect on the state's fishery. The First Circuit rejected the plaintiff's claims and reaffirmed the jurisdiction of the federal government on the OCS.[114] Under the MSA, the court reasoned, a state may have the authority to regulate fishing in federal waters, but activities on the seabed are the exclusive jurisdiction of the federal government under the OCSLA. Otherwise, states would have a veto power over projects on the OCS.

In the only successful legal challenge of the Cape Wind project to date, the town of Barnstable and the Alliance challenged the Federal Aviation Administration's (FAA) no-hazard determination, claiming the agency did not properly consider the project's danger to local aviation, violated its governing statute, and misread its regulations.[115] The FAA had based its finding on a provision in its handbook that stated a project would adversely affect navigation if the structure was taller than 500 feet. Since the

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[111] *Id.* at 109.

[112] The claim revolved around a provision of the OCLSA that extended the Corps' RHA jurisdiction "to prevent obstruction to navigation in the navigable waters of the United States … to artificial islands and fixed structures on the [OCS]." *Id.* With the 1978 amendments to the OCSLA, Congress changed the reference to artificial islands, so that federal jurisdiction would apply to "all artificial islands, and all installations and other devices permanently or temporarily attached to the seabed, which may be erected thereon for the purpose of exploring for, developing, or producing resources therefrom, or any such installation or other device (other than a ship or vessel) for the purpose of transporting such resources."

[113] Ten Taxpayer Citizen Group v. Cape Wind Associates, LLC, 373 F.3d 183 (1st Cir. 2004).

[114] The court ruled that the regulation of the seabed and attached structures is the exclusive jurisdiction of the federal government for projects in federal waters. Further, the court stated that OCSLA left no room for states to also require permits or licenses for structures on the OCS. Finally, the court ruled that the MSA did not amend or repeal any provisions of OCSLA.

[115] Town of Barnstable, Massachusetts v. Federal Aviation Administration, 659 F.3d 28, 31 (D.C. Cir. 2011). In the case, the FAA claimed that the plaintiffs lacked standing and that the claims on the merits were flawed. The U.S. District Court for the D.C. Circuit found that the plaintiffs did have standing. To have Article III standing, a plaintiff must show three things: injury, causation and redressability. All the parties here agreed that the plaintiffs were able to show injury, based on the risk of collisions and the inconvenience to pilots and other members of the Alliance and for the town who operated a municipal airport. However, the FAA argued that the plaintiffs lacked causation and redressability since the FAA's no-hazard determination was not binding on the Department of Interior's decision on whether the project could ultimately go forward. To show causation and redressability, plaintiffs have the burden of showing "that their injuries are fairly traceable to the challenged conduct and that any ultimate success on the merits would yield a 'significant increase in the likelihood that [they] would obtain relief that directly redress the inju[ries] suffered.'" *Id.* at 31 (*quoting* Utah v. Evans, 536 U.S. 452, 464 (2002)). However, the D.C. Circuit found that the plaintiffs had made the requisite showing for standing, despite the fact that the FAA's finding was not binding on DOI. This was based on the fact that DOI conditioned Cape Wind's lease on Cape Wind receiving the FAA's final determination and complying with any mitigation measures, as well as DOI's focus on safety measures. *Id.* at 34. For a more in-depth analysis of this case, see Michael DeLoreto, *Judicial Review of the Aviation Hazard Determination for Cape Wind: Why the FAA Got it Wrong*, 6 SEA GRANT L. & POL'Y J. 187 (2013).

Cape Wind project would only be 440 feet in the air, the FAA found that the project would not have an adverse effect.[116] However, the U.S. District Court for the D.C. Circuit stated that other parts of the FAA handbook listed additional ways that a project could have an adverse effect, such as if the project would change a regular flight altitude or course. By relying on only one of these provisions, the court found that the FAA did not weigh the other factors in the handbook. Thus, the court found that the agency's review of the Cape Wind project was flawed since the agency had not adequately addressed all of the project's issues or explained the agency's finding.[117]

2. Environmental Challenges

The second category of litigation that the Cape Wind project has faced includes claims brought under environmental statutes like NEPA or the ESA, as well as under similar state statutes. These challenges often involve claims based on the project's potential effect on wildlife or the natural environment. The claims have also been based on alleged deficiencies in an agency's environmental review.

With its passage of the federal environmental statutes, Congress aimed to provide broad protection for our nation's resources. Many of these statutes provide mechanisms for private citizens to challenge an agency's actions under the statute to ensure that the agency has complied with the act's provisions. For example, parties can challenge an agency's actions under NEPA by claiming that the actions were arbitrary and capricious under the Administrative Procedure Act (APA), and parties have taken advantage of this ability to challenge an agency's NEPA review. For instance, it has been estimated that between 2001 and 2009 there was an annual average of 126 NEPA challenges filed, along with an average of 24 temporary restraining orders and preliminary and permanent injunctions to halt projects based on deficient NEPA reviews.[118]

Consistent with this, the Cape Wind project has faced multiple NEPA challenges. For example, the Alliance, the Public Employees for Environmental Responsibility (PEER), and other parties filed a suit against MMS (before it was reorganized into BOEM).[119] The parties claimed MMS violated NEPA and the APA by not adequately considering the project's possible alternatives, as well as its effect on wildlife, including right whales and migratory birds.

The Alliance also brought a NEPA claim that challenged the Corps' NEPA review, claiming that the Corps was required to circulate for public comment a draft finding of no significant impact (FONSI) or

[116] *Id.* at 35. The provision in the handbook stated: "[a] structure would have an adverse [aeronautical] effect upon VFR air navigation if its height is greater than 500 feet above the surface at its site, and within 2 statute miles of any regularly used VFR route."
[117] *Id.* at 36.
[118] Jim Vines, Stephanie Salek & Kelsey Desloover, *Reforming NEPA Review of Energy Projects*, KING AND SPALDING ENERGY NEWSLETTER (2012), *available at* www.kslaw.com/library/newsletter/EnergyNewsletter/2012/December/article.html.
[119] Public Employees for Environmental Responsibility v. Bromwich, Civil No. 1:10-cv-01067-RBW-DAR (D.C. Dist. June 25, 2010), *see also* Press Release, Public Employees for Environmental Responsibility, Heavy Toll on Wildlife Prompts Lawsuit Against Cape Wind, June 25, 2010, http://www.peer.org/news/news-releases/2010/06/25/heavy-toll-on-wildlife-prompts-lawsuit-against-cape-wind-/.

environmental assessment (EA) in its review of a Section 10 permit application.[120] Under NEPA, an agency is only required to circulate draft EAs in limited circumstances, including when a project is without precedent. The plaintiffs argued this was one of those situations because Cape Wind was the first offshore wind project on the OCS.[121] The Corps had decided it was not required to circulate the draft documents since there were already similar structures in the area, such as a data tower in the waters near Martha's Vineyard. The First Circuit deferred to this reasoning, holding that the Corps had adequately provided for public notice and comment and complied with NEPA.

Some of these environmental statutes also provide for citizen suits, giving the public the opportunity to serve as private attorney generals to help often over-burdened agencies enforce the statute's requirements. For instance, the ESA has a strong citizen suit provision that allows any person to bring a suit in federal court to enjoin anyone who is allegedly violating the ESA or its implementing regulations. By including this provision, Congress wanted to encourage private citizens to bring suits that will benefit the public interest. With Cape Wind, the Alliance, PEER, and other parties used this provision to file a suit against MMS, alleging that the agency had violated the ESA with a flawed biological opinion.[122] In their complaint for declaratory and injunctive relief, the parties claimed that the biological opinion would allow roseate turns and piping plovers to be killed without adequate safeguards and other measures that would minimize the take of the species. The case is still on-going, with summary judgment motions scheduled to be filed this summer.

Finally, suits could be brought under additional environmental statutes. For instance, the Alliance has claimed that the project poses a risk to migratory birds listed under the Migratory Bird Treaty Act (MBTA) since the project lies in one of the world's largest routes for migratory birds, the Atlantic Flyway.[123] The Alliance has also made public statements that the project could violate the Marine Mammal Protection Act (MMPA) if the project kills, harms or harasses marine mammals like dolphins and whales.[124]

3. Utility-Related Challenges

The third category of claims involves utility-related challenges. These are usually challenges to state agency decisions regarding the approval of the utility aspects of the project, such as siting decisions or power purchase agreements. In the Cape Wind cases, the Massachusetts courts have deferred to the state agency decisions.

For instance, the Alliance, along with the town of Barnstable and other parties, challenged the Massachusetts Energy Facilities Siting Board's decision to grant a certificate to Cape Wind to construct underground electric transmission lines for the project.[125] Among other issues, the parties challenged the board's decision that it only had jurisdiction to consider the impacts of the transmission lines and

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[120] Alliance to Protect Nantucket Sound, Inc. v. U.S. Dept. of the Army, 393 F.3d 105 (1st Cir. 2005).
[121] *Id.* at 115.
[122] Public Employees for Environmental Responsibility, *supra* note 119.
[123] *Id.*
[124] *Cape Wind Threats: The Environment*, SAVE OUR SOUND, http://www.saveoursound.org/cape_wind_threats/environment/ (last visited July 19, 2013).
[125] Alliance to Protect Nantucket Sound, Inc. v. Energy Facilities Siting Board, 932 N.E.2d 787 (Mass. 2010).

not the effects of the rest of the wind farm that were not connected to the transmission project. The court rejected the Alliance's claims and upheld the board's decision to issue the certificate.[126]

In addition, several cases have been brought against the Massachusetts Department of Public Utilities regarding its review and approval of power purchase agreements (PPAs) for the Cape Wind project. Pursuant to Section 83 of the Massachusetts Green Community Act, when reviewing a PPA for a renewable energy source, the department is directed to determine whether the project will: (1) enhance the state's electricity reliability; (2) help moderate "system peak load requirements"; (3) be a cost-effective contract for the state's ratepayers; and (4) create jobs for the state, if feasible. The department must also consider the contract's costs and benefits, and the statute directs the department to only approve contracts that are cost-effective, long-term means for procuring renewable energy.

Several different parties filed separate claims against the department regarding its decisions under Section 83. In one case, the plaintiff Melone wanted to intervene in the department's Section 83 review of the PPA, claiming that the Cape Wind project would adversely effect him as a beachfront property owner on Martha's Vineyard by altering his view, diminishing his property value, and causing contaminants to wash up on his property.[127] The department denied Melone's request to intervene, reasoning that his claims went beyond the considerations of a Section 83 proceeding.[128] The court upheld the department's decision and ruled that the department acted within its discretion to decide whether to let a party intervene. The court reasoned that since the Section 83 proceeding was to determine the PPA's cost-effectiveness, Melone's environmental and other concerns went beyond the scope of the department's review.[129]

The Alliance also brought a case regarding a Cape Wind PPA. The Alliance has motioned to reopen the record in the department's Section 83 review, and the department had denied this motion.[130] The Alliance was seeking to have the department review PPAs from other New England wind projects, which the Alliance claimed were highly relevant to the department's cost-effectiveness review under Section 83.[131] The court upheld the department's ruling, as well as the department's requirement that the motioning party provide a compelling reason for reopening a hearing once the agency had issued its final decision in the matter.[132] In addition, the court upheld the department's reasoning that the PPAs

[126] *Id.* at 805-06.

[127] Melone v. Department of Public Utilities, 967 N.E.2d 596 (Mass. 2012).

[128] *Id.* Melone claimed he had standing because he was an abutter of the project and a ratepayer. The department determined that his abutter status was irrelevant, the Attorney General had intervened to represent the ratepayers, and Melone was not even a National Grid ratepayer since the company did not serve Martha's Vineyard. The court ruled that even if Melone was a ratepayer, he did not have a particularized interest in the proceeding and the Attorney General had already intervened.

[129] *Id.* at 1009. Melone also sought judicial review of the department's approval of one of the PPA's, which was denied. The court also upheld this denial, applying the same reasoning as its decision to uphold the department's decision to deny Melone's motion to intervene since he was not an aggrieved party.

[130] Alliance to Protect Nantucket Sound, Inc. v. Department of Public Utilities, 959 N.E.2d 408 (Mass. 2012). The department had denied Alliance's first two motions, but the Alliance did not appeal these denials.

[131] *Id.*

[132] *Id.* at 412. In reviewing the department's denial, the court gave the department a deferential standard of review, rejecting the Alliance's claim that the denial implicated the Commerce Clause of the U.S. Constitution, which would require the court to independently review the department's decision.

from other wind projects were cumulative of evidence already in the record and did not show previously undisclosed or unknown information.

In an additional PPA case, the Alliance and other parties filed suit to have the department's approval of the PPA reversed and remanded.[133] The parties claimed that the department improperly found the PPA to be cost effective.[134] Again, the court deferred to the department and remanded the case to the county court, directing the single justice to affirm the department's decision.

V. Lessons from Cape Wind

More than a decade after the Cape Wind process started, there are some glimmers of hope for a developer hoping to get a wind farm project underway in the Mid-Atlantic region, as there is a support for offshore wind projects on both the federal and state levels. On the federal level, both DOI and the Obama administration have voiced support for developing wind energy off the nation's coasts. Due to Cape Wind's decade long journey to obtain an OCS lease, Congress and DOI have taken steps to better define the leasing process, and under this new process, BOEM has already issued another commercial lease to a project off the coast of Delaware and will hold its first lease sale in the summer of 2013.

Further, BOEM's regional approach to planning, identifying WEAs, and performing environmental reviews should also help speed up the development process. With the issuance of its regional EA in 2012, BOEM has already finished its environmental review for the lease sale and site assessment steps of the leasing process for the WEAs in New Jersey, Delaware, Maryland, and Virginia. For future leases in these WEAs, the project-specific environmental review will most likely occur when the developer submits a COP for a particular project.[135]

On the state level, the Mid-Atlantic states have each taken steps to bring the industry to their respective states, such as by passing laws to encourage the industry's development. For example, in 2010, New Jersey passed the Offshore Wind Development Act to encourage the development of wind energy off the state's coast, with the aim that the industry would grow the state's economy and create jobs.[136] The law includes an offshore wind renewable energy certificate program "for businesses that construct manufacturing, assemblage and water access facilities to support the development of qualified offshore wind projects."[137]

Likewise, in announcing the Maryland Offshore Wind Energy Act of 2013, the Governor's office discussed how bringing the industry to the state would be beneficial to Maryland. The office discussed benefits like job creation, reduction in public health costs, and price stability for Maryland ratepayers. Further, the Maryland Department of Business & Economic Development projects that offshore wind

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[133] Alliance to Protect Nantucket Sound, Inc. v. Department of Public Utilities, 959 N.E.2d 413 (Mass. 2012).
[134] *Id.*
[135] As stated earlier, BOEM could do another review if it believes a developer's Site Assessment Plan merits a new review.
[136] Offshore Wind Economic Development Act, N.J. Senate Bill 2036 (2010). *See* Marshall B. McLean, *Offshore Wind: Will New Jersey Take the Opportunity to Lead?*, CLIMATE LAWYERS BLOG, Feb. 7, 2013 http://www.climatelawyers.com/post/2013/02/07/Offshore-Wind-Blog.aspx.
[137] Press Release, State of New Jersey, Governor Christie Signs Offshore Wind Economic Development Act to Spur Economic Growth, Encourage Energy as Industry (Aug. 19, 2010), *available at* http://www.state.nj.us/governor/news/news/552010/approved/20100819a.html.

will have almost a $1.3 billion economic impact on the state over five years and state tax revenues of $5.6 million.[138]

Currently, the Mid-Atlantic states appear to be working together on a regional approach for developing offshore wind. In June 2009, the Governors of New York, New Jersey, Delaware, Maryland, and Virginia formed the Mid-Atlantic Regional Council on the Ocean (MARCO) to create a regional, collaborative group to maintain and improve the region's ocean and coastal resources.[139] A part of the effort is to ensure that the Mid-Atlantic's ocean resources continue contributing to the region's economic health. The agreement identified priorities for the group, including establishing a regional approach for the sustainable development of offshore renewable energy.[140] However, multiple states in the region are attempting to become the state with the first offshore wind project, recognizing the economic and intangible benefits that an initial project can have for a state. In this race to be first, it will be interesting to see if regional cooperation breaks down and if any potential jurisdictional challenges develop between the states.

For a potential Mid-Atlantic offshore wind project, there are still a lot of regulatory hurdles for a project to get through, and the timetable for these approvals is unknown. For instance, although the Fishermen's Energy Atlantic City Windfarm is fully permitted, the project is in limbo while it awaits the approval of the New Jersey Board of Public Utilities and the Division of Rate Counsel. Because of this regulatory limbo, some have advocated further streamlining the permitting process.[141]

In addition, there are other aspects of a project that should be considered. By looking at Cape Wind, one can see that these projects might face difficulties in financing the projects, as well as the potential for litigation. Policy-makers might also have to engage in the difficult analysis of weighing the environmental costs and benefits of a project and should be aware of the potential effects of streamlining the regulatory process.

A. Financial Issues

As the Cape Wind and NRG project in Delaware have shown, offshore wind still faces a huge obstacle in securing financing. The good news is that the federal government has shown some willingness to help with these financial issues. DOE has dedicated funding to demonstration renewable energy projects and research, as well as to projects that will consider how to eliminate the market barriers for offshore wind. However, Cape Wind is still waiting to hear whether DOE will grant a loan guarantee to the project, which is another example of the regulatory limbo encountered by offshore wind developers.

Further, while developers and investors are encouraged by the extension of the federal tax credit

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[138] *Offshore Wind for Maryland*, OFFICE OF GOVERNOR, http://www.governor.maryland.gov/wind.asp (last visited July 19, 2013).

[139] Mid-Atlantic Governors' Agreement on Ocean Conservation (2009), *available at* http://www.midatlanticocean.org/agreement.pdf.

[140] Recently, MARCO worked with the Environmental Law Institute in developing a guide for offshore wind. ENVIRONMENTAL LAW INSTITUTE, A GUIDE TO STATE MANAGEMENT OF OFFSHORE WIND ENERGY IN THE MID-ATLANTIC REGION (2013), *available at* http://www.midatlanticocean.org/owe_April2013.pdf.

[141] *See* Jeffrey Thaler, *Fiddling as the World Floods and Burns: How Climate Change Urgently Requires a Paradigm Shift in the Permitting of Renewable Energy Projects*, 42 ENVTL. L. 1101 (2012).

for renewable energy projects, the tax credit has only been extended through the end of 2013 and its future availability is uncertain. To be eligible for the credit, a project will need to begin construction by the end of the year. Since it is unknown whether the tax credit will be renewed again, projects like Cape Wind and Fishermen's Energy in New Jersey are anxious to begin construction by the end of the year.[142] However, even if a project begins construction, it will still need to meet additional eligibility requirements in order to receive the credit.

If a project is able to become eligible for this tax credit, the developers will have to choose either a production tax credit (PTC) or investment tax credit (ITC) by determining which credit it thinks would be more beneficial for the project.[143] The PTC is a credit of 2.2 cents per kilowatt-hour of electricity that the project produces in its first ten years. This credit is tied to the amount of electricity generated by the project, and therefore, its amount is uncertain. The ITC, on the other hand, is a one-time credit for 30% of the project's costs during the year the project begins commercial operations, so the developer will know the amount of the ITC when deciding what credit to take.

B. Potential for Litigation

A Mid-Atlantic wind farm would face the same litigation risks as Cape Wind with similar regulatory, environmental, and utility-related claims. Private citizens will be able to use the mechanisms in the major environmental statutes to ensure that a project will not have adverse impacts, meets the statutory and regulatory requirements, and has not overlooked potential negative consequences of the project in a race to development. For example, the Alliance's challenge of the FAA's no-hazard determination helped make sure that Cape Wind would comply with the agency's regulations and not impede aviation in the area. However, although projects need to comply with these regulations and statutes, there is the potential for parties to use these tools as way to frustrate the development of a project, as many believe the Alliance has done.

Like Horseshoe Shoals, the Mid-Atlantic has other uses that might pose problems for proposed projects, is home to protected species, and is in the Atlantic Flyway. It is also likely that a Mid-Atlantic wind farm would face some NIMBY opposition, as the Mid-Atlantic has its own cluster of wealthy property owners who have fought to preserve their views in the past. For instance, property owners in New Jersey have filed a condemnation suit against their town, claiming that sand dunes built by the town have damaged their view and taken their property. The property owners have continued this suit even after the dune, which protected their property from Hurricane Sandy, has been mostly destroyed

[142] For more information on the implications of the tax credit for the Cape Wind project, see Patrick Cassidy, *Wind Tax Credits Survive*, CAPE COD TIMES, Jan. 3, 2013, http://www.capecodonline.com/apps/pbcs.dll/article?AID=/20130103/NEWS/301030341.

[143] For an in-depth analysis of renewable energy tax credits, see Walsh, *supra* note 86.

by the storm.[144] Of course, one way to avoid this opposition is to site a project out of sight from the beach, but the further offshore a project is, the more complicated construction becomes.

The Alliance has provided opponents of future wind projects with a successful game plan for stalling and frustrating a project. Another developer may have abandoned a project that faced such consistent opposition, and the opposition mounted against Cape Wind may make some developers wary of entering into the offshore wind market. Further, consistent opposition may make investors reluctant to finance a project. On the other hand, the Alliance tactics are unique in comparison to other environmental interest groups and residents near a potential Mid-Atlantic wind farm may not be willing or able to form such a coordinated, well-funded group as the Alliance.

Further, parties looking to file a legal challenge to a project will have to establish standing. For example, in his challenge to the Section 83 review of a Cape Wind PPA, a property owner claimed he had standing to challenge the review because he was an abutter of the project and a ratepayer. The state department charged with reviewing his challenge determined that his abutter status was irrelevant, that the Attorney General had already intervened to represent the ratepayers, and that he was not even a National Grid ratepayer since the company did not serve Martha's Vineyard. The Massachusetts Supreme Court agreed, ruling that even if the property owner was a ratepayer, he did not have a particularized interest in the proceeding and, furthermore, the Attorney General had already intervened to protect the ratepayers' interests.[145] As this holding is only controlling in Massachusetts, and Mid-Atlantic state courts may be faced with different standing claims associated with challenges to proposed wind farms, Mid-Atlantic wind farm developers would be wise to engage other ocean users and interest groups during the early stages of a project to hear and address concerns.[146]

Cape Wind has demonstrated that these projects can generate a large amount of public interest. For instance, the Corps's initial NEPA review received approximately 5,000 public comments. However, the streamlining and regionalizing of the federal environmental review process following Cape Wind, may result in interested parties in the Mid-Atlantic being unaware of the initial environmental review and the opportunity to provide comments. Although the public will have an opportunity to provide comments when a developer submits a COP for a particular project, those interested in the process may feel as though the lease issuance and site assessment review occurred without their input. For many, this may result in the feeling that the development process has begun without them and that their feelings or concerns have not been heard.

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[144] In determining the amount of just compensation for Harvey Cedar's partial taking of an easement to build a dune on the Karans' property, the trial court ruled that the jury could not consider the dune's storm-protection benefits since storm protection is a general, and not a special, benefit. As a result, the jury awarded the Karans $375,000 in just compensation based on the dune's adverse effect on the Karans' view, and the appellate court approved this amount. Harvey Cedars v. Karan, 40 A.3d 75 (N.J. Super. Ct. App. Div. 2012). However, the Supreme Court of New Jersey recently reversed and remanded this decision, holding that just compensation should be calculated using the property's fair market value immediately before and after the partial taking and that all non-speculative and reasonably calculable benefits should be included in the calculation, regardless of whether the benefit is general or special. Harvey Cedars v. Karan, 2013 WL 3368225, at *18-19 (N.J. July 8, 2013).

[145] Melone v. Department of Public Utilities, 967 N.E.2d 596 (Mass. 2012).

[146] For a further analysis on this point, *see* David Frulla, George M. Hagerman, Jr. & Michele Hallowell, *Found in the Wind: The Value of Early Consultation and Collaboration with Other Ocean Users for Successful Offshore Wind Development*, 17 ROGER WILLIAMS U. L. REV. 307 (2012).

As a result, the potential may exist that decreased public participation during the early stages of a project might negatively affect public support for a project. One of the best ways that a potential offshore wind farm may avoid strong opposition is to gain public buy-in for the project. With a streamlined environmental review, there is some risk that the public and opponents will feel like they have not been given a meaningful voice in the process, which may give rise to stronger opposition to the project. This opposition may actually slow down development, which is the precise situation that streamlining seeks to prevent. With this potential cause of opposition, it is again important for the developers and relevant government agencies to engage and work with the other interested parties and ocean users at the earliest stages of a project as possible.

C. Dueling Environmentalists and Weighing Environmental Costs and Benefits

Renewable energy projects have faced an interesting dynamic, with many of these projects seeing environmentalists both fighting for and against a project. These "dueling environmentalists" often focus on an environmental aspect or effect of a project, while questioning the other side's position and commitment to the environment. With this dynamic, those opposing the projects are using the toolkit provided for citizen participation under the major environmental statutes and regulations to file legal challenges against the projects.

Cape Wind, like other renewable energy projects, has faced dueling environmentalists. There are multiple parties who are challenging the project based on the alleged environmental costs of the project, including Robert F. Kennedy, Jr., a prominent environmentalist who has been a notable and visible opponent of the project. Kennedy has been outspoken in voicing his concern with the project's potential effect on the region's fishermen.[147] The Alliance has also been outspoken on the environmental effects of Cape Wind, and like Kennedy, is concerned with the impacts to local fishermen and avian species.[148] The Alliance also opines that Cape Wind will not help reduce greenhouse gas emissions, combat global warming, or improve air quality in the area, as the project will

[147] *See* Robert F. Kennedy, Jr., *supra* note 13.

[148] *Cape Wind and the Environment,* SAVE OUR SOUND, http://www.saveoursound.org/myths_vs_facts/environment/ (last visited July 19, 2013). On its website, the Alliance states:

> Cape Wind threatens the marine environment and would harm the productive, traditional fisheries of Nantucket Sound. From the bottom up, the construction and operation of Cape Wind's 25 square mile industrial plant threatens benthic, marine, and avian species. In addition to the lengthy and destructive construction process that would include dredging, jet plowing, and pile driving, the plant's 10 story Electrical Service Platform would hold 40,000 gallons of hazardous oil in the middle of the 130-turbine array. Cape Wind's proposed site, Horseshoe Shoal, is a traditional and lucrative fishing ground where many hardworking local fishermen earn up to 50%-60% of their annual income. The Massachusetts Fishermen's Partnership, which represents 18 commercial fishing organizations, says that navigation of mobile fishing gear between the 130 towers would be hazardous or impossible and, in short, Cape Wind would displace commercial fishing from Nantucket Sound. The electrical service platform (ESP) below would soar 10 stories high, cover 1/2 an acre, and contain 40,000 gallons of undisclosed oil that, in the event of a rupture, would reach Cape and Islands beaches within 5 hours.

Id.

not cause local fossil fuel power plants to close.[149] On the other hand, there is a contingent of environmental groups who are supportive of the project, including the Sierra Club, the Natural Resources Defense Council (NRDC), and Greenpeace. These groups believe the project addresses the nation's need to reduce carbon emissions. Further, these parties maintain that the effects of renewable energy on wildlife are small compared to other energy projects.

In taking these positions, each side has questioned the other side's contentions and motivation. Through his opposition, Kennedy has discussed the potential effect on the region of environmentalist supporting Cape Wind. For instance, in an editorial for the New York Times, Kennedy wrote: "Many environmental groups support the Cape Wind project, and that's unfortunate because making enemies of fishermen and marina owners is bad environmental strategy in the long run. Cape Cod's traditional-gear commercial fishing families and its recreational anglers and marina owners have all been important allies for environmentalists in our battles for clean water."[150]

Likewise, the groups supporting the project have criticized the lawsuits brought by groups like the Alliance, claiming that the group is not truly interested in protecting the environment, but rather, only wants to protect their views and property values. In fact, members of these groups have compared their own lawsuits challenging certain projects and the Alliance's litigation tactics against Cape Wind. Recently Sue Reid of the Conservation Law Foundation (CLF) stated that "[a]ll of these environmental groups like CLF and the Natural Resources Defense Council and the Sierra Club and Greenpeace and all these groups that engage in litigation – not even periodically but regularly – do so relatively surgically, and we look for when there's a problem with a proposed development project or a regulatory process. We focus on the biggest issues and target those and go after them, when necessary, with litigation."[151] In comparing these groups to the Alliance, Reid stated that the Alliance is "a whole different animal" that has been bringing suits "in connection with basically every single regulatory approval, whether it's related to the contracts or the environmental reviews or the permitting – every single turn has been challenged."[152]

Regardless of the motivation of these suits, it is difficult to determine how to weigh competing environmental harms against each other. Offshore wind projects may or may not have impacts on the region's fisheries, marine mammals, migratory birds, and other aspects of the marine environment. But if there is an adverse environmental effect, policy makers will be forced to engage in a difficult balancing test to consider the environmental costs and benefits of a project.

In considering the balance between environmental costs and benefits, policy makers considering a Mid-Atlantic project will have to decide what environmental benefit should prevail: protecting species or decreasing carbon emissions? Going forward with low-carbon or carbon-free energy projects may have immediate effects on species in a region, as a potential project could threaten wildlife. For

[149] *Global Warming*, SAVE OUR SOUND, http://www.saveoursound.org/myths_vs_facts/global_warming/ (last visited July 19, 2013). The group alleges that the project will do nothing to improve air quality in the area, which experiences air pollution that comes from power plants in the Midwest. Further, the Alliance contends that the project could actually worsen air pollution in the area by forcing dirtier power plants to go online to compensate when the wind is not blowing offshore.

[150] Robert F. Kennedy Jr., *supra* note 13.

[151] Zeller, *supra* note 21.

[152] *Id.*

instance, opponents to Cape Wind have emphasized the project's effect on New England's fisheries. To them, the project jeopardizes an important ecological and economic component of the area.

On the other hand, considering the projected effects of climate change, wildlife in these regions may be imperiled in the long run. Scientists are predicting that if carbon emissions are not reduced, climate change will have a real effect on the range and ultimate survival of certain species. For example, projected temperature increases in the Northeast region of the U.S. are expected to influence the range of cod, as well as the timing and location of spawning for the fishery.[153] For the project's supporters, renewable energy projects like Cape Wind are necessary to protect the long-term ecological health of the region, including the long-term stability and survival of the area's fisheries. Further, the proponents of the project stress that offshore wind will have a lesser impact on these resources than other energy projects.

For both policy-makers and the public at large, the answer to what environmental harms should be addressed, all things considered, will involve a hard balancing test. Interested parties will have to decide if they are willing to risk some present harm to species in the hope that these energy projects will aid the overall survival of these species in the future and ultimately help the environment. Of course, another factor that will go into this analysis is the other costs and benefits of a potential project, such as the economic benefits and potential for job creation in the region. Further, there is the potential that these projects could be developed in a way that would not harm or would have only a minimal effect on the environment. Ultimately, decision-makers will be faced with the following dilemma: what is more important – avoiding immediate harm or aiding the future environment? The answer is not certain or easy to decipher.

In considering environmental harms, this review will have to be done in connection to the particular aspects of individual projects. Policy makers should be aware of the large-scale environmental reviews done at the initial stages of a project, as there is always the potential with streamlining that a hasty review will occur that overlooks important environmental impacts. Further, by streamlining the initial environmental reviews of the lease issuance and site assessment steps, BOEM has placed a large burden on the review of a developer's COP for environmental effects. Because of the emphasis on an individual review at this point in a project's development, policy makers and interested parties will have to seriously and carefully consider a project's impacts to ensure adequate review.

VI. Conclusion

The path to developing an offshore wind project is anything but easy, and developers may not be as steadfast as Cape Wind Associates, LLC in pursuing the development of a potential project. For potential Mid-Atlantic projects, the good news is that the leasing process and connected environmental reviews are more defined than when Cape Wind first proposed its project in 2001. However, the regulatory process is still anything but simple, as there is a maze of additional federal and state agencies, laws, and regulations involved in the process. Further, these projects still face financial issues, in both securing financing and power purchase agreements to sell the power generated by the project.

[153] U.S. GLOBAL CHANGE RESEARCH PROGRAM, REGIONAL CLIMATE IMPACTS: NORTHEAST, GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES (2009), *available at* http://nca2009.globalchange.gov/coasts.

DOI has made efforts to streamline the leasing process, and others have advocated for further streamlining on both the federal and state level. However, the potential exists that by streamlining, public participation will be pushed until latter stages of individual projects, negatively affecting public buy-in for the project. This feeling of being left out of the process could strengthen the opposition of other ocean users and interest groups to the project. Further, projects may have environmental impacts that need to be considered, and decision-makers may have a hard decision to make in weighing environmental harms and benefits. Finally, a streamlined process should not overlook or fail to adequately consider these potential environmental impacts.

Legal Mechanisms and Opportunities to Advance Ocean Habitat Protection in the Mid-Atlantic

Sarah Chasis & Caryn Bower[1]

Abstract: There is valuable ocean habitat in the Mid-Atlantic that would benefit from protection. There are a number of federal laws that could provide such protection, depending on the type of habitat and activity involved. This Article discusses those federal laws and the opportunities they offer.

I. Introduction

The offshore waters of the Mid-Atlantic[2] are home to extraordinary submarine canyons, fragile cold-water corals, productive fish and crustacean habitat, and important migratory pathways for marine mammals, sea turtles, and fish. There are many laws and programs that

[1] Sarah Chasis is Senior Attorney and Director, Oceans Initiative, Natural Resources Defense Council (schasis@nrdc.org). Caryn Bower is a third-year law student at New York University School of Law (cib234@nyu.edu). This Article is based on a presentation the authors made at the "Regional Ocean Governance Symposium: Legal and Policy Solutions for Mid-Atlantic Ocean Planning" held at Seton Hall University School of Law on April 12, 2013.

[2] In this Article, the term "Mid-Atlantic" refers to the ocean region off the states that make up the Mid-Atlantic Regional Council on the Ocean (MARCO), namely New York, New Jersey, Delaware, Maryland and Virginia. *See What is the Mid-Atlantic Regional Council on the Ocean?,* MID-ATLANTIC REGIONAL COUNCIL ON THE OCEAN, http://www.midatlanticocean.org/ (last visited July 23, 2013). This region is similar to the Mid-Atlantic regional planning area identified in the Final Recommendations of the Interagency Ocean Policy Task Force. *See* COUNCIL ON ENVIRONMENTAL QUALITY, FINAL RECOMMENDATIONS OF THE INTERAGENCY OCEAN POLICY TASK FORCE 51-54 (2010), *available at* http://www.whitehouse.gov/files/documents/OPTF_FinalRecs.pdf. This article focuses on federal waters in the Mid-Atlantic region.

may be brought to bear to advance the protection of these important ocean habitats and sensitive unique offshore areas. This Article explores a number of these legal mechanisms, the types of protections they may afford, and some examples of how they have been used.

The Natural Resources Defense Council's (NRDC) 2001 report, *Priority Ocean Areas for Protection in the Mid-Atlantic*, summarizes the results of a workshop that brought together scientists to identify priority ocean areas in the Mid-Atlantic for protection. The scientists identified a number of important habitat areas deserving protection, including offshore submarine canyons, the continental shelf/slope break area, a 35-kilometer corridor of nearshore waters, and tilefish habitat.[3]

According to the Mid-Atlantic Regional Council on the Ocean (MARCO),[4] some of the Mid-Atlantic's most remarkable ocean habitats are its submarine canyons which are located approximately 70-100 miles offshore.

> Of particular interest to the five Mid-Atlantic States are the following ten major canyons: Norfolk, Washington, Poor Mans, Baltimore, Wilmington, Spencer, Lindenkohl, Carteret, Toms, and Hudson. These canyons are physically complex with outcrops, steep slopes, and diverse sediments. They provide a high flux of fine-particle nutrients and often have areas of upwelling associated with high biological productivity. The rocks and boulders exposed at the heads of the canyons and along their steep walls provide habitat for sponges, corals and anemones that require hard surfaces for attachment – a rare commodity in the mostly sandy Mid-Atlantic Ocean. *The sensitive coral dominated communities found within the submarine canyons and seamounts have individual colonies that are likely over 1,000 years old, and are among the oldest animals on the planet. They are slow-growing and sensitive to disturbance*. The Mid-Atlantic's canyon habitats provide a refuge for juveniles and adults of many commercially important fish and shellfish such as tilefish and summer flounder. All of the canyons are located along the shelf slope break which is known for high concentrations of tunas, swordfish, marine mammals, sea turtles, and seabirds in addition to diverse bottom dwelling fauna.[5]

Another key ocean habitat identified by MARCO is a wide migration corridor located closer to shore that provides for the safe passage of marine mammals, sea turtles, and fish as they move

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[3] *See Priority Ocean Areas for Protection in the Mid-Atlantic: Findings of NRDC's Marine Habitat Workshop*, NATURAL RESOURCES DEFENSE COUNCIL, http://www.nrdc.org/water/oceans/priority/poainx.asp (last visited July 24, 2013). The workshop also identified the waters off Cape Hatteras as important marine habitat for protection; however, this area is not in the Mid-Atlantic regional planning area.

[4] MARCO is a regional partnership among the states of New York, New Jersey, Delaware, Maryland and Virginia formed with the goal of maintaining and improving the health of the region's ocean and coastal resources. *See What is the Mid-Atlantic Regional Council on the Ocean?, supra* note 2.

[5] Mid-Atlantic Regional Council on the Ocean, Actions, Timelines, and Leadership to Advance The Mid-Atlantic Governors' Agreement on Ocean Conservation 3 *(2009), available at* http://www.midatlanticocean.org/summary-actions.pdf (footnotes omitted, emphasis supplied).

between their summer and winter habitats.[6] This nearshore corridor is also an important foraging area for seabirds and nursery ground for important crab and fish species.[7]

These offshore habitats can be impacted by a range of human activities including commercial fishing (e.g., bottom trawling), offshore oil and gas drilling and seismic exploration, shipping, offshore wind development, sand and gravel mining, and sonar testing (Navy). For example, deep sea corals are fragile and slow-growing animals,[8] and as such are highly vulnerable to disturbance by bottom-tending fishing gear. One pass of a bottom trawl can knock down and destroy centuries-old corals.[9] Offshore drilling can result in a massive oil spill affecting a wide swath of both deep-sea and nearshore habitats, as the Gulf of Mexico oil disaster showed.[10] Noise from seismic exploration, sonar testing and shipping can affect fisheries and marine mammals.[11] Sand and gravel mining and construction of offshore wind projects may affect fish habitat.[12]

II. Tools to Protect Offshore Habitats in the Mid-Atlantic

Despite the extent of valuable offshore habitat in the region, only one offshore habitat area in the Mid-Atlantic has been set aside for protection and that protection is limited to only one activity (bottom fishing with mobile gear). The area is the Norfolk submarine canyon which is closed to bottom-tending mobile fishing gear under Amendment 1 to the Golden Tilefish Fishery Management Plan (2009).[13] The area is referred to as a tilefish "gear-restricted area" (GRA) closure and is protected under the Essential Fish Habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act (see discussion of EFH below).[14] There are no other designated protected areas—no national marine sanctuaries (Norfolk

[6] *Id*. at 4.
[7] *Id.*
[8] *Id*. at 3.
[9] Rhian Waller, *Clear Cutting the Seafloor: Deep-Sea Trawling*, NATIONAL GEOGRAPHIC, June 24, 2013, http://newswatch.nationalgeographic.com/2013/06/24/clear-cutting-the-seafloor/ (last visited Sept. 19, 2013).
[10] *See* NATIONAL COMMISSION ON THE BP *DEEPWATER HORIZON* OIL SPILL AND OFFSHORE DRILLING, DEEP WATER: THE GULF OIL DISASTER AND THE FUTURE OF OFFSHORE DRILLING 173-88 *(*2011), *available at* www.oilspillcommission.gov.
[11] CONVENTION ON BIOLOGICAL DIVERSITY, SCIENTIFIC SYNTHESIS ON THE IMPACTS OF UNDERWATER NOISE ON MARINE AND COASTAL BIODIVERSITY AND HABITATS, Doc. UNEP/CBD/SBSTTA/16/INF/12 (2012), *available at* http://www.cbd.int/doc/meetings/sbstta/sbstta-16/information/sbstta-16-inf-12-en.pdf; *see also*, MICHAEL JASNY ET AL., NATURAL RESOURCES DEFENSE COUNCIL, SOUNDING THE DEPTHS II: THE RISING TOLL OF SONOR, SHIPPING, AND INDUSTRIAL NOISE ON MARINE LIFE (2005), *available at* http://www.nrdc.org/wildlife/marine/sound/sound.pdf.
[12] *See, e.g,* 50 C.F.R § 600.815(a)(4**)** (Non-fishing related activities that may adversely affect EFH).
[13] *See* NATIONAL MARINE FISHERIES SERVICE, SMALL ENTITY COMPLIANCE GUIDE: AMENDMENT 1 TO THE GOLDEN TILEFISH FISHERY MANAGEMENT PLAN (2009), *available at* http://www.nero.noaa.gov/nero/nr/nrdoc/09/09tileGRAclose.pdf [hereinafter AMENDMENT 1].
[14] Veatch, Lydonia, and Oceanographer canyons, off the southern New England coast, have similar protections under this amendment; however, these canyons are part of the Northeast regional planning area, not the Mid-Atlantic.

Canyon was nominated in 1975 but never designated), no national monuments, and no critical habitat designations for the protection and recovery of endangered or threatened species.

There are a number of existing federal laws that may be utilized to protect the Mid-Atlantic's important offshore habitats from various threats. Some federal tools may be used to protect against only a single threat. Others may protect against a number of different threats. As regional ocean planning proceeds in the Mid-Atlantic, it is important to be aware of these different statutory tools and their potential applicability to habitats of concern.

A. Magnuson-Stevens Fishery and Conservation Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) establishes a legal regime to conserve and manage fishery resources found off the coasts of the United States.[15] Pursuant to the framework established by the Magnuson-Stevens Act, eight regional fishery management councils develop fishery management plans (FMPs) and management measures, which are approved and implemented by NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), within the U.S. Department of Commerce. The Mid-Atlantic Fishery Management Council (MAFMC) includes the states of New York, New Jersey, Delaware, Pennsylvania, Maryland, Virginia, and North Carolina.[16] The following provisions of the Magnuson-Stevens Act spell out the responsibilities of the MAFMC to protect ocean habitat.

1. Essential Fish Habitat

The Magnuson-Stevens Act requires that the Fishery Management Councils identify and describe EFH in FMPs.[17] EFH is broadly defined to include "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity."[18] The Act requires the Councils to describe and identify the essential habitat for the managed species, minimize to the extent practicable adverse effects on EFH caused by fishing, and identify other actions to encourage the conservation and enhancement of EFH.

The Secretary of Commerce has promulgated regulations to assist Councils in identifying EFH. Using "the best scientific information available,"[19]

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[15] 16 U.S.C. § 1801(b)(1).

[16] *Id.* § 1852(a)(1)(B). The Council has 21 voting representatives: one Federal member (from the National Marine Fisheries Service); 7 from each of the constituent states' fish and wildlife agencies; and 13 private citizens knowledgeable about recreational or commercial fishing or marine conservation who are nominated by the governors of their respective states and appointed by the Secretary of Commerce. The region covered by MAFMC is similar to the Mid-Atlantic region discussed in this Article, except MAFMC's jurisdiction extends further south to include the federal waters off North Carolina.

[17] *Id.* § 1853(a)(7). EFH must be identified and described according to the Secretary's guidelines under 16 U.S.C. § 1855(b)(1)(A).

[18] *Id.* § 1802(10).

[19] 50 C.F.R. § 600.815(a)(ii)(B).

> FMPs must describe and identify EFH in text that clearly states the habitats or habitat types determined to be EFH for each life stage of the managed species. FMPs should explain the physical, biological, and chemical characteristics of EFH and, if known, how these characteristics influence the use of EFH by the species/life stage. FMPs must identify the specific geographic location or extent of habitats described as EFH. FMPs must include maps of the geographic locations of EFH or the geographic boundaries within which EFH for each species and life stage is found.[20]

The MAFMC has designated EFH for 12 different species.[21] The EFH designations cover broad swaths of the Mid-Atlantic, including the submarine canyons and nearshore migratory corridors.

Once designated, FMPs must "minimize to the extent practicable adverse effects on [Essential Fish Habitat] caused by fishing, and identify other actions to encourage the conservation and enhancement of such habitat."[22] The Secretary's guidance defines adverse effects broadly, including "direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, … site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions" that reduce the quality or quantity of EFH.[23]

Any federal agency action that "may adversely affect any essential fish habitat identified under this Act" requires consultation with the Secretary of Commerce,[24] and the Council may comment on such actions.[25] The other federal agency is not required to follow the Secretary's or Council's recommendations, but, if it does not, it must explain its reasoning.[26]

In sum, the MAFMC may use the Magnuson-Stevens Act to protect designated EFH from the adverse effects of fishing and also may use the Act to influence federal agency actions involving other types of activities that may affect EFH. The specific actions that the MAFMC has taken to minimize EFH from the adverse effects of fishing are discussed next in the context of Habitat Areas of Particular Concern, a subset of EFH.

2. Habitat Areas of Particular Concern

According to the federal regulations, FMPs should identify Habitat Areas of Particular Concern (HAPCs), a subset of EFH, that provide important ecological functions or are especially vulnerable to degradation.[27] HAPCs should be designated "based on one or more of the

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[20] *Id.* § 600.815(a).
[21] *See Guide to Essential Fish Habitat Descriptions*, NOAA FISHERIES NORTHEAST REGIONAL OFFICE, http://www.nero.noaa.gov/hcd/list.htm (last visited July 24, 2013).
[22] 16 U.S.C. § 1853(a)(7).
[23] 50 C.F.R. § 600.810(a).
[24] 16 U.S.C. § 1855(b)(2).
[25] *Id.* § 1855(b)(3).
[26] *Id.* § 1855(b)(4)(B).
[27] *See* 50 C.F.R. § 600.815(a)(8); *Habitat Areas of Particular Concern*, NOAA FISHERIES SOUTHWEST REGIONAL OFFICE, http://swr.nmfs.noaa.gov/hcd/hcd_webcontent/socal/hapc.htm (last visited July 24, 2013).

following considerations: (i) The importance of the ecological function provided by the habitat; (ii) The extent to which the habitat is sensitive to human-induced environmental degradation; (iii) Whether, and to what extent, development activities are, or will be, stressing the habitat type; and (iv) The rarity of the habitat type."[28] HAPCs should be clearly indicated on FMP maps.[29]

The FMP "should give special attention to adverse effects [of fishing] on habitat areas of particular concern and should identify for possible designation as habitat areas of particular concern any EFH that is particularly vulnerable to fishing activities."[30] HAPC designation can provide a signal to decision-makers to give the area greater protections than other EFH.[31] "FMPs must identify … recommended options to avoid, minimize, or compensate for [identified] adverse effects …, especially in habitat areas of particular concern."[32]

The MAFMC has designated and protected four offshore areas as HAPCs: Veatch, Oceanographer, Lydonia and Norfolk Canyons.[33] The four canyons are closed to all bottom trawl fishing under the Tilefish Fishery Management Plan resulting in the protection of 113,000 acres of deep-sea corals, sponges, and clay outcroppings.[34] As noted earlier, of the four canyons, only Norfolk is located within the Mid-Atlantic regional planning area.[35]

3. Deep Sea Coral Protection Zones

In addition to the more general EFH provisions of the Magnuson Act, there are provisions specifically focused on the protection of deep sea corals. Through the deep sea coral research and technology program,[36] the Secretary of Commerce must give special attention to researching and protecting "areas where deep sea corals are known to occur, and … areas where scientific modeling or other methods predict deep sea corals are likely to be present."[37] The Secretary is responsible for submitting biennial reports on the state of deep sea coral

[28] 50 C.F.R. § 600.815(a)(8). Identification of HAPCs is one of several mandatory components of a FMP. The notice and comment requirements for HAPC designations are thus the same as for any other component of a FMP. These requirements are found in 16 U.S.C. § 1854(a).
[29] 50 C.F.R. § 600.815(a)(1)(v)(C).
[30] *Id.* § 600.815(a)(2)(i).
[31] *Habitat Areas of Particular Concern, supra* note 27 ("HAPC designation does not necessarily confer additional protection or restrictions upon an area, but they help prioritize and focus conservation efforts.").
[32] 50 C.F.R. § 600.815(a)(6).
[33] The MAFMC also has designated some nearshore areas as HAPC for summer flounder: "All native species of macroalgae, seagrasses, and freshwater and tidal macrophytes … within adult and juvenile summer flounder EFH…." *See Summer Flounder*, NOAA FISHERIES NORTHEAST REGIONAL OFFICE, http://www.nero.noaa.gov/hcd/summerflounder.htm (last visited July 24, 2013).
[34] AMENDMENT 1, *supra* note 13. Lydonia and Oceanographer are also closed to fishing under the squid, mackerel, butterfish plan and the monkfish plan.
[35] *See* text, *supra* note 5.
[36] 16 U.S.C. § 1884.
[37] *Id.* § 1884(a)(6).

habitat and protections.[38] When corals have been identified under this program, the Councils may designate deep sea coral protection zones where fishing is limited or not allowed in order to protect the corals from physical damage.[39] The MAFMC is currently developing Amendment 16 to the Atlantic Mackerel, Squid, and Butterfish Fishery Management Plan to consider fishery management measures to protect deep sea corals in the region.[40]

B. Outer Continental Shelf Lands Act

The Outer Continental Shelf Lands Act (OCSLA) governs the leasing, exploration and development of offshore resources such as offshore oil and gas, sand and gravel mining, and offshore wind.[41] It is administered by the U.S. Department of the Interior (DOI).[42] Each of these activities has been carried out or proposed in the Mid-Atlantic, often in multiple locations.

1. Leasing Process

The OCSLA creates a 4-stage process for oil and gas leasing. The first stage is the creation of a 5-Year leasing program, describing what areas of the outer continental shelf will be eligible for leasing over the 5-year period.[43] The next stage consists of individual lease sales, wherein the agency sells the lease for a particular area to the highest bidder.[44] At the third stage, the leaseholder applies for approval of an exploration plan and permit to drill an exploration well.[45] Finally, in the fourth stage, the leaseholder applies for a development and production plan approval, to drill additional wells and produce the resource.[46] There are opportunities for public review and comment during this process.[47] DOI also has to comply with the National Environmental Policy Act (NEPA)[48] and prepares NEPA documents for each of the major stages

[38] *Id.* § 1884(b). The latest report to Congress is from 2012. *See* NOAA, DEEP SEA CORAL RESEARCH AND TECHNOLOGY PROGRAM: 2012 REPORT TO CONGRESS (2012), *available at* http://www.habitat.noaa.gov/protection/corals/deepseacorals/report/deep-sea_coral_research_and_technology_program/index.html.

[39] 16 U.S.C. § 1853(b)(2)(B).

[40] *See Council Actions: Amendment 16 – Deep Sea Coral Protections*, MID-ATLANTIC FISHERY MANAGEMENT COUNCIL, http://www.mafmc.org/actions/msb/am16 (last visited July 24, 2013).

[41] 43 U.S.C. §§ 1331-1356a.

[42] The OCSLA was administered for many years by the Minerals Management Service (MMS), an office within the U.S. Department of Interior. In 2010, MMS was reorganized and renamed the Bureau of Ocean Energy Management, Regulation, and Enforcement. Subsequently, the Bureau of Ocean Energy Management, Regulation, and Enforcement was split into BOEM (Bureau of Ocean Energy Management) and BSEE (Bureau of Safety and Environmental Enforcement).

[43] *Id.* § 1344(a).

[44] *Id.* § 1337(a).

[45] *Id.* § 1340.

[46] *Id.* § 1351.

[47] *See, e.g., id.* §§ 1351(a)(3), (f), and (g) (development and production plans) and 30 C.F.R. § 556.16 (proposed 5-year leasing program).

[48] 42 U.S.C. §§ 4321-4347.

of the leasing process.[49] There are opportunities for public review and comment on these NEPA documents.

The periodic development of a 5-Year leasing program, as required by OCSLA, offers an important opportunity to protect habitat in the Mid-Atlantic, including the submarine canyons and nearshore migratory corridor, since lease sales of drilling rights may not occur unless the sales are listed on the 5-Year program. For example, the 5-Year Leasing Program for the period 2012-2017, developed pursuant to OCSLA Section 18, does not include lease sales anywhere in the Atlantic, including the Mid-Atlantic.[50]

It should be noted, however, that a programmatic Environmental Impact Statement (EIS) has been prepared that proposes opening up the Atlantic Ocean from Florida to New Jersey to high-intensity seismic exploration for offshore oil and gas.[51] Therefore, even though no offshore lease sales are proposed in the Mid-Atlantic under the current 5-Year Plan, seismic exploration could occur in the area prior to 2017. The proposal, which involves the use of seismic impulses to locate and estimate the size of offshore oil and gas reserves, could injure up to *138,500 marine mammals and disrupt marine mammal feeding, calving, breeding, and other vital activities more than 13.5 million times*, according to the DOI's own draft Programmatic EIS.[52] The proposed action also threatens ocean fish populations. Because of concerns about the potential impacts on the fish populations, the Mid-Atlantic Fishery Management Council sent a letter to the Bureau of Ocean Energy Management (BOEM) opposing the seismic testing.[53] Many others weighed in as well raising serious concerns about the adverse impacts to ocean wildlife and fisheries and to coastal communities.

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[49] DOI's description of the NEPA process as applied to the leasing stages is available at *BOEM and the National Environmental Policy Act (NEPA)*, BUREAU OF OCEAN ENERGY MANAGEMENT, http://www.boem.gov/Environmental-Stewardship/Environmental-Assessment/NEPA/Index.aspx (last visited July 24, 2013).

[50] *See 2012-2017 Lease Sale Schedule*, BUREAU OF OCEAN ENERGY MANAGEMENT, http://www.boem.gov/Oil-and-Gas-Energy-Program/Leasing/Five-Year-Program/Lease-Sale-Schedule/2012---2017-Lease-Sale-Schedule.aspx (last visited July 24, 2013). The 5-Year Leasing Program defines the Mid-Atlantic Planning as extending south from the New Jersey/Delaware border to the North Carolina/South Carolina border. *See* U.S. Dep't of Interior, Outer Continental Shelf Oil and Gas Strategy (2011), *available at* http://www.doi.gov/news/pressreleases/upload/OCS_Lower_48_Strategy_20111129_V1.pdf.

[51] *See* Bureau of Ocean Energy Management, Geological and Geophysical Exploration on the Atlantic Outer Continental Shelf (OCS), 77 Fed. Reg. 19,321 (Mar. 30, 2012); *Atlantic Geological and Geophysical (G&G) Activities Programmatic Environmental Impact Statement (PEIS)*, BUREAU OF OCEAN ENERGY MANAGEMENT, http://www.boem.gov/oil-and-gas-energy-program/GOMR/GandG.aspx (last visited July 24, 2013) [hereinafter *Atlantic G&G PEIS*].

[52] *Atlantic G&G PEIS*, *supra* note 51, at Supplemental Seismic Take Tables A-2 and A-3.

[53] *See Mid-Atlantic Fishery Management Council Opposes BOEM Seismic Testing on the US East Coast*, SAVING SEAFOOD, http://www.savingseafood.org/council-actions/mid-atlantic-fishery-management-council-opposes-boem-seismic-testing-on-the-us-east-3.html (last visited Aug. 28, 2013).

2. Section 12: Presidential Withdrawals

The President may protect Outer Continental Shelf lands from these activities by withdrawing any unleased lands from disposition.[54] President George H.W. Bush exercised this authority in June 1990.[55] He announced a 10-year moratorium on offshore oil and gas leasing off the coast of California, parts of Florida, and off the New England coast. President Clinton expanded the withdrawal of offshore lands to other areas including the Mid-Atlantic, extended the moratorium on leasing until 2012 and placed a permanent ban on all leasing in areas designated Marine Sanctuaries under the Marine Protection, Research, and Sanctuaries Act of 1972.[56] In 2008, President George W. Bush rescinded most of the Bush/Clinton withdrawals, thus making these areas vulnerable to future leasing.[57] He made an exception for marine sanctuaries, which he protected from leasing indefinitely. Currently, there is no offshore habitat within the Mid-Atlantic protected through a presidential withdrawal; however, there is nothing to stop states or members of the public from requesting a Presidential withdrawal in order to protect an area from future leasing.[58]

C. Endangered Species Act

The Endangered Species Act is administered by both the Fish and Wildlife Service and NOAA Fisheries (or NMFS). NMFS has responsibility for marine species and anadromous fish. Under the Endangered Species Act, the Secretary of Commerce must determine whether marine and anadromous species are endangered or threatened, and list endangered and threatened species in the federal register. Upon designation of any species as endangered or threatened, the Act and its implementing regulations require designation of critical habitat.[59]

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[54] 43 U.S.C. § 1341(a).

[55] President George H.W. Bush, Statement on Outer Continental Shelf Oil and Gas Development, June 26, 2009, *available at* http://www.presidency.ucsb.edu/ws/?pid=18638.

[56] Memorandum on Withdrawal of Certain Areas of the United States Outer Continental Shelf from Leasing Disposition, 34 Weekly Comp. Pres. Doc. 1111 (June 12, 1998); *see also*, Tammy L. Shaw, *President Clinton Extends Ban on Offshore Leasing*, 18(3) WATER LOG 4 (1998), *available at* http://masglp.olemiss.edu/Water%20Log%20PDF/18-3.pdf.

[57] Memorandum on Modification of the Withdrawal of Certain Areas of the United States Outer Continental Shelf from Leasing Disposition, 44 Weekly Comp. Pres. Doc. 986 (July 14, 2008).

[58] There is no formal process for petitioning the President for such withdrawals. Sometimes the decision can come in the context of the review of the 5-Year offshore oil and gas leasing program. For example, President Obama reinstated protection for Bristol Bay, Alaska, through 2017 by way of a presidential withdrawal that occurred as DOI was considering revising the 5-Year Leasing Program. *See* Memorandum on Withdrawal of Certain Areas of the United States Outer Continental Shelf from Leasing Disposition (Mar. 31, 2010), *available at* http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf.

[59] 16 U.S.C. § 1533(a)(3)(A)(i). Critical habitat is defined as "(i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 1533 of this title, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the

Critical habitat designations can be updated,[60] and must use the best scientific data available.[61]

Although there are endangered and threatened marine and anadromous species that occur in the Mid-Atlantic, no critical habitat has yet been designated in the Mid-Atlantic.[62] For example, critical habitat for the severely endangered North Atlantic Right Whale has been designated off Massachusetts and off Georgia and Florida for feeding and calving respectively.[63] However, there is no critical habitat designation in the Mid-Atlantic for this species, even though it is an important migratory pathway both south in the late fall/winter for right whale pregnant females and north in the spring for mothers and their calves, arguably the most vulnerable component of the population.[64] In addition to the North Atlantic Right Whale, the Atlantic Sturgeon has recently been listed, with four populations of the fish listed as endangered and one as threatened. Under the statute, this listing should trigger the designation of critical habitat.

The ESA's citizen suit provision provides a legal avenue by which non-governmental entities may force an agency to designate critical habitat when the agency has missed the deadline to do so.[65] The ESA citizen suit provision grants courts the authority to issue injunctions to force agencies to designate habitat.[66] This provision potentially could be used to secure critical habitat designation of an important migratory pathway or other important endangered species' habitat in the Mid-Atlantic.

1. Section 7: Protection of Critical Habitat from Adverse Modification

Once critical habitat is designated, that habitat is protected under Section 7 of the ESA.[67] Section 7 requires that federal actions must not "result in the destruction or adverse

provisions of section 1533 of this title, upon a determination by the Secretary that such areas are essential for the conservation of the species." *Id.* § 1532(5)(A).

[60] 16 U.S.C. § 1533(a)(3)(A)(ii). Critical habitat updates must follow the procedures and criteria in 50 C.F.R. § 424.12.

[61] 16 U.S.C. § 1533(b)(2).

[62] *See Fisheries Data: Critical Habitat*, NOAA FISHERIES, http://www.nmfs.noaa.gov/gis/data/critical.htm (last visited July 24, 2013).

[63] *See* NOAA, Designated Critical Habitat; Northern Right Whale, 59 Fed. Reg. 28,805 (June 3, 1994).

[64] A petition to Revise Critical Habitat Designation for the North Atlantic Right Whale, including the Mid-Atlantic migratory corridor, was filed in 2009 but has not been acted upon. *See* Center for Biological Diversity et al., Petition to Revise the Critical Habitat Designation for the Northern Atlantic Right Whale (Eubalaena Glacialis) under the Endangered Species Act (Sept. 16, 2009), *available at* http://www.biologicaldiversity.org/species/mammals/North_Atlantic_right_whale/pdfs/E_glacialis_CH_petition.pdf.

[65] 16 U.S.C. § 1540(g).

[66] *Id.* § 1540(e)(2); *see also*, Defenders of Wildlife v. Norton, 239 F. Supp. 2d 9, 25 (D. D.C. 2002) (enjoining FWS to designate critical habitat pursuant to 16 U.S.C. § 1540(g)(1)(c)).

[67] It should be noted that, if modification of a listed species' habitat would likely jeopardize the continued existence of the species, that modification would be prohibited by Section 7's jeopardy prohibition, whether or not the habitat had been designated as critical.

modification of" critical habitat designated for any endangered or threatened species.[68] In making this determination, the Act requires the action agency to consult with NMFS for impacts on listed marine and anadromous species.[69] If NMFS concludes that the project may adversely modify a listed species' critical habitat, NMFS prepares a "biological opinion." The biological opinion may recommend "reasonable and prudent alternatives" to the proposed action to avoid destruction or adverse modification of the critical habitat. These so-called reasonable and prudent alternatives carry substantial weight with the action agency.[70]

2. Section 9: Takings Prohibition

Section 9 of the Endangered Species Act prohibits the "take" of endangered species. To "take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."[71] The term "harm" includes habitat modification that results in actual injury or death to endangered or threatened species.[72]

The Section 9 takings prohibition applies to "any person subject to the jurisdiction of the United States."[73] The Endangered Species Act definitions section defines "person" broadly as "an individual, corporation, partnership, trust, association, or any other private entity; or any officer, employee, agent, department, or instrumentality of the Federal Government, of any State, municipality, or political subdivision of a State, or of any foreign government; any State, municipality, or political subdivision of a State; or any other entity subject to the jurisdiction of the United States."[74] The prohibition on "take" applies to both public and private actions and to actions on private as well as federally managed land.

Section 9 expands on the protections afforded habitat by Section 7 in that it applies to private parties, as well as government entities. Even absent a critical habitat designation, actions by government agencies or private parties in the Mid-Atlantic that would modify endangered species habitat in a way that would result in injury or death of the species also would be prohibited.

Section 10 of the ESA allows the Secretary of Interior and the Secretary of Commerce to permit a taking that would otherwise be prohibited if the taking is incidental to the carrying out of an otherwise lawful activity and the person submits a conservation plan that satisfies the

[68] 16 U.S.C. § 1536(a)(2). It is possible for a federal agency action to receive an exemption under 16 U.S.C. § 1536(e), if approved by the Endangered Species Committee ("God Squad").
[69] *Id*.
[70] The action agency is to adopt one of NMFS' reasonable and prudent alternatives, not undertake or permit the proposed action, seek an exemption from the "God Squad," reinitiate consultation or adopt another action that does not destroy or adversely modify the critical habitat. *See, e.g.*, U.S. FISH AND WILDLIFE SERVICE AND NATIONAL MARINE FISHERIES SERVICE, ENDANGERED SPECIES CONSULTATION HANDBOOK 2-11 – 2-12 (1998), *available at* http://www.nmfs.noaa.gov/pr/pdfs/laws/esa_section7_handbook.pdf.
[71] 16 U.S.C. § 1532(19).
[72] Babbitt v. Sweet Home Chapter of Communities for a Great Oregon, 515 U.S. 687, 701 (1995).
[73] 16 U.S.C. § 1538(a). Liability only attaches to a party that is a proximate, but for cause of the take. *See generally Babbitt*, 515 U.S. 687.
[74] 16 U.S.C. § 1532(13).

statutory requirements.[75] This section also allows the Secretary to issue a permit to "take" an endangered species to a person who will undergo "undue economic hardship" as a result of a particular listing.[76] However, this exemption may last no longer than one year after publication of the proposed rule to list the species.

D. Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) is administered by the National Oceanic and Atmospheric Administration (NOAA), a part of the U.S. Department of Commerce. The objectives of the CZMA are to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." The principal mechanism for accomplishing this under the statute is through encouragement and support for the development and implementation of state coastal zone management programs.

One of the principal mechanisms for encouraging states to develop and implement a federally approved coastal zone management program is the federal consistency provision of the statute.[77] Once a coastal state has a federally approved coastal zone management program, federal agency activities, including those outside the coastal zone (e.g., in federal waters), that affect land or water uses or natural resources of the coastal zone, must be carried out in a manner that is consistent to the maximum extent practicable with the enforceable policies of the state's federally approved coastal management program.[78] All the Mid-Atlantic states currently have federally approved coastal management programs that they could potentially use in this way to protect offshore habitat.

In addition, any applicant for a federal license or permit to conduct an activity, including activities outside the coastal zone (e.g., in federal offshore waters) affecting any land or water use or natural resource of the state's coastal zone, must provide in its application to the federal licensing or permitting agency a certification that the activity is consistent with the enforceable policies of the state's federally approved program.[79] The state has the right to concur or object to the applicant's certification. The federal agency may not grant the license or permit until the state has concurred or the state's failure to act is conclusively presumed, *unless* the Secretary of Commerce determines that the activity is consistent with the objectives of the CZMA or is otherwise necessary in the interest of national security.[80]

This authority is a powerful tool for states to use to protect offshore habitats that support or link to valuable uses or resources of the state's coastal zone. In a recent example, the State of New York used its consistency authority under the CZMA to object to a proposed LNG terminal

[75] *Id.* § 1539(a).
[76] *Id.* § 1539(b).
[77] *Id.* § 1456(c).
[78] *Id.* §1456(c)(1)(A). The President may in certain circumstances exempt those elements of a federal agency's activity if he determines the activity is in the "paramount interest of the United States." *Id.* § 1456(c)(1)(B).
[79] *Id.* § 1456(c)(3)(A).
[80] *Id*. There is a similar provision that applies to approval by the Secretary of Interior of an exploration, development, or production plan under the OCSLA. *Id.* § 1456(c)(3)(B).

in Long Island Sound. Broadwater Energy LLC, a joint venture between the Shell Oil Company and TransCanada Corporation, had proposed building a floating LNG terminal 11 miles from the Connecticut shore and 9 miles from New York's Long Island shore. The Secretary of Commerce upheld New York's objection in the consistency appeal by Broadwater.[81]

E. Antiquities Act

The Antiquities Act can be a useful tool for protecting significant habitat within areas under federal jurisdiction and imposes relatively few procedural hurdles. The Act enables the President to designate National Monuments by Presidential Proclamation, and direct which federal agency or agencies will be responsible for their management.[82] The President may also offer direction in terms of management goals for the National Monument, and establish additional procedures or actions to be undertaken by the designated federal agency or agencies.

According to the Act, areas eligible for protection under the Antiquities Act are "historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States[.]"[83] The Act's language ("other objects of historic or scientific interest") has consistently been interpreted broadly by the courts.[84] When an area is designated a National Monument under the Antiquities Act, the Proclamation may direct one or more specific agencies to prepare a Monument Management Plan (MMP) for the new National Monument. The public may have the opportunity to comment on the MMP before it is finalized.[85]

It is now clear that the President's designation authority extends to the marine environment, as "waters located on or over federal lands" are eligible.[86] The Antiquities Act was first used to protect the marine environment in 1938, when President Roosevelt designated Channel Islands National Monument.[87] President George W. Bush made use of the Antiquities Act to protect marine environments such as Papahānaumokuākea, Rose Atoll, and the

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[81] DECISIONS AND FINDINGS BY THE U.S. SECRETARY OF COMMERCE IN THE CONSISTENCY APPEAL OF BROADWATER ENERGY LLC AND BROADWATER PIPELINE LLC FROM AN OBJECTION BY THE STATE OF NEW YORK (Apr. 13, 2009), *available at* http://coastalmanagement.noaa.gov/consistency/mediadecisions/broadwaterenergy.pdf.

[82] National Monuments may also be designated by an Act of Congress.

[83] 16 U.S.C. § 431

[84] *See, e.g.,* Cappaert v. United States, 426 U.S. 128 (1978) (determining that Devil's Hole limestone cavern and the unique fish inhabiting it were properly regarded as "objects of historic and scientific interest.").

[85] *See, e.g.,* Presidential Proclamation 8335: Establishment of the Marianas Trench Marine National Monument, 74 Fed. Reg. 1557 (Jan. 12, 2009), *available at* https://www.federalregister.gov/articles/2009/01/12/E9-496/establishment-of-the-marianas-trench-marine-national-monument.

[86] Mark Laemmle, *Monumentally Inadequate: Conservation at Any Cost under the Antiquities Act*, 21 VILL. ENVTL. L. J. 111, 143 (2010).

[87] *Id.* at 111.

Marianas Trench.[88] National Monuments must be "confined to the smallest possible area compatible with the proper care and management of the objects to be protected."[89] Nevertheless, a National Monument need not be small in absolute terms; Papahānaumokuākea Marine National Monument covers approximately 139,793 square miles.[90]

Because National Monuments are designated on a case-by-case basis, it is possible to use the Antiquities Act to mandate a specific management scheme based on what is best suited to the particular prospective National Monument. For example, Presidential Proclamation 8335, which establishes the Marianas Trench Marine National Monument, gives the Secretary of the Interior lead responsibility for management of the Monument, in cooperation with the Secretary of Commerce who has primary responsibility for management of fishery-related activities.[91] The proclamation directs that the Secretary of Commerce shall prohibit commercial fishing in the monument's Island Units, and other fishing[92] shall be managed sustainably. The proclamation also directs that the Secretary of Commerce and the Secretary of the Interior establish an advisory council for the monument; the advisory council's composition and members' terms of service are specified in the proclamation.[93]

In addition to whatever the initial protections contained in the National Monument designation may be, designation as a National Monument can serve as an important step toward other protections. For example, Channel Islands National Monument evolved into an expanded Channel Islands National Park and the Channel Islands National Marine Sanctuary in 1980.[94] Similarly, the Presidential Proclamation that created Rose Atoll Marine National Monument directed that the Secretary of Commerce should take action to incorporate the marine portions of Rose Atoll Marine National Monument into Fagatele Bay National Marine Sanctuary.[95] In 2010, Papahānaumokuākea Marine National Monument received global

[88] CAROL HARDY VINCENT & KRISTINA ALEXANDER, CONGRESSIONAL RESEARCH SERVICE, NATIONAL MONUMENTS AND THE ANTIQUITIES ACT 4 (2012). *See also* Presidential Proclamation 8335, *supra* note 85 (protecting "all lands and interests in lands owned or controlled by the Government of the United States within the boundaries described below and depicted on the accompanying map.").

[89] 16 U.S.C. § 431

[90] Presidential Proclamation 8031: Establishment of the Northwestern Hawaiian Island National Marine Monument, 71 Fed. Reg. 36,443 (June 26, 2006).

[91] *See* Presidential Proclamation 8335, *supra* note 85; *see also* U.S. FISH AND WILDLIFE SERVICE & NOAA, MARIANAS TRENCH MARINE NATIONAL MONUMENT: PLANNING UPDATE NUMBER 1 (May 2011), *available at* http://www.fpir.noaa.gov/Library/MNM/MT%20PlanningUpdate1.pdf.

[92] Other fishing includes "sustenance, recreational, and traditional indigenous fishing." *See* Presidential Proclamation 8335, *supra* note 85.

[93] *Id.*

[94] *Channel Islands National Park: Park History*, PARK VISION, http://www.shannontech.com/ParkVision/ChannelIslands/ChannelIslands.html#parkhistory (last visited July 24, 2013); J. Emmett Duffy, *Channel Islands National Marine Sanctuary*, THE ENCYCLOPEDIA OF EARTH, Aug. 3, 2007, http://www.eoearth.org/article/Channel_Islands_National_Marine_Sanctuary (last visited July 24, 2013).

[95] *Rose Atoll Marine National Monument*, U.S. FISH AND WILDLIFE SERVICE, http://www.fws.gov/roseatollmarinemonument/ (last visited July 24, 2013).

recognition through designation as a UNESCO World Heritage Site.[96] A President could use the Antiquities Act to designate an important offshore habitat area in the Mid-Atlantic as a national monument and include in the designation direction about how the area is to be protected and by what federal agency or agencies.

F. National Marine Sanctuaries Act

The National Marine Sanctuaries Act is another tool for protecting marine habitat; it may be especially useful where areas to be protected are complex, so that areas in need of varying levels of protection can be managed differently within the sanctuary. There are currently 13 National Marine Sanctuaries within the National Marine Sanctuary System, but none is in the Mid-Atlantic region.[97] The two closest to the Mid-Atlantic are Stellwagen Bank National Marine Sanctuary (off Massachusetts) and Monitor National Marine Sanctuary (off North Carolina).[98] The Mid-Atlantic represents a hole in coverage by the sanctuary program of marine resources along the Atlantic seaboard.

The process of becoming a National Marine Sanctuary proceeds in stages. The first step is placement on the Site Evaluation List (SEL).[99] The Secretary selects and places on the list natural and historical resource sites that qualify for further evaluation for possible designation as National Marine Sanctuaries.[100]

After placement on the SEL, the next step toward sanctuary designation is to become an Active Candidate. An Active Candidate is a site selected by the Secretary for further consideration for possible sanctuary designation.[101] As an Active Candidate, a site undergoes a "formal Sanctuary designation-evaluation process"[102] including preparation of a draft EIS under NEPA. An Active Candidate is judged against the standards in the National Marine Sanctuaries Act.[103] The Secretary of Commerce prepares designation materials as directed by Section 304 of the Act.[104] If the Active Candidate includes waters in the Exclusive Economic Zone, Regional Fishery Management Councils would have 120 days to make recommendations and/or draft fishery regulations.[105] In preparing its recommendations and/or draft regulations, the Council

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[96] Press Release, Papahānaumokuākea Marine National Monument becomes first mixed (natural and cultural) UNESCO World Heritage Site in the U.S., July 30, 2010, *available at* http://www.papahanaumokuakea.gov/wheritage/.

[97] The current National Marine Sanctuaries are: Channel Islands, Cordell Bank, Fagatele Bay, Florida Keys, Flower Garden Banks, Gray's Reef, Gulf of the Farallones, Hawaiian Islands Humpback Whale, Monitor, Monterey Bay, Olympic Coast, Stellwagen Bank, and Thunder Bay.

[98] The Visitor's Center is located in Virginia.

[99] There is a proposal to delete the requirement in the regulations that the SEL be the only method to evaluate potential new sanctuaries. *See* NOAA, Amendments to National Marine Sanctuary Regulations: Proposed Rule, 78 Fed. Reg. 5999 (Jan. 28, 2013).

[100] 15 C.F.R. § 922.10.

[101] *Id.* § 922.3.

[102] *Id.* § 922.21

[103] 16 U.S.C. § 1433.

[104] 15 C.F.R. § 922.22

[105] *Id.*

shall use as guidance the national standards of Section 301(a) of the Magnuson-Stevens Act to the extent that they are consistent and compatible with the goals and objectives of the proposed Sanctuary designation.[106] After clearing the above-described hurdles, the Active Candidate would be formally designated a National Marine Sanctuary.

Once a Sanctuary is designated, a Sanctuary Advisory Council[107] with up to 15 members[108] may be formed to enhance involvement of local stakeholders in the Sanctuary's management. Each of the 13 National Marine Sanctuaries currently has a Sanctuary Advisory Council.[109] If a Sanctuary were designated in the Mid-Atlantic, Mid-Atlantic stakeholders could use a Sanctuary Advisory Council to influence habitat protection policies within the Sanctuary.

The implementation of habitat protective measures is Sanctuary-specific. Each Sanctuary has its own management plan[110] and its own regulations,[111] and protections can vary significantly by Sanctuary.[112]

The SEL has been inactive since at least 1995.[113] Additionally, Congress has imposed a restriction on the designation of new sanctuaries.[114] The deactivation of the SEL and the congressional restriction together have, practically-speaking, created a moratorium on the designation of new sanctuaries. However, the effective moratorium on designation of new Sanctuaries has not completely prevented the growth of the National Marine Sanctuary System. Over the past several years, NOAA has expanded the boundaries of some National Marine Sanctuaries, thereby providing marine habitat protections to a greater area.[115]

Recently, discussion about reactivating the SEL has been underway. President Obama issued Executive Order 13,547 in 2010, establishing ocean protection as a priority and creating

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[106] *Id.* § 922.22(b)

[107] Authorized by 16 U.S.C. § 1445a(a).

[108] 16 U.S.C. § 1445a(c). Sanctuary Advisory Councils for Sanctuaries designated prior to November 4, 1992, may have more than 15 members; for example, Channel Islands Sanctuary Advisory Council has 21 voting and 21 alternate members. *See Sanctuary Advisory Council Overview*, CHANNEL ISLANDS NATIONAL MARINE SANCTUARY, http://channelislands.noaa.gov/sac/main.html (last visited July 24, 2013).

[109] Papahānaumokuākea Marine National Monument also has an advisory council. *See Sanctuary Advisory Council Overview,* NOAA NATIONAL MARINE SANCTUARIES, http://sanctuaries.noaa.gov/management/ac/welcome.html (last visited July 24, 2013).

[110] Sanctuary Management Plans are available at *Ongoing Management Plan Reviews*, NOAA NATIONAL MARINE SANCTUARIES, http://sanctuaries.noaa.gov/management/mpr/welcome.html (last visited July 24, 2013). NMFS reviews these plans for compliance with the Magnuson-Stevens Fishery Conservation and Management Act.

[111] 15 C.F.R. Part 922.

[112] For summaries of protections at each sanctuary, see *National Marine Sanctuaries*, MARINE CONSERVATION INSTITUTE, http://www.marine-conservation.org/what-we-do/program-areas/mpas/national-marine-sanctuaries/ (last visited July 24, 2013).

[113] 15 C.F.R. § 922.10(b); *see also*, NOAA, National Marine Sanctuary Program, 60 Fed. Reg. 66,875 (Dec. 27, 1995).

[114] 16 U.S.C. § 1434(f).

[115] Sanctuaries with recent expansions include: Fagatele Bay in 2012, Monterey Bay in 2009, and Florida Keys in 2001. *See About Your Sanctuaries*, NOAA NATIONAL MARINE SANCTUARIES, http://sanctuaries.noaa.gov/about/ (last visited July 24, 2013).

the National Ocean Council to advance the nation's ocean policy.[116] In 2012, the National Ocean Council released a draft National Ocean Policy Implementation Plan, which "describes specific actions Federal agencies will take to address key ocean challenges, give states and communities greater input in Federal decisions, streamline Federal operations, save taxpayer dollars, and promote economic growth."[117] After a public comment period, the final National Ocean Policy Implementation Plan was released on April 16, 2013.[118] As one of the actions to protect natural and cultural areas, the final National Ocean Policy Implementation Plan identifies the reactivation and repopulation of the SEL "with marine areas that have been identified as nationally significant due to their conservation, recreational, ecological, historical, scientific, cultural, archaeological, educational, or aesthetic qualities."[119]

NOAA recently announced that it is re-establishing the sanctuary nomination process and is proposing to amend its regulations governing the process for nominating and evaluating sites for eligibility as a national marine sanctuary.[120] To implement this process, the agency is seeking public comment on the proposed changes to the sanctuary nomination and designation procedures, and on the criteria by which the agency would analyze nominations for potential new national marine sanctuaries. Once these criteria have been made final, NOAA states that it intends to solicit nominations for areas of the marine and Great Lakes environments that satisfy those criteria for possible designation as a national marine sanctuary. This nomination solicitation process, once final, could afford an important opportunity to propose important offshore habitat in the Mid-Atlantic for consideration as a marine sanctuary.

III. Conclusion

There are important and valuable offshore habitats in the Mid-Atlantic that need to be protected, especially as the region experiences increasing industrial development in offshore marine areas. There are many legal authorities and programs that may be used to protect offshore habitat from one or more types of impacts. Which authority will be the most appropriate will depend on the area or resource to be protected and the activities that may

[116] Executive Order 13,547: Stewardship of the Ocean, Our Coasts and the Great Lakes, Section 5(a), 75 Fed. Reg. 43,023, 43,025 (July 22, 2010). Executive Order 13,158, issued by the Clinton administration in 2000 to enhance the national network of marine protected areas, similarly furthers national ocean policy by mandating that all federal agencies "shall avoid harm to the national and cultural resources that are protected by an MPA" to the "maximum extent practicable" and permitted by law. Executive Order 13,158: Marine Protected Areas, 65 Fed. Reg. 34,909 (May 31, 2000). Executive Order 13,158 defines Marine Protected Area as "any area of the marine environment that has been reserved by Federal, State, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein." *Id.* at Section 2(a).

[117] *National Ocean Policy Implementation Plan*, NATIONAL OCEAN COUNCIL, http://www.whitehouse.gov/administration/eop/oceans/implementationplan (last visited July 24, 2013).

[118] NATIONAL OCEAN COUNCIL, NATIONAL OCEAN POLICY IMPLEMENTATION PLAN (2013), *available at* http://www.whitehouse.gov//sites/default/files/national_ocean_policy_implementation_plan.pdf.

[119] *Id.* at 18; NATIONAL OCEAN COUNCIL, NATIONAL OCEAN POLICY IMPLEMENTATION PLAN APPENDIX 21 (2013), *available at* http://www.whitehouse.gov//sites/default/files/national_ocean_policy_ip_appendix.pdf.

[120] *See* NOAA, Re-establishing the Sanctuary Nomination Process, 78 Fed. Reg. 38,848 (June 28, 2013).

affect it. As regional ocean planning goes forward in the Mid-Atlantic, protection of valuable offshore habitat should be a high priority and these legal authorities should be brought to bear to accomplish needed protections.

Incentivizing Offshore Wind with the Renewable Integration, Firming, and Transmission Infrastructure Credit

Jonathan Blansfield[1]

Abstract: The coastal waters of the Northeast United States are a rich source of offshore wind energy. Generating electricity from offshore wind is an expensive undertaking and will require federal support. At the same time, a dramatic increase in the yield of domestic unconventional gas fields has shifted the United States' energy focus toward developing these resources. This Article proposes a mechanism to align wind and gas under a framework of federal and regional cooperation, which if implemented would hopefully be a step toward achieving a national energy policy.

I. Introduction

By global standards, the U.S. is well behind the development curve for offshore wind energy.[2] The cost and politically contentious nature of installing wind turbines in coastal waters has proven to be

[1] Jonathan Blansfield will receive his J.D. from Vermont Law School in 2014, where he focuses on energy and electricity law. He is particularly interested in renewable energy deployment and grid integration. The author would like to thank the staff of the *Sea Grant Law and Policy Journal* for the diligent and thoughtful efforts editing this article. The author also wishes to thank Kevin Jones of the Vermont Institute for Energy and the Environment for his editorial assistance, and the Vermont Institute for Energy and the Environment for its financial support in presenting this Article at the Seton Hall University School of Law symposium, *Regional Ocean Governance: Legal and Policy Solutions for Mid-Atlantic Ocean Resiliency*, in April 2013.

powerfully detrimental. In 2009, federal tax policy became largely supportive of renewable resources, particularly wind and solar. Yet, offshore wind, which is a higher quality (i.e., it blows most consistently when the demand for energy is greatest) and more potent (i.e., the wind is stronger) resource than land-based wind, was largely left out of the discussion. No offshore wind facilities are operational in the United States today. The difficulty in gaining permit approval (both federal and state), siting controversies, and prohibitive capital costs (a large portion of which is associated transmission) associated with offshore wind projects are among the reasons why the United States currently lacks an offshore wind industry.

At the same time, natural gas has risen to the forefront of energy policy, and a transition to a natural gas energy economy seems inevitable, undermining the urgency of renewable resource development. Natural gas in a supporting role to wind, providing power rapidly only when needed, would allow the growth of the offshore wind industry, while mitigating natural gas' effects on wind power and avoiding continued national reliance on fossil fuels.[3]

This Article proposes a Renewable Integration, Firming, and Transmission Infrastructure Credit (RIFTIC) that would make federal support available to both the wind and gas industry to deploy offshore wind projects with a dedicated relationship to natural gas generation. This interrelationship would enable natural gas to serve as a backup energy supply to offshore wind power. By discussing the problems inherent in the current federal subsidy available to wind (i.e., the Production Tax Credit), the current lack of federal support for transmission infrastructure, and the need to create a national energy policy that is forward looking, this Article seeks to encourage a broader conversation in federal energy policy. In alignment with the "all of the above" energy strategy currently espoused by the Obama Administration, this Article argues for a partnership between wind and natural gas, two resources traditionally conceived as competitors.

II. The Renewable Integration, Firming, and Transmission Infrastructure Tax Credit

Natural gas is now a prominent player in the energy policy debate. Exploitation of previously unavailable shale and tight gas plays has created a political environment in which many see the development of these resources as an urgent priority. This "boom" of potential gas[4] threatens to derail the momentum that renewables have achieved in the political and economic realm. In 2011, 32% of

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[2] Europe, by comparison has deployed large amounts of offshore wind. Countries such as Ireland, Spain, Portugal, and several Scandinavian countries are leaders in offshore wind penetration.

[3] JOHN D. PODESTA & TIMOTHY E. WIRTH, CENTER FOR AMERICAN PROGRESS NATURAL GAS: A BRIDGE FUEL FOR THE 21ST CENTURY 5 (2009), http://www.americanprogress.org/issues/green/report/2009/08/10/6513/natural-gas-a-bridge-fuel-for-the-21st-century/ (last visited Sept. 23, 2013). This report highlights not only the potential of some form of a Renewable Integration Credit to incentive utilities in utilization and cost recovery for use of renewable fuel, but also highlights the need for a "robust" transmission infrastructure to augment intermittent resources like wind. Combining the two approaches will go a long way toward achieving lasting impacts toward a zero-carbon energy program.

[4] *See* U.S. ENERGY INFO. ADMIN., DOE/EIA-0383(2012), ANNUAL ENERGY OUTLOOK 2012 58 (2012), *available at* http://www.eia.gov/forecasts/aeo/pdf/0383%282012%29.pdf; J. DAVID HUGHES, POST CARBON INSTITUTE, DRILL BABY DRILL: CAN UNCONVENTIONAL FUELS USHER IN A NEW ERA OF ENERGY ABUNDANCE 33–34 (2013), http://www.postcarbon.org/reports/DBD-report-FINAL.pdf; J. David Hughes, *Energy: A Reality Check on the Shale Revolution*, 494 NATURE 307 (2013).

new U.S. electric generating capacity was wind power.[5] Wind and natural gas together represent the vast majority of gross capacity additions to the U.S electrical grid.[6] These figures are powerful motivation to encourage the sectors to operate in tandem, rather than in opposition. Further, natural gas is an ideal backup fuel to supplement wind power because of its ability to be brought online quickly, potential for pipeline storage, and lower carbon content than other fossil fuels.

The proposed RIFTIC would be a federal tax incentive designed to make large-scale offshore wind generation facilities economically feasible. The RIFTIC would also be a hedge against the detrimental effects a transition to a natural gas energy economy may have on the renewable energy industry, specifically the wind industry. The RIFTIC would draw upon past and existing proposals, literature, and legislation to piece together a federal tax program that provides support for offshore wind production, transmission infrastructure, and natural gas infrastructure used in support of wind power. As discussed in more detail below, past and current tax programs provide the financial underpinnings of the proposed RIFTIC. Literature from the Department of Energy and New England Governor's Association provide the policy rationale, while existing state-level energy policy provides a basis for a similar regional program.

A. Making the Case for a New Federal Tax Incentive

The renewable energy industry, particularly onshore wind, has achieved important advances in levels of penetration, technological developments, and cost reductions. However, these developments are inchoate and fragile. The United States' energy policy is in need of a new direction, and a RIFTIC would offer a new way forward by providing a mechanism to move the United States toward a clean energy future, while providing a hedge against the variability of intermittent resources. Stemming the detrimental effects of anthropogenic climate change requires decisive policy choices focused on renewable energy. Unfortunately, current federal energy policy is not yet sufficient to ensure that offshore wind will succeed in the United States.

Although offshore wind is a massive source of clean, carbon-free energy, and does not involve the same land use and resiliency[7] concerns associated with onshore wind, current national energy policy (tax and otherwise) favors onshore wind resources over offshore resources. The Federal Energy Regulatory Commission (FERC) and interconnection planning bodies are focused toward land-based generation and transmission. These important electricity regulatory and planning bodies, discussed in greater detail below, simply do not consider offshore wind in proportion to its potential contribution of electricity supply. Furthermore, no tax incentive is available to transmission projects, or intentionally targeted at offshore production.[8]

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[5] U.S. DEP'T OF ENERGY, 2011 WIND TECHNOLOGIES MARKET REPORT 4 (2012), *available at* http://www1.eere.energy.gov/wind/pdfs/2011_wind_technologies_market_report.pdf [hereinafter 2011 WIND MARKET REPORT].

[6] *Id*.

[7] The term "resiliency" is used here to refer to electricity and grid stability, reliability, and security.

[8] The main federal mechanisms for funding large scale renewable energy projects (the Production Tax Credit, Investment Tax Credit, and Treasury Grant in lieu of tax Credit) are specifically targeted at the generation of electricity or recouping the capital costs of the generation infrastructure.

As a result of geography, there is a significant downside to this policy of favoring onshore wind power. The most abundant onshore wind is located in the western part of the country, far from the dense load centers along the East Coast, predominantly in the Mid-Atlantic. Large-scale terrestrial transmission projects are needed to carry electricity produced from wind-rich states like Montana and Wyoming thousands of miles eastward to the cities where power is needed most. Transmission of this magnitude has extraordinary cost (above and beyond those associated with ordinary land-based transmission) and faces huge institutional challenges. Offshore wind resources are of higher quality and are less intermittent than even the best onshore resources, and their development would likely render cross-country wind power transmission projects unnecessary[9] Furthermore, above-ground transmission lines spanning hundreds or thousands of miles introduce security and reliability risks that are largely absent in the type of subsurface high voltage direct current (DC) lines involved with offshore to shore transmission.[10] While offshore projects also face institutional challenges, the very nascent nature of the industry is an asset, because the regulatory framework can be constructed to streamline the process.

Additionally, the intermittent nature of wind power is at times exacerbated by an inverse relationship between production and demand. In certain parts of the country, or at certain times during the year when the wind blows most consistently, demand is lowest. Thankfully for offshore wind, the inverse relationship between demand and production potential (actual generation) that tends to plague onshore resources is *reversed*.[11] Furthermore, while capacity factors[12] of modern turbines have improved significantly since the early days of wind power, the capacity factor for offshore wind can reach up to 40%[13] to 50%[14] (or more) depending on the region. This provides offshore wind with a significant advantage over onshore wind.[15] As a result, East Coast and Mid-Atlantic offshore wind resources must be seriously considered as the prime opportunity to achieve significant market penetration for wind energy.

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[9] U.S. DEP'T OF ENERGY, A NATIONAL OFFSHORE WIND STRATEGY: CREATING AN OFFSHORE WIND INDUSTRY IN THE UNITED STATES 6 (2011) [hereinafter NATIONAL OFFSHORE WIND STRATEGY].

[10] Traditional above ground high voltage transmission lines are subject to electricity losses over distance. The longer the line, the greater probability of "line loss" occurring. Furthermore, during hot days or catastrophic weather events, the possibilities of line losses or disruptions in the transmission system are greater. Catastrophic weather threats mirrors man-made security threats to the transmission system. The security and resiliency of the electricity grid is not enhanced by building cross-country transmission lines. The sub-terranean and submerged high voltage direct current (HVDC) lines that offshore developers will use are more stable and secure, and therefore should be viewed as preferable.

[11] NATIONAL OFFSHORE WIND STRATEGY, *supra* note 9, at 6. *See also* NYISO, NYISO WIND GENERATION STUDY FINAL DRAFT viii, 76 (2010), which indicates that the correlation of offshore wind production is stronger to daily load demand.

[12] Capacity factor is the amount of energy output from a particular generating source in relation to the generating potential, otherwise known as nameplate capacity. For example, if a single turbine has the potential to generate 1 MW of power, but is only running at 50% output for only half the day, the capacity factor of the turbine would be 25%.

[13] NYISO, *supra* note 11, at 93.

[14] *See Transparent Cost Database*, OPENEI, http://en.openei.org/apps/TCDB/. This data set relies on numbers generated by the U.S. Department of Energy and the National Renewable Energy Laboratory. *See also,* Zachary Sahan, *Wind Turbine Net Capacity Factor — 50% the New Normal?,* CLEANTECHNICA (July 27, 2012), http://cleantechnica.com/2012/07/27/wind-turbine-net-capacity-factor-50-the-new-normal/#lgkKZuYoLDCz35RL.99 (last visited Sept. 23, 2013).

[15] *See id.*

Despite this, wide-scale reliance on the variable renewable resources (wind in particular) presents reliability concerns. Specifically, such reliance creates problems for base load plants, which are difficult and expensive to bring offline or reduce their output (called "ramping") in order to bring wind turbines online. A base load plant is designed to provide the bare minimum of power its customers need to operate (i.e., the grid's base load) and ensure bottom line reliability of the system.[16] When additional power is needed, such as during hot summer days when more air conditioners are running, supplementary power must be brought "online" to serve this demand. Power plants that are designed to service "peak" demand when needed, are referred to as "peakers." Peaker power plants have traditionally been fueled by natural gas, because it has great quick start potential and is easily dispatchable. In general, wind energy can provide neither base load nor peaking power, because the wind does not blow constantly or strongly on schedule. Power plants located in the Mid-Atlantic region and along the East Coast, however, could be reliably fueled by offshore wind if natural gas was used to supply supplemental power. The RIFTIC, therefore, is designed to target and address transmission and reliability concerns associated with offshore wind, by encouraging a partnership between renewable and non-renewable sources..

A key component to establishing a national offshore wind industry is intergovernmental cooperation, which includes federal, state, and local governments. Because offshore facilities will likely serve regions rather than individual states, it is essential that a coherent policy framework be developed to facilitate planning and implementation. While a RIFTIC alone cannot achieve a comprehensive policy framework, it could incentivize or lay the foundation to begin the development of such a policy. A comprehensive subsidy that addresses the major issues facing the offshore wind industry would be an integral part of a forward-thinking and comprehensive national and regional energy policy initiative. A long-term and stable funding mechanism would make renewable energy policy objectives and investment strategies more attainable.

B. RIFTIC in Context

Fossil fuels have historically benefitted from a larger national investment through federal subsidies than have renewable resources. In fact, from 1916 to 1970, "energy tax policy focused almost exclusively on increasing domestic oil and gas reserves and production. There were no tax incentives promoting renewable energy or energy efficiency."[17] As a result of the many years of operating without competition from renewables in the marketplace or tax policy arena, the fossil fuel industry is now robust and mature with a financial advantage over renewables. Even as recently as the 2000's, U.S. energy policy was dominated by fossil fuel subsidy and tax credits, with some measures aimed at efficiency and alternative fuels (such as alcohol and bio-fuels) in the mix.[18]

Modern political and economic pressures will not allow the renewable industry to operate under the same cloak of preferential federal protection. As an example the Production Tax Credit (PTC), available only to wind and closed loop biomass systems, has recently become politically contentious. It was first

[16] Demand is the amount of power that is needed at a certain time, and may also be referred to as load.
[17] MOLLY F. SHERLOCK, CONG. RESEARCH SERV., R41227, ENERGY TAX POLICY: HISTORICAL PERSPECTIVES ON AND CURRENT STATUS OF ENERGY TAX EXPENDITURES 2 (2011).
[18] *Id*. at 6-8.

enacted in 1992 as part of the Energy Policy Act of 1992. The Energy Policy Act of 2005 created a substantially enlarged federal energy subsidy program, and while the amount of federal spending on renewables increased significantly as a result of EPAct '05, the Act also incentivized a significant increase of domestic fossil fuel production.

More recently, however, in response to more recent economic pressures and social awareness regarding the need to achieve more carbon emission mitigation, federal subsidy for fossil fuels have ceded some ground to renewables and "[t]he 2008 and 2009 stimulus bills expanded and extended energy tax incentives for renewables and efficiency."[19] Additionally, the American Recovery and Reinvestment Act of 2009 (ARRA) extended and modified a number of preexisting energy subsidies, notably creating the ARRA Section 1603 cash grant in lieu of an Investment Tax Credit. From 2008 to 2012, the PTC and Section 1603 cash grant resulted in a huge increase in the amount of wind generation in the United States.[20] Although the trend in energy tax policy is moving away from subsidies for traditional fuels, more support is needed to enable the renewable industry to become as robust and mature as the fossil fuel industry.

Total electricity consumption is projected to increase by .3% per year until 2035, even as average electricity use per person and per dollar of GDP decreases. The largest growth is anticipated in the industrial and commercial sector.[21] In an ideal world, the private sector would be able to meet the country's energy needs without governmental support. The world, however, is not ideal and federal investment is necessary. Prudent energy policy should focus spending of limited federal dollars on renewables rather than fossil fuels, with less political focus on subsidy independence.

Wind stands to gain a larger toehold in the energy market by offsetting coal's share, due to coal plant retirement resulting from stricter greenhouse gas and carbon regulations. The wind industry should be aided in its efforts to compete with fossil fuels by a federal subsidy that would allow the wide-scale deployment of offshore infrastructure. A RIFTIC, by incentivizing access to an abundant and clean source of renewable fuel located close to major load centers, would help move the U.S. energy market toward an economic scenario dominated less by fossil fuels.

Just as a national energy policy cannot succeed through dependence on any one resource, no single funding mechanism will be able to achieve the penetration of renewable resources to meaningfully offset reliance on fossil fuels. It is therefore important that the United States, in cooperation with federations of regional governments, embrace all possible funding mechanisms for renewable energy. Key mechanisms include the Production Tax Credit, Investment Tax Credit, and the Department of Treasury's cash grant in lieu of credit, discussed in more detail in the next section.

C. The Role of the Production Tax Credit and Investment Tax Credit in the Offshore Wind Industry

Wind energy, since it is commercial deployment, is financed primarily through private investment and the Renewable Energy Production Tax Credit (PTC), a federal subsidy that allows owners of wind

[19] *Id*. at 9.
[20] *See* U.S. DEP'T OF ENERGY, *supra* note 5. "In 2011, wind power was again (for the sixth time in seven years) the second-largest new resource added to the U.S. electrical grid in terms of gross capacity additions, behind the 10,500 MW of new natural gas capacity." *Id*. This represents 32% of new electric generating capacity for 2011.
[21] ANNUAL ENERGY OUTLOOK 2012, *supra* note 4,at 75.

generation capacity to receive a 2.2-cent credit per kilowatt-hour of electricity produced from qualified facilities.[22] The PTC became politically contentious during the 2012 Presidential Election, and is symptomatic of the fractured conception and implementation of U.S. energy policy. The PTC has expired and been renewed five times since its inception in the Energy Policy Act of 1992. The latest extension (for one year) approved only days before the expected sunset of the preceding legislation, is emblematic of the politically cyclical nature of renewable energy funding. The effects of the PTC on the wind industry highlight the need to move away from a subsidy that encourages dependence on federal money to a more comprehensive approach to energy policy planning.

The PTC has succeeded in that there has been a significant addition of generation capacity in the most recent decade. However, the current federal subsidy approach to wind is politically cyclical and does not motivate innovation or stabilize the industry.[23] As noted above, the PTC for qualified wind energy projects has expired and been renewed five times since 1992. Each time the credit is allowed to expire—or, as in 2012-2013 taken to the brink of expiration before extension[24]—the industry, specifically turbine manufacturing, experienced significant contraction. Manufacturers and developers cite the recent political uncertainty of the PTC as a primary weakness in current renewable energy policy.[25] This "boom and bust cycle" limits or eliminates lead-time and capital flexibility needed for project development.[26] "The intermittent and haphazard nature of U.S. energy policy also wreaks havoc with the business confidence necessary for the long-term investments required" to continually improve the product and to make choices geared toward beyond the life of the tax credit on which the emerging industry is reliant.[27]

Under the provisions adopted in 2009 through the ARRA, a qualified small wind energy facility can elect to take the renewable energy investment tax credit (ITC) instead of the PTC, for new installations.[28] The ITC "is equal to 30% of expenditures, with no maximum credit for small wind turbines placed in service after December 31, 2008."[29] Only investment in new property is eligible for

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[22] 26 U.S.C. § 45(a).

[23] *See* JESSE JENKINS ET. AL., BEYOND BOOM & BUST: PUTTING CLEAN TECH ON A PATH TO SUBSIDY INDEPENDENCE 5 (2012), *available at* http://thebreakthrough.org/blog/Beyond_Boom_and_Bust.pdf. While the PTC is indexed to inflation, and thus the level of subsidy does increase each year, the real dollar amount is constant, as the amount of the PTC has not increased since the credit was first enacted in 1992. Thus, there is "no clear incentive for continual cost declines or pathway to eventual subsidy independence." *Id.* at 37.

[24] The PTC was extended for one year as part of the "Fiscal Cliff" deal that the U.S. Congress passed on January 1, 2013. K. Kaufmann, *Wind Energy Tax-credit Extension part of "Cliff" Deal*, THE DESERT SUN (Palm Springs, CA), Jan 2, 2013, *available at* http://www.usatoday.com/story/news/nation/2013/01/02/fiscal-cliff-wind-energy-extension/1804447/.

[25] *See generally* INTERNATIONAL ECONOMIC DEVELOPMENT COUNCIL, UNDERSTANDING RENEWABLE ENERGY BUSINESSES: ALIGNING RENEWABLE ENERGY FIRMS + ECONOMIC DEVELOPERS (2013), *available at* http://www.iedconline.org/clientuploads/Downloads/edrp/IEDC_Renewable_Energy_Businesses.pdf.

[26] *See generally* Jenkins, *supra* note 23.

[27] *Id.* at 37; *see also* DEUTSCHE BANK CLIMATE CHANGE ADVISORS, INVESTING IN CLIMATE CHANGE 2011: THE MEGA-TREND CONTINUES - EXPLORING RISK & RETURN 60 (2011) (discussing the shortcomings of U.S. renewables policies with respect to three essential attributes of a successful subsidy—transparency, longevity and certainty.).

[28] *See* 26 U.S.C. § 48; see *also Business Energy Investment Tax Credit*, DSIRE (DATABASE OF STATE INCENTIVES FOR RENEWABLE ENERGY, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=US02F (last visited Aug. 20, 2013).

[29] *Business Energy Investment Tax Credit, supra* note 28.

the ITC, and the credit vests fully over a five-year period.[30] These types of investment tax credits can be highly valuable to investors seeking to recoup capital costs after a project is placed in service.

The third option, the ARRA Section 1603 Treasury Cash Grant, is a variation of the ITC. Pursuant to Section 1603, the U.S. Treasury "makes payments to eligible persons who place in service specified energy property and apply for such payments."[31] Basically, this provision allows eligible taxpayers to receive cash grants in lieu of the PTC or ITC. The Section 1603 Treasury Cash Grant was available to wind projects placed in service after 2010 but before January 01, 2013.[32] Similar to the ITC formula, payments are generally equal to 30% of the value of the property.[33] The Treasury Cash Grant, however, is somewhat more generous in important respects than the ITC. For example, the costs of roads to transport equipment to and from a wind farm are eligible for Treasury cash payments, but are not for the ITC.[34] Also, there are no limitations on receiving the Cash Grant based on the income of the recipient.[35]

A RIFTIC program should build on the positive attributes of the Treasury Cash Grant program, including allowing ancillary projects (like interconnection facilities) to benefit. Also, because regional cooperation and partial governmental ownership may be necessary or highly beneficial in the case of large-scale transmission projects (like a transmission "back bone" in the Mid-Atlantic and East Coast), the absence of this limitation on ownership would be essential to the success of a RIFTIC. By allowing project developers to recover up to 30% of eligible capital cost expenditures, the risk involved in capital-intensive projects, such as transmission of offshore wind, is mitigated to a large degree.

Indeed, while any transmission project is capital cost intensive, because capital cost is one of the largest hurdles for the continued market penetration of wind, a cash grant in lieu of an investment tax credit would be more useful than a credit based on production. This is supported by the popularity of the Section 1603 program. In the case of offshore wind projects and transmission infrastructure, an investment tax credit makes more sense. While traditional generation and transmission infrastructure is heavy on capital expenditure, offshore generation is particularly capital intensive because of the unique nature of the physical environment in which the infrastructure is located. Engineering, design and resiliency issues add to these complications. Further, subterranean and oceanic installation of transmission lines presents novel challenges. These related capital costs represent a large portion of the overall project cost for wind, and a hurdle for developing a robust offshore wind industry and achieving market penetration. Explicitly addressing these costs is key to the success of an energy tax scheme targeted at realization of a U.S. offshore wind industry. If the United States is to achieve significant gains in renewable generation levels, up to 20%[36] - 80%[37] of total installed capacity, wind penetration

[30] Edwin F. Feo & Simon Friedman, *Tax Equity Financing for Wind Projects*, *in* ENERGY AND ENVIRONMENTAL PROJECT FINANCE LAW AND TAXATION: NEW INVESTMENT TECHNIQUES 703, 712 (Andrea S. Kramer & Peter C. Fusaro eds., 2010).
[31] U.S. DEP'T OF TREASURY, PAYMENTS FOR SPECIFIED ENERGY PROPERTY IN LIEU OF TAX CREDITS UNDER THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009, at 2 (rev. 2011), *available at* http://www.treasury.gov/initiatives/recovery/Documents/GUIDANCE.pdf [hereinafter Section 1603 Guidance].
[32] Feo & Friedman, *supra* note 30.
[33] *Id.*
[34] *Id.* at 727–28.
[35] *Id*.
[36] *See generally* U.S DEP'T OF ENERGY, 20% WIND ENERGY BY 2030: INCREASING WIND ENERGY'S CONTRIBUTION TO THE U.S. ELECTRICITY SUPPLY 1 (2008); 2011 WIND MARKET REPORT, *supra* note 5.

levels must be elevated significantly. The PTC alone is ill suited to achieve the dual objective of increased generation capacity and decreased intermittency.

D. Production Tax Credit Long-Term Extension

Under the RIFTIC paradigm proposed in this Article, Congress would enact a long-term PTC extension. Despite the politically contentious nature of the PTC, the potential economic benefits of enacting a long-term extension should outweigh the political risk of subsidizing the renewable energy industry through financial instruments that are more permanent and reliable. As such, Congress should enact a long-term extension of the PTC. The RIFTIC could be a tool to harness all of the available mechanisms to achieve a healthy and robust offshore wind industry and integrate it into the energy market. This approach mirrors the Obama Administration's "all of the above" approach to energy policy, which the President discussed most recently in a June 25, 2013 speech at Georgetown University, which outlined his comprehensive energy plan, focused on combatting climate change.[38] Furthermore, during the contentious period prior to the reauthorization of the PTC for 2013-2014, the American Wind Energy Association (AWEA) issued a compromise proposal outlining a PTC "phase out." According to the advocacy group, assuming industry was able to meet technology improvement goals,

> Analytical results indicate that a PTC beginning with 2.2 cents per kilowatt-hour, or 100% of the current level for projects that begin construction in 2013, followed by 90%, 80%, 70%, 60%, and then 60% of the current level for projects that are placed in service in years 2014 through 2018, with no PTC in 2019 or afterwards, would sustain a minimally viable industry, able to continue achieving cost reductions.[39]

A "phase out" approach, however, may not yield superior economic benefits over extending the PTC. While subsidy independence is certainly ideal, forcing the technology-dependent renewable energy industry that is still—relative to the fossil industry—nascent to compete with a mature and fully scaled industry is unfair and uneconomical. Nor is it immediately necessary that the renewable sector achieve subsidy independence. A long-term PTC extension would stabilize the industry, allowing it to recover from the most recent downturn (included lost jobs and cancelled projects) and would incentivize continued production. Furthermore, a long-term extension would likely lead to increased research and development to improve turbine capacity factors and efficiency. Therefore, a long-term extension achieves desirable results for the wind industry and the retail and wholesale electricity market.

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[37] NATIONAL RENEWABLE ENERGY LABORATORY, RENEWABLE ELECTRICITY FUTURES STUDY—EXECUTIVE SUMMARY 14 (2012), *available at* http://www.nrel.gov/docs/fy13osti/52409-ES.pdf.

[38] President Obama's Climate Action Plan is available at http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf.

[39] Letter from Denise Bode, CEO, Wind Energy Association, to Senator Max Baucus et al. (Dec. 12, 2012), *available at* http://www.eenews.net/assets/2012/12/13/document_daily_01.pdf. The AWEA suggested this phase out approach in the event Congressional leaders were not able to come to an agreement during the very tense budget negotiations at the end of 2012. The AWEA claimed this approach would allow the industry to stay minimally viable, in the absence of federal dollars.

Legislation proposed in the 112th Congress, if enacted today, is insufficient to achieve the desired results of a long-term PTC.[40] While a contraction of the industry may make the industry more economically independent, it does not add to a meaningful carbon mitigation national energy policy. Because the industry suffered from the uncertainty preceding the most recent one-year extension, a mere one- or two-year extension is not enough to provide the stability to sustain a project from concept to installation. Furthermore, because of the long lead-time associated with wind projects, a mere one-year extension will not mitigate (let alone reverse) all of the previous damage. Finally, the same uncertainty looms as the current one-year extension approaches its sunset deadline. Instituting a long-term extension of the PTC and introducing an investment-targeted incentive specifically aimed at capital costs would incentivize both the installation and production of wind power, creating a financial environment conducive to offshore projects. Because the PTC has survived the most recent threat of extinction, the debate now needs to move to the heart of the matter; establishing a sustainable and forward-thinking trajectory for United States energy tax policy that mirrors the President's call for an "all of the above" strategy.

III. Natural Gas and Wind: Redefining the Relationship

Natural gas can counteract the variability of intermittent renewables because of the quick start nature of gas plants and its dispatchability and pipeline storage potential. The problem of intermittency is one of the largest impediments to the widespread adoption of wind power in the United States. While capacity factors of wind turbines have improved dramatically over the last decade and the resource profile for offshore wind is favorable, offshore wind's potential maximum capacity factor of 50% is still quite low when compared to natural gas or coal.[41] This lower capacity factor provides political ammunition to attack wind energy resources as inferior to natural gas.

The price of natural gas in relation to wind and the inherent intermittency of wind are closely related in the context of the proposed RIFTIC. Both issues represent stumbling blocks to the wide-scale deployment and political and social acceptance of a robust offshore wind industry. A RIFTIC would seek to address and mitigate both of these stumbling blocks. Because of the economics of the competitive electricity marketplace, natural gas has emerged as a competitor to renewable energy, specifically wind.[42] Based on price per kilowatt-hour of electricity produced, wind power competes with natural gas, but this is a result of the PTC. Without the PTC, natural gas would be economically superior. Additionally, intermittency concerns could be allayed with the use of natural gas as a firming fuel (augmenting wind energy facilities when the wind does not blow). However, promotion of natural gas

[40] *See* American Renewable Energy Production Tax Credit Extension Act of 2011 (H.R. 3307) (proposing a four-year extension, sunsetting in 2017); American Energy and Job Promotion Act (S. 2201) (proposing a two-year extension sunsetting in 2015).

[41] The average capacity factor for a natural gas combined cycle turbine is roughly 85.60%, with a 93% maximum. The capacity factor for coal facilities ranges between 80-90%. *Transparent Cost Database*, *supra* note 14.

[42] Kevin Doran & Adam Reed, *Natural Gas and its Role in the U.S. Energy End Game*, YALE ENVIRONMENT 360 (Aug. 13, 2012), http://e360.yale.edu/feature/natural_gas_role_in_us_energy_endgame/2561/ (last visited Sept. 23, 2013).

as a bridge fuel should not be used to justify a switch to, or reliance on, natural gas without an accompanying vision for a transition to a more renewable energy-based resource mix.[43]

A. The Natural Gas Debate

The huge growth in previously unavailable unconventional gas resources (shale and tight gas accessed via hydraulic fracturing and horizontal drilling) has affected a sea change in the national energy debate. After almost a decade of real technological, political, and social advances in wind energy production and use, a domestic natural gas "boom" threatens, or has already begun to derail this progress. Although the natural gas industry has historically been subject to a high degree of price volatility,[44] currently natural gas is the cheapest it has ever been (or nearly so), and supply is at an all time high.[45] Exploitation of these domestic resources is considered an urgent priority.[46] Political motivation to fully commit the United States to natural gas as a plentiful and cheap domestic resource is strong;[47] while support for renewable energy is not as robust as it was at the beginning of President Obama's first term. President Obama, former Secretary of Energy Stephen Chu, and current Secretary of Energy Dr. Ernest Moniz all endorse what has become known as an "all of the above" energy policy that includes exploitation of the newly accessible unconventional shale gas resources. Secretary Chu, while touring the National Renewable Energy laboratory, stated that "[a]s President Obama made clear … we need an all-out, all of the above strategy that develops every available source of American energy."[48] Wind energy is disproportionately affected by the rise in domestic unconventional natural gas production and its corresponding low cost.

There is mounting evidence that the "gas boom" is merely a bubble. The uncertainty surrounding the future of domestic gas reserves and price stability in the long term is supported by research recently published by the Post Carbon Institute.[49] This report challenges the popular premise that domestic unconventional drilling will greatly expedite U.S. energy independence.[50] Enhanced reliance on natural

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[43] *See generally* Patrick Parenteau & Abigail Barnes, *A Bridge Too Far: Building Off-Ramps on the Shale Gas Superhighway*, 49 IDAHO L. REV. 325 (2013).

[44] *See* ERIN MASTRANGELO, U.S. ENERGY INFORMATION ADMINISTRATION, AN ANALYSIS OF PRICE VOLATILITY IN NATURAL GAS MARKETS (2007), http://www.eia.gov/pub/oil_gas/natural_gas/feature_articles/2007/ngprivolatility/ngprivolatility.pdf.

[45] Doran & Reed, *supra* note 42.

[46] *See generally* Keith Schneider, *U.S. Fossil Fuel Dims Glow of Clean Energy,* YALE ENVIRONMENT 360, Mar. 29, 2012, http://e360.yale.edu/content/print.msp?id=2511 (last visited Sept. 23, 2013); MICHAEL WEBER, CENTER FOR CLIMATE AND ENERGY SOLUTIONS, THE LOOMING NATURAL GAS TRANSITION IN THE UNITED STATES (2012), *available at* http://www.c2es.org/docUploads/natural-gas-transition-us.pdf; Doran & Reed, *supra* note 42.

[47] *See generally* Schneider, *supra* note 46; Ned Haluzan, *Wind Energy vs. Natural Gas – U.S. Perspective*, RENEWABLE ENERGY ARTICLES, May 17, 2011; Bruce Smith, *Fracking, Economy Slow Developing SC Offshore Wind*, BLOOMBERGBUSINESSWEEK, Sept. 13, 2012, http://www.businessweek.com/ap/2012-09-13/fracking-economy-slow-developing-sc-offshore-wind (last visited Sept. 23, 2013).

[48] Press Release, U.S. Dep't of Energy, Chu in Pittsburgh: "We need an All-Out, All-of-the-Above Strategy that Develops Every Available Source of American Energy," Feb. 9, 2012, http://energy.gov/articles/chu-pittsburgh-we-need-all-out-all-above-strategy-develops-every-avaialable-source-american.

[49] Hughes, *Drill, Baby, Drill*, *supra* note 4, at 50.

[50] *Id*. at 59.

gas with an unproved future is therefore unwise.[51] This research, viewed in light of growing concern over a domestic market exhibiting signs of a steep rise in price, coupled with looming Liquefied Natural Gas (LNG) export applications pending at the Department of Energy that may reduce domestic supply[52] supports the case for a re-evaluation of prioritizing natural gas as the primary fuel for electricity production in the future.

As J. David Hughes notes, high-yield unconventional gas wells are not common, and the top three producing wells are responsible for 66% of total output, and the top six producing wells are responsible for 88% of total output.[53] Also, most wells decline from peak production after about 36 months. At the current rate of production, the U.S. has an estimated supply of 24 years' worth of economically recoverable gas.[54] These development and production projections do not take into account possible federal regulation of hydraulic fracturing based on environmental impacts or costs that could influence (most likely slow) the rate of extraction.[55]

B. Natural Gas as a Bridge Fuel and as a Firming Resource for Wind Power

Reliance on natural gas alone as a fully viable alternative to coal is unwise. Developing natural gas as a bridge fuel to a carbon-free clean energy economy will be a "bridge to nowhere," unless federal energy policy also embraces technological developments in the renewable energy industry and the policy mechanisms that support them. Natural gas resources should not be developed independently, nor at the exclusion of renewable energy resources. A bridge must link one finite point to another. Here, the far side of the bridge is a robust offshore wind industry. Natural gas resources can be used as a way to transition the United States away from fossil fuels to renewable energy resources. Complete reliance on natural gas will not enable the United States to achieve its clean energy goals. Massive renewable use requires significant financial, societal, and political support, but holds promise that complete reliance on natural gas does not. A federal energy policy is needed that aligns the two resources to not only buttress one another, but to also place the country on a path toward less dependence of fossil fuels. The proposed RIFTIC is a potential mechanism to harness the effective use of natural gas as a bridge fuel while avoiding complete reliance on natural gas and enabling a comprehensive national wind policy to emerge.

In order to create a financial environment that provides the most value to the U.S. energy consumers, a RIFTIC should be available only to transmission projects for both renewable electricity and natural gas that serves a wind power facility. The natural gas credit should not be available to stand-alone transmission infrastructure, but rather available only when linked to wind resources for firming capabilities. For example, the construction of natural gas pipelines with a demonstrated firming contract or relationship to a wind project should be eligible for a federal subsidy under a RIFTIC program. Transmission projects to support offshore turbines should also be eligible for subsidies. These

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[51] *Id*.
[52] *See* NERA ECONOMIC CONSULTING, MACROECONOMIC IMPACTS OF LNG EXPORTS FROM THE UNITED STATES 1 (2013), *available at* http://www.nera.com/67_8081.htm.
[53] Hughes, *Drill, Baby, Drill*, *supra* note 4, at 52.
[54] *Id*. at 75.
[55] *Id*. at 77.

types of subsidies are preferable because the transmission infrastructure, while geared toward the support and delivery of electricity produced from offshore wind power, would still be subject to the open access transmission tariff and requirement of non-discrimination imposed by the Federal Energy Regulatory Commission (FERC). As such, even though a company may pay for the construction of transmission infrastructure, it is not allowed to charge itself preferential rates. Allowing for an upfront cost recovery, in conjunction with the PTC, would hopefully mitigate these FERC requirements while ensuring that wind power remains properly incentivized.

"Firming" is a secondary resource, available as quick start generation capacity to supplement intermittent generation when the intermittent resource is not able to produce enough electricity to meet current load demand. Wind installations have a large capacity, but less potential generation contribution to the grid.[56] As mentioned above, the capacity factor for wind turbines is now roughly 50%. Further, when demand is at its peak, wind is typically not able to generate enough power to service this demand. Energy facilities generating electricity from wind, in order to enhance the security and stability of their operations, should supplement their production with other sources of energy.

In 2011, the Interstate Natural Gas Association of America (INGAA) sponsored a study conducted by ICF International on this topic.[57] The study looked specifically at the costs of natural gas transportation infrastructure needed to firm wind generation. "[T]he need for reliable backup for renewable generation will require development of some form of electricity storage or gas-fired generation and its supporting infrastructure."[58] The INGAA report highlighted two main considerations of firming generation: the ability for the firming transmission to respond on short notice and the importance of a cost recovery mechanism for such transmission.[59] "As a result, the costs … may need to be directly associated with the cost of the wind generation itself."[60] A RIFTIC would be directly in line with this recommendation. By uniting wind generation and natural gas transport under a single financing mechanism, cost allocation and recovery becomes more certain.

Further, natural gas as part of the "mix" may help lead to eventual renewable subsidy independence. By stimulating deployment of renewables and reliance on offshore wind, the industry may be able to achieve scalable supply chains, installation mechanisms, and other cost saving opportunities. Moreover, as the amount of wind generation (and Combined Cycle Gas Turbine generation) grows and offsets the amount of coal generation in the U.S., gas producers will have a stable market in which to sell. Through the RIFTIC, pipeline owners would be able to recoup some of the costs of building the necessary infrastructure to support these market developments.

Eventually, the mechanism by which natural gas provides the firming capability for wind energy facilities would need to be further defined to effectively implement a RIFTIC. For purposes of this Article, it is not essential to fully investigate the possibilities but it is helpful to understand how gas is usually traded. Traditionally, a gas utility offers a bid into the day-ahead market. The generation owner

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[56] ANNUAL ENERGY OUTLOOK 2012, *supra* note 4, at 90.
[57] THE INGAA FOUNDATION, INC., FIRMING RENEWABLE ELECTRIC POWER GENERATORS: OPPORTUNITIES AND CHALLENGES FOR NATURAL GAS PIPELINES (2011), *available at* http://www.ingaa.org/Foundation/Foundation-Reports/Studies/13417/12751.aspx.
[58] *Id.* at 70.
[59] *Id.* at 73.
[60] *Id.*

is able to make any bid it wants as long as it fulfills its obligation to bid into the day-ahead market. Once the bid is *not* selected, the generator's duty is fulfilled, and it need only make its best effort to be available if needed; there is no affirmative obligation to supply power unless contractually obligated to do so. Under a RIFTIC regime, the gas utility or generator *would* have an affirmative obligation to provide service. To effectuate this, the offshore project developer and owners would have to contract with gas companies and transmission owners to provide firming capabilities. Whether this is done through a forward contract,[61] a power purchase agreement (PPA), or bought in blocks on the spot market remains to be explored. What is important is that the RIFTIC should not be available to a stand-alone natural gas project and wind developers must demonstrate a firming "plan" to be eligible.

Gas is useful as a firming mechanism and "stop-gap" on the way to a carbon-free future. Linking gas to the offshore wind industry will mitigate its adverse impact on a still fledgling industry. Encouraging wind will discourage over-reliance on gas.

IV. Realignment of Regulatory and Policy Mechanisms to Incentivize Offshore Wind

A. FERC Measures and National Transmission Policy

The Federal Energy Regulatory Commission (FERC), the federal agency responsible for the planning and interconnection into the grid, has made incremental advances to incentivize and ease the way for the development and use of renewable resources. It has not yet gone far enough, however. FERC is largely silent regarding planning for or incentivizing offshore wind.

In June 2012, FERC finalized an amendment to the pro forma Open Access Transmission Tariff (OATT).[62] FERC Order No. 764, Integration of Variable Energy Resources, requires that all public utility transmission providers allow for intra-hourly transmission scheduling and requires generating facilities and public transmission utilities to communicate certain data to facilitate power production forecasting.[63] This is designed to facilitate the development and use of renewable energy resources and to eliminate built-in tariff advantages for scheduling of base-load resources, such as coal. Before this change, under the OATT, transmission customers utilizing variable energy resources (VERs) had no ability to mitigate "imbalance charges" by updating transmission schedules within the hour to reflect actual generation output.[64] By contrast non-VERs, like coal, have little need for 15-minute scheduling.

More importantly, the most significant measure FERC has taken since to specifically influence energy transmission infrastructure planning in the United States is FERC Order No. 1000.[65] Order 1000 mandates that interregional planning commissions and operating entities (such as Regional Transmission Organizations (RTOs & Independent System Operators (ISOs)) consider public policy

[61] A forward contract is a mechanism to provide a commodity at a contractually agreed upon price. The commodity is not necessarily delivered when the contract is executed, but rather at a date specified in the agreement. Forward contracts can be useful tools to hedge against price uncertainty or volatility.
[62] Federal Energy Regulatory Commission, Integration of Variable Energy Resources Final Rule, 139 FERC ¶ 61,246, 18 CFR Part 245 (June 22, 2012).
[63] *Id*.
[64] *Id*.
[65] FERC Order No. 1000, 136 FERC ¶ 61051, 2011 WL 2956837 (July 21, 2011).

when making transmission planning and expansion decisions.[66] Order 1000 seeks to rectify inefficiencies in transmission market operations and transactions, caused by an earlier FERC order, which did not require transmission providers to consider regional transmission needs in the context of public policy requirements.[67] Further, Order 1000 aims to incentivize cost allocation methods for interregional transmission facilities.[68] This public policy planning requirement, however, is "biased toward building cross-country transmission 'superhighways' that would connect remote onshore wind to areas with untapped—and more efficient— coastal and offshore wind resources."[69]

This type of inter-regional transmission planning will most likely lead to conversations about cross-country energy transport. This is apparent when looking at recent studies and the lack of meaningful consideration of offshore resources by the regional transmission operator, PJM (Pennsylvania-New Jersey-Maryland), a membership based organization whose members own transmission infrastructure and cede market and asset operational control to the non-profit organization.[70] For example, a 2012 PJM wind integration study discusses offshore resources as such: "More research and development is needed on offshore meteorology as input for offshore wind forecasting. Fewer measurements of current wind conditions, surface temperatures and other meteorological factors over water are available to tune forecast models."[71] A notable exception to this lack of consideration is the Eastern Interconnection Planning Collaborative (EIPC), which issued a report modeling regional implementation of a national renewable portfolio standard (RPS) enabling 30% wind penetration resulting from offshore installation.[72] However, even the EIPC does not give meaningful consideration to offshore wind as a probable resource. Public policy consideration in regional transmission goals is essential to offshore wind transmission siting. Yet, current federal policy alone is insufficient to promote offshore wind development. Therefore, a RIFTIC program is needed to specifically target offshore wind resources.

A RIFTIC would eliminate the need for cross-country transmission projects, which are currently necessary to integrate western wind power into mid-western and eastern states, and move wind electricity generation near load centers on the East Coast. Because the purpose of the RIFTIC would be to develop alternatives to cross-country transmission projects, wind developers in the west seeking to transmit electricity to the load centers of the east should not be eligible for the credit. Such long distance transmission does little to enhance the stability or security of the grid and does nothing to

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[66] *Id*.

[67] FERC Order No. 890, 72 Fed. Reg. 12,266 (Mar. 15, 2007).

[68] FERC Order No. 1000, *supra* note 65.

[69] Emily E. Steinhilber & Jonathan R. Voegele, *Taxation and Electricity Transmission: Bringing Wind Energy onto the Grid* 166, *in* CRITICAL ISSUES IN ENVIRONMENTAL TAXATION VOLUME XII GREEN TAXATION AND ENVIRONMENTAL SUSTAINABILITY (Larry Kreiser et al. eds., 2012).

[70] *See* EXETER ASSOCIATES, INC. & GE ENERGY, PJM INTEGRATION STUDY: REVIEW OF INDUSTRY PRACTICE AND EXPERIENCE IN THE INTEGRATION OF WIND AND SOLAR GENERATION (2012). PJM is a regional transmission organization (RTO). The organization is responsible for operating a large portion of the electricity market and transmission infrastructure in the eastern interconnection.

[71] *Id*. at 115.

[72] EASTERN INTERCONNECT PLANNING COLLABORATIVE, PHASE 1 REPORT: FORMATION OF STAKEHOLDER PROCESS, REGIONAL PLAN, INTEGRATION AND MACROECONOMIC ANALYSIS (2011). The EIPC is a coalition of eastern energy stakeholders formed in 2010 organized to identify and analyze policy-planning options. This report is an inter-ISO transmission planning tool for the Eastern Interconnect.

mitigate the intermittency concerns inherent in wind power. Relaying power across such large spans will lead to increased line loss of electricity and economic losses. To this end, tying offshore wind resources with onshore firming capabilities will allow the resource to develop as part of a holistic resource mix rather than an independent resource competing on an uneven playing field.

National transmission policy should be strategic, aligning availability with need. This incentive will enable energy providers to deal with important regional questions while removing the need to transport power literally across the country.[73]

B. Regional Renewable Portfolio Standard and Renewable Electricity Credits

Individual states' Renewable Portfolio Standards (RPS) are responsible for the majority of onshore wind generation in the last decade and remain the primary driver of renewable energy installation.[74] Currently twenty-nine states plus the District of Columbia have mandatory RPS programs.[75] New Jersey has an RPS that specifically sets a target of 20.38% renewables by 2021, which specifically includes 1100 MW of offshore wind.[76] This individualized paradigm alone, however, is insufficient to incentivize significant offshore generation.

While a federal renewable portfolio standard would likely expedite offshore wind generation, such a standard is currently politically unworkable.[77] However, there is hope for a regional RPS. Regional cooperation on energy policy holds much promise for offshore wind. A regional RPS would be supported by, and complimentary to, the concept of regional energy policy and regulatory cooperation. The nature of the resource and the infrastructure needed (including a potential transmission "backbone" such as proposed by the Atlantic Wind Connection) to support it favors regional cooperation. A regional procurement standard would be in line with these objectives. In fact, according to the EIPC, the only way an offshore industry is economically viable in light of onshore wind is in the context of a regional or federal RPS-type program.[78]

RPS programs create a market for Renewable Energy/Electricity Credits (REC). A REC equates to the "renewableness" of the power a particular generator creates. Generally, an owner of one MWh of electricity produced from a qualified renewable resource owns one REC. This credit or certificate can then be sold in a national market. Often, utilities will buy RECs from other jurisdictions to help satisfy their domestic RPS requirements. When an REC is sold, however, the generator of the MWh can no

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[73] Steinhilber & Voegele, *supra* note 69, at 165.

[74] PHILLIP BROWN, CONG. RESEARCH SERV., R42576, U.S. RENEWABLE ELECTRICITY: HOW DOES THE PRODUCTION TAX CREDIT (PTC) IMPACT WIND MARKETS*?* 8 (2012).

[75] *Id*. at 7-8. A comprehensive list of current state RPS programs, including voluntary programs, is available from the Database of State Incentives for Renewables & Efficiency (DSIRE) program, a collaboration between the Dept. of Energy, Interstate Renewable Energy Council and North Carolina Solar Center. *See* DSIRE, Renewable Portfolio Energy Standards, *available at* http://www.dsireusa.org/documents/summarymaps/RPS_map.pdf.

[76] *See New Jersey Renewables Portfolio Standard,* DSIRE, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=NJ05R&re=0&ee=0 (last visited Aug. 20, 2013).

[77] *See* FRED SISSINE, CONG. RESEARCH. SERV., RL34116, RENEWABLE ENERGY PORTFOLIO STANDARD (RPS): BACKGROUND AND DEBATE OVER A NATIONAL REQUIREMENT (2007).

[78] EIPC, *supra* note 72.

longer claim the green attribute of the power. When a generator (or a purchaser) wants to retain the "green" attributes of the renewable power, the REC must be retired, and no longer traded on the REC market.

Tying transmission and firming capabilities to renewable development as eligibility requirements, especially if done within a regional RPS (of which RECs are a part), would achieve two beneficial economic consequences. First, it would create a market for both the power generated and the REC's. Second, it would create certainty and stability within these markets that would in turn encourage investors and developers. Independent Service Operator–New England already requires that "renewable energy imported from outside the RTO needs to have firm transmission capacity. This requirement has kept REC prices high in New England and substantiates the need for additional transmission capacity…"[79] In New England,

> RECs, each of which receives a unique tracking identification number, represent the renewable attributes of electricity generated from a qualified renewable power facility… RECs can potentially provide an additional revenue source for wind projects, although the value of RECs can vary depending on the supply/demand balance within certain markets.[80]

A RIFTIC program would necessitate a continued REC market. However, this market should be based on a regional RPS rather than on individual state RPS programs. The mechanisms and certainty of this market based on a regional standard is unclear, however. But it *is* clear that a RIFTIC subsidy should include bundled transmission-firming capabilities rather than merely relying on compliance credits for state RPS. Although state RPS programs have traditionally driven, and will continue to drive, the installation of wind capacity, once the state RPS portfolio is satisfied, there will no longer be any major market incentives to push toward more wind power installation (or renewable installation generally), or to continue innovation of more efficient and technologically advanced turbines. States are unlikely to continuously raise RPS requirements to affect a transition to reliance on offshore wind.

Individually neither a regional RPS, a REC market, nor the PTC alone is sufficient to affect a transition to greater reliance on offshore wind. These three incentives, however, working strategically together in the context of a federal financing initiative could have a significant penetration impact. It is therefore preferable to incentivize regional planning through a federal subsidy that will encourage significant market penetration and eventual subsidy independence.[81]

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[79] EDWARD N. KRAPELS ET. AL., MEETING NEW ENGLAND'S RENEWABLE ENERGY TARGETS: A PRACTICAL THREE-STEP PLAN 9 n. 5 (2010).

[80] Brown, *supra* note 74, at 8 (2012).

[81] As an aside, a state or local regulatory analysis is beyond the scope of this Article. The intention of this Article is to keep a wide lens and broadly focus on the issues. More refined details are not necessary to conceptualize how the credit would work on the macro level.

V. The Framework of a New Subsidy

A. Proposed Legislation

Both the House and the Senate have proposed legislation that deals with the creation and implementation of a "renewable integration credit." Basically, the proposed integration credit in its various forms seeks to incentivize utilities to procure renewable energy and subsidize its use. The 111th and the 112th Congress each proposed legislation that sought to encourage the use of ethanol or biofuel and to provide payment to utilities that purchased wind or solar power.[82] S. 559 (111th Congress) has language that if passed would enact a "renewable integration credit" and go one step further by also creating a "renewable fuel" pipeline loan guarantee for up to 80% of the total project cost.[83] However, the renewable fuel pipeline provision is not directed to or targeted at encouraging firming infrastructure or even electricity transmission projects. Subsection (e) of Title II of the bill, entitled "Rapid Deployment of Renewable Fuel" calls for the "[i]nstallation of sufficient infrastructure to allow for the cost-effective deployment of clean energy technologies appropriate to each region of the United States…."[84] The pipeline credit is targeted specifically and exclusively at advanced bio-fuel, such as ethanol, biodiesel, and cellulosic biomass fuels. The use of the term "renewable fuel" per the Clean Air Act definitions contained in Section 211(0)(1) is far more limiting and less preferable than the use of the term "electricity." It is also less preferable to explicitly carve out transmission costs of electricity produced from wind and solar, or natural gas pipelines used for firming intermittent electricity. If the credit were adopted as currently written, infrastructure needed for the transmission of electricity produced from offshore wind would not qualify for the credit.

Despite this, the RIC could prove useful as a model or starting point. A truly effective tax subsidy, however, should be targeted at transmission infrastructure for the delivery of competitive renewable energy commercially deployable on a large scale. No federal program has been proposed for such a credit. Admittedly, tying natural gas to a tax credit that rewards installation of infrastructure introduces the hazard of subsidizing the gas industry while it is doing well and arguably does not need a subsidy. However, using the model of the RIC, but targeting *transmission* and providing the subsidy to utility/generator *and* transmission owners (transmission and production of gas must be functionally unbundled), would avoid this problem.[85]

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[82] In the 111th Congress, see H.R. 4149: A bill to amend the Internal Revenue Code of 1986 to provide a renewable electricity integration credit for a utility that purchases or produces renewable power (H.R. 4149) and Securing America's Future with Energy and Sustainable Technologies Act (S. 3576). In the 112th Congress, see Renewable Energy for a Brighter Future Act (H.R. 2391); Securing America's Future with Energy and Sustainable Technologies Act (S. 559); and A bill to amend the Internal Revenue Code of 1986 to provide a renewable electricity integration credit for a utility that purchases or produces renewable power (S. 1291). Note that S. 1291 contains only language for the renewable integration credit. S. 559 is a broader energy bill that includes a renewable integration credit as one of many provisions.

[83] S. 559, Title II—Production and use of renewable fuel, Section 201—Loan Guarantees for Projects to Construct renewable Fuel Pipelines.

[84] *Id*.

[85] While some may argue that actual unbundling is necessary to prevent discrimination, the operators will still be subject to the OATT and demonstrate a service commitment to renewable resources, and specifically offshore wind. Actual unbundling seems unnecessary in this regard.

Furthermore, in the case of the renewable Electricity Integration Credit, utilities are the beneficiaries, rather than producers or generation owners.[86] This credit is limited to wind and solar facilities.[87] The legislation proposed in the 112th Congress (H.R. 2391) mirrors legislation proposed in the 111th Congress (H.R. 4149) in all critical respects including a continuation of a payment in lieu of tax credit provision.[88] However, the integration credit is still geared toward the *production* of renewable electricity, in that the credit is based on the amount of electricity produced and sold to retail customers. In fact, the credit specifically is limited to the sale of electricity to retail customers. The credit does encourage utilities to purchase intermittent sources of power, which does create demand for renewable energy—a definite positive element of the RIC. But, the RIC does not seek to mitigate the intermittency problems of VERs, nor does it facilitate the transmission or connection issues attendant in actually integrating the renewable resources into the grid.

Indeed, the ARRA Section § 1603 Treasury Grant program in its current form (which would likely be popular in the future based on its initial success and percentage of projects opting for the cash grant[89]) specifically disqualifies costs incurred "by the producer of the electricity for interconnection facilities, distribution upgrades" or other transmission infrastructure projects.[90] While a RIFTIC program would not be designed to allow a utility or generator to claim costs that should be included in their rate base, certain initial interconnection costs should be eligible for subsidization. The purpose of this tax program would be to expedite and facilitate a rapid transition to a renewable-based energy economy. Ensuring that certain necessary technologies will be eligible for an offset will likely lead to a more enthusiastic push toward installation. Federal money for this technology would aid in combating the variability of connecting large amounts of intermittent resources into grid. The proposed House and Senate legislation may prove useful as a framework or starting point to begin construction of a new energy tax mechanism that is more comprehensive and addresses the major impediments to the large-scale installation of intermittent resources.

B. Department of Energy Offshore Wind Strategy and Permitting Issues

In 2011, the U.S. Department of Energy released "A National Offshore Wind Strategy: Creating an Offshore Wind Energy Industry in the United States (Strategy Report).[91] This report is a comprehensive approach outlining the steps the nation might take toward achieving a robust and fully functioning offshore wind energy industry. The Strategy Report identified offshore wind farm installation permitting issues as unduly duplicative and burdensome as a result of the nascent and untested nature

[86] *See* H.R. 4149 and H.R. 2391 defining "eligible taxpayer" as an electric utility.
[87] *See id*. (defining renewable electricity as wind and solar, respectively).
[88] *Id.* Sec. 6433(a) Renewable Electricity Integration Payments. The payment is tied to the number or kilowatt hours of renewable electricity (wind or solar) produced or sold to retail customers.
[89] PHILLIP BROWN & MOLLY SHERLOCK, CONG. RESEARCH SERV., R41635, ARRA SECTION 1603 GRANTS IN LIEU OF TAX CREDITS FOR RENEWABLE ENERGY: OVERVIEW, ANALYSIS, AND POLICY OPTIONS (2011).
[90] H.R. 4149 and H.R. 2391, Sec. 6433(d)(2) ("[C]harges intended to recover integration costs do not include amounts paid by the producer of the electricity for interconnection facilities, distribution upgrades, network upgrades....")
[91] *See* NATIONAL OFFSHORE WIND STRATEGY, *supra* note 9.

of the process.[92] Now that the Mineral Management Service is no longer in existence, the Bureau of Ocean Energy Management (BOEM) is in charge of offshore wind permitting decisions.[93] The restructuring provides the opportunity to engage in streamlining the permitting process of offshore facilities. A streamlined permitting process built into the responsibilities of the BOEM, combined with a priority status for "backbone" projects funded with tax subsidy dollars would effectively answer the DOE's call for a major hurdle to be significantly lessened.

Additionally, the federal permitting dashboard initiative implemented as a result of President Obama's call to streamline the permitting process for key federal projects can play an important role in "coordinated and concurrent project review processes."[94] The executive order created an online database and listing status that works to ensure that projects key to the national well-being—from energy to highway and bridge construction—benefit from diligent agency cooperation and public access to information. These projects are often environmentally challenging and permit intensive. The federal permitting dashboard could be used as a mechanism to deploy the streamlined permitting process that the DOE has determined to be a necessary and central component of creating a robust offshore wind energy industry in the United States.[95] Listing offshore wind projects on the federal dashboard will help address this need.[96]

C. 2009 New England Governors' Renewable Energy Blueprint

New England's "Renewable Scenario Development Analysis" (RSDA) developed by ISO-New England, identifies key potential for the New England states, through coordinated and targeted regional panning and regulatory cooperation, to develop regional renewable resources (primarily wind) goals.[97] Included in the RSDA are "[a] number of potential transmission projects … that would allow for the reliable transfer of power from offshore and onshore wind resource regions to load across New England, and for export to [neighboring states and regions]."[98] Additionally, the New England Governors' Renewable Energy Blueprint calls for a "commonality of purpose" across the region in achieving low-cost, low-carbon energy goals through regulatory mechanisms such as power procurement contracts, allocation of RECs and siting authority.[99] The report calls for increased interstate cooperation, especially regarding siting for transmission projects.[100] Finally, the report identifies key areas where federal and state cooperation should be improved to better facilitate

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[92] *Id*. at 10.

[93] ADAM VANN, CONG. RESEARCH SERV., R40175, WIND ENERGY: OFFSHORE PERMITTING 5-6 (2012).

[94] *See* Executive Order 13,604, Improving Performance of Federal Permitting and Review of Infrastructure Projects, 77 Fed. Reg. 18,887 (Mar. 28, 2012). Indeed, this has already begun to happen for onshore wind projects. Two are currently slated to be listed: the Chokecherry/Sierra Madre Wind Energy Project in Wyoming (3,000 MW) and the Mohave Wind Energy Project in Arizona (425 MW).

[95] NATIONAL OFFSHORE WIND STRATEGY, *supra* note 9.

[96] *Initial High Priority Projects*, FEDERAL INFRASTRUCTURE PROJECTS PERMITTING DASHBOARD, http://permits.performance.gov/projects/High%20Priority (last visited Sept. 23, 2013).

[97] THE NEW ENGLAND GOVERNORS' CONFERENCE, NEW ENGLAND GOVERNORS' RENEWABLE ENERGY BLUEPRINT 5 (2009), *available at* http://nescoe.com/uploads/September_Blueprint_9.14.09_for_release.pdf.

[98] *Id*. at 6.

[99] *Id*. at 7.

[100] *Id*. at 9.

regional renewable goals. These include giving priority to "renewable resources identified in regional planning processes" and expediting permitting processes through coordinated review of projects located in both state and federal waters.

While the regional planning perspective is addressed most recently in FERC Order 1000, it does not incentivize regional goals for renewable projects, nor does it ensure that such projects will be identified as priorities for purposes of federal funding. "Together, the states' mutual authority, [compatible] competitive solicitation processes, and universal focus on cost to consumers provides the foundation for a multi-state or regionally synchronized approach to support those renewable resources able to serve New England consumers most cost effectively."[101]

Energy growth in New England and the Mid-Atlantic will require new transmission. Despite modest demand-growth forecasts, the region has inadequate infrastructure to support significant new generation capacity. Further informing this need is the combination of the desire to develop generation from renewables rather than fossil fuels and the unique, intermittent nature of wind and solar, plus the impending retirement of coal-fired power plants due to imminent EPA carbon emission regulation.[102] The New England Governors' Conference report identifies areas in the siting review processes, including statutory flexibility (such as statutorily condoned regional planning compacts, initiatives, or joint hearings) and timeline review processes, that present opportunities to engage in simultaneous review and possible approval of interstate transmission facility siting decisions. Finally, the report urges state and federal coordination, specifically that federal funding decisions include consideration of regional planning analysis.

FERC order 1000 speaks to this on a cursory level but does not address the federal funding question, nor does it make regional planning mandatory or incentivize, to the degree necessary, reliance on regional planning for interstate siting decisions. Because states maintain near-exclusive jurisdiction over siting decisions within their borders, and the federal government may not legitimately make these decisions absent extenuating circumstances, a robust federal policy aimed at regional initiatives would make such planning collaborative more decisive. Again, priority status for important projects is key to streamlining the permitting processes. Regional coordination will also aid this objective. A federal tax incentive that specifically targets regional initiatives and is designed with these kinds of regional projects in mind will help incentivize federal and state project coordination.

D. Offshore Wind and Firming Must Gain a "Social License to Operate"

To borrow a term from the International Energy Agency, offshore wind must gain a "social license to operate."[103] The political motivation to extract domestic oil and gas must be harnessed to develop the political motivation to develop domestic wind. Tying the two resources together represents the best hope of moving a wind policy forward. Fundamentally, the political impetus behind the natural gas

[101] *Id.* at 25.
[102] *Id.* at 15.
[103] INTERNATIONAL ENERGY AGENCY, GOLDEN RULES FOR A GOLDEN AGE OF GAS: WORLD ENERGY OUTLOOK SPECIAL REPORT ON UNCONVENTIONAL GAS 10 (2011). This term as used by the International Energy Agency applies to exploitation of unconventional gas resources. It is appropriate in this context as well, considering the often-staunch political and social opposition to wind farms, especially offshore.

revolution is energy security and freedom from foreign oil. Importantly, while wind power is not risk-free (e.g., there are intermittency concerns and weather-related interruptions), it does address issues of national security and energy independence. These questions of political motivation and societal acceptance are aptly characterized by the International Energy Agency as the "social license to operate." In order for a resource to be integrated fully into the energy lexicon, it is important that the communities adopting the change be knowledgeable and aware of the characteristics of the resource, and the costs and benefits associated with its use, as well as the costs and benefits associated with choosing existing resources over alternatives.

Social acceptance of an offshore wind industry will be predicated on identifying and addressing key issues facing the consuming public. Policy makers will be unable to move a reform-oriented program such as the proposed RIFTIC forward without the corresponding political and social will. The public must not only be aware of the problems facing the national energy landscape and have all of the available information regarding available choices, but must be actively convinced that accepting a new way forward is the right thing to do. The social license premise operates for both offshore wind and natural gas firming projects. The new federal tax incentive focused on regional cooperation will go a long way toward facilitating the social license to operate and moving the conversation from contentious stalemate to purposeful cooperation.

VI. Conclusion

Without significant investments in transmission infrastructure, the full realization of domestic offshore resources remains unlikely. Tying the offshore wind resources with onshore firming capabilities—from the beginning—will allow the resource to develop as part of a holistic energy mix rather than an independent resources competing on an uneven playing field. Congress should act to affect a long-term extension of the PTC as a component of a more comprehensive energy subsidy aimed at addressing the long term carbon mitigation, transmission, and reliability goals that must play central roles in a national energy policy.

Judicial Review of the Aviation Hazard Determinations for Cape Wind: Why The FAA Got It Wrong

Michael DeLoreto[1]

Abstract: Cape Wind, located off the coast of Barnstable, Massachusetts, is a bellwether offshore wind power generation site in the United States. The Court of Appeals for the D.C. Circuit vacated and remanded a Federal Aviation Administration (FAA) "no hazard" determination related to Cape Wind on the grounds it was issued arbitrarily and capriciously. Upon remand, the FAA provided additional rationale for its decision and re-issued a "no-hazard" determination. This Article argues the latest determination fails to meet the standards outlined by the D.C. Circuit.

"Though human ingenuity may make various inventions … it will never devise any inventions more beautiful, nor more simple, nor more to the point than Nature does." – Leonardo Da Vinci[2]

I. Introduction

This Article examines the decision of the Court of Appeals for the District of Columbia (D.C. Circuit) in *Town of Barnstable v. FAA*,[3] which stalled development of a major offshore wind farm project in the

[1] J.D. Candidate, 2014, Seton Hall University School of Law; M.P.A., University of Pennsylvania.; B.A., Drew University. Thank you to my wife and family for their ongoing support and my faculty advisor, Professor Marc Poirier, for his guidance during the writing process. I hope this comment adds to the growing legal scholarship on wind energy.

[2] XIV NOTEBOOKS OF LEONARDO DA VINCI 837 (Jean Paul Richter ed., 1880).

[3] 659 F.3d 28 (D.C. Cir. 2011).

United States. Harnessing the wind to power human activity is not a new idea,[4] but Americans have continued in our tradition of ingenuity to capture the power of nature with greater efficiency and far more developed technology.[5] Over 51,000 megawatts of power are generated from wind in the United States today, and our nation accounts for 20% of the global generation of wind energy.[6] This share of global wind power is expected to grow as the United States embarks on an ambitious plan to provide 10 gigawatts of offshore wind generating capacity by the year 2020 and 54 gigawatts by 2030.[7]

One of the first offshore wind projects in the United States was slated to be Cape Wind, located off the coast of Massachusetts in Nantucket Sound.[8] (Image 1). Cape Wind is expected to have 130 turbines located between five and thirteen miles from the Massachusetts shoreline.[9] When complete, this project could generate 174 megawatts of energy on average, with a maximum generating capacity of 486 megawatts.[10] Cape Wind advocates claim that this wind farm will be able to provide 75% of all the power needed for Cape Cod, Martha's Vineyard, and Nantucket.[11]

[4] The first known wind mills were constructed by Persians in early 500 A.D. Phyllis Mckenzie, *World History of Windmills*, http://www.utexas.edu/gtc/assets/pdfs/windmills_world.pdf (last visited Sept. 15, 2012). The first known wind mill that would spin in whatever direction the wind would blow and could automatically slow itself down was invented in the United States in 1854 by Daniel Halladay of Connecticut. *Id.*

[5] *See generally* DENNIS G. SHEPPARD, HISTORICAL DEVELOPMENT OF THE WINDMILL, NASA CONTRACTOR REPORT 4337 (1990), *available at* http://wind.nrel.gov/public/library/shepherd.pdf.

[6] *Industry Statistics,* AM. WIND ENERGY ASS'N, http://www.awea.org/learnabout/industry_stats/index.cfm (last visited July 17, 2013). To put this power generation in perspective, one megawatt of wind energy is enough to power at least 240 homes. *FAQ,* TRADE WIND ENERGY, http://www.tradewindenergy.com/windlibrary_sub.aspx?id=136 (last visited July 17, 2013).

[7] Press Release, Dep't of the Interior, Salazar, Chu Announce Major Offshore Wind Initiatives (Feb. 7, 2011), available *at* http://www.doi.gov/news/pressreleases/Salazar-Chu-Announce-Major-Offshore-Wind-Initiatives.cfm. This initiative would produce enough power for 2.8 million homes by 2020 and 15.2 million homes by 2030. *Id.*

[8] *Project at a Glance,* CAPE WIND, http://www.capewind.org/modules.php?op=modload&name=Sections&file=index&req=viewarticle&artid=24&page=1 (last visited July 17, 2013). This project was the first to be given a license by the Department of the Interior, but there are other projects including a wind project off the coast of Atlantic City, N.J. which may be completed before Cape Wind due to the ongoing litigation which is the focus of this Article. *See generally* Press Release, Fishermen's Energy, Fishermen's Energy Receives Final Construction Permit (July 19, 2012) http://www.fishermensenergy.com/press-releases/Press-Release%20Fishermen%27s-USACOE-Permits.pdf.

[9] *Frequently Asked Questions – Cape Wind Basics,* CAPE WIND, http://www.capewind.org/FAQ-Category4-Cape+Wind+Basics-Parento-myfaq-yes.htm (last visited July 17, 2013).

[10] *Id.*

[11] *Id.* The entire area of Cape Cod, Martha's Vineyard, and Nantucket uses 230 megawatts of energy annually. Press Release, Cape Wind, Independent Experts Agree, Cape Wind Electricity will Power Cape & Islands and Reduce Pollution and Energy Prices (June 3, 2003), http://www.capewind.org/modules.php?op=modload&name=News&file=article&sid=81&mode=thread&order=0&thold=0.

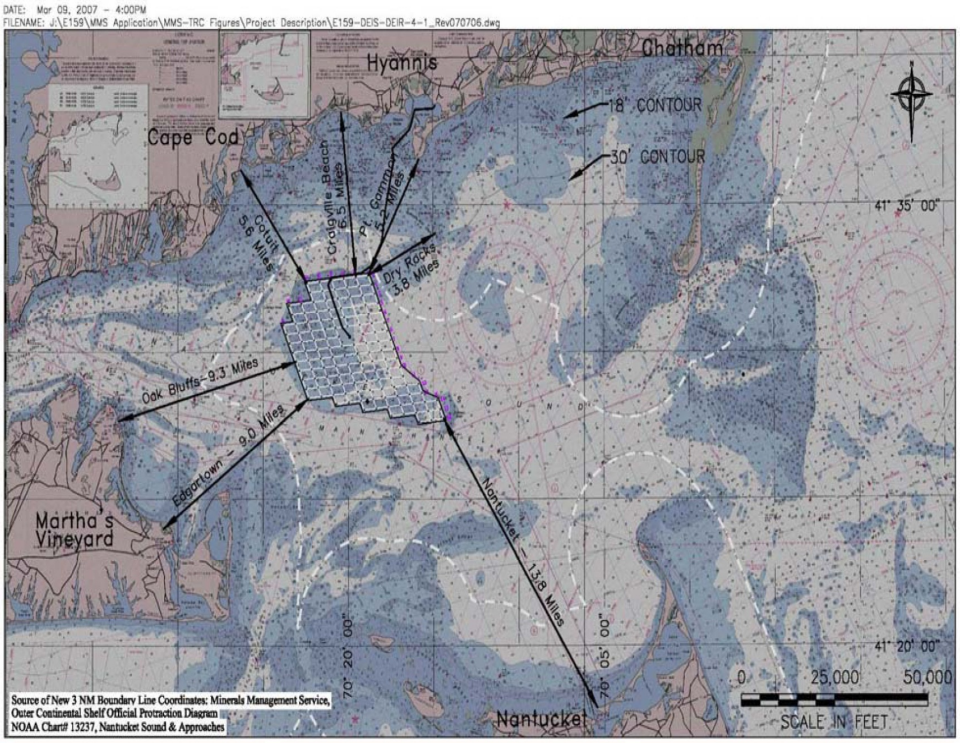

Image 1. Cape Wind Project Site Map. Courtesy of the U.S. Department of Interior.

Despite the push for green technology and the issuance of approvals from various federal agencies including the Department of Interior (DOI) and Federal Aviation Administration (FAA), Cape Wind has met strong resistance from the surrounding local towns, the homeowners in those communities, and even Robert F. Kennedy, Jr., the son of Robert F. Kennedy and a Senior Attorney for the Natural Resources Defense Council (NRDC).[12] This resistance has lead to extensive litigation. In January 2011, the Town of Barnstable, Massachusetts, and the non-profit group, The Alliance to Protect Nantucket Sound, filed a lawsuit challenging the FAA's determination that the Cape Wind project would not pose a hazard to aviation. The petitioners argued that the FAA's "no hazard" determination regarding the wind turbines was arbitrary and capricious.[13] They claimed the FAA "misread its own regulations, and … failed to calculate the dangers posed to local aviation."[14] Although the FAA opposed the relief sought, the D.C. Circuit vacated the FAA's decision and remanded the determination back to the FAA for

[12] Robert F. Kennedy, Jr., Op-Ed., *An Ill Wind Off Cape Cod,* N.Y. TIMES, Dec. 16, 2005, http://www.nytimes.com/2005/12/16/opinion/16kennedy.html?_r=0 (last visited Sept. 23, 2013); Press Release, Dep't of the Interior, Secretary Salazar Announces Approval of Cape Wind Energy Project on Outer Continental Shelf of Massachusetts (Apr. 28, 2010), *available at* http://www.doi.gov/news/doinews/Secretary-Salazar-Announces-Approval-of-Cape-Wind-Energy-Project-on-Outer-Continental-Shelf-off-Massachusetts.cfm; FEDERAL AVIATION ADMIN., DETERMINATION OF NO HAZARD TO AIR NAVIGATION, FEDERAL AVIATION ADMIN. STUDY NO. 2009-WTE-332-OE (2010), *available at* https://oeaaa.faa.gov/oeaaa/external/searchAction.jsp?action=displayOECase&oeCaseID=157246996 [hereinafter STUDY NO. 2009-WTE-332-OE]. Further, the NRDC is a supporter of the project. *See infra* discussion and sources cited accompanying note 80.

[13] *Town of Barnstable*, 659 F.3d at 31.

[14] *Id.*

reconsideration.[15] The FAA conducted a new inquiry, taking the court's opinion into account, ultimately reaching the same conclusion and releasing a second determination that Cape Wind was not a hazard to air travel.[16]

This Article will argue the D.C. Circuit was justified in finding the FAA's first determination to be arbitrary and capricious, and that based upon the initial ruling, the FAA has not corrected the flaws in its second determination. In support of this thesis, Part II provides an overview of the approval process for Cape Wind and explains the required FAA determination. Part III explores the FAA's initial No Hazard Determination findings regarding Cape Wind. Then, Part IV summarizes the arguments made by the parties in the *Barnstable* case and addresses the D.C. Circuit's holding. Part V discusses why the FAA's second Determination issued following the court's remand is still deficient under the *Barnstable* holding. Part VI proposes potential solutions to avoid future challenges to FAA No Hazard Determinations, including a revision to the FAA's own regulations.

II. Permitting Cape Wind and the Need for FAA Determinations

A. Federal Permitting Authorities

As the first proposed offshore wind project in the United States, Cape Wind entered uncharted statutory and regulatory territory from its inception. At the time, federal law was silent with respect to permitting authority for offshore wind and energy projects. Onshore, wind energy projects are licensed by the DOI pursuant to the Federal Land Policy and Management Act.[17] Cape Wind sought its first permit in 2001 from the U.S. Army Corps of Engineers ("Corps"), which had assumed authority under the Rivers and Harbors Act of 1899 (RHA) to grant permits for offshore wind energy projects. [18]

The Corps had no explicit statutory authority to grant permits for offshore wind power, only the broad authority granted by the RHA to permit obstructions to navigable waters of the United States.[19] In 1953, with the passage of the Outer Continental Shelf Land Act (OCSLA),[20] Congress expanded the geographic scope of the Corps' permitting authority to the Outer Continental Shelf.[21] This statutory discrepancy between licensing onshore and offshore wind projects did not go unnoticed and was addressed by the Energy Policy Act of 2005, which expressly granted the DOI—working in cooperation with other federal agencies— the authority to grant leases on the Outer Continental Shelf for certain

[15] *Id.* at 36.
[16] STUDY NO. 2012-WTE-322-OE, *supra* note 12.
[17] 43 U.S.C. § 1701; ADAM VANN, CONG. RESEARCH SERV., WIND ENERGY: OFFSHORE PERMITTING 3 (2007).
[18] 33 U.S.C. § 1. *See generally* Ann Yarling, *Increasing Offshore Wind Projects: A Focus on Regulatory Authority*, NAT'L. L. REV. (Mar. 8, 2012), *available at* http://www.natlawreview.com/article/increasing-offshore-wind-projects-focus-regulatory-authority (discussing early regulation of offshore wind turbines).
[19] 33 U.S.C. §§ 401-426p.
[20] 43 U.S.C. §§ 1331-1356a.
[21] *Id. See generally* VANN, *supra* note 17. The Outer Continental Shelf extends from the U.S. coastline and outward for 200 nautical miles. *Id.* at 1.

activities including wind energy production.[22] By 2006, the Cape Wind project was under the authority of the DOI.

Although the DOI took over as the lead permitting agency for the Cape Wind project per the Energy Policy Act of 2005, the DOI had to work in consultation with other federal agencies. One such agency was the Federal Aviation Administration (FAA). The FAA has a statutory responsibility to study any object or structure that may interfere with air commerce, if it is believed the object will result in an obstruction to air travel.[23] Congress enumerated five specific factors when considering a structure's impact on air travel:

- The impact on arrival, departure, and en route procedures for aircraft operating under visual flight rules ("VFR");[24]
- Impact on arrival, departure, and en route procedures for aircraft operating under instrument flight rules ("IFR");[25]
- The impact on existing public-use airports and aeronautical facilities;
- The impact on planned public-use airports and aeronautical facilities; and
- The cumulative impact resulting from the proposed construction or alteration of a structure when combined with the impact of other existing or proposed structures.[26]

Under this Congressional mandate, the FAA promulgated rules as to when a project triggers a review for interference with air commerce.[27] These regulations state that when a structure's height exceeds 200 feet, the FAA must be notified by the proponent of the structure.[28] In the case of Cape Wind, each wind turbine tower will be 258 feet tall, with the maximum height of each wind turbine blade being 440 feet.[29] Because of the height of each turbine, Cape Wind was required to notify the FAA of the project and thus the FAA embarked on a review of whether the turbines created a hazard to air traffic.

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[22] 43 U.S.C. § 1337(p)(1) ; VANN, *supra* note 17, at 4. Part of the reason for Congressional action on the issue was the first lawsuit filed against Cape Wind, which claimed the Corps of Engineers did not have the statutory authority to license the Cape Wind project. *See* Alliance to Protect Nantucket Sound v. U.S. Dep't of the Army, 288 F. Supp. 2d 64 (D. Mass 2003), *aff'd,* 398 F.3d 105 (1st Cir. 2005) (holding Corps of Engineers did have authority to issue permits).

[23] 49 U.S.C. § 44718. The statute specifically authorizes the Secretary of the Department of Transportation (DOT) to conduct the study, and DOT has delegated this authority to the FAA. While not a focus of this Article, it is important to note that subdelegation, a subsequent delegation of authority to an agency within a department, is permitted under 5 U.S.C. § 302.

[24] VFR Rules allow the pilot to be able to operate the aircraft based upon his visual reference with the ground and surroundings. *See* Redhead v. United States, 686 F.2d 178, 180 at n.1 (3d Cir. 1982).

[25] IFR Rules are in effect when the pilot cannot operate the aircraft based on visual references due to weather or darkness and must rely solely on instruments to navigate. *Id.*

[26] 49 U.S.C. §§ 44718(b)(1)(A)–(E).

[27] Safe, Efficient Use, and Preservation of the Navigable Airspace, 14 C.F.R. § 77.

[28] Construction or alteration requiring notice, 14 C.F.R § 77.9.

[29] *Frequently Asked Questions: Cape Wind Basics*, CAPE WIND, http://www.capewind.org/FAQ-Category4-Cape+Wind+Basics-Parento-myfaq-yes.htm (last visited Sept. 23, 2013).

B. The FAA Determination Process

To determine if a structure like the Cape Wind turbines will obstruct or interfere with air travel, the FAA regulations require the study of certain factors.[30] These factors focus on the object's impact to:

- Aircraft operating under VFR;
- Aircraft operating under IFR;
- Existing and planned public-use airports;
- Airport traffic capacity;
- Obstacle clearance altitudes, approach procedures, and departure procedures;
- Impacts to radar facilities, communications, and other surveillance systems; and
- The cumulative impact of the proposed structure when combined with all other effects.[31]

To provide further internal guidance in studying a potential obstruction, the FAA issued Order JO 7400.2G ("the Handbook"), which creates uniform procedures used in the administration of airspace management.[32] The Handbook states that because the navigable airspace is a limited national resource:

> full consideration shall be given to all airspace users, to include national defense; commercial and general aviation; and space operations. Accordingly, *while a sincere effort shall be made to negotiate equitable solutions to conflicts over the use of the airspace for non-aviation purposes, preservation of the navigable airspace for aviation shall be the primary emphasis*.[33]

Part Two of the Handbook supplements the statutory and regulatory framework Congress and the FAA have established for addressing structures interfering with airspace.[34] When conflicts in airspace use arise, the FAA emphasizes the need to protect airspace for air navigation and to protect air navigation facilities from either "electromagnetic or physical encroachments."[35] Should a proposed project and airspace use conflict, the Handbook again states that first priority should be given to altering the project to eliminate the conflict.[36]

Part Two of the Handbook also contains details on how the FAA is to evaluate whether a substantial adverse aeronautical impact exists.[37] It notes that a structure has an adverse effect when it exceeds one

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[30] 14 C.F.R. §§ 77.13 through 77.35.
[31] Evaluating aeronautical effect, 14 C.F.R. § 77.29(a)(1)–(7).
[32] FED. AVIATION ADMIN., PROCEDURES OF HANDLING AIRSPACE MATTERS, ORDER JO 7400.2G (Apr. 10, 2008) *available at* http://www.faa.gov/documentLibrary/media/Order/7400.2G.pdf [hereafter ORDER JO 7400.2G].
[33] *Id.* at 1-2-1 (emphasis added).
[34] *Id.* at 5-1-1 ("The guidelines, procedures, and criteria detailed in this part supplement those contained in part 77, Objects Affecting Navigable Airspace…."); *id.* at 5-1-2 ("The FAA's authority to promote the safe and efficient use of the navigable airspace, whether concerning existing or proposed structures, is predominantly derived from Title 49 U.S.C. Section 44718….").
[35] *Id.* at 6-3-1(a).
[36] *Id.* at 6-3-1(b).
[37] *Id.* at 6-1-1 through 6-3-37.

of the previously enumerated standards in the regulation or has a physical or electromagnetic impact on air navigation facilities.[38] The Handbook specifies that a structure could cause a substantial adverse impact through a combination of effects, such as impacting both flight courses and a significant volume of activity.[39] The Handbook states that the "significant volume" threshold is met if more than one flight a day would be impacted since "this would indicate a regular and continuing activity."[40]

Based upon the findings of this study, the FAA makes a determination as to whether the obstruction will be a hazard to air navigation.[41] This determination lists the effects on air traffic departure and arrival; air traffic procedures; minimum flight altitudes; and impacts on air navigation facilities, communications, and surveillance systems which collectively lead to the determination's outcome.[42] When the FAA believes the object will cause an adverse aeronautical impact, it issues a "Determination of Hazard to Air Navigation."[43]

If the FAA concludes, however, "that the proposed construction or alteration will exceed an obstruction standard but would not have a substantial aeronautical impact to air navigation," the FAA will issue a "Determination of No Hazard."[44] Although a Determination of No Hazard might be issued, it does not necessarily mean the project does not require improvements. In fact, the Determination of No Hazard may include conditional provisions that must be implemented in order for the project to move forward, such as marking or lighting requirements to make the objects conspicuous to air traffic.[45]

Interested individuals can challenge the FAA's determination through an FAA internal appeals process, referred to as a "Petition for Discretionary Review."[46] In addition to triggering an additional review by the FAA, the Petition enables individuals who were not given a prior opportunity to comment on the project to put forth substantive aeronautical comments related to the proposal, such as alleged impacts on air travel and radar systems.[47] To be granted, the Petition must include "new information or facts not previously considered or presented during the aeronautical study, including valid aeronautical reasons why the determination … made by the FAA should be reviewed."[48]

III. The FAA's Initial Determination of No Hazard for Cape Wind

Under the framework of 49 U.S.C. § 44718, 14 C.F.R. § 77, and the Handbook, the FAA conducted an aeronautical study on the Cape Wind project.[49] The study:

[38] *Id.* at 6-3-3.
[39] *Id.* at 6-3-5.
[40] *Id.* at 6-3-4.
[41] Determinations, 14 C.F.R. § 77.31.
[42] *Id.* § 77.31(b)(1)–(2).
[43] *Id.* § 77.31(c).
[44] *Id.* § 77.31(d)–(e).
[45] *Id.* § 77.31(d)(1)–(4).
[46] Petitions for Discretionary Review, 14 C.F.R. §§ 77.37 through 77.41.
[47] *Id.* § 77.37(a).
[48] *Id.* § 77.39(b).
[49] STUDY NO. 2009-WTE-332-OE, *supra* note 12, at 2.

> considered and analyzed the impact on existing and proposed arrival, departure, and en route procedures for aircraft operating under both visual flight rules and instrument flight rules; the impact on all existing and planned public-use airports, military airports and aeronautical facilities; and the cumulative impact resulting from the studied structure when combined with the impact of other existing or proposed structures.[50]

As part of the study process, the FAA circulated the Cape Wind proposal on February 13, 2009 to "all known aviation interests and to non-aeronautical interests that may be affected by the proposal."[51] It allowed one year for interested persons to review the study and comment, with the comment period extended from an original deadline of March 22, 2009 to April 30, 2010.[52] Fourteen letters of objection were filed with the FAA, and their comments along with FAA responses made up the greater half of the FAA's Determination regarding Cape Wind.[53] Some of the comments filed with the FAA were outside the scope of the aeronautical study, such as concerns about the environmental noise impacts of the wind farm on the mainland and concerns that the type of wind turbine used was improper.[54] There were, however, two areas of concern that did fall under the FAA purview: the impact on flights operating under VFR and the impact on air traffic control radar.[55]

A. VFR Flight Concerns

Public comments against Cape Wind first focused on the adverse impacts to VFR navigation.[56] Many commenters expressed concern that a considerable number of VFR operations would be impacted because many pilots would move from lower altitudes of 500 to 1,000 feet to altitudes of 1,000 feet or higher in order to avoid the turbines, causing aircraft to fly too close to one another.[57] Additionally, Nantucket Sound is subject to poor weather; forcing pilots to fly at higher altitudes might create navigation issues for VFR pilots who may need to stay at certain altitudes to maintain visual observation.[58] The FAA did not agree with the commenters' concerns and stated that the "proposed wind turbines [did] not exceed any 14 C.F.R. Part 77 obstruction standards."[59] The FAA did note however that "some aircraft operating under visual flight rules (VFR) *may have to alter their altitude or route of flight*."[60] The FAA further noted that the Cape Wind project is within two statute miles of a

[50] *Id.* (emphasis added).
[51] *Id.* at 4.
[52] *Id.*
[53] *Id.*
[54] *Id.* at 4–5.
[55] *Id.* at 5.
[56] *Id.*
[57] *Id.*
[58] *Id.*
[59] *Id.* (alteration from original). 14 C.F.R. § 77 requires a height of 499 feet or higher to be an obstruction.
[60] STUDY NO. 2009-WTE-332-OE, *supra* note 12, at 7 (emphasis added).

regularly used VFR route.[61] The FAA however determined that the project would not adversely impact VFR operations because Section 6-3-8(c)(1) of the Handbook states that the structure has to be above 500 feet tall *and* within two statute miles of a VFR route.[62] In the Determination, the FAA did not address Section 6-3-3(b), which states that a structure has an adverse impact when it requires "a VFR operation, to change its regular flight course or altitude."[63] The FAA went on to note that the windmill structures would be marked and/or lighted to make them "conspicuous to airmen should circumnavigation be necessary."[64]

B. Impact on Radar Facilities

Most commenters also took issue with the impacts of the proposed project on the three radar facilities which provide for the detection of aircraft in the Nantucket Sound area.[65] The FAA agreed with the commenters that Cape Wind could cause "unwanted search radar targets," known as "clutter," to appear on an air traffic controller's radar screens, which can confuse air traffic controllers.[66] The FAA found the impact on the Otis Air Force Base ("FMH") radar to be particularly significant because that Base uses a type of analog search radar system which has "limited capabilities to resolve the effects of clutter caused by multiple wind turbines within a confined area."[67] The cumulative effect of the wind turbines' rotation on the FMH radar system would likely be expected to reduce search radar detection for aircraft at all altitudes above the wind farm.[68] To address this problem, the FAA determined that upgrades to the radar systems would be necessary, and Cape Wind agreed to pay $15 million into an escrow account for the FAA to make the modifications or install a new radar system should the upgrades not work.[69] With this agreement in place, the FAA concluded "there [would] not be a significant adverse effect to radar services in Nantucket Sound."[70]

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[61] *Id.* A statute mile is the standard mile of 5,280 feet. This is compared to a nautical mile, which is roughly 1.15 statute miles. NAT'L GEOSPATIAL-INTELLIGENCE AGENCY, CONVERSION TABLE FOR NAUTICAL MILES AND STATUTE MILES, (2012), *available at* http://msi.nga.mil/MSISiteContent/StaticFiles/NAV_PUBS/DBP/endtables.pdf.

[62] STUDY NO. 2009-WTE-332-OE, *supra* note 12, at 7.

[63] *Id*.

[64] *Id*.

[65] *Id.* at 5. The three radar facilities are North Truro Cape (QEA), Nantucket (ACK), and Otis Air Force Base (FMH). *Id.*

[66] *Id.* The FAA reached this conclusion after conducting its own study as well as reviewing the studies provided by certain commenters. As a technical matter, radar works by sending out a signal which then hits an object and is returned to the radar station showing an object on the radar screen. Clutter is the term used to describe returns caused by surface objects (ground and sea objects caused by nature), volume (commonly caused by weather), and point sources (windmills, tall buildings, and other objects not caused by nature). *See generally Radar Clutter*, RADAR TUTORIAL, http://www.radartutorial.eu/11.coherent/co04.en.html (last visited Jan. 4, 2013).

[67] STUDY NO. 2009-WTE-332-OE, supra note 12, at 6. Although the FAA determination refers to Otis Air Force Base, the facility is actually an Air National Guard and Coast Guard facility located on Cape Cod and is home to the 102nd Intelligence Wing, a non-airborne military intelligence unit. 102ND INTELLIGENCE WING http://www.102iw.ang.af.mil/ (last visited Nov. 5, 2012).

[68] STUDY NO. 2009-WTE-332-OE, *supra* note 12, at 6.

[69] *Id.*

[70] *Id.*

Taking all the cumulative impacts and public comments of the Cape Wind project into account, the FAA did not consider the project to have a substantial adverse effect and it issued a Determination of No Hazard on May 10, 2010.[71]

C. Petition for Discretionary Review

As previously noted, the FAA has an internal appeals mechanism to allow those in disagreement with the decision to petition for discretionary review. Various persons opposed to Cape Wind filed a Petition for Discretionary Review, which the FAA accepted as procedurally valid.[72] The FAA, however, later rejected the request for discretionary review on the substantive basis that the wind turbines did not exceed 500 feet in height, thus there was no adverse effect on VFR operations.[73] The rejection also stated that because the FAA mitigated the impacts on radar system disruption by requiring radar facility upgrades, there was no cumulative impact significant enough to warrant a Hazard Determination.[74] In other words, the FAA rejected the Petition because there was no new substantial evidence to justify a further review of the project.

IV. *Town of Barnstable v. FAA* and the D.C. Circuit Holding's Impact

On January 19, 2011, the Town of Barnstable and the Alliance to Protect Nantucket Sound brought suit in the D.C. Circuit against the FAA challenging its "Determination of No Hazard" for the Cape Wind project.[75] The Town of Barnstable asserted that it was harmed by the FAA's determination because it is the operator of the Barnstable Municipal Airport ("HYA").[76] HYA is the third busiest airport in the State of Massachusetts, with 108,657 flights occurring in 2009.[77] The vast majority of those flights, 84,593, occurred under VFR; 24,064 occurred under IFR.[78] The Alliance to Protect Nantucket Sound (APNS) is a 501(c)(3) tax exempt organization "supported by thousands of private donors including aviators, concerned citizens, towns and local government and civic groups, trade associations, historic preservation interest and associations of fishing interest and boaters that oppose industrialization of Nantucket Sound and use the site of [Cape Wind] to pursue their interests."[79] The harm asserted by the

[71] *Id.* at 7.
[72] Joint Brief of Petitioners at 23, Town of Barnstable v. Fed. Aviation Admin., 659 F.3d 28 (D.C. Cir. 2011) (No. 10-1276), ECF No. 1288795.
[73] Brief for Respondent at 12, Town of Barnstable v. Fed. Aviation Admin., 659 F.3d 28 (D.C. Cir 2011) (No. 1-1276), ECF No. 1294074.
[74] *Id.*
[75] Joint Brief of Petitioners, *supra* note 72, at 1. Petitioners were allowed to bring this claim directly to the D.C. Circuit pursuant to 49 U.S.C. § 46110 (judicial review of FAA safety decisions).
[76] *Id.* at 22.
[77] *Id.*
[78] *Id.*
[79] *Id.* at 11.

town of Barnstable and the APNS in its pleadings was that their commercial, environmental, and recreational interest at and around the wind farm site would be detrimentally impacted.[80]

A. Standing of the Petitioners

The first argument raised in the briefs of both parties was the issue of whether the Town and APNS had standing to bring the suit.[81] The Town of Barnstable argued that it had standing to challenge the FAA determination because it would be harmed as the owner/operator of HYA.[82] For an organization like APNS to have standing, however, it must show that its members would have standing, the interests at stake are relevant to the purpose of the organization, and neither the claim nor the relief sought requires individual participation.[83] APNS used an affidavit of its president, setting forth claims of harm to aviation and its members' economic livelihood and recreational activities, to establish standing as an organization.[84]

The FAA disputed the standing of the petitioners, specifically APNS. To establish standing under Article III of the U.S. Constitution, a plaintiff must show the "threat of suffering injury in fact that is concrete and particularized; the threat must be actual and imminent, not conjectural or hypothetical; it must be fairly traceable to the challenged action of the defendant; and it must be likely that a favorable judicial decision will prevent or redress the injury."[85] The FAA asserted not only that there was no threat of immediate harm from Cape Wind, but also that the FAA had no ability to stop the building of the project—only the DOI did—and therefore, their injury is not traceable to the FAA determination.[86] In support of this premise, the FAA noted the decision to move forward with the project was made by the Department of the Interior on April 28, 2010, but that the FAA Determination of No Hazard was not

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[80] *Id.* at 11–12. As an aside, the opposition is a prime example of NIMBY (Not In My Backyard). These NIMBY concerns are elaborated in the Robert F. Kennedy, Jr., op-ed, *supra* note 12, where he states the views from sixteen historical lighthouses will be damaged and he urges visitors to come see the historic wrecks off Cape Cod, the fishing villages, and try some of the amazing seafood the region offers. There is also a connection between APNS and a fossil fuel tycoon, William Koch, who has donated over $1.5 million to APNS and sits on the APNS Board of Directors. *Bill Koch: The Dirty Money Behind Cape Wind Opposition*, GREENPEACE, http://www.greenpeace.org/usa/en/campaigns/global-warming-and-energy/polluterwatch/Bill-Koch/ (last visited Apr. 20, 2013). While APNS claims to be concerned with the environmental impacts, major environmental special interest groups support the project, including the Sierra Club, Greenpeace, Clean Water Action, League of Conservation Voters, Natural Resources Defense Council, and the National Wildlife Federation. *Support for Cape Wind,* CAPE WIND, http://www.capewind.org/article47.htm (last visited July 17, 2013).

[81] *See generally* Joint Brief of Petitioners, *supra* note 72, at 5–7, 26; Brief for Respondent, *supra* note 73, at 17. Although not the focus of this Article, a brief discussion on standing is necessary in order to better understand the parties' position and the court's holding.

[82] Joint Brief of Petitioners, *supra* note 72, at 26.

[83] *See* Friends of Earth, Inc. v. Laidlaw Envtl. Servs. Inc., 528 U.S. 167, 181 (2000).

[84] *Id. See also* Joint Addendum of Statutes and Regulations of Petitioners at 89–90, Town of Barnstable v. Fed. Aviation Admin, 659 F.3d 28 (D.C. Cir 2011) (No.10-1276), ECF No. 1288796.

[85] Brief for Respondent, *supra* note 73, at 17 (quoting Summers v. Earth Island Institute, 555 U.S. 488, 493 (2009)).

[86] *Id.* at 18 (citing BFI Waste Sys. of N. Am., Inc. v. FAA, 293 F.3d 527, 530 (D.C. Cir. 2002)).

released until May 10, 2010.[87] Therefore, the FAA claimed it had no control over the final issuance of permits for Cape Wind and could not be the cause of any harm.[88]

B. FAA's Failure to Follow Its Own Guidance

APNS and the Town of Barnstable further argued that the FAA violated its "statutory duties and its own regulations" because the FAA's sole focus in its Determination of No Hazard was whether the wind turbines met the technical definition of obstruction, without properly taking into account the interference with air navigation.[89] Petitioners stated that Congress charged the FAA with the statutory authority to determine whether a structure has an impact on air travel depending upon the factors listed in 49 U.S.C. § 44718(b). Under this authority, the FAA promulgated the regulations found in 14 C.F.R. § 77 and issued the Handbook to provide internal guidance on how to determine when a structure is an obstruction, either by size or by creating a substantially adverse aeronautical effect.[90] The Town of Barnstable and APNS asserted that the FAA's Determination of No Hazard was arbitrary and capricious because the decision did not comport with what the Handbook prescribed.[91] In other words, the FAA failed to follow its own guidance.

The Handbook instructs that the goal of the FAA is the protection of airspace and that altering the proposal should be the first priority in the case of conflicts.[92] The Handbook goes on to state that an adverse effect exists when there is an obstruction standard violation under 14 C.F.R. § 77 and/or an impact on air navigation facilities.[93] Petitioners claimed this existed here because there was an impact on radar facilities. In addition, because the FAA found that there would have to be changes to certain aircraft operating under VFR, petitioners asserted this meant there was an adverse impact under Section 6-3-3(b). Moreover, since the FAA found that some VFR aircraft would be impacted, this could cause a significant cumulative impact under Section 6-3-5.[94] Lastly, petitioners pointed to a provision in the Handbook which states that if there is evidence of a structure being a hazard, the FAA has *no discretion* to find otherwise.[95]

The FAA disputed the petitioners' view and claimed it met its statutory and regulatory obligations. First, the FAA stated that the statutory and regulatory authority merely tells the FAA when to conduct an aeronautical study and what should be taken into account as a part of that study.[96] The FAA claimed it did exactly that, and where the statute fell silent it filled in the gaps with the regulations and the

[87] *Id.* at 21.
[88] *Id.*
[89] Joint Brief of Petitioners, *supra* note 72, at 16.
[90] *Id.* at 18–19.
[91] *Id.* at 19–20.
[92] Order 7400.2G, *supra* note 32, at 1-2-1. Joint Brief of Petitioners, *supra* note 72, at 18.
[93] Order 7400.2G, *supra* note 32, at 6-3-3.
[94] Joint Brief of Petitioners, supra note 72, at 40.
[95] Order 7400.2G, *supra* note 32, at 7-1-3(c) (emphasis added).
[96] Brief for Respondent, *supra* note 73, at 5.

Handbook.[97] Therefore, the FAA claimed that the court should defer to the agency's expertise in the matter.[98]

Second, the FAA claimed that it followed prior court precedent and that its decision in Cape Wind was generally consistent with prior determinations it had made.[99] The FAA noted that an agency's interpretations of its own regulations are controlling unless plainly erroneous or inconsistent with the regulation.[100] Because the FAA claimed it took into account and answered all the comments and issues raised during the public comment period, the FAA asserted it had met its obligations to adequately explain its results and respond to relevant and significant public comments.[101]

C. D.C. Circuit Opinion

On October 28, 2011, the D.C. Circuit decided *Barnstable*, holding that the petitioners had standing and that the FAA determination was arbitrary and capricious.[102] Even though the court agreed that the FAA determination has no "enforceable legal effect" and cannot prevent the building of Cape Wind, it found that the DOI gave the FAA a significant role in the decision-making process when it mandated that construction could not begin until the receipt of the FAA determination and compliance with any mitigation measures.[103] The DOI's reliance on the FAA satisfied the standing test's requirement of redressability because it would be "improbable" that the FAA's determination would be "blithely disregarded."[104]

On the substantive matter of the Determination of No Hazard, the court held the determination was indeed arbitrary and capricious because the FAA departed from its own Handbook.[105] The court based this reasoning on the varying definitions of "substantial adverse effect" which existed throughout the Handbook. For example, substantial adverse impact is defined in Section 6-3-3 of the Handbook as existing when there is an obstruction standard violation under the regulations or when there is an effect on the operations of the air traffic system.[106] In Section 6-3-4 of the Handbook, substantial impact exists when there is an adverse impact on a significant number of flight operations, and Section 6-3-5

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[97] *Id.* at 14–15.

[98] *Id.* at 29–30; *see also* Chevron, U.S.A., Inc. v. Natural Res. Def. Council, Inc., 467 U.S. 837, 843–44 (1984). *Chevron* deference is the concept that if a statute administered by an agency is ambiguous with respect to the specific issue, the courts will defer to the agency's reasonable interpretation of the statute. *Id.* The D.C. Circuit did not address the *Chevron* claim made by the FAA in its decision. This may have been because the statute being administered did clearly speak to the issue at hand, thus the FAA did not reach the first requirement for *Chevron* deference. *Barnstable* does not turn on a matter of statutory interpretation, but rather the application of an agency's own guidelines. This makes *Chevron* not applicable to this case and explains why it was not given consideration by the D.C. Circuit in its ruling.

[99] Brief for Respondent, *supra* note 73, at 46.

[100] Auer v. Robbins, 519 U.S. 452, 461 (1997).

[101] Public Citizen, Inc. v. FAA, 988 F.2d 186, 197 (D.C. Cir. 1993) (citing Home Box Office, Inc. v. FCC, 567 F.2d 9, 35 & n.58 (D.C. Cir. 1977)).

[102] *Town of Barnstable*, 659 F.3d 28.

[103] *Id.* at 31–32.

[104] *Id.* at 34. In support of this, the court also cited *Bennett v. Spear*, 520 U.S. 154, 170 (1997), which granted standing despite the fact the decision maker was free to disregard the opinion in question.

[105] *Id.* at 34.

[106] *Id.* at 35.

states there could be a substantial adverse effect if there is a cumulative impact under Sections 6-3-3 and 6-3-4.[107] In the view of the FAA, all these prior definitions are seemingly irrelevant because Section 6-3-8(c)(1) states that there can be a substantial adverse impact on VFR routes when an object is over 500 feet tall and is within two miles of a VFR route.[108] Because the FAA solely relied on the definition of substantial adverse impact under Section 6-3-8(c)(1), without addressing the other potential triggers included in Sections 6-3-3, 6-3-4, and 6-3-5, the court held the FAA was "improperly relying … on 6-3-8(c)(1)," and it "failed to supply any apparent analysis of the record evidence concerning the wind farm's potentially adverse effects on VFR operations."[109]

D. The Barnstable *Court's View on Agency Deference*

The D.C. Circuit's ruling in *Barnstable* spoke to the amount of deference an agency can expect when interpreting its own rules. Agency regulations are promulgated under the authority of a statutory mandate and are generally reviewable for the procedural requirements of notice and comment and their substantive requirements.[110] However, agency interpretations of their own rules, such as the FAA's interpretation of "substantial adverse effect," are generally given greater deference unless the interpretation is plainly erroneous or inconsistent with the regulation.[111] In the Administrative Procedure Act (APA), which sets forth the standard of judicial review governing federal agency decisions in the absence of explicit provisions of the enabling act, decisions can be set aside only if "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law."[112] Most court decisions note that this deference is not controlling, as it can be overcome by the judiciary when it strongly feels there is a lack of a rational connection between the facts and the policies enacted.[113]

Because *Barnstable* turns on the FAA's interpretation of its Handbook and its own regulations in promulgating the hazard determinations, the court's level of review should be deferential unless the FAA decision was erroneous. *Auer v. Robbins* is the leading case in this area.[114] In *Auer*, police sergeants and a lieutenant in the St. Louis Police Department sued their employer under the Fair Labor Standards Act claiming they were owed overtime pay.[115] The City of St. Louis argued that the officers were exempt from overtime pay as executive level personnel.[116] The Department of Labor had previously

[107] *Id.* at 34.
[108] *Id.* at 35.
[109] *Id*.
[110] CHARLES H. KOCH, ADMINISTRATIVE LAW & PRACTICE, § 10.23 (2012). Regulations, such as 14 C.F.R. § 77, are promulgated under the Administrative Procedure Act. 5 U.S.C. § 553.
[111] KOCH, *supra* note 110, at § 10.26. The concept of "plainly erroneous and inconsistent" stems from *Bowles v. Seminole Rock*, 325 U.S. 410, 413–14 (1945) where the court stated, "But the ultimate criterion is the interpretation, which becomes of controlling weight unless it is plainly erroneous or inconsistent with the regulation." Although still good law, the plainly erroneous language of *Seminole Rock* has been replaced by the statutory language of the APA, which was enacted after *Seminole Rock*.
[112] 5 U.S.C. § 706(2)(A).
[113] Motor Vehicle Mfrs. Assn. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983) (citing Burlington Truck Lines, Inc. v. U.S., 371 U.S. 156, 168 (1962)).
[114] 519 U.S. 452 (1997).
[115] *Id*.
[116] *Id.*

issued regulations stating that the overtime exemption applied to employees paid a specified minimum amount on a salary basis, which required that the compensation "not [be] subject to reduction because of variations in the quality or quantity of the work performed."[117] Even though the St. Louis Police Manual stated that the officers' pay could be reduced for disciplinary actions, the Department of Labor interpreted its own regulation excluding reductions in salary for reasons such as disciplinary measures.[118] In a unanimous decision written by Justice Scalia, the U.S. Supreme Court upheld the Department of Labor's interpretation of this "salary basis test" for overtime because the standard was created by the Department and therefore its interpretation should be left to the agency unless plainly erroneous or inconsistent with the regulations.[119]

This trend towards deference can be found in other cases where agency expertise is important. In *Marsh v. Oregon Natural Resources Council*, the Supreme Court held that when the analysis of the documents requires a high degree of technical expertise, courts should defer to the informed discretion of the responsible agency.[120] Judges, however, should not blindly defer to an agency without carefully reviewing the record to ensure the agency has made a reasoned decision based on the information.[121]

The D.C. Circuit has acknowledged in previous cases involving the FAA that courts should defer to agencies in interpreting their own regulations. In *Breneman v. FAA*,[122] a structure being built on a hill would have extended 62 feet into the airport's approach surface.[123] The FAA determined the structure to be a hazard based upon an earlier version of the Handbook and the D.C. Circuit upheld that determination because the evidence, in the court's view, was sufficient to support the decision.[124]

Based upon these cases, it may appear to some that the issuance of the Cape Wind Determination of No Hazard and the explanations contained within should be sufficient to survive judicial review. As in *Auer*, the FAA was using an interpretation of its Handbook to make a decision about whether Cape Wind was a hazard to air traffic. The FAA was also making a determination about air traffic with respect to Cape Wind that required some type of technical expertise, thereby allowing the court to defer to the informed discretion of the agency as was the case in *Marsh* and *Breneman*. However, the D.C. Circuit in *Barnstable* required a more detailed connection between the FAA's determinations and <u>every</u> aspect of the agency's own regulations that may impact the making of that determination. The court's reliance on *D&F Afonso Realty v. Garvey* illustrates this point.[125]

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[117] *Id.* (alterations to original).
[118] *Id.*
[119] *Id.* at 461.
[120] 490 U.S. 360, 377 (1989). This case addressed the issuance of permits by the Army Corps of Engineers and whether those permits could be issued based upon the available information or whether new information first needed to be considered by the Corps. The Court held in favor of the Corps, finding that the Corps' decision not to issue a supplemental report based on the additional information was not arbitrary and capricious. *Id* at 384-85.
[121] *Id.*
[122] 30 Fed. Appx. 7 (D.C. Cir. 2002).
[123] An approach surface is an imaginary slope line that extends upwards into the airspace from the runway in order to prevent objects from entering the path of aircraft. *Airport Approach Surface,* WILLIAMS AVIATION CONSULTANTS, http://www.wacaz.com/services/obstruction-evaluation/airport-approach-surface/ (last visited July 17, 2013).
[124] *Breneman,* 30 Fed. Appx. at 8. The court also seemed to dislike the plaintiff who was purposely building up the hill in order to impede air traffic, thus violating the Court's "chutzpah doctrine." *Id.*
[125] *Town of Barnstable*, 659 F.3d at 36.

In *D&F*, a home was built near a small privately owned airport, thus requiring the FAA to be notified because of the proximity between the residence and the airport.[126] The FAA determined that the home intruded into the "transitional surface"[127] airspace around the airport by 16.1 feet.[128] The FAA then conducted an aeronautical study under 14 C.F.R. § 77 and determined that the house would cause a substantial adverse effect on the airport and inbound flights operating under VFR.[129] The Massachusetts Aeronautics Commission followed the FAA's determination, which led the municipality where the home was located to refuse to issue an Occupant Certificate for the house.[130] The Hazard Determination was challenged in the D.C. Circuit, and the court held that the FAA's Determination of Hazard was arbitrary, capricious, and not in accordance with the law.[131] The court reached this conclusion by finding that the FAA did not properly follow its guidelines entitled "Procedures for Handling Airspace Matters."[132] Specifically, while the court did find that the height of the house unlawfully entered the airspace around the airport, there was no link between the hazard determination and the hazard standard.[133] The court noted there were other structures, like trees, which also impeded the airspace, yet the FAA failed to address these interferences.[134] The court succinctly stated, "even our highly deferential standard of review requires more than the FAA offers. Thus, the FAA's abandonment of its own established procedures and its lack of reasoned analysis on the record constitute arbitrary and capricious agency action in violation of the law."[135]

D&F and *Breneman* seem like nearly analogous fact patterns. In each, there were violations of airspace requirements,[136] and in each the FAA found a violation and issued a Determination of Hazard. But in *Breneman* the FAA is upheld, while in *D&F* it was rejected. The way to reconcile these cases is to understand that the court's decision turned on how it perceived the quality of the analysis by the FAA. By the court relying on *D&F* in its *Barnstable* decision, rather than applying *Breneman,* it is signaling to the FAA that the agency needed to set forth an explanation for every possible interference Cape Wind might cause and why those interferences would not matter. Even impacts that may seem trivial to the FAA require an explanation for the court to be satisfied.

V. The FAA Determination on Remand is Still Deficient under *Barnstable*

In response to the D.C. Circuit's decision in *Barnstable,* the FAA conducted a new hazard determination for the Cape Wind project including a new study and new public comment period.[137] On

[126] D&F Afonso Realty Trust v. Garvey, 216 F.3d 1191, 1192 (D.C. Cir. 2000).
[127] This transitional surface extends up and out from the runway centerline and from the sides of the primary surface and the approach surface and is not to be entered into by an object. *Id*.
[128] *Id.* at 1193.
[129] *Id.*
[130] *Id.*
[131] *Id.* at 1195.
[132] *Id.* at 1195. The "Procedures for Handling Airspace Matters" is an older version of the Handbook.
[133] *Id.* at 1196.
[134] *Id.*
[135] *Id.* at 1196–97.
[136] The violation into airspace in *D&F* was 16.1 feet while the violation in *Breneman* was slightly larger at 62 feet.
[137] STUDY NO. 2012-WTE-322-OE, *supra* note 12.

August 15, 2012, the FAA issued a second Determination of No Hazard for the Cape Wind project.[138] This latest Determination attempts to address the issues expressed in *Barnstable* by providing a step-by-step analysis on how the FAA used its own guidelines to determine if a structure will have a substantial adverse impact.[139] The FAA stated in this new Determination that its first step was to determine if a violation of 14 C.F.R. § 77 exists.[140] If so, then it must proceed to the second step of evaluating whether there was an adverse effect.[141] If an adverse effect is found, then the structure will be determined a hazard.[142]

In its new Determination, the FAA explicitly clarified that there is no violation of 14 C.F.R. § 77 and therefore no hazard to air navigation.[143] The FAA made this decision because the project is below the 500-foot threshold required by the regulation, and because the FAA installed upgraded radar equipment to address the "clutter" problem. Therefore, the FAA claimed there is no need to analyze the project for any other adverse impacts.[144] The FAA also reasserted there is no reason to analyze the issue under Section 6-3-8(c)(1) of the Handbook because this only applies if the object is both 500 feet in height and within two miles of a VFR lane.[145] While Cape Wind is within two miles of a VFR lane, the wind farm does not exceed the height threshold of 500 feet.[146]

Although the FAA provided a slightly improved explanation, the August 2012 Determination of No Hazard has already been challenged by the Town of Barnstable and APNS in the D.C. Circuit and it is possible that the Determination could be vacated and remanded again.[147] The FAA is attempting to lead the court away from the conflicting definitions of substantial adverse impact that exist in the Handbook, but this maneuver is unlikely to pass muster. The statutory authority under which the FAA operates requires the study of any structure that could impact the enumerated factors listed in the statute. Moreover, the obstruction standards under 14 C.F.R. § 77 are only one piece of the puzzle; there are other regulatory provisions which the court may find to be violated due to new information included in the second Determination.[148]

As part of the second Determination, the FAA gathered data on VFR traffic to "respond to the court's concern raised in [*Barnstable*]."[149] The FAA found that "some aircraft under VFR may have to alter their altitude or route of flight."[150] In fact, the study concluded that for a nine-month period

[138] *Id.*
[139] *Id.* at 3.
[140] *Id.*
[141] *Id.*
[142] *Id.*
[143] *Id.*
[144] *Id.*
[145] *Id.* at 6.
[146] *Id.*
[147] Petitioners from *Town of Barnstable* filed a Petition for Review of the FAA determination in the D.C. Circuit on August 22, 2012 and at the time of writing this Article, briefing was currently underway with no oral argument date scheduled. *See* Brief of Petitioners, Town of Barnstable, Massachusetts and Alliance to Protect Nantucket Sound v. Fed. Aviation Admin., (No. 12-1362), 2012 WL 6604718, at *1.
[148] *See* 14 C.F.R. § 91.119 which requires a 500 foot distance between objects and aircraft.
[149] STUDY NO. 2012-WTE-322-OE, *supra* note 12, at 4.
[150] *Id.* at 6.

between January and September 2011, there were 427 aircraft operating below 949 feet. [151] This would cause a violation of 14 C.F.R. § 91.19, which requires a 500-foot clearance between aircraft and objects. The study also stated that 52% of VFR aircraft operations occurred over the southeast corner of the wind farm area, illustrating that a large percentage of aircraft may be impacted.[152]

This data goes directly to the potential impacts listed in several sections of the Handbook. Section 6-3-4 establishes that a substantial adverse impact can be found when more than one aeronautical operation a day would be affected.[153] The data collected by the FAA shows that at least one flight a day could be impacted. Moreover, the data implicated two other sections of the Handbook that the court expressly mentioned in its first opinion. These are Section 6-3-5 and Section 6-3-8(b), which states that "any structure that would interfere with a significant volume of low altitude flights by actually excluding or restricting VFR operations in a specific area would have a substantial adverse effect and may be considered a hazard to air navigation."[154]

As the D.C. Circuit noted in *Barnstable,* the provisions in the Handbook identify multiple ways a structure can cause an adverse effect, especially for VFR traffic.[155] The idea that a structure has to be above a certain height and within a certain distance in order to cause an adverse effect, as 14 C.F.R. § 77 or Section 6-3-8(c)(1) prescribes, "simply identifies one circumstance … potentially one among many."[156] Considering the data the FAA provided, showing at least one flight per day could be impacted, it is plausible the court will reject the second No Hazard Determination.

VI. The Need For a Revised FAA Handbook

In *Barnstable*, *D&F*, and *Breneman*, the core issue ultimately addressed by the D.C. Circuit was whether the FAA followed its own guidelines for when structural interference exists. The first of these cases, *D&F*, was decided in 2000, so the interpretative issues raised by the Handbook are not new by any means. But the application of the Handbook to wind farm development is a novel issue, especially as the growth of the wind energy sector continues in the United States. Wind farms become more cost effective when they are located closer to population centers,[157] therefore conflicts related to when a structure poses a hazard will become more prevalent.[158]

[151] *Id.* at 7.
[152] *Id.* at 7.
[153] *Id.* at 34.
[154] *Town of Barnstable*, 659 F.3d at 36.
[155] *Id*. at 35.
[156] *Id.*
[157] Bjorn Carey, *Offshore Wind Energy Could Power Entire East Coast*, STANFORD REPORT (Sept. 14, 2012) http://news.stanford.edu/news/2012/september/offshore-wind-energy-091412.html (last visited Sept. 23, 2013).
[158] *Wind Farms Run Into Turbulence With the FAA*, AVIATION AND AIRPORT DEVELOPMENT LAW NEWS (Jan. 25, 2010) http://www.aviationairportdevelopmentlaw.com/2010/01/articles/faa-1/regulatory/wind-farms-run-into-turbulence-with-the-faa/ (last visited July 17, 2013).

Some recent scholarship has suggested that the United States should enact comprehensive legislative reforms for siting wind farms.[159] The problem with this solution is one of pragmatism: Congress currently appears to lack the necessary political will and cohesion in order to act on such matters. While the topic of wind farms seems mundane to the average observer, the politics surrounding alternative energy is complicated in part due to the partisan nature of alternative energy.[160] With Congress's inability to address even the most immediate problems facing the country, coupled with other pressing issues on the national agenda, legislation on alternative energy is unlikely to occur.[161]

Another commentator has also recommended that agencies involved in the permitting and siting of wind farms become more aware of the opposition to these projects and conduct more thorough analyses to provide better explanations of project approvals.[162] However, this fails to recognize the fact that the FAA, as with other federal agencies, is facing a greater demand on its services without the corresponding increase in funding; the FAA is doing more with much less.[163] While the FAA's role in siting wind farms may be important, it is understandable that the FAA may not put the level of effort some want into this area considering the FAA's other obligations such as air traffic control, airplane and airline regulation, and air travel technology development.[164]

Because Congress is unlikely to act and the FAA has few resources to tackle this issue, the FAA must find a cost-effective and independent method of remedying lengthy hazard determinations. The only viable solution is for the FAA to modify its own Handbook to make it easier for the agency to use and courts to interpret. By taking this small step, it will reduce its long-term costs and administrative

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[159] *See, e.g.*, Kenneth Kimmell & Dawn Stolfi Stalenhoef, *The Cape Wind Offshore Wind Energy Project: A Case Study of the Difficult Transition to Renewable Energy*, 5 GOLDEN GATE U. ENVTL. L.J. 197 (2011) (discussing the early permitting process for Cape Wind and recommending Congress enact a "one stop shop" for wind farm permitting); Gregory J. Rigano, *The Solution to the United States' Energy Troubles is Blowing in the Wind,* 39 HOFSTRA L. REV. 201 (2011) (discussing the environmental benefits of wind energy and the need for Congress to pass an "Offshore Energy Wind Act" which the author proposes a draft of); Erica Schroeder, *Turning Offshore Wind On,* 98 CAL. L. REV. 1631 (2010) (arguing for Congressionally enacted changes to the Coastal Zone Management Act).

[160] Matthew Mosk & Ronnie Green, *Did Obama Administration Cut Corners For a Green Energy Company,* ABC NEWS (May 24, 2011), http://abcnews.go.com/Blotter/obama-administration-solyndra/story?id=13640783#.Ueb8HFMVLQQ (last visited Sept. 23, 2013).

[161] An observer of the American political system need only consider the fact that the Federal Government has been operating on a series of "Continuing Resolutions" since 2007 or the issues of gun control or tax reform to understand this statement to be true.

[162] Heidi Willers, *Grounding the Cape Wind Project: How the FAA Played into the Hands of Wind Farm Opponents and What We Can Learn From It,* 77 J. AIR L. & COM. 605, 633-35 (2012).

[163] Until February 2012, the FAA operated under a series of 23 separate continuing funding resolutions from 2007 to 2012 and actually had a partial shutdown in early 2012. Keith Laing, *Obama Signs $63B FAA Funding Bill into Law,* THE HILL (Feb. 14, 2012), http://thehill.com/blogs/transportation-report/aviation/210649-obama-signs-63b-faa-funding-bill-into-law (last visited Sept. 23, 2013). The bill signed by President Obama keeps funding levels at Fiscal Year 2011 levels and does not provide an increase many in Congress hoped for. Pete Kasperowicz, *House Approves First Long Term FAA Funding Bill in Eight Years,* THE HILL (Feb. 3, 2012), http://thehill.com/blogs/floor-action/house/208535-house-approves-first-long-term-faa-funding-bill-in-eight-years (last visited Sept. 23, 2013).

[164] *What We Do,* FED. AVIATION ADMIN., http://www.faa.gov/about/mission/activities/ (last visited July 17, 2013).

burdens.[165] Specifically, the FAA should modify Chapter 6 of the Handbook in order to make the procedures for airspace management more streamlined. A possible solution would be to turn Sections 6-3-3, 6-3-4, and 6-3-5 into one new Section. This new section could read:

6-3-3 Substantial Adverse Impact

For a structure to have a substantial adverse impact, it must first exceed an obstruction standard under 14 C.F.R. § 77.17. If this exists, then there must also be at least one of the following conditions met for a substantial adverse impact to be found:

a. Requires a change to an existing or planned IFR minimum flight altitude, a published or special instrument procedure, or an IFR departure procedure for a public-use airport.

b. Requires a VFR operation to change its regular flight course or altitude. This does not apply to VFR military training route (VR) operations conducted under part 137, or operations conducted under a waiver or exemption to the CFR.

c. Restricts the clear view of runways, helipads, taxiways, or traffic patterns from the airport traffic control tower cab.

d. Derogates airport capacity/efficiency by impacting at least one aeronautical operation per day.

e. Affects future VFR and/or IFR operations as indicated by plans on file.

f. Affects the usable length of an existing or planned runway.

g. Causes interference with the operation of air navigation or communication equipment.

This revised Section 6-3-3 would make clear how the factors for determining an obstruction are to be considered. It places all the possible factors under one section of guidance and gives a precise order as to when the factor should be considered. It also corresponds with the other sections of the Handbook that require a regulatory violation first, before looking at additional obstruction factors. [166] A change like this will make it easier for the FAA to apply, and courts to interpret, the Handbook and improve the efficiency of FAA determinations.

[165] A reader of this Article may be thinking, "Wouldn't it be costly and time consuming for the FAA to do this as well?" The response to that question is that the cost and time associated with issuing a clarification to its Handbook is far less than the years spent in court litigating matters of interpretation.

[166] Although Section 6-3-8(c)(1) is discussed in detail in this Article, there is no reason to change the language contained therein because it already requires a structure to be taller than 500 feet and be within 2 miles of a VFR route, thus Cape Wind does not trigger this Section. Order 7400.2G, *supra* note 32, at 6-3-8(c)(1).

If the FAA Handbook contained the above language, it is more likely than not that the initial determination on Cape Wind would have been upheld. This is because Cape Wind never would have triggered this "substantial adverse effect" language based upon the fact it did not exceed the standards in 14 C.F.R. § 77.17. The "substantial adverse impact" argument can be used by the opponents of Cape Wind only because the current version of the Handbook does not define substantial adverse impact as needing the pre-requisite regulatory violation of 14 C.F.R. § 77.17. The proposed language removes their main argument, addresses the problems specified by the D.C. Circuit in *Barnstable*, and curtails the likely argument of future anti-wind farm advocates.

VII. Conclusion

The Cape Wind project is an example of the problems that face wind energy development projects in the United States.[167] Not only are there political implications from nearby residents and other special interest groups,[168] but a host of regulatory challenges which wind farm proponents may not even consider including the obtainment of FAA approvals due to the height and other aeronautical issues associated with wind turbines.

As more wind farm projects are proposed, challenges to their construction will also increase. The FAA will continually be placed in the position of determining whether these projects have an adverse effect on air traffic. While the benefits and pitfalls of wind energy may be at the core of many challenges, it is the role of the judiciary to focus not on those issues, but on whether the proper regulatory prescriptions were followed.[169] In the case of Cape Wind, the D.C. Circuit was justified in its holding that the FAA did not properly follow its own Handbook in determining whether the wind turbines would cause an adverse impact to air traffic. Because the FAA failed to appropriately address those issues in its most recent Determination of No Hazard, the latest challenge to Cape Wind will likely

[167] Not all energy windmills face opposition. For example, Atlantic City, N.J. hosts five 380-foot windmills directly on the bay and has found that the windmills have not only increased tourism, but also home values with views of the windmills have increased faster than those without the view. Molly Golubcow, *Tourism that Blows,* ATLANTIC CITY WEEKLY (Jan. 26, 2006), http://www.atlanticcityweekly.com/arts-and-entertainment/features/tourism_that_blows-50733287.html (last visited Sept. 23, 2013).

[168] In addition to concerns noted previously, Congress has also gotten involved. On August 8, 2012, Congressman Darrell Issa (R-CA), Chairman of the Committee on Oversight and Government Reform, wrote a letter to President Obama suggesting the President's support for wind energy programs created political pressures on the FAA to approve the project. Letter from Congressman Darrell Issa, Chairman, U.S. House of Representatives Committee on Oversight and Government Reform, to President Barak Obama at 4 (Aug. 8, 2012), *available at* http://oversight.house.gov/wp-content/uploads/2012/08/Chairman-Issa-to-President-Obama-8-8-12.pdf. Further evidence of the polarized nature of Cape Wind can be found in a letter from APNS President Audra Parker to the FAA which suggests the FAA succumbed "to political pressure with suboptimal decisions leading to serious public safety risks." Letter from Audra Parker, President and CEO, Save our Sound, to Michael Huerta, Acting Administrator, Federal Aviation Admin. at 12. (May 22, 2012), *available at* http://www.saveoursound.org/userfiles/files/APNS%2BLetter%2Bto%2BFAA%2Bre%2BFOIA%2B5%2B22%2B12%5B1%5D.pdf.

[169] The D.C. Circuit did note that "while of course the wind farm may be one of those projects which such overwhelming policy benefits (and political support) as to trump all other considerations, even as they relate to safety, the record expresses no such proposition." *Town of Barnstable*, 659 F.3d at 33.

be successful, thus delaying the project even further. The FAA should learn from this experience and make changes to its Handbook as suggested in this Article. Doing so would be prudent, so as to not impede worthy wind farm projects, but also to reduce agency costs spent on permit reviews as resources become scarcer. Wind farm development is here to stay and the FAA cannot rely on Congress or the judiciary to rescue it from its regulatory obligations; it must fix its own problems from the inside.