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Marine Policy

journal homepage: www.elsevier.com/locate/marpol

Power and perspective: Fisheries and the ocean commons beset by demands of development



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ARTICLE INFO

Available online 18 December 2014

Keywords:

East and West Coast US fisheries

Stakeholders' values

Power inequities

Marine space use

Common pool resources

Conflict

ABSTRACT

Marine renewable energy (MRE), though a relative newcomer to the ocean and coastal commons, has become a significant driver of marine spatial planning in the US, posing particular challenges to commercial fisheries and fishing communities. State and federal agencies with primary oversight for MRE development have focused on the identification of places where MRE might proceed unhindered by other uses, most notably coastal fisheries. These agencies and MRE developers have focused on potential space-use conflict and standard mitigation measures for loss of access to that space. However, discussions with fishery participants and other community members, as well as observations of processes on the US West and East Coasts, reveal a complex, multi-faceted social-ecological system not easily parsed out among users, nor amenable to classic mitigation formulas. Recent ethnographic research on potential space-use conflicts and mitigation for MRE demonstrates that marine space use is dynamic and multi-dimensional, with important linkages among fisheries, communities and other interests. Although experiences vary within and across regions and fishing communities, this research illustrates the weak position of fishing communities in marine spatial planning in the context of MRE development. This paper considers the implications of MRE for US East and West Coast fisheries and fishing communities situated within the larger context of neoliberalism and commodification of the ocean commons.

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1. Introduction

Marine renewable energy (MRE) generated by coastal winds, waves, and tides has gained considerable attention from government agencies, energy utilities and developers, as well as some coastal community residents. A relative newcomer to the ocean and coastal space use context, most efforts to develop MRE in the US have been contentious, especially vis à vis commercial fisheries. State and federal agencies with primary oversight over MRE development have focused on the identification of places where MRE might proceed without conflicting with existing uses such as fisheries and, where conflict cannot be avoided, on mitigation measures for existing users' loss of access to that space. However, fundamental differences between MRE and fisheries in how ocean space is conceived, valued, and used pose particular challenges for accommodating both uses, as well as for avoiding or mitigating

space-use conflict. These differences are emblematic of the growing tension between neoliberal and common pool approaches to the challenges (and opportunities) of ocean management and resource use. Uneven power relationships among commercial fishing businesses, government agencies, and corporations seeking space for MRE further complicate the potential for the accommodation of multiple uses.

In 2009, the US Bureau of Ocean Energy Management (BOEM, then the Minerals Management Service) sponsored a study to investigate potential space-use conflicts on the Outer Continental Shelf (OCS) of the US East and West Coasts and identify mitigation measures for the loss of use of that space by traditional ocean stakeholders should such conflict be unavoidable [1]. Despite empirical evidence of spatial overlap among existing ocean uses, and concern for increasing overlap with emerging ocean uses, there was no comprehensive documentation of ocean use or the values, characteristics, and socioeconomic contributions of existing coastal and ocean users. The perception that there was unused space to be found comes from a persistent view of the ocean as a "frontier," despite well-documented evidence that the ocean is a "peopled seascape" [2]. Documenting spatial overlap, along with

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the dynamics and multi-dimensionality of MRE and fisheries as distinct types of space use and values, is critical to avoiding and mitigating space-use conflict.

This paper explores the implications of MRE for US East and West Coast commercial fisheries and fishing communities within the larger context of neoliberal commodification of the ocean commons. It begins with a brief discussion of the oceans as the “common heritage of mankind” and efforts to privatize ocean space and resources, with an emphasis on the US experience related to fisheries and MRE. Results of research on potential space-use conflict between MRE, a new use, and commercial fishing, an existing one, are presented. The spatial and temporal dynamics of space use and associated values, along with differences in power and the potential for conflict – and compatibility – between commercial fishing and MRE are examined.

2. Historical context

2.1. Commercial fisheries

The archaeological record provides clear evidence of aboriginal peoples' rich traditions of fishing and trade in marine products along both the East and West Coasts of the US. Commercial fishing by Europeans in the US began in the early 1600s with the British Crown's establishment of a fishing village on Cape Ann (which later became Gloucester, Massachusetts). By the 18th century, commercial fishing and whaling were well established on the East Coast. Commercial fishing and whaling among non-aboriginal people on the West Coast developed later, following the slowing of the Gold Rush in the 1800s [3].

As technology progressed and key infrastructure was constructed, commercial fishing became an important component of the coastal economies of the US. Diversity characterizes the industry on both coasts in terms of the gear used, sizes and types of vessels, target species, and fishing grounds. On the East Coast, these range from large trawlers, scallopers, and offshore trap boats that roam widely, to relatively small vessels (typically under 50 ft) working with fixed gear (traps and gillnets) and longlines. On the West Coast, trawlers and purse seiners (typically 45 to 90 ft) are among the larger fishing operations, whereas trollers, longliners, gillnetters, and trap and dive boats tend to be smaller (12–50 ft). While smaller vessels traditionally worked closer to shore than the larger vessels, fishing restrictions, especially time and area closures, have resulted in more of them working further offshore. Despite substantial socioeconomic change, including consolidation, and coastal development, the fishing industry on both coasts remains dominated by family-owned businesses with strong ties to coastal communities.

2.2. Marine renewable energy development

Wind, waves and tides are the three most common sources of MRE. Denmark was the first nation to establish offshore wind generation facilities (wind turbines) [4], quickly followed by the United Kingdom (UK) and several other European nations [5]. The first experimental wave energy project began in 2008 in Portugal, followed by Australia, the United Kingdom, Ireland, and Denmark. Tides have been used to power mills since at least the Middle Ages, but it was 1966 before the first tidal power station was built in Brittany, France [5]. Until recently, tidal power was not considered economically and environmentally competitive with wind and wave energy; however, this assessment has changed with advances in technology.

The development of MRE in the US has lagged behind activity elsewhere as state and national authorities grapple with permitting

requirements of a host of agencies and with requisite stakeholder input [5]. In the US, the federal Bureau of Ocean Energy Management (BOEM) has primary authority over permitting and management of the development of ocean energy, including MRE, in offshore waters (3–200 nm from the coast). However, as many as 26 separate government departments and agencies have authority to comment on and, in some cases, block development. While the states have very limited authority over the seabed and water column beyond 3 nm from shore, the distribution of marine energy requires linking to shoreside networks. Thus, federal agencies must collaborate with state agencies and coastal communities to ensure that the energy generated has an effective conduit. Similarly, although states have jurisdiction over submerged lands from the shoreline out to 3 nm, they must coordinate with numerous federal agencies such as the Federal Energy Regulatory Commission as well as multiple other state entities in planning and siting marine energy facilities [6]. In California, for example, the State Lands Commission is the lead agency for MRE, but must consult and/or coordinate with the California Coastal Commission, the California Department of Fish and Wildlife, the California Public Utilities Commission, the California Energy Commission, and the State Water Resources Control Board [7].

The development of particular MRE technologies has varied between the US East and West Coasts. The West Coast has been the focus of wave energy development in the US, most notably off Oregon, where MRE has been promoted as a potential new economy or industry for Oregon, and the state encouraged offshore renewable energy development by establishing the Oregon Wave Energy Trust [8]. However, due to technical, environmental, and socioeconomic questions and challenges, the Northwest National Marine Renewable Energy Center, a government-supported testing facility, has been the primary locus of these efforts. More limited efforts have occurred off California [1]. Wind and tidal energy have been the primary types of MRE explored on the East Coast. For example, in April 2010, the federal government approved the first offshore wind project in the Northeast, 130-turbine Cape Wind, located in a 25 square mile area in Nantucket Sound. Other large wind projects are being developed in Delaware and New Jersey with a smaller project off Rhode Island. Three areas in the US have been determined to have sufficient tidal energy to warrant development: Puget Sound, Washington, Cook Inlet, Alaska, and the Gulf of Maine, where devices have been deployed at two sites [9].

2.3. Neoliberalism and the commodification of the ocean commons

The question of who has the right to access and use the ocean for navigation, seabed mining, fisheries, and other purposes has long been contested. In 1609, Grotius argued that freedom of the seas was essential for the development of maritime trade. He further contended that the sea, like the air, was the “common property of all... because it is so limitless that it cannot become a possession of any one, and because it is adapted for the use of all, whether we consider it from the point of view of navigation or of fisheries” [10]. In contrast, in 1635, Selden sought to prove that the seas were as amenable to appropriation as land was [11]. In 1702, van Bynkershoek [12] offered a compromise, providing for the more limited maritime claim of a 3-nm territorial sea (based on the range within which cannon could protect it), which was widely accepted.

Two and a half centuries later, however, the debate among nations continued amid rapidly changing sociopolitical, economic and technological circumstances. The 1982 United Nations Convention on the Law of the Sea (UNCLOS) defined the area within 12 nm of a nation's coast as its sovereign territory, and specified an exclusive economic zone that protects coastal nations' sovereign rights to the seabed and water column, typically out to 200 nm from shore. UNCLOS declared that coastal nation states have special rights over the exploration, use,

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