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Addressing policy issues in a stakeholder-based and science-driven marine protected area network planning process

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ABSTRACT

The California Marine Life Protection Act (MLPA) Initiative (Initiative) was a public-private partnership focused on designing a statewide network of marine protected areas (MPAs) to increase coherence and effectiveness in protecting the state's marine life, habitats, and ecosystems through a public planning process. In pursuing this core charge, the Initiative had to consider a range of other (non-MPA) policy issues and develop approaches to ensure that MPA network planning continued unimpeded, while also facilitating the consideration of issues deemed outside of California's MPA planning process. This paper explores the strategies used to address policy issues that arose in MPA planning and provides examples from six specific topic areas: fisheries management, water quality, military use areas, marine bird and mammal protection, dredging and maintenance, and tribal gathering activities. Each of these topics helps illustrate a different strategy utilized, including engaging policy issues early, providing additional evaluations, engaging additional support, putting complimentary issues on a parallel track, utilizing flexibility in statutes, and ensuring frequent and direct stakeholder communication. Considering how multiple issues were addressed in a MPA planning process provides important insights for more integrated coastal and marine spatial planning.

1. Introduction

Marine protected area (MPA) planning is often driven by focused, ecosystem-based goals that address a relatively narrow range of factors affecting marine ecosystem health (Foley et al., 2010; Tallis and Polasky, 2009). However, the complicated nature of coastal ecosystems and associated human uses often requires that even focused MPA planning processes consider, though not necessarily resolve, a broad range of other issues that arise in the context of marine spatial planning. Addressing diverse ocean issues in a manner that does not disrupt the core MPA planning focus requires a correspondingly wide range of strategies, which have implications for broader coastal and marine spatial planning.

Worldwide, coastal and marine resource managers are pursuing more integrated, ecosystem-based approaches to address challenges regarding marine ecosystem health and conflicting coastal uses (Beck et al., 2009; Crowder et al., 2006; Douvere and Ehler, 2009; Gopnik, 2008; Halpern et al., 2012; Olsson et al., 2008). Within the United States, this shift toward multiple objective management is exhibited by a new national ocean policy with

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objectives that state the need to "implement comprehensive, integrated, ecosystem-based coastal and marine spatial planning and management," and "better coordinate and support federal, state, tribal, local and regional management" (CEQ, 2010).

MPAs are one mechanism, amongst others, available to help address coastal and marine resource issues (Gaines et al., 2010; Halpern et al., 2010). The California Marine Life Protection Act (MLPA) Initiative (Initiative) was a public–private partnership that led a MPA network planning process guided by a relatively focused set of ecosystem-based objectives[2] (Kirlin et al., 2013; Gleason et al., 2010). The Initiative took nearly seven-years and covered four planning areas, called "study regions" (see Fox et al., 2013b; Kirlin et al., 2013), spanning most of California's 1770 km coastline. The complexity of California's coastal and marine waters and jurisdictional overlap among agencies necessitated that the broader management landscape be more directly considered, including several policy issues that had the potential to confuse or disrupt the MPA planning process.

In 1999 the MLPA was enacted, directing the California Department of Fish and Game (CDFG) to redesign California's system of MPAs to increase the system's coherence and effectiveness in protecting marine life, habitats, and ecosystems (Fish and Game Code §2853(a)). The California State Legislature recognized that a broad range of human activities threaten the health of marine habitats and biological diversity found in California's ocean waters, and that MPAs, along with sound fishery management and other management tools, are "complementary components of a comprehensive effort to sustain marine habitats and fisheries" (FGC §2851(c) and 2851(d)). The MLPA outlines a general process for redesigning California's MPAs, which are classified and defined separately in the Marine Managed Areas Improvement Act (MMAIA, California Public Resources Code §36600–36900). The MLPA and MMAIA together provide for MPA planning within state waters (generally defined as mean high tide to three nautical miles from shore) (Kirlin et al., 2013; Gleason et al., 2010).

While the MLPA focuses on MPAs designated in state waters (including "no-take" state marine reserves), broader management of California's coastal and marine resources is much more complex. First, coastal jurisdiction includes multiple local, state, and federal agencies with specific, and sometimes overlapping, responsibilities (CNRA, 1997 and Table 1). Second, coastal managers must consider increasing demands for use of the marine environment for industrial and other related purposes, some of which may fall outside of primary regulatory authority or geographic bounds of a planning area (ELI, 2009). Such activities include land use management and construction in the coastal watershed, aquaculture and desalination facilities at or near the land–sea interface, shipping, oil, gas and mineral extraction, national defense and offshore energy production, among others. Finally, coastal zone management includes a wide range of regulatory mechanisms for managing fisheries, marine birds and mammals, water quality, coastal development, and a host of other issues. While MPA planners must consider these uses and jurisdictions, their complexity creates challenges for more integrated resource management. Discrete policy guidance is one method for allowing some consideration of these diverse issues.

Planning a statewide network of MPAs through the Initiative required working within the legal authority of the MLPA, regulations adopted by the California Fish and Game Commission (Commission), and the management authority of CDFG, as well as the broader complexities of California's coastal policy context. The Initiative developed multiple strategies to navigate, though not necessarily resolve, a range of policy issues, while still allowing the core MPA planning process to move forward largely unimpeded, without compromising the overarching Initiative objectives and MLPA goals. Ultimately, MPA planning was successfully completed in the four open coast study regions,[3] and a statewide network of MPAs is being established (Fox et al., 2013b; Gleason et al., 2013). Over the course of the Initiative planning process, the overall trend was to consider an increasing number of jurisdictions and ocean uses in each study region (see Figs. 1–3 for examples).

This paper focuses on six key strategies used by the Initiative to address policy issues that arose during MPA planning. Specific examples of policy issues are presented to illustrate how each strategy was used, including fisheries management, water quality, military use areas, protection of marine birds and mammals, dredging and maintenance, and traditional gathering by tribes and tribal communities. These policy issues are relevant to managing marine resources, but were not resolvable within the Initiative's MPA planning process or within the legislative authority of the MLPA (see Table 2). While many other policy issues arose during the MPA planning process, the six examples provided demonstrate mechanisms for considering broader ocean resource issues, while maintaining focus on the core objectives of the planning effort. Analyses of the strategies presented in this paper have been conducted by Initiative staff involved in the planning process and thus provide a participant–observer perspective on the efficacy of each approach, as well as associated challenges and shortcomings.

2. General approach for addressing policy issues

Throughout the course of the Initiative planning process, issues regarding use of coastal and marine resources arose that were not directly related to the legal requirements and authorities of the MLPA, the CDFG or the Commission. An appointed regional stakeholder group (RSG) was responsible for developing MPA proposals in each study region (Fox et al., 2013b), and often requested specific guidance for how to address these policy issues during the MPA planning process. The appointed MLPA Master Plan Science Advisory Team (SAT), which played an advisory role in the process, similarly encountered policy issues that needed to be addressed (Saarman et al., 2013).

Oversight for addressing policy issues was provided by the MLPA Blue Ribbon Task Force (BRTF), a group of five to eight advisors appointed in each region for their public policy experience and professional expertise to direct the Initiative process in an objective manner (see Kirlin et al., 2013). BRTF members worked with Initiative staff to help determine which emerging policy issues could be addressed through the Initiative, as well as the appropriate strategies for addressing each issue. The BRTF and Initiative staff generally worked to enable the RSG to focus on its core task of redesigning MPAs, and the SAT to focus on its core charge of providing objective scientific input to inform MPA design, and ensure that policy issues were appropriately addressed.

Support for crafting, delivering and recording guidance for policy issues was provided by Initiative staff in consultation with relevant agencies and other legal and policy advisors. Importantly,

[2] The six goals of the MLPA are primarily focused on protecting marine diversity, marine populations, and natural heritage while supporting recreational and educational opportunities in a statewide network of MPAs that have clearly defined objectives and management measures, are anchored on sound science, and are enforceable.

[3] A planning process for the fifth study region (San Francisco Bay) will be considered subsequent to completion of current planning efforts in the Sacramento-San Joaquin River Delta focused on ecosystem restoration and water supply reliability.