NOAA's Role in Marine Spatial Planning

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I. Introduction

Marine Spatial Planning (MSP) is a comprehensive, ecosystem-based process through which compatible human uses are objectively and transparently allocated to appropriate ocean areas to sustain critical ecological, economic and cultural services for future generations. Often, the purpose is to reduce impacts in ecologically sensitive areas or to minimize disputes among incompatible activities sharing marine locations. However, MSP is seldom conducted in a comprehensive, holistic manner in which the society's desired uses of places are optimized by design. Rather spatial allocation of uses has evolved from individually implemented activities without a strategic and integrated framework that minimizes conflicts and increases efficient use of space and resources. For example, fishing regulations are implemented for conservation goals, or access to certain areas is limited to restore degraded habitats, or areas are set aside for national defense training or for energy development siting. NOAA has major roles to play in MSP both as a technical expert to combine critical bathymetric, ecological, human use and oceanographic information in decision support tools for use by managers, and in its stewardship missions to achieve conservation and other societal goals. MSP applicable to NOAA's missions occurs in the coastal and estuarine systems, the Great Lakes, states' territorial seas and the exclusive economic zone (EEZ, 3-200 nm).

II. Marine Spatial Management and NOAA's Missions

NOAA is the major US federal agency responsible for marine protected areas and other spatial restrictions to optimize human uses and to achieve conservation of living marine resources, cultural resources, and marine ecosystems. NOAA also plays a leadership role in federal interagency coordination through the Federal Geographic Data Committee and Joint Subcommittee on Ocean Science and Technology (JSOST).

Federal legislation allows NOAA to restrict some activities in areas under its control if they are inconsistent with the goals of these statutes. For example, under the National Marine Sanctuary Act, NOAA protects and manages 116,000 square nautical miles (nm^2) in 13 Sanctuaries and Monuments, protecting living marine resources, cultural resources such as historically significant ship wrecks, and restricting activities such as sand and gravel mining. Under the Magnuson Stevens Fishery Conservation and Management Act (MSRA), NOAA can restrict all or some fishing methods from areas in order to achieve sustainable management of fished natural resources. Federal fishery management councils prohibit the use of bottom trawling and shellfish dredging in 2.4 million nm^2, or 2/3 of the USA EEZ to achieve optimum yield from fish stocks, to protect essential fish habitat (EFH), minimize impacts on sensitive deep coral populations, and to minimize impacts in habitat areas of particular concern (HAPC). Under the Coastal Zone Management Act (CZMA), NOAA has authorized and supports active management within states' coastal zones and territorial seas to encourage planning and other activities that allow the states to achieve conservation and protection of sensitive ecological areas. The CZMA program provides programmatic funding to states to encourage MSP and associated management activities. NOAA also manages 27 units of the National Estuarine Research Reserve System (NERRS), which are located in sensitive estuaries and coastal regions.

Many federal agencies are involved in marine spatial planning and management. Some of NOAA's more significant partners include the Minerals Management Service, which allocates oil and gas leases and associated conservation restrictions on the Outer Continental Shelf (OCS). Under the Energy Policy Act of 2005, NOAA and the Minerals Management Service developed the first version of an integrated mapping system to support alternative energy planning on the OCS. The system includes the baseline information that can be used for MSP. The Federal Energy Regulatory Commission regulates siting of liquefied natural gas (LNG) terminals and interstate natural gas pipelines. The Army Corps of Engineers (ACOE) authorizes and permits all modifications proposed for the seabed and associated activities which may interfere with navigation. The EPA can restrict certain activities related to contaminated site rehabilitation and remediates pollution in coastal regions. Increased emphasis on renewable energy

projects in the coastal zone requires an integrated approach to impact assessments and siting for these activities.

The National Environmental Policy Act (NEPA) is the overarching federal law that requires federal agencies to examine actions in light of all other activities and alternatives applicable to its placed-based management. The CZMA imposes similar requirements within each State. However, existing tools appear inadequate to achieve harmonized marine spatial planning and management activities among federal agencies or among the states to assure that these goals are consistent or mutually supporting. The US Ocean Commission and the Pew Ocean Commission both proposed regional governance institutions to improve coordination. Mechanisms were proposed in the 110th Congress under H.R. 21, and it seems likely that such legislation will be considered in the 111th. NOAA needs to be involved in providing appropriate comment and drafting assistance.

III. Technical Requirements of Marine Spatial Planning

MSP comprises a broad spectrum of NOAA functions and capabilities, ranging from management-driven spatial analysis of ecosystem and socioeconomic data, to comprehensive regional planning of ocean uses using decision support tools, to integrated adaptive management of ocean areas using existing or new legal authorities. Key supporting functions of MSP in NOAA are:

Spatial Data and Planning Tools

Spatially Explicit Ecosystem Information – syntheses of existing data on important habitats, species and ecological processes at scales relevant to ocean planning.

Spatially Explicit Ocean Uses Assessments – maps and analyses of patterns, impacts, economic significance and potential conflicts of current and emerging ocean uses (i.e. industrial, consumptive and non-consumptive).

Decision Support Tools – practical tools and information that enable agencies and stakeholders to visualize, evaluate and select viable spatial allocations of competing uses

Policy Leadership

Interagency Coordination – consultations and collaborative regional, multi-sectoral planning among key federal, state, tribal and local agencies and stakeholders concerned about ocean uses. A critical issue in policy development is how the collaborations should be structured – using existing collaborations or seeking new comprehensive planning legislation

Policy Framework – analyses of relevant federal and state authorities and development of new federal and state legislation and policies to fill critical gaps in spatial management capacity in US waters.

Beyond these key supporting functions NOAA has the expertise to provide, along with our partners, other capabilities that are necessary to fill gaps that would make a MSP framework more robust. These include: mapping and observations, research, assessments, models, decision support tools, governance, monitoring and evaluation.