Sanctuary Ecologically Significant Areas

Introduction

Monterey Bay National Marine Sanctuary (MBNMS) is one of 13 national marine sanctuaries in U.S. waters. The National Marine Sanctuary System is mandated to "maintain for future generations the habitat and ecological services of the natural assemblages of living resources that inhabit these areas."1 In order to accomplish this mandate, we need a thorough understanding of the natural resources occurring within the sanctuary's boundaries. Since the MBNMS encompasses such a large area (6094 square miles), we also recognize the need to focus our limited resources and efforts to better understand and protect some of the more ecologically significant areas within the sanctuary.

What are Sanctuary Ecologically Significant Areas (SESAs)?

Sanctuary Ecologically Significant Areas encompass remarkable, representative and/or sensitive marine habitats, communities and ecological processes and facilitate research to better understand natural and human-caused variation. SESAs are not currently part of the MBNMS regulatory regime, yet will be used and applied as a marine spatial management tool.

Why SESAs?

SESAs will be established to assist with sanctuary management for resource protection and research purposes. We are identifying Sanctuary Ecologically Significant Areas by using the best available scientific information, including GIS data layers to locate remarkable, representative and sensitive habitats. The key reasons to establish SESAs include:

1. National Marine Sanctuaries have a mandate to understand and protect the marine resources within their jurisdiction.
    - It is particularly important to focus efforts in a sanctuary as large as the MBNMS (6094 square miles).
    - In 2013/14, MBNMS will undertake a management plan review. New spatial management tools for resource protection, such as SESAs, will be included in this review.

2. Understanding and identifying special places or SESAs within the sanctuary allows for more directed guidance for future research and monitoring, education and management efforts related to emerging human activities.

3. The identification of SESAs will help target research, funding and management towards specific locations containing diverse, biogenic benthic habitats that are vulnerable to seafloor disturbance and other potential threats such as offshore energy development, offshore aquaculture, oil spills, shipping lanes, noise or climate change (e.g., ocean acidification) issues.

[1] Title 16 United States Code, Chapter 32, §1431(a)(4)(C)

4. Identifying and implementing SESAs in a comprehensive manner allows the MBNMS to use an adaptive management approach to draw on the best available scientific information.

What is the Study Area for SESAs?

The study area for identifying SESAs is **offshore federal waters**, which encompass all portions of MBNMS to the west of the state waters boundary, including the Davidson Seamount Management Zone. We are focusing on federal waters because the California State Marine Life Protection Act already made significant progress in understanding and protecting marine resources within state waters (< 3 nautical miles from shore). In studying and identifying SESAs in offshore waters, we are investigating pelagic habitats (the water column) and benthic habitats (the seafloor). **Initially we will focus SESA efforts on benthic (seafloor) habitats.**

How are SESAs Selected?

Working with agencies, the scientific community and other community stakeholders, MBNMS technical experts collected and analyzed over 150 layers of Geographic Information System (GIS) data. Primary and secondary criteria were developed to select areas that address multiple objectives. Primary criteria include benthic habitat identified by depth zones, substrate type, benthic structure-forming invertebrates (e.g., deep sea corals, sponges) and locations where visual or research data has been collected. Secondary criteria include upwelling hotspots, visual imagery, stakeholder input and existing management connections.

Intended Outcomes for SESAs

- Enhanced understanding and protection of benthic habitats at risk to seafloor disturbance
- Increased imagery, characterization and research of important areas of the sanctuary
- Directed science, conservation and outreach efforts in targeted areas to maximize resource protection investments and benefits
- Greater collaboration between partner agencies to leverage resources (e.g., funding, vessels, equipment)
- Adaptive management planning for emerging issues or future threats

Guiding Principles for SESAs

- Focus MBNMS resources and efforts to understand, protect and monitor Sanctuary Ecological Significant Areas within the sanctuary
- Foster and leverage partnerships
- Use the best available information including local knowledge from scientists, fishermen and conservation organizations.
- Anticipate and address changes to ocean ecosystems due to human or environmental causes such as energy development structures or climate change.

Figure 1 – Draft Map of Sanctuary Ecologically Significant Areas