

Appendix D. Draft Environmental Assessment

The following draft Environmental Assessment for the proposed Draft Framework for Developing the National System of MPAs (Draft Framework) is available for public comment in the same comment period as the Draft Framework. Comments should be submitted to the contact and by the date listed in Section II of the Draft Framework.

Draft Environmental Assessment for the Proposed Draft Framework for Developing the National System of Marine Protected Areas

Lead Agency:

Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service

Cooperating Agency:

Department of the Interior, Office of the Assistant Secretary for Fish and Wildlife and Parks

For further Information Contact:

Jonathan Kelsey
National Marine Protected Areas Center
1305 East West Hwy.
Silver Spring, MD 20910
Phone: (301) 563-1130; Fax: (301) 713-3110
E-mail: Jonathan.Kelsey@noaa.gov

Purpose and Need for this Environmental Assessment

Executive Order 13158 on MPAs

Executive Order 13158 on Marine Protected Areas (2000) calls on the Department of Commerce and the Department of the Interior (DOI), in consultation with other federal agencies and stakeholders, to develop a national system of marine protected areas (MPAs) to enhance the conservation of the nation's natural and cultural marine heritage. The Executive Order created the National Marine Protected Areas Center (MPA Center) within the National Oceanic and Atmospheric Administration (NOAA) to coordinate this effort. The mission of the MPA Center is to facilitate the effective use of science, technology, training and information in the planning, management and evaluation of the nation's system of marine protected areas.

The National System of MPAs

Currently, over 1,500 marine areas have been identified in the United States (U.S.) that are managed under the authority of hundreds of federal, state and territorial (state), tribal and local laws and regulations. Familiar examples of MPAs include national and state marine sanctuaries, parks, wildlife refuges, and some fishery management areas. This patchwork of protected areas is an important component of the nation's marine conservation mission, but would be greatly enhanced by the improved coordination and integration across sites and MPA programs that a national system will provide.

Table 1. Examples of Existing U.S. MPAs

MPA Name and Location	Name of Managing Agency and Type of Management	MPA Description*
Ashepoo-Combahee-Edisto (ACE) Basin National Estuarine Research Reserve South Carolina	Federal/State Partnership Management: National Oceanic and Atmospheric Administration and South Carolina Department of Natural Resources	ACE Basin is one of the largest undeveloped estuaries on the East Coast. Diverse estuarine wetlands provide an extensive complex of wildlife habitat types; the region contains 91,000 acres of tidal marshes, 26,000 acres of managed impoundments and 12,000 acres of maritime islands.
Manele-Hulopoe Marine Life Conservation District (MLCD) Hawaii	State Management: Hawaii Department of Land and Natural Resources	The Manele-Hulopoe Marine Life Conservation District (MLCD) is located in the waters offshore of Palawai and Kamao on the southwestern coast of Lanai. Within Manele Bay corals are most abundant along the sides of the bay near the cliffs, where the bottom slopes off quickly to about 40 feet. The middle of the bay is a sand channel. Just outside the western edge of the bay near Pu'u Pehe rock is "First Cathedrals", a popular SCUBA destination. Hulopo'e Bay has large tidepools at its left point. A shallow reef is just offshore, providing excellent snorkeling opportunities. Pu'u Pehe Cove has clear water and considerable marine life. Coral growth is interspersed with sand patches, and most coral is found away from the narrow beach in about 10 to 15 feet of water.
North Fork, St. Lucie Aquatic Preserve Florida	State Management: Florida Department of Environmental Protection	The North Fork, St. Lucie Aquatic Preserve contains various aquatic habitats such as riverine, blackwater stream, tidal marsh, slough, and floodplain forest communities. The headwaters of the North Fork are comprised of freshwater from Ten Mile and Five Mile Creeks. Downstream, brackish conditions support tidal marshes with mangroves, leatherfern, and sawgrass.
Monomoy National Wildlife Refuge Massachusetts	Federal Management: Department of the Interior, US Fish and Wildlife Service	Monomoy is comprised of 7,604 acres of barrier beach, sand dunes, freshwater ponds, and saltwater marshes. Monomoy provides habitat for hundreds of species of resting, feeding, and migratory birds. The refuge supports the largest nesting colony of common terns in the Gulf of Maine and second largest on the Atlantic Seaboard with close to 8,000 nesting pairs in 2001. Monomoy is the largest haul-out site of gray seals on the Atlantic Seaboard as well.

* Only the marine portion of the described areas are considered to be a part of the MPA; the terrestrial components, while a part of the larger management unit, are not considered to be part of the MPA.

The National System of MPAs (National System) will be built collaboratively by existing MPA sites and systems through partnerships at the ecosystem, regional, and national levels. The National System will focus on supporting shared priorities for enhancing coordination and stewardship of partner MPA sites and systems in order to improve effectiveness. The National System may ultimately include some new areas vital to the conservation of significant natural and cultural marine resources. These may be identified by National System partners through regional planning or other processes, and will be based on the best available science and stakeholder involvement. Any new MPAs would need to be designated through an existing federal, state, tribal or local authority, as the Executive Order provides no authority to create new MPAs.

Need for Action

The Executive Order calls on the MPA Center to develop a Framework for the National System (Framework). The purpose of the proposed Draft Framework document is to serve as a “road map” for developing the National System that will specify a common vision, goals, objectives and criteria for the National System, as well as the process for partnerships among state, federal, tribal, and local government agencies and stakeholders to develop it. While the Executive Order and the Draft Framework document are non-regulatory, the MPA Center is developing this Environmental Assessment to provide federal and state agencies, tribes and other stakeholders with the best available information on the potential impacts of the Draft Framework document during its public comment period.

Description of Alternatives

Alternatives Considered, but Rejected

In considering alternatives for proposing the Draft Framework, the following two were selected as constituting a reasonable range of alternatives for this Environmental Assessment: “Alternative A: Take No Action,” and “Alternative B: Propose the Draft Framework for Developing the National System of MPAs.” Numerous other possible alternatives were, however, informally considered by NOAA for analysis, but ultimately rejected, such as:

- 1) Publishing only limited information, such as the National System MPA definition and related criteria in the Draft Framework, and publishing separate guidance at a later date on other requirements of the Executive Order, such as processes for developing the National System and implementing the “avoid harm” provision.
- 2) The very large number of alternatives that would result from all the possible permutations of changes in the Draft Framework’s approach to meeting the various requirements of the MPA Executive Order.

In considering (1) above, it was determined that publishing only limited information in the Draft Framework would not fully meet the intent and requirements of the Executive Order. In that sense, publishing only limited information in the Draft Framework is fundamentally no different than Alternative A, since it too would fail to meet all of NOAA’s goals and requirements for implementing the Executive Order.

Alternative (2) above describes the potentially large number of alternatives that would result from developing possible options for each element of the Draft Framework. Several factors led to the determination that this approach and set of alternatives should be rejected.

First, the Draft Framework lays out a series of processes for U.S. MPA programs, agencies, authorities, and other stakeholders around the country to work together to determine eligible MPAs and

the most appropriate, specific approaches for developing the National System. Because the Draft Framework is focused on agency and stakeholder processes to determine specific approaches and actions, the environmental consequences of alternatives as described under (2) cannot be predicted to be significantly different than Alternative B.

Second, and most important, the processes outlined in the elements of the Draft Framework are based on input received from consultations with and recommendations from MPA stakeholders around the country, including the MPA Federal Advisory Committee, as required by the Executive Order. Creating a range of alternatives that are either independent of these consultations or consider only some of the recommendations received or would not meet the requirements of the Executive Order.

Having considered additional alternatives for proposing the Draft Framework for the National System, NOAA has determined that the two described below constitute a reasonable and practical range of alternatives for assessing the anticipated environmental consequences of fulfilling the requirement to develop the Draft Framework.

Alternative A: Take No Action

Under this alternative, NOAA would not propose a Draft Framework as required by the MPA Executive Order. Thus the MPA Executive Order would stand alone without any further detail of the processes necessary for developing the National System. For example, there would be no description of processes for identifying and including existing MPAs in the National System, working with MPA programs to collaboratively identify and address common stewardship needs, or identifying place-based gaps in protection.

Alternative B: Propose the Draft Framework for Developing the National System of MPAs (Preferred)

This alternative would fulfill the directive of the MPA Executive Order to develop a Framework. The Draft Framework provides guidance for developing the National System and therein implementing key elements of the Executive Order. The full descriptions of the proposed National System elements and associated processes are contained in the Draft Framework and summarized here as:

- Summary of authority for developing the Draft Framework and National System.
- Overview of key U.S. MPA programs and related initiatives.
- Key definitions for developing the National System.
- Goals and objectives for the National System.
- Sequence and steps for implementing the Draft Framework.
- Process for identifying, nominating, and recognizing MPAs in the National System.
- Options for building collaborative efforts to enhance stewardship and coordination of MPAs.
- Potential mechanisms for identifying gaps in the National System and future conservation priorities.
- Maintenance of the official List of MPAs.
- Process for implementing the “avoid harm” provision.
- Options for evaluating effectiveness of the National System.
- Mechanisms for tracking and reporting National System progress and priorities.

Description of Affected Environment

The geographic extent of the Draft Framework and the nation's existing MPAs that it aims to support span the United States territorial waters and Exclusive Economic Zone waters of the Pacific Ocean, including the Bering Sea; Atlantic Ocean, including the Gulf of Mexico and Caribbean Sea; Arctic Ocean, and the Great Lakes. This environment encompasses the entire range of the nation's marine ecosystems including their natural heritage, cultural heritage and sustainable production resources and functions, goods, and services.

Natural Heritage Resources

The nation's existing MPAs, whether managed by federal, tribal, state, or an inter-governmental collaboration of agencies help to conserve and restore the wealth of U.S. natural marine environments including but not limited to kelp forests, warm and cold water coral reefs, rocky intertidal areas, offshore banks and seamounts, estuarine areas, the Great Lakes waters, deep sea vents, and sand and mud flats. In these marine environments, MPAs play an important role in protecting the significant natural biological communities, endangered and threatened species, habitats, ecosystems, processes, and the ecological services, uses, and values they provide to this and future generations. These various components of the nation's marine environment are critical to maintaining the integrity and health of marine and coastal ecosystems. Oftentimes managing for one of these elements means protecting the others. For example to effectively manage endangered or threatened species, the habitat they rely upon must also be protected.

Sustainable Production Resources

Existing U.S. MPAs are also designed and established with the intent to help ensure the sustainability of the renewable living resources and their habitats, including, but not limited to, spawning, mating, and nursery grounds, and areas established to minimize incidental by-catch of species, that are important to the nation's economy, livelihoods, and subsistence. MPAs can help to sustain commercial and recreational fisheries by controlling fishing effort, protecting critical stages in the life history of fishery species, conserving genetic diversity of exploited species, reducing secondary impacts of fishing on essential fish habitat and other species, and ensuring against fisheries collapse (Murray et al. 1999; NRC, in press). MPAs may allow site-specific regulation of selected species, selected gear types, or fishing methods. Certain MPAs or zones within MPAs may be fishery reserves that protect all or nearly all species from fishing. Many studies indicate that abundance and size of target species increase in marine protected areas that limit extractive use (Dugan and Davis, 1993; Crowder et al., 2000; Halpern, in press).

Cultural Heritage Resources

The nation's existing MPAs preserve and protect important historical and cultural resources. These cultural resources reflect the nation's maritime history and traditional cultural connections to the sea, as well as the uses and values they provide to this and future generations. Examples include archeological sites that contain significant cultural artifacts; sunken historic ships, aircraft, or other vessels; and areas important to specific cultures. Protecting cultural resources in MPAs reduces the chance that artifacts will be removed or damaged from modern-day commercial or recreational activities. Unlike many biological communities that have some level of resilience to recover from degradation, once underwater historic and cultural sites are damaged, the information and value of these non-renewable resources may be lost forever. MPAs are an important tool for conserving cultural resources by monitoring the environment for change and stabilizing deteriorating structures. MPAs also encourage actions to find, preserve, and interpret the associated artifacts that may otherwise be inaccessible to the public. By protecting marine sites that are important to the nation's diverse cultures, existing U.S. MPAs preserve a part of history for future generations.

Current Governmental Management Structure

The past several decades have witnessed a dramatic increase in the use of MPAs as a conservation and management tool to protect the nation's most important natural and cultural marine resources and areas. Over 90 percent of U.S. marine managed areas were established after 1970 (National MPA Center Marine Managed Area Inventory, 2006). This growth in MPAs has not only resulted in increased protections to certain natural and cultural marine resources, but also brought about a significant number of new MPA programs and authorities at all levels of government, each with their own requirements, levels of protection and associated terms.

These programs and the MPA sites that they manage are components of a complex sociopolitical landscape that features diverse institutions, governance structures, and processes. They include, for example, federal programs such as the National Marine Sanctuaries and National Parks; tribal MPA authorities and co-management arrangements with states; state programs such as fish and wildlife, coastal zone management, and historic preservation; and other governmental approaches to MPAs.

Each of these programs has its own mandate it is required to fulfill. These mandates often overlap in both geographic scope and the conservation purposes for which they are established. In addition, while many existing MPA programs comprise a system of MPAs, there are a limited number of mechanisms in place to coordinate MPA efforts across ecosystem, regional, national, or international levels among MPA programs and levels of government. This is not to say that no such coordination is happening. In fact, there are a number of good examples of existing MPA sites and programs in a common geography working together, which serve as excellent models. However, there is no overarching MPA framework for facilitating and promoting such coordination across levels of government and at an ecosystem or regional scale around the nation. Similarly, the effectiveness of the existing suite of MPAs in contributing to the long-term sustainability of important resources, habitats and ecosystems, and the services and values they provide is largely yet to be determined.

Importance to Americans

MPAs in the U.S. and its territories provide social, economic, and cultural benefits by protecting resources and environments. These benefits come in many forms, both tangible and intangible, and direct and indirect. Direct, tangible benefits may include supporting the socioeconomic well-being of communities tied to our nation's fisheries by enhancing stocks for sustainable harvest and recreational opportunities. These communities provide significant inputs to the U.S. economy and many have long and storied historical connections to the marine environment. MPAs that ensure sustainable production have the intangible benefit of promoting cultural continuity and identity, which is instrumental in maintaining healthy communities.

By protecting key resources and habitats, MPAs can also promote greater economic returns from tourism through enhanced visitor experiences. These direct economic benefits are inextricably linked with the intangible quality of visitor experience. Good water quality, abundant living resources, and scenic, aesthetic ocean environments attract visitors to coastal areas around the globe. These visitors engage in diverse activities that include non-extractive uses of the marine environment, such as scuba diving, snorkeling, wildlife watching, boating, and surfing, as well as extractive uses such as fishing. All of these activities rely on healthy marine environments. U.S. MPAs help ensure that marine environments will continue to draw the visitors that have become critical to many coastal economies. For example, in Monroe County, Florida, location of the Florida Keys National Marine Sanctuary and other marine-related parks and wildlife refuges, the estimated total tourist contribution to the economy (1995-1996) is over 60 percent (English et al., 1996).

MPAs also provide direct, tangible benefits by providing opportunities for research and education. Certain MPAs feature academic and applied monitoring of short-term events and long-term environmental trends, as well as biomedical research (Salm et al, 2000).

MPAs can provide hands on experience and outdoor laboratories for bringing classroom studies to life. MPA educational programs have the potential to promote public awareness of the importance of marine ecosystems and their many benefits.

MPAs also protect historic connections to our nation's heritage that are critical to social and cultural continuity. People and communities are connected to marine resources, including both natural and cultural features. These connections are affirmed through direct practice, oral and written narrative, and everyday discourse. MPAs can enhance cultural connectivity to places by ensuring their protection for future generations, allowing traditional cultural practices, promoting awareness of our nation's heritage, and acknowledging existence and bequest values inherent in marine resources.

Environmental Consequences of Proposed Action and Alternatives

Alternative A: Take No Action

Environmental Impacts

Taking no action would result in no predictable direct or indirect environmental impacts, either positive or negative. The 'Take No Action' alternative would not allow for the realization of the benefits expected from the proposed Draft Framework's greater integration and coordination of conservation efforts among existing authorities and sites.

Socioeconomic Impacts

Taking no action would result in no predictable direct socioeconomic, either positive or negative. The 'Take No Action' alternative would not allow for the realization of the benefits expected from the proposed Draft Framework's greater integration and coordination of conservation efforts among existing authorities and sites.

Alternative B: Propose the Draft Framework for Developing the National System of MPAs (Preferred)

Environmental Impacts

The proposed Draft Framework is not expected to result in adverse impacts on the environment. The Draft Framework proposes to coordinate the activities among federal, state, tribal, and local MPA sites and systems to reduce administrative costs, and promote efficiency and the effective use of existing management infrastructure for marine resource protection.

The Draft Framework will provide opportunities for shared information, resources, scientific expertise, and lessons learned for individual MPAs. The proposed Draft Framework mostly involves a number of low or no impact activities that will positively affect the stewardship and management of individual MPAs and ultimately lead to beneficial long-term environmental impacts and improved quality of the nation's marine resources relative to Alternative A. Additional environmental analysis of future activities, as required under NEPA and other acts and executive orders, would be prepared as necessary by the relevant agency or agencies taking any such actions.

The Draft Framework also promotes activities over time to identify gaps in protection of important marine resources and subsequent area-based conservation priorities that would be needed to manage and protect those resources. This component of the Draft Framework is similarly comprised of a number of low or no impact activities that ultimately could lead to beneficial long-term environmental impacts relative to Alternative A. In order to realize these benefits, however, actions to implement new or increased protections would be needed. Activities taken by individual agencies

in the future, such as changes in MPA regulations or the establishment of new MPAs as a result of the implementation of the proposed Draft Framework will undergo separate NEPA analysis by agency taking such actions as required and appropriate.

Socioeconomic Impacts

The proposed Draft Framework is not expected to result in adverse socioeconomic impacts. The Draft Framework provides guidance for the implementation of the National System. It does not establish new MPAs or directly affect the stewardship and management, including human uses and values, associated with existing MPAs. The socioeconomic impacts of, for example, the long term cumulative effects of developing the National System will be assessed as necessary under NEPA and other federal mandates for specific actions taken by those agencies or programs with the authority to establish and manage MPAs and/or alter MPA regulations.

In proposing to integrate the activities and conservation objectives among the various authorities, the Draft Framework will have its most immediate effects upon the communication and organizational structures across the various levels of MPA governance. As a result, there is great potential, relative to Alternative A, for long-term positive socioeconomic impacts from promoting integration among government authorities, enhancing knowledge and awareness of MPAs as a tool of ecosystem based management, and supporting processes for incorporating stakeholders and communities in ecosystem management.

Furthermore, the implementation of the National System as proposed by the Draft Framework will have long-term positive impacts, relative to Alternative A, for participating MPA sites, their associated marine resources, and the wider ecosystems of which they are a part. The National System will seek to integrate natural heritage, cultural heritage, and sustainable production objectives in order to minimize adverse socioeconomic impacts and promote comprehensive MPA conservation and management. It will focus on improving the effectiveness of MPA design, management, and evaluation through dissemination and use of the best available science and tools.

Additional socioeconomic analysis as required under NEPA and other acts and executive orders would be prepared by the relevant agency or agencies as necessary for future specific actions.

References

- Crowder, L.B., S.J. Lyman, W.F. Figueira, and J. Priddy. 2000. Source-sink population dynamics and the problem of siting marine reserves. *Bulletin of Marine Science* 66(3): 799-820.
- Dugan, J.E. and G.E. Davis. 1993. Applications of marine refugia to coastal fisheries management. *Canadian Journal of Fisheries and Aquatic Science* 50:2029-2042.
- English, Donald B.K., Warren Kriesel, Vernon R. Leeworthy, and Peter C. Wiley. 1996. Economic Contribution of Recreating Visitors to the Florida Keys/Key West. National Oceanic and Atmospheric Administration. Silver Spring, MD. I + 22pp.
- Halpern, B. In press. The impact of marine reserves: does reserve size matter? *Ecological Applications*.
- Murray, S.N., R.F. Ambrose, J.A. Bohnsack, L.W. Botsford, M.H. Carr, G.E. Davis, P.K. Dayton, D. Gotshall, D.R. Gunderson, M.A. Hixon, J. Lubchenco, M. Mangel, A. MacCall, D.A. McArdle,

J.C. Ogden, J. Roughgarden, R.M. Starr, M.J. Tegner, and M.M. Yoklavich. 1999. No-take reserve networks: protection for fishery populations and marine ecosystems. *Fisheries* 24(11):11-25.

Salm, R.V., John Clark, and Erkki Siirila. 2000. *Marine and Coastal Protected Areas: A Guide for Planners and Managers*. IUCN. Washington, DC. xxi + 371pp.

Finding of No Significant Impact

NOAA Administrative Order (NAO) 216-6 (revised May 20, 1999) provides eleven criteria for determining the significance of the impacts of a proposed action. These criteria are discussed below with respect to the proposed action (Alternative B).

1. Impacts may be both beneficial and adverse— a significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

NOAA expects the implementation of the proposed Draft Framework will result a number of low or no impact activities that will positively affect the stewardship and management of individual MPAs and ultimately lead to beneficial long-term environmental impacts and improved quality of the nation's marine resources.

2. What is the degree to which public health or safety is affected by the proposed action?

Public health and safety will not be affected by the proposed action. The Draft Framework for the National System of MPAs simply implements the Executive Orders and does not affect public health and safety.

3. Are there unique characteristics of the geographic area in which the proposed action is to take place?

The nation's MPAs and the important natural and cultural resources that they protect encompass the breadth of unique biological, physical, and cultural aspects associated with the marine and Great Lakes environments.

4. What is the degree to which effects on the human environment are likely to be highly controversial?

While MPAs are often a contentious subject, the effects of the proposed Draft Framework on the human environment are not likely to be controversial. The actions and activities associated with the various components of the Draft Framework focus on promoting coordination, collaboration, opportunities for stakeholder input, and enhancing scientific understanding in support of effective use of MPAs. These activities are largely of low or no impact to the human environment, but are envisioned to positively affect the stewardship and management of individual MPAs and ultimately lead to beneficial long-term impacts on the human environment and improved quality of the nation's marine resources.

5. What is the degree to which effects are highly uncertain or involve unique or unknown risks?

The proposed Draft Framework is not considered to involve highly uncertain, unique, or unknown risks.

6. What is the degree to which the action establishes a precedent for future actions with significant effects or represents a decision in principle about a future consideration?

The proposed Draft Framework establishes guidelines for the development of the National System of MPAs and sets some precedent for future action. These future actions, however, are largely of

low or no impact to the human environment and are envisioned to positively affect the stewardship and management of individual MPAs and ultimately lead to beneficial long-term environmental impacts and improved quality of the nation's marine resources. Additional environmental and/or socioeconomic analysis of future activities, as required under NEPA and other acts and executive orders would be prepared as necessary by the relevant agency or agencies.

7. Does the proposed action have individually insignificant but cumulatively significant impacts?

The activities associated with the proposed Draft Framework are largely of low or no impact to the human environment, but are envisioned to positively affect the stewardship and management of individual MPAs and ultimately lead to beneficial long-term impacts on the human environment and improved quality of the nation's marine resources.

8. What is the degree to which the action adversely affects entities listed in or eligible for listing in the National Register of Historic Places, or may cause loss or destruction of significant scientific, cultural, or historic resources?

The proposed Draft Framework is consistent with executive orders, laws and policies protecting significant scientific, cultural, and historic resources. No adverse effects are expected to entities listed in or eligible for listing in the National Register of Historic Places or those of significant scientific, cultural, or historic resources.

9. What is the degree to which endangered or threatened species, or their critical habitat as defined under the Endangered Species Act of 1973, are adversely affected?

There are no adverse impacts contemplated to endangered or threatened species, or critical habitat for such species.

10. Is a violation of Federal, state, or local law for environmental protection threatened?

No laws protecting the environment are threatened by the proposed Draft Framework.

11. Will the proposed action result in the introduction or spread of a non-indigenous species?

The proposed Draft Framework will not result in the introduction or spread of a non-indigenous species?

List of Preparers and Agencies Consulted

Department of Commerce, National Oceanic and Atmospheric Administration

- 1) Steve Kokkanakis
- 2) Jonathan Kelsey
- 3) Bryan Oles
- 4) Lauren Wenzel
- 5) Rikki Dunsmore
- 6) Brian Jordan
- 7) John Armor

Department of the Interior, Department of the Interior, Office of the Assistant Secretary for Fish and Wildlife and Parks

- 1) Randal Bowman

