

Marine Protected Areas: *a general overview*



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OUTLINE

- General description of marine protected areas (MPAs)
 - Reasons for MPA establishment
 - Necessary considerations
 - MPAs in the United States
 - Examples of MPAs in the U.S.
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What is a MPA?

MARINE RESOURCE MANAGEMENT TOOL

- **ONE OF MANY TOOLS**
(such as catch limits, wetland restoration, water quality standards, etc.)
- **ECOSYSTEM-BASED TOOL**



What is a MPA?

World Conservation Union definition of MPAs:

“any area of intertidal or subtidal terrain, together with its overlaying water and associated flora, fauna, historical, and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment”

MPA sites

- More than 1350 sites designated as MPAs worldwide
- MPAs cover less than 0.5% of the world's oceans (Roberts and Hawkins 2000)

Types of MPAS

Fishery reserves

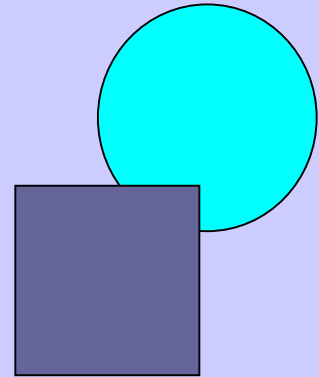
zone where fishing activity is not allowed in order to enhance fishery stocks or habitat

Marine reserves

zone where removal or disturbance of some or all living resources is prohibited

Ecological reserves

zone where the disturbance or removal of any living or non-living marine resource is prohibited



Types of MPA management

Community-based

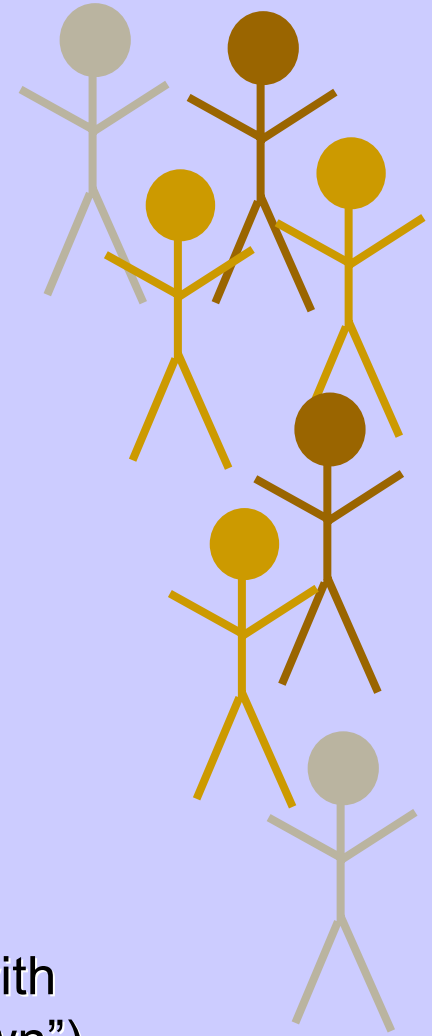
Designated and managed by local village, town, or community (“Bottom-up”, grassroots, etc.)

Co-managed

Designated and managed by local village, town, or community in collaboration with the state or federal government

Federally-based

Designated and managed by federal government with little or no input from the local community (“Top-down”)



Why establish MPAs?

Conserve biological diversity

MPAs are one of the only management tools available for conserving biodiversity



Jim Raymont - Florida Keys NMS

Protect cultural and historical resources

MPAs can help to assure continuation of traditional uses, cultural practices, and sacred sites



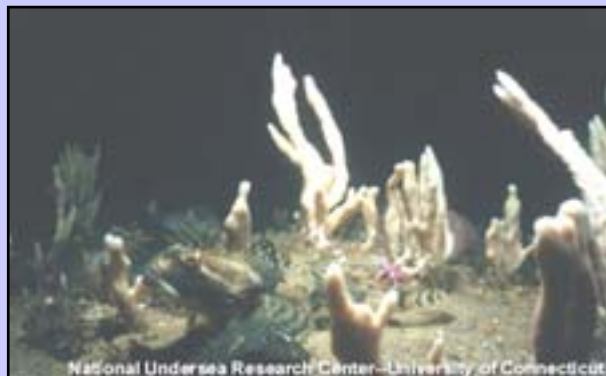
Protection of sites with historical significance (i.e. shipwrecks)

Enhance natural resources



Limit impacts to endangered or threatened species

Increase number and size of exploited populations (i.e. commercially caught shellfish)



Maintain benthic habitats

Provide opportunities for research and education

MPAs provide a control to measure the impacts of human activities



MPAs can serve as sites for education (i.e. hands-on interactions, support classroom curricula)



Enhance non-extractive uses



Non-extractive uses (diving, kayaking, tourism) can provide benefits, both economic and non-economic

What must be considered?

- Effects on communities
- Stakeholder involvement in planning
- Structure and function of the natural system
- Costs of implementation
- Enforcement
- Changes to current uses
- Existing laws and regulations
- Resource issues outside of MPA boundaries

More...

MPAs in the U.S.

What is going on with MPAs in the United States?

Executive Order 13158 (May 2000)

“This Executive Order will help protect the significant natural and cultural resources within the marine environment for the benefit of present and future generations by strengthening and expanding the Nation’s system of marine protected areas (MPAs)”

Questions about the Executive Order

(1) What are the objectives of the Order?

(2) Who is responsible for MPAs under this Order?

(3) What has been done so far (as of March 2003)?

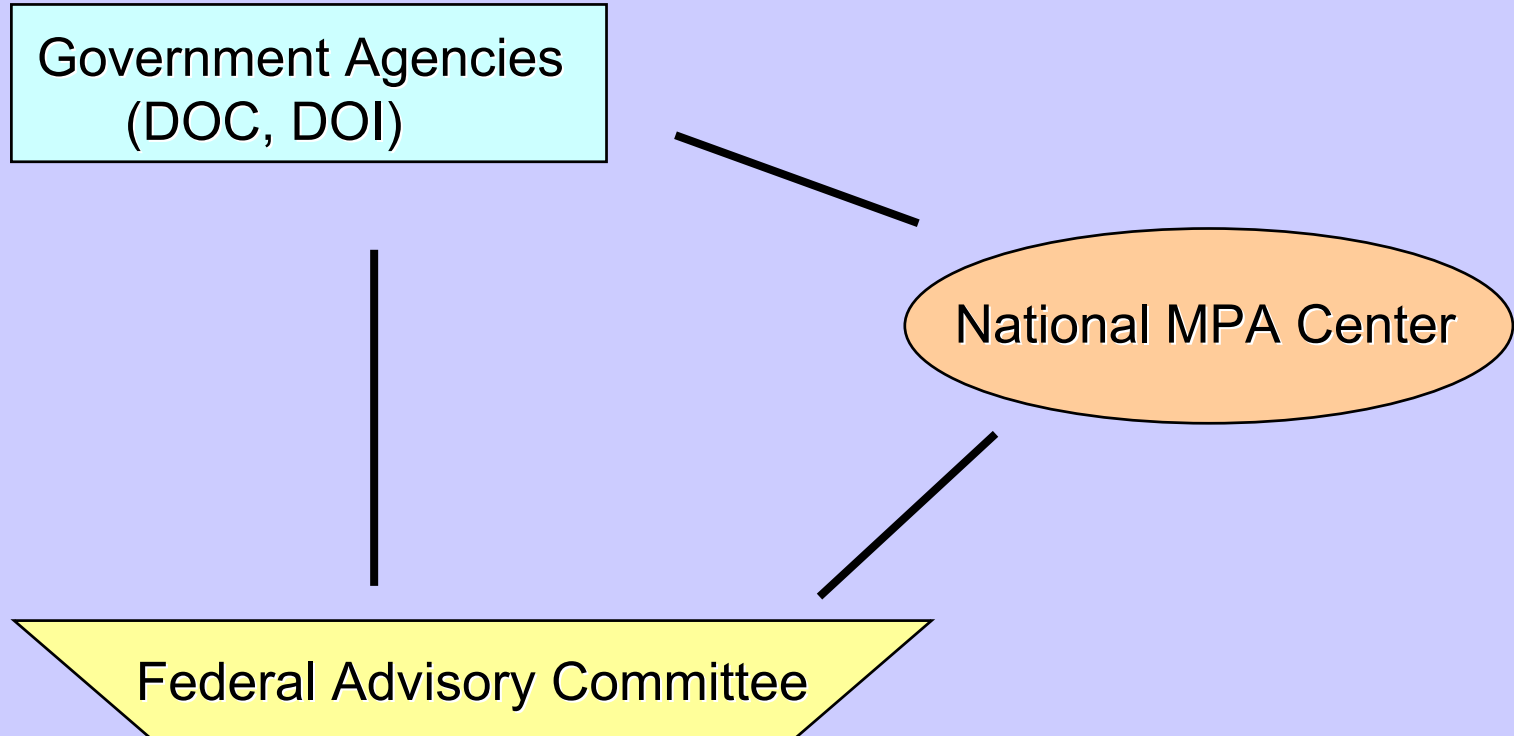
Executive Order 13158

What are the objectives of the Order?

- strengthen the management of existing MPAs and establish new or expanded MPAs
- develop a scientifically based, comprehensive national system of MPAs representing diverse ecosystems and natural and cultural resources
- avoid causing harm to MPAs through federally conducted, approved, or funded activities

Executive Order 13158

Who is responsible for MPAs under this Order?



MPA Federal Advisory Committee

Thirty people invited to serve on the committee:

1. Dr. Tundi Agardy, Sound Seas; Bethesda, Md.
2. Mr. Robert Bendick, Jr., The Nature Conservancy; Altamonte Springs, Fla.
3. Mr. David Benton, North Pacific Fishery Management Council; Anchorage, Alaska
4. Dr. Daniel Bromley, University of Wisconsin; Madison, Wis.
5. Dr. Anthony Chatwin, Conservation Law Foundation; Boston, Mass.
6. Dr. Michael Cruickshank, Marine Minerals, Technology Center Associates; Honolulu, Hawaii
7. Mr. Ernesto Diaz, Puerto Rico Coastal Zone Mgmt. Program; San Juan, Puerto Rico
8. Ms. Carol Dinkins, Vinson & Elkins Attorneys At Law; Houston, Texas
9. Dr. Rodney Fujita, Environmental Defense; Oakland, Calif.
10. Dr. Dolores Garza, University of Alaska; Ketchikan, Alaska
11. Mr. Eric Gilman, National Audubon Society; Honolulu, Hawaii
12. Dr. Mark Hixon, Oregon State University; Corvallis, Ore.
13. Mr. George Lapointe, Maine Department of Marine Resources; Augusta, Maine
14. Dr. Bonnie McCay, Rutgers University; New Brunswick, N.J.
15. Mr. Melvin E. Moon, Jr., Quileute Natural Resources Department; LaPush, Wash.

(cont'd)

MPA Federal Advisory Committee (cont'd)

16. Mr. Robert Moran, American Petroleum Institute, Washington, D.C.
 17. Dr. Steven Murray, California State University; Fullerton, Calif
 18. Mr. Michael Nussman, American Sportfishing Association; Alexandria, Va.
 19. Dr. John Ogden, Florida Institute of Oceanography; St. Petersburg, Fla.
 20. Mr. Terry O'Halloran, hulaRez Inc.; Kalaheo, Hawaii
 21. Mr. Lelei Peau, Dept. of Commerce of American Samoa Pago Pago; American Samoa
 22. Dr. Walter Pereyra, Arctic Storm Management Group, Inc.; Seattle, Wash.
 23. Mr. Max Peterson, International Assoc. of Fish and Wildlife Agencies; Washington, D.C.
 24. Mr. Gilbert Radonski, Sport Fishing Institute; Cape Carteret, N.C.
 25. Mr. James Ray, Environmental Ecology and Response Shell Global Solutions Inc.;Houston, TX
 26. Ms. Barbara Stevenson, Portland Fish Exchange; Portland, Maine
 27. Dr. Daniel Suman, University of Miami; Miami, Fla.
 28. Capt. Thomas E. Thompson, USCG (Ret.), International Council of Cruise Lines; Arlington, Va.
 29. Ms. H. Kay Williams, Gulf of Mexico Fishery Management Council; Vancleave, Miss.
 30. Mr. Robert Zales, II, Bob Zales Charters; Panama City, Fla.
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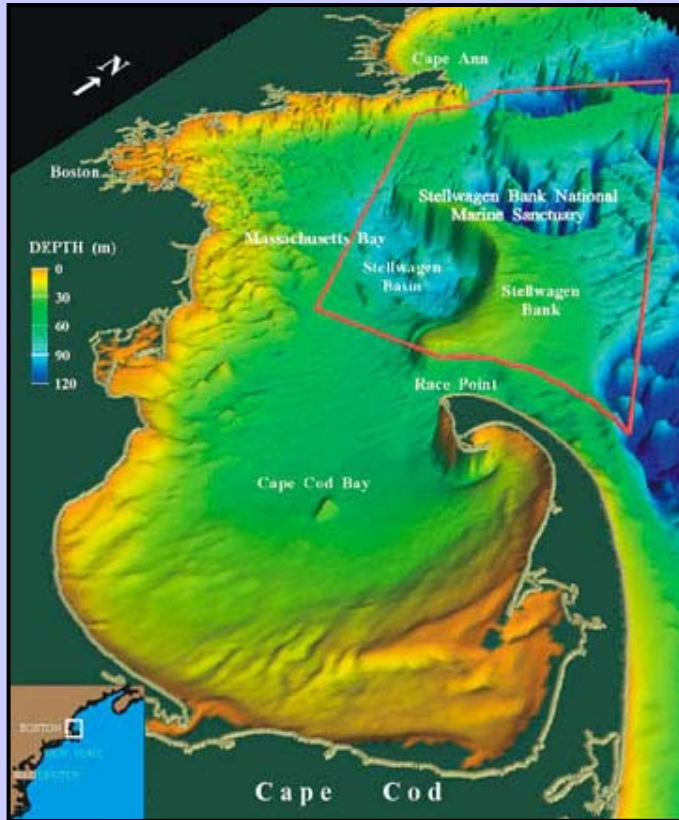
Executive Order 13158

What has been done so far
(as of March 2003)?

- Website created: www.mpa.gov
 - Maps of existing state and federal MPAs in the U.S. are being compiled
 - National MPA Center established in Washington D.C.
MPA Training Center established in South Carolina
MPA Science Center established in California
 - Federal Advisory Committee appointed
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**So, what are some
examples of MPAs in
the United States?**

Stellwagen Bank National Marine Sanctuary



Source: National Marine Sanctuary
Program photo gallery

Designated in 1992

Objective:
To protect biodiversity,
ecological integrity, and
cultural legacy

Narragansett Bay Estuarine Research Reserve

Designated in 1980

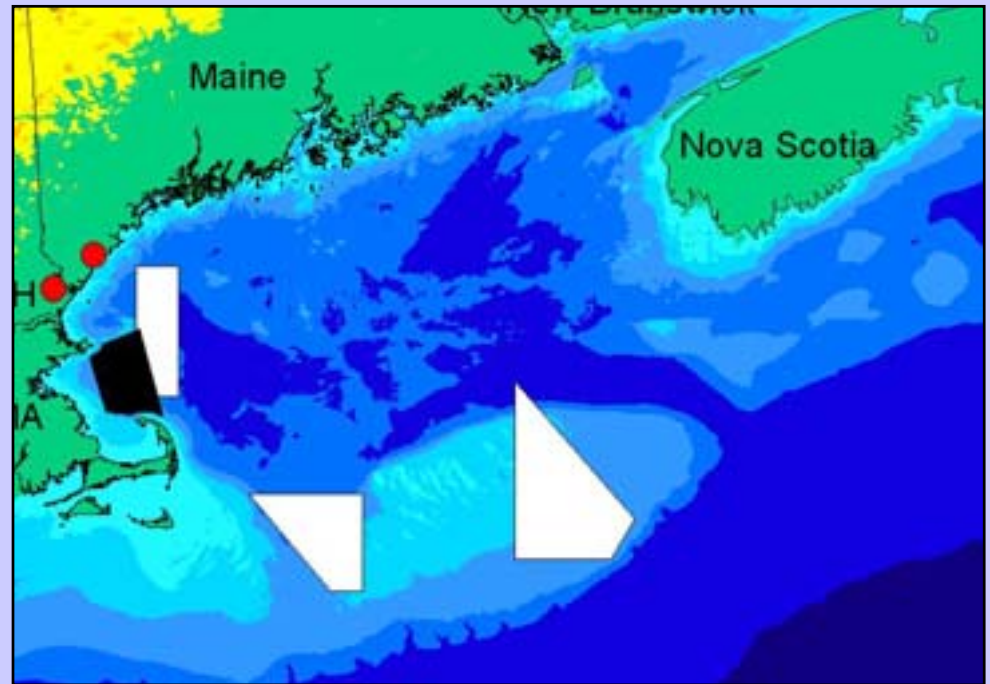
Objective:

To enhance research and
public awareness about the
marine environment

Gulf of Maine Fishery Closures

Designated in mid-1990s

Objective:
To support the rebuilding
of groundfish stocks



Fishery closures: white areas

Data Source: USGS

Massachusetts Ocean Sanctuaries

Designated in 1970

Objective:

To prevent alteration of
the ocean, seabed, or
subsoil

Summary of MPA examples

MPA

Objective

Stellwagen Bank National
Marine Sanctuary

To protect biodiversity, ecological
integrity, and cultural legacy

Narragansett Bay
National Estuarine
Research Reserve

To enhance research and public
awareness about the marine
environment

Gulf of Maine Fishery
Closure

To support the rebuilding of groundfish
stocks

MA Ocean Sanctuaries

To prevent alteration of the ocean,
seabed, or the subsoil

Summary

- MPAs are ONE tool for managing marine resources
- MPAs are established for a variety of reasons
- Necessary considerations in planning and managing MPAs: stakeholder involvement, impacts on communities, function of natural system, existing management measures, etc.
- MPAs are in use in the United States: Marine Sanctuaries, Estuarine Reserves, Fishery Closures, etc.