

A CLASSIFICATION SYSTEM FOR MARINE PROTECTED AREAS IN THE UNITED STATES: A Tool To Understand What We Have And What We May Need

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SIMPLIFYING THE VARIETY OF MARINE PROTECTED AREAS

Faced with widespread declines in ocean health, many nations are turning to marine protected areas (MPAs) to protect their most important marine habitats and species. Familiar examples of MPAs in the U.S. include national marine sanctuaries, parks and wildlife refuges, fisheries closures, and many state parks and conservation areas. Although MPAs have long been used as a management tool by federal and state resource agencies, the nation still lacks a consistent and straightforward language to describe the many types of MPAs occurring in our waters or to understand how they affect marine ecosystems and associated human uses.

For example, the official programmatic names of many U.S. MPAs rarely reflect their actual purpose, level of protection, use restrictions or impacts on users and resources. Consequently, MPAs having similar names (e.g. “reserves”, “parks”, “sanctuaries”) may, in fact, differ fundamentally in their effectiveness in protecting the habitats and resources they encompass. A frequent manifestation of the ambiguity in MPA terminology is the misperception that all MPAs are “no take” areas, which are, in fact, extremely uncommon in the U.S.

The growing confusion over MPA terminology continues to complicate the critically important national dialogue about whether, when and how to use this promising management tool to sustain the health of the nation’s seas. In response, the National Marine Protected Areas Center has developed a functional classification system for MPAs that provides agencies and stakeholders with a simple and objective means to understand, describe and evaluate the many different types of MPAs found in the United States. The system uses six objective criteria to describe any MPA, rather than relying on formal programmatic names or popular terminology that may be inconsistent or misleading. This classification system is derived from a number of existing approaches used by the International Union for the Conservation of Nature (IUCN), state governments, non-governmental organizations, and others to describe MPAs. The primary classification criteria are the MPA’s:

- Primary conservation goal
- Level of protection
- Permanence of protection
- Constancy of protection
- Scale of protection
- Allowable extractive activities

For most MPAs in the U.S., these six characteristics provide a clear picture of why the site was established, what it protects, and how it may affect marine ecosystems and associated human uses. This approach should help overcome several long-standing obstacles to our collective understanding and effective use of MPAs.

Consequently, the proposed classification system is intended to:

- Provide a straightforward common language about MPAs for public policy discussions
- Clarify confusion over the wide variety of types and terms
- Allow meaningful assessments of how we currently use different types of MPAs in the U.S.
- Provide a way to assess the likely conservation impacts of existing and proposed MPAs
- Inform the effort to develop a framework for an effective national system of MPAs

WHAT IS AN MPA? THE OFFICIAL U.S. DEFINITION

“Marine protected area” is a widely used umbrella term that encompasses a variety of approaches to place-based management in the U.S. The *official federal definition* of an MPA derived from Executive Order 13158 is: “any area of the marine environment that has been reserved by Federal, State, tribal, territorial, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein.” Areas that restrict access for purposes other than conservation (e.g. security zones), and areas that are inaccessible logistically are not considered to be MPAs, although they may confer some conservation value.

In practice, MPAs are specific places in the ocean and the Great Lakes within which the natural and/or cultural resources are afforded a higher-level protection than in surrounding waters. Existing MPAs in the U.S. span a surprising range of habitats including areas in the open ocean, in coastal areas, in the inter-tidal zone, in estuaries and in the Great Lakes waters. They also vary widely in their purpose, legal authorities, agencies and management approaches, level of protection and restrictions on human uses

OVERVIEW OF THE MPA CLASSIFICATION SYSTEM

The new MPA classification system simplifies this often confusing diversity of terminology by focusing on a few key functional features that together describe those aspects of the MPA that are of greatest concern to stakeholders, agencies and scientists. Outlined below are the six fundamental design characteristics, and options within them, used to describe any MPA. In practice, the first two characteristics – (a) the primary conservation goal and (b) the level of protection – address most of the issues and concerns underlying the national MPA policy dialogue.

(1) Primary Conservation Goal

- Natural Heritage
- Cultural Heritage
- Sustainable Production

(2) Level of Protection Afforded

- No Access
- No Impact
- No Take
- Zoned With No Take Area(s)
- Zoned Multiple Use
- Uniform Multiple Use

(3) Permanence of Protection

- Permanent
- Conditional
- Temporary

(4) Constancy of Protection

- Year-round
- Seasonal
- Rolling

(5) Scale of Protection

- Ecosystem
- Focal Resource

(6) Allowed Extractive Uses

- Recreational Fishing
- Commercial Fishing
- Subsistence Hunting / Fishing
- Scientific / Educational Collecting
- Mineral / Energy Extraction
- Other

EXPLANATION OF TERMS USED IN THE CLASSIFICATION SYSTEM

This section presents a more detailed description of the six fundamental MPA characteristics, and the options within them, used by the classification system.

PRIMARY CONSERVATION GOAL

While many MPAs in the US have multiple objectives, most are established by law to achieve a primary overarching conservation goal that reflects their statutory mandates, implementing regulations and management plans. The primary conservation goal also determines many fundamental aspects of the site's design, location, size, scale and management strategies.

- **Natural Heritage** -- established and managed principally to sustain the protected area's natural biological communities, habitats, ecosystems and processes, and the ecological services, uses and values they provide to this and future generations.

Applications: most national marine sanctuaries, national parks, national wildlife refuges, and many state MPAs.

- **Cultural Heritage** -- established and managed principally to protect, understand and interpret submerged cultural resources that reflect the nation's maritime history and traditional cultural connections to the sea. ⁱ

Applications: some marine sanctuaries, national and state parks and national historic monuments.

- **Sustainable Production** -- established and managed principally to support the continued sustainable extraction of renewable living resources (e.g. fish, shellfish, plants, birds or mammals) within or outside the MPA by protecting important habitat and spawning, mating or nursery grounds; or providing harvest refugia for by-catch species. ⁱⁱ

Applications: most federal and state fisheries MPAs and many national wildlife refuges.

LEVEL OF PROTECTION AFFORDED

MPAs in the U.S. vary widely in the level and type of legal protections provided to the site's natural and cultural resources and to the natural environmental processes that sustain them. The five levels of protection described below largely determine both the effectiveness an MPA and its impacts on human uses and activities.

- **No Access** – MPAs that prohibit all significant ecological disturbances in the protected area by restricting all access, unless specifically permitted for designated special uses such as research, monitoring or restoration.

Applications: extremely rare in the U.S., occurring mainly as small research-only zones within larger multiple use MPAs. Other commonly used terms for no access MPAs include wilderness areas or marine preserves.

- **No Impact** – MPAs that allow access but prohibit activities that could harm the MPA's resources or disrupt the ecological or cultural services it provides. Prohibited activities often include resource extraction; discharge of pollutants; disposal of materials; and any significant alteration of submerged cultural resources, biological assemblages, ecological interactions, protected habitats, or the natural processes that support them.

Applications: very rare in U.S. waters, occurring mainly as small isolated MPAs or in small zones within larger multiple use MPAs. Other commonly used terms include fully protected marine (or ecological) reserves.

- **No Take** – MPAs that allow access and some potentially harmful human uses but prohibit the extraction or significant destruction of natural or cultural resources.

Applications: rare in the U.S., occurring mainly in state MPAs, in some federal areas closed for either fisheries management or the protection of endangered species, or as generally small no take zones within larger multiple use MPAs. Other commonly used terms include marine reserves or ecological reserves

- **Zoned With No Take Area(s)** – Multiple use MPAs that employ marine zoning, including one or more no take areas where all extraction is prohibited, to manage a range of human activities by allocating specific uses to compatible places or times in order to reduce user conflicts and adverse impacts while providing an overall level of protection that exceeds that of surrounding waters.

Applications: increasingly common in U.S. waters, including some marine sanctuaries, national parks, national wildlife refuges, and state MPAs.

- **Zoned Multiple Use** – MPAs that allow some extractive activities throughout, but that employ marine zoning to allocate specific uses to compatible places or times in order to reduce user conflicts and adverse impacts while providing an overall level of protection that exceeds that of surrounding waters.

Applications: relatively common in U.S. waters, including some marine sanctuaries, national parks, national wildlife refuges, and state MPAs.

- **Uniform Multiple Use** – MPAs that apply a consistent level of protection and allowable activities, including certain extractive uses, across the entire protected area.

Applications: among the most common MPA types in the US; typical of many marine sanctuaries, national and state parks; many fisheries and cultural resource MPAs.

PERMANENCE OF PROTECTION

Not all MPAs are permanently protected. Many vary widely in how long their protections remain effect, which in turn, profoundly affects their ultimate impacts on ecosystems and users.

- **Permanent** – MPAs whose legal authorities protect special places in the ocean *in perpetuity* for future generations.

Applications: some marine sanctuaries, all national parks.

- **Conditional** -- MPAs that have the potential, and often the expectation, to persist administratively over time, but whose legal authority has a finite duration and must be renewed or ratified based on periodic governmental reviews of performance.

Applications: some national marine sanctuaries, parks and monuments with ‘sunset’ clauses.’’

- **Temporary** -- MPAs that are designed to address relatively short-term conservation and/or management needs by protecting a specific habitat or species for a finite duration, with no expectation or specific mechanism for renewal

Applications: some fisheries closures, including rolling closures.

CONSTANCY OF PROTECTION

Not all MPAs provide year-round protection to the enclosed area. Three levels of “constancy” are seen among MPAs in the U.S.

- **Year-Round** – MPAs that provide constant protection throughout the year.
Applications: all marine sanctuaries, national parks, refuges, monuments, and some fisheries sites.
- **Seasonal** -- MPAs that protect specific habitats and resources, but only during certain seasons when human uses may disrupt ecologically sensitive seasonal processes such as spawning, breeding or feeding aggregations.
Applications: some fisheries and endangered species closures around sensitive habitats.
- **Rolling** – MPAs that persist for a finite duration and are then de-designated and moved to another location to fulfill similar conservation or management goals.
Applications: fisheries closures created for the purpose of recovering a localized population to harvestable levels.

SCALE OF PROTECTION

MPAs in the U.S. vary widely in the ecological scale targeted by the site’s legal protections. Examples range from sites with entire ecosystems as the conservation target, to those that target a single focal species of economic or ecological importance. Scale of protection reflects the MPA’s underlying legal authorities and, in turn, influences the area’s design, siting and management approach.

- **Ecosystem** – MPAs whose legal authorities and management measures are intended to protect the entire ecosystem or habitat within its boundaries.
Applications: most marine sanctuaries, national parks and national monuments.
- **Focal Resource** – MPAs whose legal authorities and management measures specifically target one or a limited suite of identified resources (either natural or cultural).
Applications: many fisheries and cultural resource sites, including some national wildlife refuges and sanctuaries.

ALLOWABLE EXTRACTIVE ACTIVITIES

Many multiple use MPAs in the U.S. allow one or more forms of resource extraction that are deemed compatible with the purposes of their designation. The specific allocation of allowable uses within and among MPAs can profoundly affect the protected ecosystems and is of intense interest to potential users. Key extractive activities may include:

- **Commercial Fishing** – Taking marine organisms for commercial gain.
- **Recreational Fishing** – Taking marine organisms for sport and/or personal consumption.

- Subsistence Fishing / Hunting** – Taking marine organisms for legally or culturally recognized subsistence purposes.
- Scientific / Educational Collecting** – Taking natural or cultural resources for the purposes of research and monitoring, or for educating people about marine environments.
- Minerals / Energy Extraction** – Taking non-renewable resources commercial gain.
- Other** – Extractive activities other than those listed above.

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ⁱ A question has been raised by the Marine Protected Areas Federal Advisory Committee (MPAFAC) about whether this definition should be broadened beyond cultural ‘artifacts’ (per Executive Order 13158) to include culturally significant traditional uses of marine ecosystems, particularly among indigenous peoples. The resolution of this issue will depend, in part, on input from the public, the MPAFAC and other relevant agencies.

ⁱⁱ A question has been raised by the MPAFAC about whether this definition should be broadened to include non-renewable resources, such as minerals or energy resources that may be protected by federal and state agencies for managed or eventual extraction. The resolution of this issue will depend, in part, on input from the public, the MPAFAC and other relevant agencies.