

A COMMON LANGUAGE OF OCEAN USES



National Marine Protected Areas Center

The Nation's Hub for Building Innovative Partnerships and Tools to Protect Special Ocean Places

Managing America's Oceans: Managing Human Uses

Why A Common Language of Ocean Uses?

Our nation's oceans are becoming crowded as existing human uses expand and new ones emerge. Growing concerns over the potential conflicts and impacts of ocean uses have led several states and regions to undertake comprehensive ecosystem-based ocean planning initiatives. Mirroring the US National Ocean Policy, these diverse efforts reflect a growing societal desire to more thoughtfully consider the future of our oceans. Ultimately, their success will depend upon a shared and more nuanced understanding of what those uses are, how and why we pursue them, and how they affect the coastal ecosystems they occur in and the human communities they support.



Understanding ocean uses requires a transparent way to discuss them. Specifically, we need a coherent and consistent terminology, or language, of ocean use that can help us describe, map and illuminate the implications of the growing variety of activities in, on, and under America's oceans. To be useful, such a language needs to be objective, to accurately describe both current

and emerging human uses, and to have the flexibility to accommodate regional and cultural differences in how those uses are pursued.

Presently, however, the terms we often employ to describe, map and evaluate ocean uses can seem vague, idiosyncratic, overlapping, and highly variable from place to place and group to group. These inconsistencies are more than just semantics. They can create confusion, contention and delay among planners and stakeholders trying to find practical solutions to complex ocean issues. Additionally, terminological differences can pose major obstacles to comparisons of patterns and implications of ocean uses across geographies or sectors. Consider, for example, how challenging it would be to compare the natural biodiversity of two continents using different taxonomic systems to describe their flora and fauna. Crafting and using a common language of ocean uses will be fundamental to successfully planning and managing their sustainable pursuit.



Ocean Use Categories: The Foundational Element in a Common Language

Recognizing this need, NOAA's National Marine Protected Areas Center has developed this Common Language of Ocean Uses for the United States. Informed by ocean users and experts, and built from extensive experience mapping uses around the US between 2005

and 2012, the Common Language defines 35 distinct uses. Extending from the shoreline to the 200nm limit of the US Exclusive Economic Zone (EEZ), the diverse Use Categories summarized below in Table I reflect many of the ways that people routinely engage in commercial, recreational, security and cultural activities in US waters.

Table I. Ocean Use Categories

SCUBA / Snorkeling	Cultural Use	Hunting	Military Vessels
Swimming	Pelagic Fishing	Wind Energy	Mining and Mineral Extraction
Surface Board Sports	Fishing with Benthic Mobile Gear	Wave Energy	Offshore Aquaculture
Paddling	Fishing with Benthic Fixed Gear	Ocean Current Energy	Coastal Aquaculture
Sailing	Kayak Fishing	Tidal Current Energy	Seawater Intake
Motorized Boating	Dive Fishing	Ocean Thermal Energy Conversion	Sewage Discharge
Wildlife Viewing at Sea	Fishing from Shore	Offshore Oil and Gas	Ocean Dumping
Tide Pooling	Gathering from Shore	Shipping	Underwater Transmission Cables
Shore Use	Offshore Seaweed Harvest	Cruise Ships	Created by NOAA's MPA Center

Applications of the Common Language

Specifically designed to support place-based ocean planning and management, including marine planning, marine protected areas and area-based resource management, the Common Language of Ocean Uses can be used by all interested parties to inform:

- Mapping patterns of ocean uses across a planning area or over time
- Assessments of impacts of ocean uses on ecosystem components, functions and services

- Avoidance of conflicts and/or fostering compatibilities among current or emerging uses
- Understanding of cultural, social, and economic drivers and benefits of specific uses
- Tradeoffs among uses within a planning area or across regions
- Identification of suitable areas for future ocean uses

Constructing a Common Language of Ocean Use

What's New?

There are many ways to describe ocean uses. Most existing definitions were developed locally to reflect human activities, management issues and planning priorities specific, and sometimes unique, to that place. Few are directly transferrable to other locations or planning needs. What makes the Common Language different is its intentional focus on function, by objectively describing how ocean uses operate in, on or under the water (e.g. catching edible animals near the seafloor), as opposed to focusing on who is conducting the use (e.g. commercial vs. recreational vs. subsistence fishermen) or why they are doing it (e.g. financial gain, food, cultural connections).

By providing an objective framework to understand what ocean uses actually do – and therefore what they might mean to other users or the environment - the Common Language creates a transparent and widely applicable foundation for place-based planning of future ocean uses. Designed to be flexible, it can be adapted to reflect unique local uses and issues while maintaining the ability to make meaningful comparisons and assessments among uses across areas and over time.

As a result of taking a functional approach to defining distinct ocean uses , this framework is not intended to:

- Label and group Ocean Use Categories around larger organizing themes (e.g. sectors or user groups) reflecting presumed shared characteristics or interests. While such characteristics of uses are frequently important drivers of the activity and its implications, the utility of such labels depends entirely on the objectives of the planning or management effort in which they are being used. Below, we offer some guidance on how the Common Language can be adapted to meet these needs where additional labels are deemed appropriate.
- Address the broad, and often ephemeral, suite of human activities (e.g. military training, research, restoration, emergency response, archaeology, treasure hunting, or marine salvage) that tend to combine multiple uses into one event, thus making them challenging to assess without detailed, case-by-case information.

Components of the Common Language

The Common Language comprises two hierarchical components:

- Use Categories - The basic unit of mapping and analysis is the Use Category. Each of the 35 Use Categories represents a fairly distinct functional type of human engagement with the ocean which can be depicted, understood and planned spatially (e.g. Surface Board Sports; Pelagic Fishing; and Underwater Transmission Cables).
- Activities - Within each individual Use Category, the Common Language identifies Activities that reflect different approaches to pursuing that specific Use (e.g. using tethered vs. free-floating net pens as variants of the Category Offshore Aquaculture, or surf casting vs. kite fishing as variants of the Category Fishing from Shore). Each individual Use Category below lists those Activities which are included in or excluded from the Category, recognizing that Activities often vary across regions and can be adapted to fit local needs.

How the Use Categories Were Created

Based on extensive experience by NOAA's MPA Center in mapping and analyzing ocean uses, the Categories in the Common Language we crafted to reflect uses that:

- Have distinct functional characteristics, including how the use occupies space in the ocean which often influences how it interacts with ocean ecosystems or resources
- Can be mapped with spatially explicit boundaries
- Are currently occurring or are expected to occur in US waters within five years (i.e. by 2018)
- Generally involve a limited and predictable suite of activities that can be anticipated, mapped, evaluated and planned



Definitions of Ocean Use Categories

Following are the *functional* definitions of 35 Ocean Use Categories. Each definition provides an illustrative list of activities that are either “Included” in or “Excluded” from the Category.

SCUBA/Snorkeling

Included: SCUBA diving, surface supply diving, snorkeling (free diving)

Excluded: Swimming, Dive Fishing



Swimming

Included: Short- and long-distance surface swimming any distance from shore, body surfing

Excluded: SCUBA/Snorkeling, Surface Board Sports

Surface Board Sports

Included: Tow-in and paddle-in surfing, windsurfing, kite surfing, sailboarding

Excluded: Paddling, SCUBA/Snorkeling, Swimming

Paddling

Included: Kayaking, canoeing, rowing, outrigger paddling, Stand-Up Paddling (SUP)

Excluded: Motorized Boating, Surface Board Sports

Sailing

Included: Transit, mooring, motoring or anchoring by sailboats, including sailing kayaks and canoes

Excluded: Motorized Boating, Paddling

Motorized Boating

Included: Transit, mooring or anchoring by motorized vessels for commercial or recreational purposes, personal watercraft (i.e. PWC)

Excluded: Fishing, Wildlife Viewing at Sea, Cruise Ships, Shipping, Sailing

Wildlife Viewing at Sea

Included: Boat-based wildlife viewing at sea, usually on a commercial vessel

Excluded: Incidental wildlife viewing from shore or sea while pursuing other uses such as Motorized Boating, Paddling or Sailing

Tide Pooling

Included: The non-consumptive use of the intertidal zone between high and low tides for recreational, scientific or educational purposes

Excluded: Harvesting from Shore, Shore Use

Shore Use

Included: Walking, running, digging, resting, collecting of shells, wildlife viewing, driving on the beach, camping, kite flying, bonfires, picnicking, dog walking, horseback riding, skim boarding and related recreational activities

Excluded: Tide Pooling, Mining and Mineral Extraction, Surface Board Sports, Swimming, Harvesting from Shore, Coastal Aquaculture

Cultural Use

Included: Traditional and current use of specific ocean, coastal, and shoreline areas by tribal and indigenous communities, based on that area's inherent cultural, spiritual, or aesthetic values and significance

Excluded: All other uses and activities captured in other Use Categories

Pelagic Fishing

Included: The use of mid-water trawling, purse seine, pelagic long-lines, hand-lines, harpoons, mid-water gillnets, rod and reel, trolling, and buoys to catch pelagic fishes and mobile invertebrates

Excluded: All other forms of Fishing

Fishing with Benthic Mobile Gear

Included: The use of rod and reel, trolling, trawling, dredging, and other mobile gear to catch benthic fishes and mobile invertebrates

Excluded: All other forms of Fishing

Fishing with Benthic Fixed Gear

Included: The use of traps, pots, bottom long-lines, bottom or anchored gillnets, pound nets, weirs, and other bottom tending gear types used to catch benthic fishes and invertebrates

Excluded: All other forms of Fishing

Kayak Fishing

Included: The use of hook and line fishing from kayaks or any other similar vessel to catch fishes and mobile invertebrates

Excluded: All other forms of Fishing

Dive Fishing

Included: The use of SCUBA diving, surface supply diving or snorkeling (free diving) to spear or catch fishes and invertebrates

Excluded: All other forms of Fishing, SCUBA/Snorkeling

Fishing from Shore

Included: The use of rod and reel, crab traps, cast nets or kites to catch fishes and mobile invertebrates near the shore, or from piers and jetties

Excluded: All other Fishing, Tide Pooling, Shore Use



Gathering from Shore

Included: Consumptive and/or subsistence harvest in the intertidal zone of living marine plant or animal species for consumption, aquaria, recreation, education or research

Excluded: All other forms of intertidal or coastal harvesting including bait, Fishing from Shore, Tide Pooling, Commercial Seaweed Harvest, Coastal Aquaculture

Offshore Seaweed Harvest

Included: Large-scale commercial harvesting by machine, or limited-scale individual harvesting by hand from a

small boat, of any species of benthic macroalgae

Excluded: All other harvesting, Aquaculture, Tide Pooling

Hunting

Included: Shore and boat-based hunting of vertebrates, birds, mammals and reptiles, including legally recognized hunting by tribal and indigenous communities

Excluded: Fishing, Cultural Use

Wind Energy

Included: The generation of electricity from wind power using turbines, and associated offshore infrastructure including substructures, transmission hubs, cables and service platforms

Excluded: Onshore power grids, other forms of renewable energy



Wave Energy

Included: The generation of electricity from wave power using fixed or floating wave energy capture devices

Excluded: Other forms of marine and hydrokinetic renewable energy

Ocean Current Energy

Included: The generation of electricity from ocean currents using turbines, associated transmission hubs, generators and cables

Excluded: Other forms of marine and hydrokinetic renewable energy

Tidal Current Energy

Included: The generation of electricity from tidal currents using dams and turbines associated transmission hubs, generators and cables

Excluded: Other forms of marine and hydrokinetic renewable energy

Ocean Thermal Energy Conversion (OTEC)

Included: The generation of electricity from ocean temperature gradients using closed-cycle, open-cycle and hybrid conversion systems, associated seawater intake systems and pipelines

Excluded: Other forms of marine and hydrokinetic renewable energy

Offshore Oil and Gas Energy

Included: Production and transportation of oil and gas, associated offshore infrastructure and pipelines

Excluded: Renewable energy production, Shipping

Shipping

Included: Transit, mooring or anchoring by ships, ferries and other large commercial vessels

Excluded: Cruise Ships, Offshore Oil and Gas

Cruise Ships

Included: Transit, mooring or anchoring for extended overnight recreational travel on commercial ships

Excluded: Motorized Boating, Commercial Shipping

Military Vessels

Included: Transit of military vessels related to training activities, ship and submarine maneuvers, and war games.

Excluded: War time military operations

Mining and Mineral Extraction

Included: Sand and gravel extraction, seabed mining for commercial minerals, dredging, and beach renourishment

Excluded: Energy production

Offshore Aquaculture

Included: Cultivating and harvesting marine organisms offshore using man-made enclosures that can be fixed, floating or submerged (e.g. nets, pens and cages)

Excluded: Coastal Aquaculture, aquaculture wholly pursued on land



Coastal Aquaculture

Included: Cultivating and harvesting marine organisms in the near-shore environment using man-made enclosures that can be fixed, floating, or submerged (e.g. nets, pens and cages)

Excluded: Offshore Aquaculture, aquaculture wholly pursued on land

Seawater Intake

Included: Intake of seawater for desalination, power plant cooling, or other industrial uses, and associated beach wells, offshore or submerged intake systems, and pipelines

Excluded: Intake related to Sewage Discharge, Renewable Energy or Fishing

Sewage Discharge

Included: Discharging of sewage and wastewater effluent from outfall areas, associated pipelines

Excluded: Ocean Dumping

Ocean Dumping

Included: The deliberate, legal dumping of dredged spoils and other materials into ocean waters

Excluded: Sewage Discharge, Mining and Mineral Extraction

Underwater Transmission Cables

Included: Cables installed on the seafloor to transmit data, communications, and electricity generated on land.

Excluded: Lost fishing gear, renewable electricity transmission cables, other types of cables

Adapting the Common Language to Local Realities

Clearly, while the Common Language provides a standard framework for describing ocean uses, one size does not fit all when considering how humans interact with the oceans. Reflecting the variety of ocean use across US regions, the Common Language is not intended to be either exhaustive or static in its content. Instead, it is designed as a “living document” that can and should be adapted to meet local situations and planning needs as understood by those most directly involved. Listed below are some recommended approaches to using and adapting the Common Language in real-life marine planning settings.

Capturing New and Emerging Ocean Uses

Human uses of the oceans are constantly changing as entirely new uses emerge or existing ones evolve in response to technological, environmental or societal drivers. The Common Language accommodates the addition of new Use Categories and related Activities when they are clearly distinct and explicitly defined relative to existing uses (e.g. jet powered human flight over water, or a functionally new approach to extracting renewable energy).

Capturing Locally Unique Uses

Many regions have unique and traditional ocean uses driven by local geography, conditions or culture (e.g. snowmobiling across frozen bays in New Hampshire, underwater rock concerts, and Easter egg hunts in the Florida Keys). When relevant to planning or management objectives, new Use Categories can be created to capture uses that are sufficiently distinct from the existing framework to require separate treatment.

Capturing Local Variations Within Existing Use Categories

The Common Language can also be adapted to reflect differences in how specific Use Categories are pursued locally. For example, fishing has many variants around the US (e.g. plastic bag fishing in Hawai’i). Such locally distinct Activities can be added to existing Use Categories (i.e. Fishing from Shore) while still maintaining the analytical consistency of the overall framework, as long as they share similar fundamental characteristics with the

overarching Use Category.

Lumping vs. Splitting of Use Categories

While it is possible to create new Use Categories or add new Activities to existing Categories, it is not advisable to “lump” different existing Use Categories together into a new one or to mix existing Activities across different Use Categories. Comingling the data and terminology in this way would confound analysis or comparisons of uses across regions or over time and would compromise the utility of this general framework.

Evaluating Ocean Use Categories by Characteristics of Interest

As noted earlier, the Common Language is focused on functional categories, and does not attempt to address why, or by whom, uses are pursued. However, these characteristics (e.g. commercial vs. recreational, extractive vs. non-extractive) can, when deemed appropriate, provide valuable insight into the origin, value and impacts of ocean uses in real settings. Table 2 illustrates an example of how the Common Language might be used in marine planning to compare two potentially important aspects of ocean uses: (i) their purpose and (ii) their degree of resource extraction.

Table 2 shows how the suite of Ocean Use Categories occurring in US waters can vary widely in their basic purposes and drivers, and in their approach to extracting natural and/or cultural resources from the ocean. Such syntheses of the diverse ocean uses in US waters may help inform marine planning exercises and the long-term management of ocean areas in specific geographies.



TABLE 2. CHARACTERISTICS OF OCEAN USES

Ocean Use Categories	Purpose of Use			Extractive Use
	Recreational	Commercial	Charter / Guide	
SCUBA / Snorkeling	●	○	○	-
Swimming	●	-	-	-
Surface Board Sports	●	-	○	-
Paddling	●	-	○	-
Sailing	●	-	○	-
Motorized Boating	●	-	○	-
Wildlife Viewing at Sea	●	-	○	-
Tide Pooling	●	-	○	○
Shore Use	●	-	○	○
Cultural Use	●	○	-	○
Pelagic Fishing	●	○	○	●
Fishing w/ Benthic Mobile Gear	○	●	○	●
Fishing w/ Benthic Fixed Gear	○	●	○	●
Kayak Fishing	●	-	○	●
Dive Fishing	●	○	○	●
Fishing from Shore	●	○	-	●
Gathering from Shore	●	○	-	●
Offshore Seaweed Harvest	-	●	-	●
Hunting	●	-	○	●
Wind Energy	-	●	-	●
Wave Energy	-	●	-	●
Ocean Current Energy	-	●	-	●
Tidal Current Energy	-	●	-	●
Ocean Thermal Energy Conversion	-	●	-	●
Offshore Oil and Gas Energy	-	●	-	●
Shipping	-	●	-	-
Cruise Ships	●	-	●	-
Military Vessels	-	●	-	-
Mining and Mineral Extraction	-	●	-	●
Offshore Aquaculture	-	●	-	●
Coastal Aquaculture	○	●	-	●
Seawater Intake	-	●	-	●
Sewage Discharge	-	●	-	-
Ocean Dumping	-	●	-	-
Underwater Transmission Cables	-	●	-	-

● Always Applicable

● Mostly Applicable

○ Sometime Applicable

- Never Applicable

Describing Tribal and Indigenous Ocean Uses

Ocean uses by tribes and other indigenous communities occur throughout most US waters, often under unique legal authorities, sovereign treaty rights, and recognition of traditionally important areas. Many such uses are multidimensional and have significant cultural, ceremonial or spiritual components inextricably coupled with the primary activities listed in the Common Language. Recognizing the regional importance of tribal and indigenous ocean uses, the Common Language provides regional planners the flexibility to address indigenous uses in several ways. For example, traditional paddling may be categorized by four options, each of which illustrates how the approach affects what is Included and Excluded from the Use Category:



Option 1. Traditional paddling is encompassed under the general Use Category of Paddling, but is not listed explicitly as a specific Activity under this Use Category:
Included: Kayaking, canoeing, rowing, outrigger paddling, Stand-Up Paddling (SUP)
Excluded: Motorized Boating, Surface Board Sports

Option 2. Traditional paddling is listed explicitly as a specific Activity under the Use Category “Paddling:”
Included: Kayaking, canoeing, rowing, outrigger paddling, Stand-Up Paddling (SUP), traditional canoeing, traditional outrigger paddling, traditional kayaking
Excluded: Motorized Boating, Surface Board Sports

Option 3. A new Use Category, “Traditional Paddling”, is created specifically for traditional paddling that includes all appropriate Activities:
Included: traditional kayaking, traditional canoeing, traditional outrigger paddling
Excluded: Motorized Boating, Surface Board Sports

Option 4. Traditional paddling is encompassed under the general Use Category of Cultural Use, but is not listed as a specific Activity under this Use Category. This option may be used when communities would prefer to document general areas of importance rather than disclose specific Activities. Uses listed in this Category should not be listed elsewhere in other Categories. These decisions should be made and documented locally by those most directly engaged in and affected by the activities.

Informing Place-Based Management of the Oceans

Ultimately, by making ocean use planning more consistent, transparent and efficient, the Common Language can help coastal communities make informed, timely and equitable decisions about the future of the ocean and the ecosystem services it provides. Specifically, the Common Language can: increase shared understanding of ocean uses; allow for meaningful comparisons of uses across space and time; help identify key stakeholder

communities linked to specific uses; accelerate shared decision-making; and, highlight the implications of tradeoff decisions in the marine environment for this and future generations. Intended to be an entirely voluntary tool, the Common Language can and often should be adapted to reflect local issues and priorities.



More On Ocean Uses

The Common Language is the first product in a broader initiative entitled “Spotlight on Ocean Uses,” currently under development by NOAA’s National Marine Protected Areas Center and its partners. Designed to support place-based ocean planning and management – including marine protected areas -- throughout the US, the Spotlight project will build upon the Common Language to explore the operational requirements and potential interactions of ocean uses in US waters.

The Common Language of Ocean Use for the United States was developed by Dr. Charlie Wahle and Julia Townsend, of NOAA’s National Marine Protected Areas Center. These ideas were profoundly shaped over several years by insights provided by Lauren Wenzel, Dr. Mimi D’Iorio, Jordan Gass, Nick Hayden, Hugo Selbie, Dr. Valerie Grussing, Dan Basta, the MPA Federal Advisory Committee, and the hundreds of ocean users and experts who voluntarily contributed their invaluable time and insights in NOAA’s Ocean Uses Atlas mapping workshops.

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