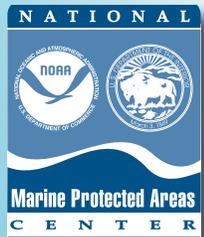


A COMMON LANGUAGE OF OCEAN USES



INTRODUCTION

Managing America's Oceans = Managing Human Uses

Our nation's oceans and coasts are becoming crowded as existing human uses continue to expand and new uses emerge. Growing concerns over their potential impacts and conflicts have spurred several states and regions to embark on comprehensive ecosystem-based ocean planning initiatives. While differing in scale and focus, each effort reflects the growing societal desire – mirrored in the National Ocean Policy – to more thoughtfully consider our ocean future. Ultimately, successful ocean planning will emerge from a shared understanding of what those uses are, why and how we pursue them, and how they affect coastal ecosystems and the human communities they support.

The Need for a Common Language of Ocean Uses

Everyone interested in the future of America's oceans – from planners to stakeholders and managers -- needs more effective and transparent ways to think and talk about diverse ocean uses. The terms we employ to describe both current and emerging ocean uses are often 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 and can consume valuable time defining anew the full range of ocean uses in an area.

To effectively plan for ocean uses in the US, we need a coherent and consistent terminology – or language – that can help describe, map and illuminate the implications of the growing variety of activities in, on, and under America's oceans. To be useful, any ocean use terminology needs to: accurately reflect current and emerging uses; flexibly accommodate regional differences in how specific uses are pursued; be scalable across varying geographic footprints; and, account for complex cultural aspects of human interactions with the ocean.

To meet this need, NOAA's National Marine Protected Areas Center has developed a Common Language of Ocean Uses. Built upon extensive experience mapping ocean uses around the US between 2005 and 2012, and informed by users and experts, the Common Language defines 35 distinct Categories of significant human uses organized into four familiar Sectors. This simple organizing framework, summarized below, comprises most of the major ways that people engage in commercial, recreational and cultural activities from the shoreline to the 200 mile limit of the US Exclusive Economic Zone (EEZ).

OCEAN USE CATEGORIES BY SECTOR			
RECREATION & CULTURE	FISHING, HUNTING & GATHERING	ENERGY	OTHER MARITIME ACTIVITIES
SCUBA / Snorkeling	Pelagic Fishing	Wind	Commercial Shipping
Swimming	Fishing with Benthic Mobile Gear	Wave	Cruise Ships
Surface Board Sports	Fishing with Benthic Fixed Gear	Ocean Current	Military Vessels
Paddling	Kayak Fishing	Tidal Current	Mining and Mineral Extraction
Sailing	Dive Fishing	Ocean Thermal Energy Conversion	Offshore Aquaculture
Motorized Boating	Fishing from Shore	Offshore Oil and Gas	Coastal Aquaculture
Wildlife Viewing at Sea	Harvesting from Shore		Seawater Intake
Tide Pooling	Commercial Seaweed Harvest		Sewage Discharge
Shore Use	Hunting		Ocean Dumping
Cultural Use			Underwater Transmission Cables

Specifically designed to support place-based ocean planning and management (e.g. marine protected areas, coastal and marine spatial planning, area-based fisheries management), the Common Language can be used to inform decisions about:

- mapping patterns of ocean uses across a planning area or over time
- assessing impacts of ocean uses on ecosystem components, functions and services
- avoiding conflicts and fostering compatibilities among current or emerging uses
- understanding cultural, social, and economic drivers and benefits of specific uses
- evaluating tradeoffs among uses or sectors within a planning area or across regions

ELEMENTS OF THE COMMON LANGUAGE

The Common Language of Ocean Uses describes and organizes America's diverse ocean uses objectively according to how they function in, on or under the water. Consequently, it provides a consistent and transparent terminology to inform coastal communities' planning for how we use America's oceans. Designed to be both rigorous and flexible, it can be adapted to reflect unique local and regional uses and issues while maintaining the ability to make meaningful comparisons and assessments among uses, across areas and over time.

Nested Structure

Like a biological taxonomy, the Common Language's organizing framework is a nested hierarchy of descriptive terms. Key layers of the Common Language of Ocean Uses include:

Sectors

Sectors are broad intuitive groupings of related ocean uses (e.g. Energy) that often share common purposes, space-use footprints, management or regulatory regimes, demographics, socioeconomic drivers, ecosystem interactions, and dependence on natural, cultural and energy resources in ocean environments.

Use Categories

The Common Language's fundamental unit of mapping and analysis is the Use Category (e.g. Surface Board Sports, Kayak Fishing, or Underwater Transmission Cables). Each of the 35 Use Categories represents a distinct and common type of human engagement in, on or under the ocean.

Activities

Within each Use Category, the Common Language identifies related Activities that reflect different approaches to pursuing that specific Use (e.g. snorkeling vs. SCUBA diving; surf casting vs. kite fishing from shore). To facilitate the effective application of the Common Language in a planning setting, each Use Category explicitly lists those Activities which are generally included and excluded by the Use, recognizing that Activities often vary across regions, and can be adapted to fit local needs.



Examples

The relationship among Sectors, Use Categories and Activities is illustrated by the following examples of three common ocean uses: (i) Fishing with Benthic Fixed Gear; (ii) Surface Board Sports; and, (iii) Wind Energy.



SECTOR: Fishing, Hunting and Gathering

Use Category: Fishing with Benthic Fixed Gear

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



SECTOR: Recreation & Culture

Use Category: Surface Board Sports

Activities: Tow-in and paddle-in surfing, wind-surfing, kite surfing, sailboarding



SECTOR: Energy

Use Category: Wind

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

SCOPE OF THE COMMON LANGUAGE

No single organizing framework can capture all of the current and emerging ocean uses throughout US waters. Instead, the Common Language is designed to provide a flexible tool that allows the diversity of uses to be categorized, understood and compared. Guiding principles for that design are described below.

How the Use Categories Were Created

Based on lessons learned from five years of participatory mapping around the US, the Use Categories in the Common Language reflect human uses that:

- are currently occurring or are expected to occur within five years (i.e. by 2018)
- can be mapped with spatially explicit boundaries
- generally occur within specific, and often predictable areas of ocean or coastal waters
- generally involve a limited and predictable suite of activities that can be anticipated, mapped, evaluated and planned
- are largely distinct from other uses in their operational requirements for space and ecosystem services
- may be pursued for either recreational, commercial, subsistence or security purposes
- are legally allowed where they occur

Why Certain Uses Were Excluded

More than simply a way to discuss ocean uses, the Common Language is also intended to rigorously inform spatial mapping and analysis of the patterns, ecosystem impacts, socioeconomic benefits, conflicts and compatibilities of diverse human activities. To that end, it focuses on discrete uses that are amenable to proactive spatial planning.

As a result, the Common Language does not presently include the much broader, and often locally important, suite of human activities that often tend to occur spontaneously, ephemerally, in unpredictable areas or in ways that involve multiple distinct uses, making them problematic to plan. Familiar examples of uses in this realm include military training, research, restoration, emergency response, archaeology, treasure hunting, or marine salvage. For the near-term, such uses may be identified and mapped individually when relevant to regional planning goals. Ultimately, comprehensive ocean planning would benefit from the expansion of the Common Language to reflect the diversity and complexity of some of these locally important uses.

OCEAN USE DEFINITIONS BY SECTOR

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

RECREATION & CULTURE

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, wind-surfing, 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 (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 that can be captured elsewhere in this Framework

FISHING, HUNTING & GATHERING

Pelagic Fishing

Included: The use of mid-water trawling, purse seine, pelagic longlines, handlines, 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 longlines, 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 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



Harvesting 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

Commercial 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

ENERGY

Wind

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

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

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

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

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

Excluded: Renewable energy production, Shipping

OTHER MARITIME ACTIVITIES

Commercial 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: Wartime military operations



Mining and Mineral Extraction

Included: Sand and gravel extraction, seabed mining for commercial minerals, dredging, and beach re-nourishment

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

APPLYING THE COMMON LANGUAGE OF OCEAN USES

By providing an organizing framework to describe and compare ocean uses, the Common Language creates a practical, intuitive, and consistent foundation for place-based planning and management in US waters. Recognizing the complexity and dynamism of how people use the nation's oceans, the Common Language is neither exhaustive nor static in its content. Instead, it is designed to be adapted to meet local and regional planning needs. Listed below are some recommended approaches to using and adapting the Common Language in real-life planning settings.

Local Variations on Existing Use Categories

The Common Language can be adapted to reflect differences in how specific Use Categories are pursued locally. For example, fishing has many varieties and local Activities can be added to existing Use Categories, (e.g. plastic bag fishing in Hawaii as part of Fishing from Shore), as long as they share similar fundamental characteristics with the overarching use and are documented fully in the metadata.

Locally Unique Use Categories

Many regions have developed unique ways to use the ocean (e.g. snowmobiling across frozen bays in New Hampshire, underwater rock concerts in Florida). When relevant to spatial planning, such Uses can be added to the framework and associated metadata as distinct, local Use Categories and mapped and analyzed accordingly.

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 is designed to accommodate the addition of new Use Categories and Activities of human uses when they are clearly distinct and explicitly defined relative to existing uses (e.g. a functionally new approach to harvesting renewable energy or recreating in the ocean). In this case, the new Use(s) should be clearly defined and incorporated into metadata for mapping and analyses.

Lumping vs. Splitting of Uses

As a general rule of thumb, it is possible to “split” an existing Use Category into two or more new, related Categories when local ocean uses fall outside the scope of existing Categories. It is not, however, advisable to “lump” different existing Use Categories together or to mix existing Activities across Use Categories. Both would confound any analysis or comparisons across regions or over time. In all cases, changes to Use Categories or Activities should be thoroughly and transparently documented.

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.

Geographic Scalability

The Common Language of Ocean Uses is designed to be flexibly applicable to place-based ocean planning at any scale from broad regions spanning multiple states to more localized MPA designations. As such, it can be used in regional planning to capture and analyze broad trends in human uses at the Sector level, as well as to inform higher resolution planning of very specific Use Categories and/or Activities within much smaller areas. The flexibility of the Common Language enables planners to match the scale of data acquisition and analysis to management goals being sought.

Wider Comparisons of Ocean Uses

In addition to providing a straightforward language to facilitate MPA or ocean planning, the Common Language is intended to enable meaningful comparisons of uses across larger areas and over time. Its hierarchical framework allows Use Categories and their component Activities to be rigorously and transparently mapped, analyzed and compared within and across planning areas. This “apples to apples” consistency can inform critically important discussions about allocating specific Use Categories and Sectors to areas appropriate for their long-term sustainable pursuit. As such, it will be important for planners to clearly document how this framework is applied and what changes if any, were made to reflect local conditions and priorities.

CONCLUSION

Ultimately, by making ocean use planning more consistent, transparent and efficient, the Common Language for Ocean Uses can help coastal communities make informed, timely and equitable decisions about the future of the ocean and the services it provides. Specifically, the Common Language can: increase shared understanding of ocean uses; allow for meaningful comparisons of uses across space and time; identify key stakeholder communities linked to specific uses; speed up decision-making; and, highlight the implications of tradeoff decisions in the marine environment for this and future generations.

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. Designed to support place-based ocean planning and management throughout the US, the project will examine: the general nature and components of conflicts among uses; spatial and operational requirements of different uses; and the potential for conflict among specific co-occurring uses.



For more information:

http://www.mpa.gov/dataanalysis/ocean_uses

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