



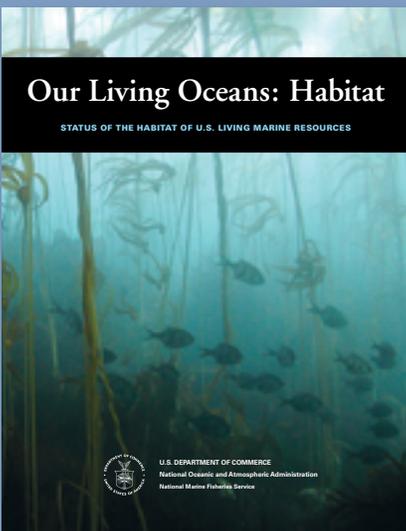
# NOAA FISHERIES

*“One of the greatest long-term threats to the viability of commercial and recreational fisheries is the continuing loss of marine, estuarine, and other aquatic habitats. Habitat considerations should receive increased attention for the conservation and management of fishery resources of the United States.”*

- Magnuson-Stevens Act

To download an electronic copy of the *OLO: Habitat*, visit:

<http://www.st.nmfs.noaa.gov/ecosystems/habitat/plans/olohabitat/index>



## Our Living Oceans: Habitat

### Pacific Islands Region

The United States has jurisdiction over approximately 50 Pacific Ocean islands, including two archipelagos (Hawaiian and Marianas), part of another archipelago (Samoa) and eight isolated atolls or low-lying islands (Johnston Atoll, Kingman Reef, Palmyra Atoll, Jarvis Island, Howland Island, Baker Island, Swains Island, and Wake Atoll). Created by volcanoes erupting from the seafloor, these islands are the summits of pinnacles that rise steeply from ocean depths of 4–7 km (2.5–4.35 mi). The geomorphology of the islands varies and includes some of the youngest and oldest islands in the world.



Upper left: A biologically diverse Pacific coral reef. Lower left: Low, flat beaches, such as this Pacific atoll, are a vital habitat for sea turtles and monk seals. Right: Hawaiian estuarine habitat.

Although the land area of the U.S. Pacific Islands Region is small, the surrounding waters comprise 5.751 million km<sup>2</sup> (1.677 nmi<sup>2</sup>), nearly 50% of the total area of the U. S. Exclusive Economic Zone (EEZ). This combination of geographically wide-spread holdings with small land areas and large marine EEZs creates a large region of predominantly marine biological resources.

The Pacific Islands Region contains many diverse habitats including high islands, atolls, submerged banks, seamounts, and offshore oceanic habitats. Beach habitats are important terrestrial nesting sites critical to the survival of seabirds and sea turtles, and as haul-out sites for Hawaiian monk seals. Shallow nearshore habitats include algal and seagrass beds, sand flats, rocky reefs, rubble-covered bottom; the most productive of these Pacific Islands habitats is the coral reef habitat. Coral reef ecosystems are among the most diverse and biologically complex ecosystems found on earth, hosting species-rich assemblages of algae, corals, reef invertebrates, fish, and a variety of other flora and fauna.

## Habitat Issues

Non-native species of fishes, crustaceans, invertebrates, and algae have been introduced to areas throughout the Pacific Islands Region, both intentionally and accidentally. Some of these invasive species out-compete or exclude native species.

**Global warming, ocean acidification, sea level rise, and overfishing** are the greatest threats not only to coral reefs but also to protected species. Some other factors that adversely affect habitat in the Pacific Islands Region are:

- marine debris
- shoreline construction
- point and nonpoint source pollution

Many coral reefs across the Pacific Islands have declined in biomass since studies began in the Pacific Islands region.

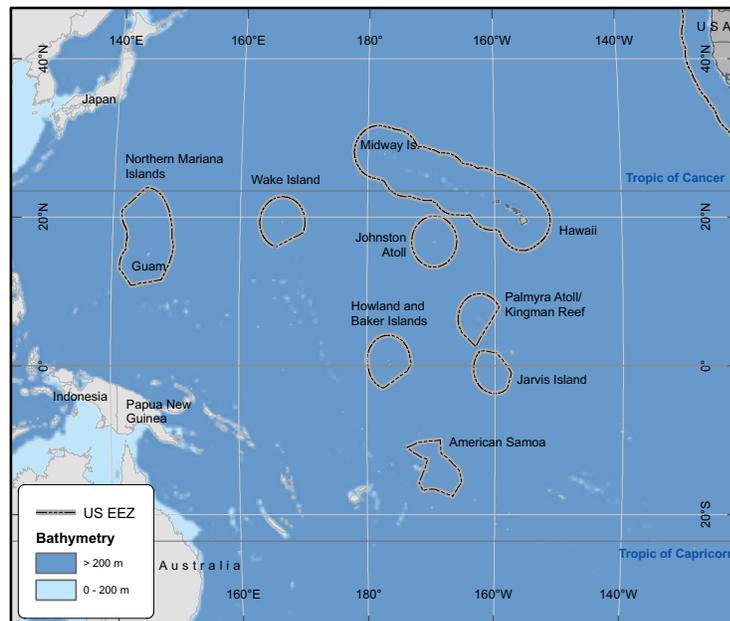
Anthropogenic impacts (e.g. sea level rise and overfishing) to habitats vital to protected species (including cetaceans, Hawaiian monk seals, and sea turtles) have been documented in nearshore and offshore areas in the Pacific Islands Region.

## Habitat Needs

Because the Pacific Islands Region is so vast and widely dispersed, there are large gaps in the basic knowledge of the fishery and protected species in this region, the quantity and quality of habitats, and how these species use habitat. Some habitat-specific research needs for the Pacific Islands Region include:

- Collecting life history information related to habitat needs, particularly for early life stages of fishery and protected species.
- Completing baseline descriptions of habitats and long-term monitoring of these habitats.
- Delineating and mapping important habitats and complete high resolution mapping of bottom topography, bathymetry, currents, algal beds, substrate types, and habitat relief.
- Evaluating the ecological impact of invasive species colonizing native habitat.
- Determining effects of natural and anthropogenic stresses to habitats including marine debris and pollution.
- Quantifying habitat-related densities and growth, reproduction, and survival rates within habitats for all life-history stages of fishery and protected species.

## Map of the Pacific Islands Region



Pacific Islands Region waters are 5.751 million km<sup>2</sup> (1.677 million nmi<sup>2</sup>).

## Pacific Islands Highlights

In 2007, an ecosystem-based, fishery management strategic planning document was drafted by a team comprising ecosystem, stock assessment, and fishery management experts. This was followed by the adoption of five new Fishery Ecosystem Plans (FEPs) by the Western Pacific Regional Fishery Management Council (WPRFMC) in 2010. These FEPs shifted focus from species-based to place-based management, and began the implementation of ecosystem-based approaches to fisheries management in the Pacific Islands Region.

The adoption of FEPs created the organizational structure to incorporate additional information, community input, and local knowledge into fishery ecosystem management. Recent amendments to the FEPs have established fishery regulations, including annual catch limit procedures, and gear requirements for the American Samoa longline fishery to reduce sea turtle interactions. Additionally, longline area closures have been established in the Commonwealth of the Northern Mariana Islands, and fishing regulations have been created for the Pacific marine national monuments.

In 2006, the Papahānaumokuākea Marine National Monument was created, designating over 360,000 km<sup>2</sup> (140,000 mi<sup>2</sup>) of islands, atolls, and ocean along the Northern Hawaiian Islands chain as a protected national monument. This is one of the largest protected marine areas in the world, and encompasses over 13,200 km<sup>2</sup> (5,100 mi<sup>2</sup>) of coral reef habitat.

The Marianas Trench, Pacific Remote Islands and Rose Atoll national monuments were established in 2009 in the tropical western Pacific, protecting a total area of over 490,000 km<sup>2</sup> (190,000 mi<sup>2</sup>). In September 2014, the Pacific Remote Islands Marine Monument was expanded to 1,056,720 km<sup>2</sup> (408,000 mi<sup>2</sup>).