Archipelagic-based Fishery Ecosystem Plans: Looking to the Past in Managing the Future

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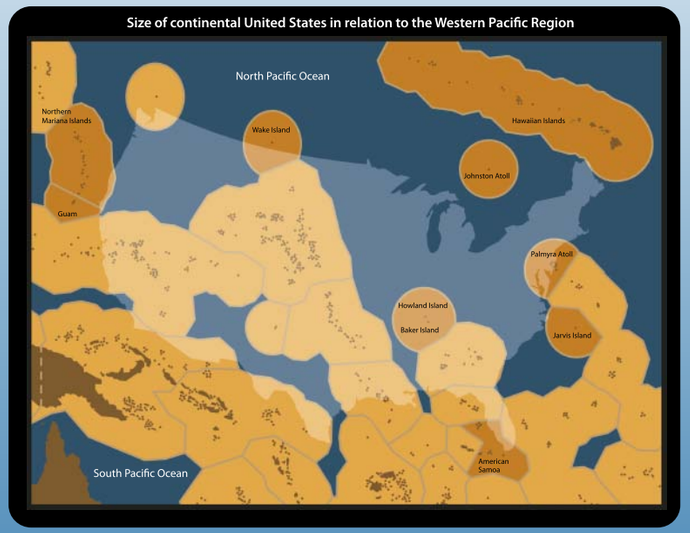
Unlike the continental regions of the United States, oceanic islands of the Pacific rise steeply from the ocean floor with their upper slopes providing only a limited amount of coastal shelf area. However, despite limited coastal shelf area, Pacific islands contain a diversity of marine habitats including, coral reefs, deep reef slopes, deep benthic zones, banks, seamounts and pelagic waters which support thousands of marine species and important fishery resources.

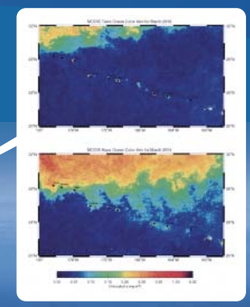
Through thousands of years of direct observations, Pacific island communities have gained an intimate understanding of environmental cycles and rhythms which affect the health and abundances of marine resources. Based on this understanding, they developed successful management systems that maintained healthy ecosystems which was key to their survival.

The Council's FEPs will incorporate these traditional concepts of marine resource management for each of the island areas under its jurisdiction.

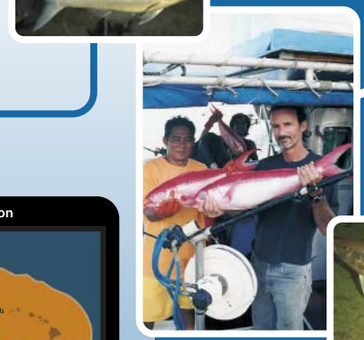


High islands of the Pacific contain the greatest number of reef zones and habitats including, coastal bays, lagoons, estuaries, barrier reefs, channels, reef flats, and spur and groove zones. It is estimated that there are over 1,500 species of reef fish which inhabit these zones in the US Pacific Islands.

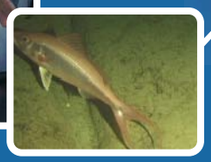
Coastal ecosystems are affected by terrestrial activities such as land development, urbanization, and non-point and point source pollution.



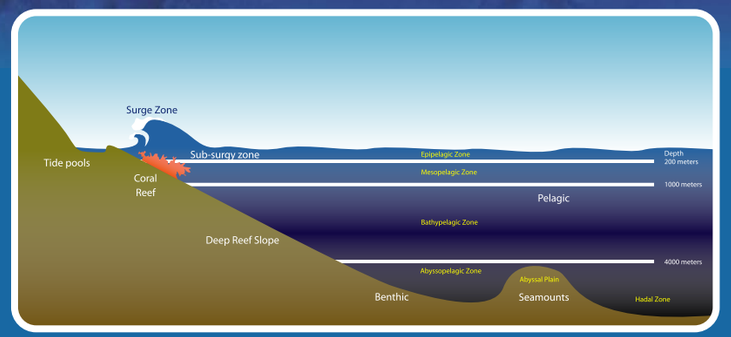
Seasonal north-south movement of the North Pacific convergence zone. The southern boundary of the zone bathes the Northwestern Hawaiian Islands enriching the plankton and nutrients nearshore waters of these islands



Deep reef slopes are important habitats for bottomfish, and important fishery resource utilized by Pacific islanders for thousands of years.

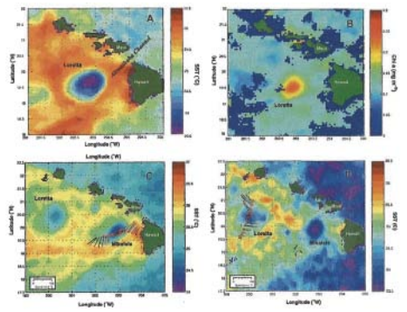


Deep benthic demersal zones provide habitat for a number of marine organisms including precious corals, which have been used for Hawaiian cultural and medicinal practices and supports a $30 million industry today.



A dense school of the bigeye scad or *akule* in a shallow coral reef lagoon. This species occupies the intermediate waters between the shallow coral reef lagoons and the offshore pelagic zone. Although a pelagic fish it is often aggregated in with coral reef fish catches.

SEKI ET AL.: Biologically Enhanced Hawaiian Eddies



Eddy systems off the Kona coast of the Big Island. These eddies may be one of the principal reasons why billfish such as blue marlins and swordfish spawn in large numbers of the Kona coast, and why Kona is called "the marlin capitol of the Pacific" by sportsfishermen around the world.

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