



Ecosystem-based Management of Fisheries in the Hawaii Archipelago

Hawaii Fisheries

Hawaii is one of the primary ports for US seafood landings, due primarily to its offshore pelagic fisheries, which are open-ocean fisheries covered by the Pacific Pelagic Fishery Ecosystem Plan (FEP). Fisheries that are related to the seafloor and submerged lands are covered by the Hawaii Archipelago FEP and include the following:

Bottomfish

The deep-slope bottomfish fishery in Hawaii targets snappers, jacks (trevally) and a single species of grouper concentrated at depths of 30–150 fm. The fishery can be divided into two geographical areas: the inhabited main Hawaiian Islands (MHI), with their surrounding reefs and offshore banks, and the Northwestern Hawaiian Islands. In the MHI, about 50% of the bottomfish habitat lies in State waters (0 to 3 miles from shore). Bottomfish fishing grounds within federal waters include Middle Bank, most of Penguin Bank, and approximately 45 nm of 100-fm bottomfish habitat in the Maui-Lanai-Molokai offshore triangle.

Food Web

Courtesy of NOAA Pacific Islands Fisheries Science Center



Crustaceans

The typical species targeted by this fishery are the Hawaiian spiny lobster and the common slipper lobster. Other important species include other spiny and slipper lobsters, Kona crab and deepwater shrimp. More than 50% of the Kona crab are caught at Penguin Bank.

Precious Corals

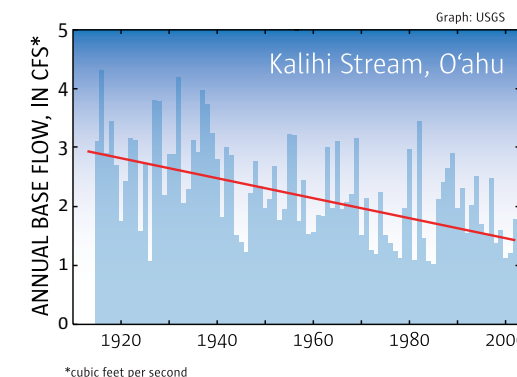
Since 1980, virtually all of the black coral harvested in the Hawaii Archipelago has been taken from a bed located in the Auau Channel and nearly all of the harvest has come from State waters. There is a biannual quota of 5,000 kg for the Auau black coral bed. A five-year moratorium on the harvest of gold coral began in 2008. No operations currently exist in Hawaii for pink or bamboo coral harvest.



Coral Reef Ecosystem

Coral reef species are targeted using numerous fishing gear including nets, traps, hook and line, spear, hand and other methods. Akule (coastal pelagic scads) dominates near-shore commercial landings and are typically harvested using surround or fence nets, gillnets, or hook-and-line. Other top species by weight and value include soldierfish, parrotfish, surgeonfish and goatfish. Some of these species can fetch a high price in some seasons. Recreational and subsistence catches are not reported in Hawaii, but creel surveys suggest that the total inshore catch from reef areas could be as high as the reported commercial catch.

Fishing and Non-fishing Impacts on the Marine Ecosystem



- Pollution and sedimentation
- Coastal development
- Reduced freshwater flow
- Nutrient loading
- Marine debris
- Alien invasive species
- Hurricanes
- Global warming, coral bleaching and climate change
- Human population increase
- Ocean acidification
- Fisheries bycatch and protected species interaction
- Designated and de facto no-fishing zones



Management Objectives

1. To maintain biologically diverse and productive marine ecosystems and foster the long-term sustainable use of marine resources in an ecologically and culturally sensitive manner through the use of a science-based ecosystem approach to resource management.
2. To provide flexible and adaptive management systems that can rapidly address new scientific information and changes in environmental conditions or human use patterns.
3. To improve public and government awareness and understanding of the marine environment in order to reduce unsustainable human impacts and foster support for responsible stewardship.
4. To encourage and provide for the sustained and substantive participation of local communities in the exploration, development, conservation, and management of marine resources.
5. To minimize fishery bycatch and waste to the extent practicable.
6. To manage and co-manage protected species, habitats and areas.
7. To promote the safety of human life at sea.
8. To encourage and support appropriate compliance and enforcement with all applicable local and federal fishery regulations.
9. To increase collaboration with domestic and foreign regional fishery management and other governmental and non-governmental organizations, communities, and the public at large to successfully manage marine ecosystems.
10. To improve the quantity and quality of available information to support marine ecosystem management.



Photo courtesy of Carl Jellings
Taape (blue-lined snapper) school on artificial reef off Oahu's Waianae coast. Since its introduction by the State of Hawaii in the mid-1950s, this alien invasive species has spread throughout the archipelago from the Big Island to Kure Atoll.

What is Ecosystem-based Fisheries Management?

- It is holistic, adaptive, and geographically specific
- It accounts for ecosystem knowledge and uncertainties
- It considers multiple external influences
- It strives to balance diverse social objectives

How is it taking place?

Management measures for the insular fisheries in US exclusive economic zone waters surrounding Hawaii have been taken from the Bottomfish, Crustaceans, Precious Coral and Coral Reef Ecosystem Fishery Management Plans for the Western Pacific Region. They are now contained in a single document—the Hawaii Archipelago Fishery Ecosystem Plan (FEP).

The creation of a Hawaii Archipelago Regional Ecosystem Advisory Committee and restructuring of the Council's Advisory Panel and Standing Committees have provided

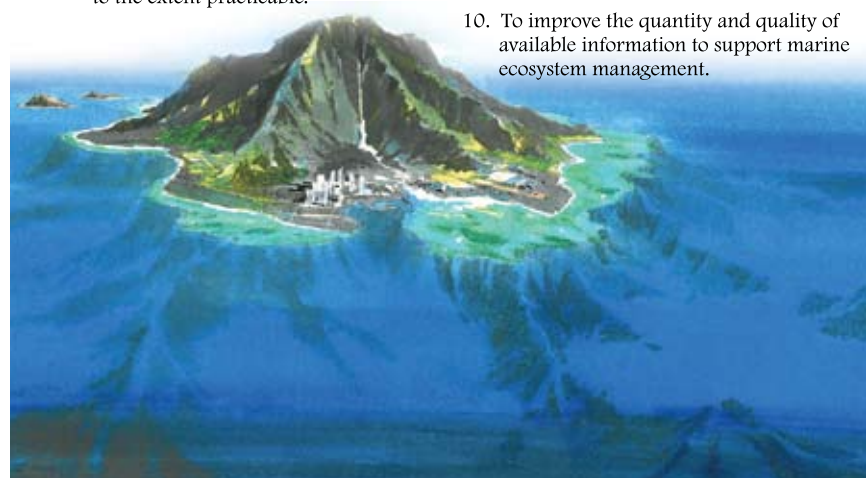
enhanced local knowledge and input into the management process. The members' unique perspectives and knowledge of different parts of the ecosystem contribute to the management of the fisheries and better planning for the health of the ecosystem.

Managers are increasing their understanding of a range of social, cultural, economic, biological, ecological, and other scientific issues. This ecosystem knowledge is used to adaptively manage fisheries in the Hawaii Archipelago.



The Hawaii Regional Ecosystem Advisory Committee convenes to discuss land-based impacts to the marine ecosystem.

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