



## **Summary of Council's Preferred Alternative for its Coral Reef Ecosystem Fishery Management Plan**

July 2000

Management measures proposed in the Coral Reef Ecosystem Fishery Management Plan (CRE-FMP) represent a combination of choices made by the Council based on a comparison of alternatives. Alternatives were a product of numerous public meetings and meetings of the Council's various advisory bodies. Proposals made by the Council at a meeting in June 2000 would, if approved by the Secretary of Commerce, result in three major regulatory actions: (a) fishing permit and reporting requirements for fishing of coral reef resources in the Exclusive Economic Zone (EEZ); (b) definition of allowable gear and methods of fishing for coral reef resources in the EEZ; and (c) designation of "no take" and "low use" marine protected areas in portions of the EEZ. The Council also proposes framework regulatory procedures to allow for timely, adaptive management based on new resource information, unforeseen effects or changes in fisheries. In addition, the Council recommends that a formal procedure be established for assessing and controlling ecosystem effects of reef-related fisheries managed under existing FMPs for Bottomfish, Crustaceans and Precious Corals. These regulations are described below.

### Trade-offs evaluated

In determining preferred alternatives, the Council considered trade-offs of benefits in reference to the management objectives. Trade-offs can be summarized as: 1) Between utilization of coral reef resources by controlled fishing and preservation of coral reef ecosystems by minimal consumptive use. 2) Between sustainable use of multi-resource coral reef ecosystems and sustainable use of particular target resources. 3) Between prevention of adverse fisheries impacts and mitigation of damage. 4) Between management actions now or later. 5) Between regulatory burden on potential new coral reef fisheries and burden on existing fisheries.

### Ecosystem approach to management

The Western Pacific Regional Fishery Management Council's FMP for Coral Reef Ecosystems of the western Pacific region incorporates ecosystem approaches into the present regulatory structure, created through earlier FMPs for Bottomfish, Crustaceans and Precious Corals. It also serves as a demonstration "Fisheries Ecosystem Plan", as

recommended by the Ecosystem Principles Advisory Panel.

The high diversity of species and complexity of functions that characterize coral reefs demands an ecosystem approach to management. The ecosystem approach considers both effects of targeted taxa removed by harvest and the indirect effects of this removal on other non-target species and community linkages.

Adopting an ecosystem approach shifts the burden of proof from determining if proposed harvests will be detrimental to the ecosystem to establishing prior to harvest that such activities will not jeopardize the health and sustainability of the ecosystem. A precautionary management approach is employed, and steps are taken to ensure against unforeseen impacts to the ecosystem. An ecosystem approach to fisheries management is an adaptive approach that allows for improvement of the FMP as new information is gained.

The FMP also addresses the essential fish habitat (EFH) provisions of the Magnuson-Stevens Act, which require Councils to move beyond traditional single-species and multi-species management and to consider a broader, ecosystem-based approach to fishery management. The Councils are now required to begin to consider the ecological role (e.g., prey, competitors, trophic links within food webs, etc.) played by management unit species (MUS). Further, Councils are now required to identify and minimize adverse impacts to EFH that result from both fishing and non-fishing activities.

#### Taxa managed under the coral reef ecosystem FMP

The management unit for the coral reef ecosystem FMP includes virtually all biota in the coral reef ecosystem, with fisheries for species already listed in existing FMPs monitored for ecosystem impacts. Species that are harvested under other FMP fisheries, but not yet listed as MUS, will be added to the appropriate FMP as MUS.

The management unit is divided into two groups of species or taxa: 1) “Currently Harvested Coral Reef Taxa,” i.e., organisms that are currently harvested (from catch report records in federal waters) but not covered by existing FMPs, for which adequate information is available to begin management; and 2) “Potentially Harvested Coral Reef Taxa,” i.e., organisms that are not known to be currently harvested, or for which adequate information is not available, but have potential to be harvested in new emerging fisheries (e.g., the rapidly expanding marine ornamental products trade and the emerging industries for pharmaceutical and natural products). Some species within the list of currently harvested taxa are already listed as MUS under existing FMPs, under which their maximum sustainable yield (MSY)/optimum yield (OY), EFH and other fishery

characteristics are identified (e.g., spiny and slipper lobsters, snappers and groupers, black coral). Other species within the same taxa are MUS only under the coral reef ecosystem FMP. However, monitoring and managing ecosystem effects, through a formal consultation process, is the primary responsibility of the coral reef ecosystem FMP for all MUS in all FMPs.

Regulation for permit and reporting

The preferred alternative would rely on detailed permit reporting control (i.e. special permit) over coral reef fisheries in the low-use marine protected areas (MPAs) proposed for designation in the EEZ around the Northwestern Hawaiian Islands (NWHI), Johnston Atoll and Wake Island, where fishing that targets coral reef resources is very limited at present. In areas of the EEZ which are adjacent to inhabited island groups, where nearshore reef resources are actively fished and managed under local laws and regulations, region-specific local systems for monitoring and coordination would be used for currently harvested coral reef taxa. The expanding marine ornamentals fishery and emerging bioprospecting are targeting a broader spectrum of coral reef resources, including species about which little is known. The preferred alternative would require detailed permit and reporting control for potentially (but not previously) harvested resources throughout the EEZ in the western Pacific region. No permit could be obtained, however, to collect live stony coral or live rock for commercial purposes.

<b>Region</b>	<b>Fishery Type</b>	<b>Special Permit</b>	<b>General Permit</b>	<b>Reporting*</b>
<b>PRIAs NWHI</b>	Existing/emerging targeted CRE fisheries	permit mgmt. meas.	n/a	via permit
<b>Am. Samoa Guam</b>	Existing/emerging targeted CRE fisheries	framework	framework	via local monitoring, coordination
<b>CNMI MHI</b>	Existing targeted CRE fisheries Emerging targeted CRE fisheries	framework permit mgmt. meas.	framework framework	via local monitoring, coordination via permit

- Notes: 1) For currently harvested CRE taxa.  
 2) Potentially harvested CRE taxa require special permit.  
 3) For all areas, incidental CRE catch under other FMPs will require no additional permit; reporting via local monitoring and coordination.  
 4) Develop local-specific mechanisms for monitoring and reporting where no reporting systems exist.

\* Details of reporting mechanism to be determined.

Related alternatives, also preferred by the Council, would exempt fishing activities already subject to permit and reporting requirements under the existing FMPs for Bottomfish, Crustaceans and Precious Corals from new requirements under the proposed FMP for Coral Reef Ecosystems. A second exception would allow the collection of small amounts of live stony coral (by special permit) as seed stock for commercial aquaculture of coral. A third exception would allow collection of small amounts of coral for customary and traditional indigenous uses. An alternative that would have allowed no exemptions was not preferred.

Indigenous fishing provisions would permit access rights of Native Hawaiian people to the Northwestern Hawaiian Islands for traditional and customary practices. If quotas are established for the commercial exploitation of the coral reef resources, in Hawaii 20% of such quotas should be reserved for the exclusive and unconditional use of Native Hawaiians. An appropriate percentage of the sustainable quota of the coral reef resources shall be determined later for CNMI, Guam and American Samoa.

Also specified in the FMP are special permit application criteria, grounds for denial of special permit, and requirements for special permit use.

#### Regulation for fishing gear and methods

The preferred alternative allows only the following selective, non-destructive fishing gears: hand harvest, spear, slurp gun, hand net/dip net, hoop net (for kona crab), throw net, barrier net (for aquarium fish), surround/purse nets for targeted schools (e.g., akule, baitfish, weke) with a minimum of bycatch, hook-and-line (includes handline [powered or not], rod-and-reel, and trolling), and remote-operating vehicles/submersibles. Minimizing the damage to coral reef habitat should be achieved through this rule. In addition, nets shall be tended at all times (except hoop nets for kona crabs), and traps shall only be allowed in appropriate areas and with appropriate conditions (e.g., minimal bycatch mortality, negligible habitat impact, and provisions to minimize the possibility of ghost fishing); traps must be permanently marked to identify owner. The use of poisons, explosives and intoxicating substances is prohibited. Spearfishing with assisted breathing apparatus (e.g., scuba) at night is prohibited in the Pacific Remote Island Areas (PRIAs) and NWHI, and fishing with assisted breathing apparatus will be frameworked in other areas consistent with local regulations. Existing FMP fisheries shall follow allowable gear/methods listed in their respective plans.

#### Regulation for Marine Protected Areas (MPAs)

One of the actions proposed for ecosystem-based fishery management is a zone-based management approach to designate geographic areas for prescribed uses. The establishment of “low use” marine protected areas (MPAs) is a preferred alternative. The designation of “low use” marine protected areas (MPAs) combines preferences for their locations and boundaries, permitted activities, and conditions of vessel operation.

“No take” marine protected areas (MPAs) are a powerful tool for ecosystem management because they do not require detailed knowledge of the management unit species while being holistic in conserving multi-species resources, diverse habitats and the functional attributes of marine ecosystems. The designation of “no take” marine protected areas (MPAs) proposed by the FMP combines preferences for (a) their location; (b) the percentage that is “no take;” (c) seaward boundaries for “no take” areas; (d) exemptions to “no take;” and (e) conditions of vessel operation in “no take” areas.

Significant coral reef areas of special value shall be designated through the FMP as marine protected areas (MPAs) for their protection, conservation and management. Existing FMP fisheries follow conservation and management measures in their respective plans, except in no-take MPAs where all fishing is prohibited (no exemptions). This plan, including MPAs, does not extend to State, territory and commonwealth waters (0-3 nmi from shore), except around Rose Atoll (AS). Sustainable utilization of coral reef resources for customary and traditional purposes shall be permitted in take MPAs in the Northwestern Hawaiian Islands. No cruise ships should be allowed in MPAs due to potential for damage to EFH or habitat areas of particular concern (HAPC).

MPAs shall be established in the following areas of the Western Pacific Region:

- \$ **Wake Atoll and Johnston Atoll:** Special Permit Zones: 0 to 50 fathoms; allow recreational fishing.
- \$ **Midway:** No-take MPA for half of Midway; other half allow recreational fishing for island inhabitants for on-island consumption or catch-and-release; Special Permit Zones: 0 to 50 fathoms.
- \$ **Jarvis Island, Howland Island, Baker Island, Kingman Reef and Palmyra Atoll:** No-take MPA: 0 to 50 fathoms.
- \$ **Rose Atoll:** No-take MPA: 0 to 50 fathoms.
- \$ **Guam’s Southern Banks:** No anchoring by fishing vessels larger than 50 feet.

§ **Northwestern Hawaiian Islands:** No-Take Zones (including existing FMP fisheries): 0 to 10 fathoms around all islands and 0 to 50 fathoms around Laysan and French Frigate Shoals. Within No-Take Zones, anchoring shall not be allowed in areas of particular concern (to be identified). Special Permit Zones: 10 to 50 fathoms around all islands (except as noted above for Laysan and French Frigate Shoals). The Council also recommends that the State of Hawaii and the US Fish and Wildlife Service adopt consistent regulations.

**Preliminary Estimates of No-Take Areas**

<b>Area</b>	<b>Federal Waters</b>	<b>Total (State/Federal)</b>
<b>NWHI</b>	14%	24%
<b>PRIA</b>	67%	67%
<b>WP Region</b>	13%	21%

Insurance requirement

All vessels operating or transiting in the MPA shall be required to have insurance to cover the cost of vessel removal and pollution liability (and possibly mitigation) in the event of a grounding, depending on category of vessel, type of permit, and fishing area.

Framework actions

A framework regulatory process shall be established to allow management adjustments to be made rapidly. Options may be considered for addition to the FMP in the future that include mooring and anchoring, vessel monitoring system (VMS) and others.

To protect essential fish habitat from damage, anchoring of any fishing vessel in no-take MPAs should be prohibited except in serious emergencies or in prescribed areas that the Council may designate, depending on category of vessel, type of permit, and fishing area. Mooring buoys may be installed in zones designated by the Council. All other vessels must not anchor in any MPAs.

Fishing vessels operating in MPAs may be required to carry remote electronic vessel monitoring systems (VMS), if funded by NMFS, as part of an effective monitoring and enforcement system for state, territorial and federal agencies, depending on category of vessel, type of permit and fishing area.

### Non-regulatory actions

A formal process will be established for assessing and controlling ecosystem effects of existing FMP fisheries in reef areas. The process involves coordination among the FMP plan teams to identify and address impacts, through recommendations to the Council. This process also retains the autonomy of FMPs to fulfill their respective management objectives.

Other non-regulatory actions proposed in the plan are to facilitate consistent state and territorial level management of coral reef resources; create social, economic and political incentives for sustainable use (including bioprospecting) and disincentives for unsustainable use of coral reef resources; and conduct education, public outreach and “coral reef management diplomacy”.

### Conclusion

The Council’s CRE-FMP includes an innovative ecosystem-approach to management, considers regional and local concerns and issues, including cultural sensitivities, interagency collaboration, and is consistent the President’s directive regarding coral reef protection in the NWHI.

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