



**Western
Pacific
Regional
Fishery
Management
Council**

MEMORANDUM

5 January 2001

TO: Interested Agencies, Groups and Individuals
FROM: *Kitty M. Simonds*
Kitty M. Simonds
Executive Director
SUBJECT: Draft Fishery Management Plan (FMP)/Draft Environmental Impact Statement (DEIS) for Coral Reef Ecosystems of the Western Pacific Region

Enclosed for your review is a summary of the Western Pacific Fishery Management Council's (Council) Draft FMP and DEIS, pursuant to the National Environmental Policy Act.

The FMP proposes to: (1) designate marine protected areas, including no-take reserves and areas zoned for specific fishing activities with a special permit; (2) establish fishing permit and reporting requirements; (3) specify the use of selective, non-destructive gears and methods for harvesting; and (4) establish a framework process for future regulatory adjustments. The FMP also would establish a process for existing FMP plan teams to coordinate discussion of relevant fishery issues with the coral reef ecosystem plan team, facilitate consistent State and territorial level management of coral reef resources; create social, economic and political incentives for sustainable use of coral reef resources; and foster education, public outreach and "coral reef management diplomacy."

A formal public review period is open for the DEIS until 26 February 2001. Mail or fax written comments to:

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Comments sent by e-mail or Internet will not be accepted. Send a copy of your comments to Susan B. Fruchter, NEPA Coordinator, OPSP, Room 5805, US Department of Commerce, Washington, DC 20230. A schedule for public hearings around the Region is attached.

Copies of the FMP, DEIS and associated documents (3 volumes totaling over 1,100 pages) are available in three forms: (1) Council website at www.wpcouncil.org, (2) CD-ROM, and (3) bound hard copies. Volume I is the FMP (including draft regulations and gear catalog) and the draft Regulatory Impact Review/Initial Regulatory Flexibility Analysis (RIR/IRFA). Volume II is the Draft Environmental Impact Statement. Volume III is the essential fish habitat (EFH) descriptions for management unit species. Contact the Council Office at (808) 522-8223 or (808) 522-8172 you would like a CD-ROM or hard bound copy (indicate volumes).

Mahalo!

**Dates, Times, and Locations for Public Hearings
on the Coral Reef Ecosystem FMP DEIS**

1. Agana (Hagatna), Guam: January 16, 2001, 8 to 10 p.m., Guam Fishermen's Cooperative Association, Hagatna Boat Basin, Agana (Hagatna), Guam (hearing on coral reef DEIS will follow public meeting on pelagics DEIS).
2. Susupe Village, Saipan, CNMI: January 17, 2001, 8 to 10 p.m., Saipan Diamond Hotel, Hibiscus Room. No street address, Susupe Village, P.O. Box 66, CNMI (hearing on coral reef DEIS will follow public meeting on pelagics DEIS).
3. Kahului, Maui, HI: January 19, 2001, 6 to 9 p.m. Lehi Kai Elementary School, 335 S. Papa Ave., Kahului, HI 96732
4. Kaunakakai, Molokai, HI: January 22, 2001, 8 to 10 p.m., Mitchell Pauole Center, 90 Ainoa St., Kaunakakai, HI 96748 (hearing on coral reef DEIS will follow public meeting on pelagics DEIS).
5. Kona, Hawaii, HI: January 23, 2001, 8 to 10 p.m., King Kamehameha Hotel, 75-5660 Palani Road, Kona, HI 96740 (hearing on coral reef DEIS will follow public meeting on pelagics DEIS).
6. Hilo, Hawaii, HI: January 24, 2001, 8 to 10 p.m. Cooperative Extension Services, College of Agriculture, Conference Room B, 875 Komohana Street, Hilo, HI 96720 (hearing on coral reef DEIS will follow public meeting on pelagics DEIS).
7. Lihue, Kauai, HI: January 25, 2001, 6 to 9 p.m. Wilcox Elementary School, 4319 Hardy St., Lihue, HI 96766
8. Lanai, HI: January 26, 2001, 8 to 10 p.m., Lanai Airport Conference Room, Lanai, HI 96763 (hearing on coral reef DEIS will follow public meeting on pelagics DEIS).
9. Honolulu, Oahu, HI: January 29, 2001, 6 to 9 p.m., McCoy Pavilion, Ala Moana Regional Park, Ala Moana Blvd., Honolulu, HI 96814 (tel 808-592-2288)
10. Fagatogo, AS: February 5, 2001, 3 to 5 p.m. Dept. of Marine & Wildlife Resources (DMWR) conference room, Faratogo, AS.



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Summary

Draft Environmental Impact Statement

Draft Fishery Management Plan for Coral Reef Ecosystems of the Western Pacific Region

January 2001

SUMMARY OF THE DEIS

The draft environmental impact statement (DEIS), as required by the National Environmental Policy Act (NEPA), was prepared to examine impacts of implementing the proposed Fishery Management Plan (FMP) for Coral Reef Ecosystems of the Western Pacific Region.

The FMP has been proposed to address potential for problems due to human interactions with coral reefs in the Western Pacific exclusive economic zone (EEZ). Although local regulations control many of the impacts of harvesting nearshore coral reef resources in settled areas, exploitation of coral reef ecosystems remains relatively uncontrolled in federal waters of the EEZ. Although these areas have been minimally exploited to date, there has been interest expressed for fisheries to expand in these areas. In addition, the coral reef ecosystems FMP has been proposed to provide for better understanding of impacts due to natural environmental changes, other FMP managed fisheries, and non-fishing related impacts such as dredging.

To address these problems, four alternatives including the status quo, were examined. The environmental effects of each of the alternatives, management measures, components, and options have been analyzed in the DEIS. In June 2000, the Council tentatively adopted a preferred alternative and management options.

Management measures proposed in the 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 will result in three major regulatory actions: (a) designation of "no take" and "low use" marine protected areas in portions of the EEZ; (b) fishing permit and reporting requirements for fishing of coral reef resources in the EEZ; and (c) definition of allowable gear and methods of fishing for coral reef resources in 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.

In evaluating 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.

The alternatives and options analyzed in the DEIS are listed below.

Alternative 1: No Action

- No new MPAs of any type would be implemented.

Alternative 2: Minimal Additional Protection to Coral Reef Resources

- Low-use MPAs would be established for EEZ waters from 0-50 fathoms around each of the Northwestern Hawaiian Islands (NWHI) and each of the Pacific Remote Island Areas (PRIA).
- anchoring by large vessels would be prohibited on Guam's offshore southern banks.
- Midway island, which is physically located in the NWHI, would be exempted from these MPAs.

Alternative 3: Substantial Additional Protection to Coral Reef Resources (preferred alternative)

- No-take MPAs would be established for EEZ waters from 0-10 fathoms around all NWHI as well as EEZ waters from 0-50 fathoms around French Frigate Shoals, Laysan Island, and the northern half of Midway Island.
- No-take MPAs would also be established for EEZ waters from 0-50 fathoms around American Samoa's Rose Atoll, and Jarvis, Howland, Baker, Kingman, and Palmyra in the PRIA.
- Low-use MPAs would be established in EEZ waters from 10-50 fathoms around the remaining NWHI (including the southern half of Midway Island), as well as EEZ waters from 0-50 fathoms around Johnston and Wake Islands.
- Sustainable utilization of coral reef resources for customary and traditional purposes shall be permitted in the low-use MPAs of the NWHI.
- No anchoring of large vessels would be allowed on Guam's offshore southern banks.

Alternative 4: Maximum Additional Protection to Coral Reef Resources

- No-take MPAs would be established for EEZ waters from 0-100 fathoms around all of the region's islands and atolls.
- Due to the broad extent of these areas, there would be no low-use MPAs.

MEASURES:

Measure 1. Marine Protected Areas:

- MPAs are areas where some or all activities are prohibited.
- MPAs provide for holistic protection of ecosystems and multi-species resources that cannot be addressed by a species-by-species approach.
- Options considered were the location of these areas (off all the Pacific islands, or only in remote areas), how much of the MPAs would be no-take areas versus low-use areas for resource extraction, and what separate types of activities would be allowed or prohibited in these areas.

Measure 2. Permits and Reporting Requirements:

- Permits are used to identify participation in a fishery, provide base data for fishery monitoring, catch reporting, and management.
- The options for permit requirements include type of permits, who is required to have a permit to harvest reef resources, prohibitions on harvest of certain reef resources, and other conditions of the permit.

Measure 3. Fishing Gear/Methods:

- Gear restrictions are used to prevent overfishing, protect habitat from direct impacts, and limit bycatch.
- Options considered include defining legal gear types so as to prohibit other gear types, and special restrictions for SCUBA spearfishing.

Measure 4. Other Ecosystem-Based Management Measures:

- Framework for an adaptive management process to identify and address possible impacts of existing FMP fisheries on coral reef ecosystems, and other non-regulatory measures such as education. (does not constitute "action" in terms of NEPA).

Justification for the Preferred Alternative

The preferred alternative's combination of management measures is anticipated to provide enhanced levels of protection and increased opportunities for appropriate management of the region's coral reef ecosystem resources. Under this regime, the proposed Coral Reef Ecosystem FMP is expected to combine harvest controls with careful monitoring in a manner which allows for the controlled utilization of these vital resources in an ecologically sensitive manner. While fishing is currently minimal, the FMP has been developed as a framework upon which to address potential management needs. The plan has been drafted to immediately protect large portions of coral reef and associated resources, while allowing flexibility to adapt to a wide variety of potential management issues as resource utilization develops. The preferred alternative is comprised of the following four management measures. The rationale for these measures is as follows:

No-Take Marine Protected Areas: No-take MPAs are delineated by the 10 fm isobath except for certain ecologically sensitive areas where the boundary is extended to the 50

fm isobath. These areas are French Frigate Shoals, Laysan Island, the north half of Midway Island and Jarvis, Howland and Baker Islands, Kingman Reef, and Palmyra and Rose Atolls. These no-take MPAs also apply to the existing FMPs of the Council. The Council felt that no-take should apply for all activities save limited research and management which could not occur elsewhere. The ecological significance of these areas as remote and near-pristine reefs were driving factors in choosing these areas as the initial MPAs for this FMP. Consideration of proximity to important monk seal colonies was a further rationale for these choices. Seaward boundaries are delineated by following the relevant depth contours around the indicated areas. Basing these seaward boundaries on either the closest State of Hawaii commercial catch reporting grid square inclusive of the relevant contours or on circles drawn around islands or banks that are inclusive of these areas was considered but rejected due to the significantly larger closed area that would result. Most of this additional closed area would be beyond the depth of coral reefs and would result in a major impact on existing fisheries.

Low-use Marine Protected Areas: The Council proposes a zone-based management approach to designate geographic areas for prescribed uses. Zone-based management allows for unique regulations for areas of varying ecological and socio-cultural importance. All EEZ coral reefs around the Northwestern Hawaiian Islands not designated for no-take areas are designated as low-use MPAs. Other low-use MPAs are designated for coral reefs in the EEZ around Johnston and Wake atolls and on offshore banks south of the island of Guam. The seaward boundaries preferred for all low-use MPAs would extend to a uniform depth of 50 fm. These locations were chosen for similar reasons that the no-take MPAs were chosen, but allow for existing fisheries to continue as well as for closely monitored new fisheries in ecologically and socio-culturally important areas.

Permits and Reporting: Special permits and reporting are required for the harvest of coral reef resources in the low-use marine protected areas. Vessels regulated and targeting species managed by other FMPs would be exempt from this requirement. Special permits and reporting will also be required for potentially (but not previously) harvested coral reef taxa throughout the region's EEZ. Regional permit and reporting requirements for the remaining EEZ waters would continue for currently harvested coral reef taxa where reef resources are actively fished and managed under local laws and regulations. The Council preferred to retain regional reporting requirements for current practices in the populated regions, enacting general or special permit requirements under a framework provision at a later date if deemed necessary.

Due to their ecological vulnerability, the preferred alternative would prohibit the of collection live stony coral or live rock for commercial purposes, except small amounts to be collected under a special permit for use as seed stock for aquaculture, for bioprospecting, or for customary and traditional indigenous purposes.

Allowable Gears and Methods: The list of allowable gears is based primarily on gear types with potential for minimizing damage to essential fish habitat (EFH). Adverse impacts from fishing gear may include physical, chemical or biological alterations of the substrate and loss of, or injury to, benthic organisms, prey species and their habitat and

other components of the ecosystem. A second criteria for allowable gear is its catch selectivity, allowing those gears which produce a minimum of bycatch.

Summary tables of management measures and options considered in the DEIS:

Marine Protected Areas:

Options	No-take MPAs	Low-use MPAs
Preferred	0-10 fathoms at all NWHI plus, 0-50 fathoms at FFS, Laysan, ½ Midway, Rose Atoll, Jarvis, Howland, Baker, Kingman, Palmyra. This will total 13% of the region's EEZ coral reefs.	10-50 fathoms all other NWHI, 0-50 fathoms around Johnston, Wake and the South ½ of Midway, and Guam's offshore southern banks (no anchoring allowed here by vessels > 50 feet)
Rejected	No action.	0-100 fathoms in all MPA areas, including inhabited islands.
Rejected	Describe areas which will total 100% of the region's EEZ coral reefs.	Include all non no-take MPA management area as low-use MPAs (the whole EEZ would be either no-take or low-use MPA)
Rejected	No action	No action

Permit Requirements:

Options	CRE general permit	CRE special permit
Preferred	Option to require for take of specific CHCRT in specific sub-areas of the EEZ as determined by the Council through framework process. Unless specifically designated by Council, CHCRT will be managed by regional authorities in non-MPA areas of the EEZ. Required for transshipment of CRE MUS within EEZ of MHI, A. Samoa, Guam, CNMI.	Required for all take of CRE MUS within low-use MPAs, and for all PHCRT within the EEZ except for MUS fished under other FMPs (i.e. precious coral, crustacean, bottomfish and pelagic MUS) and anyone in an existing fishery for coral reef MUS (although requirement can be frameworked)
Rejected	Require general permit for any MUS take of CHCRT in all non-MPA areas in the EEZ.	Require special permit for any MUS take within the management unit area (the entire EEZ)
Rejected	No action	No action

Allowable gear types:

Option	
Preferred	Allow hand harvest, spear, slurp gun, hand/dip net, hoop net for kona crab, throw net, barrier net for aquarium fish, surround/purse set for targeted schools (e.g. akule, baitfish, weke) with a minimum of bycatch, hook-and-line (including powered and unpowered handlines, rod and reel, and trolling), traps (with conditions), and remote operating vehicles/submersibles. Prohibit nighttime spearfishing with scuba/hookah in the EEZ of the NWHI and PRIA.
Rejected	Allow hand harvest, spear, slurp gun, hand/dip net, hoop net for kona crab, throw net, barrier net for aquarium fish, surround/purse set for targeted schools (e.g. akule, baitfish, weke) with a minimum of bycatch, hook-and-line (including powered and unpowered handlines, rod and reel, and trolling), traps (with conditions), and remote operating vehicles/submersibles.
Rejected	Allow hand harvest, spear, slurp gun, hand/dip net, hoop net for kona crab, throw net, barrier net for aquarium fish, surround/purse set for targeted schools (e.g. akule, baitfish, weke) with a minimum of bycatch, hook-and-line (including powered and unpowered handlines, rod and reel, and trolling), traps (with conditions), and remote operating vehicles/submersibles. Prohibit all spearfishing with scuba/hookah throughout the region's EEZ.
Rejected	No action

Miscellaneous measures:

Preferred	No commercial take of live rock or live coral except for: 1) incidental take by other FMP permit holders; 2) take by indigenous people for traditional/ceremonial use; 3) use by aquaculture operations as seed stock; 4) science & management; 5) bioprospecting. All of these (except #1) would require a CRE special permit.	Establish a framework process for measures analyzed but not originally implemented (e.g., require VMS, designate anchoring areas, set aside a percentage of low-use MPAs for subsistence by indigenous users) Establish a formal process to coordinate ecosystem effects from other FMPs
Rejected	No commercial take of live rock, live coral, napoleon wrasse, humphead parrotfish, giant clams.	
Rejected	No action	No action

SUMMARY OF THE FMP

The FMP for Coral Reef Ecosystems of the Western Pacific Region was developed by the Western Pacific Regional Fishery Management Council based on the ecosystem-based approach. The FMP incorporates ecosystem approaches into the present regulatory structure, created through earlier FMPs for Bottomfish, Crustaceans and Precious Corals. This FMP represents the first fishery ecosystem plan developed in the United States. 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. 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.

Coral reefs cover an estimated 15,852 km² of the shallow ocean bottom around US Pacific island areas served by the Council, which includes the State of Hawaii, the Territories of American Samoa and Guam, the Commonwealth of the Northern Mariana Islands, and the unincorporated remote areas of Johnston Atoll, Kingman Reef, Palmyra, Midway Atolls, and Jarvis, Howland, Baker, Midway and Wake Islands. Some 90% of coral reefs in the region's exclusive economic zone (EEZ; the 200-mile limit) are found in remote areas, away from fishing communities.

Objectives of the FMP: The Council established eight objectives for the Coral Reef Ecosystems FMP, which are consistent with an ecosystem-based management approach. The objectives promote sustainable use of coral reef resources, especially by fishing communities and indigenous fishermen in the region, an adaptive management approach based on fishery-dependent and fishery-independent research, marine protected areas and habitat conservation, cooperative and coordinated management by the various agencies concerned with the conservation of coral reef resources and education to foster public support for management.

Summary of Preferred Management Measures:

Marine Protected Areas (MPAs):

- MPA includes all EEZ reefs in NWHI to a depth of 50 fm
- 0–10 fm zoned “no-take” in EEZ around all islands in NWHI
- 10–50 fm zoned “no-take” in EEZ around French Frigate Shoals, Laysan and the north half of Midway in NWHI (south half zoned low-use for recreational fishing and catch/release)
- 10-50 fm around all other EEZ reefs in NWHI zoned for low-use, subject to special permit
- No-take MPAs 0-50 fm around Pacific Remote Island Areas (PRIA: Jarvis Island, Howland Island, Baker Island, Kingman Reef, Palmyra Atoll) and Rose Atoll, AS (except around Johnston and Wake-zoned low-use for recreational fishing)
- MPA for Guam's southern banks prohibits anchoring by vessels larger than 50 ft
- Existing FMP fisheries follow regulations in their respective plans, except in no-

take MPAs where all fishing is prohibited

Permit and Monitoring:

- Rely on existing region-specific (local) systems for monitoring currently harvested coral reef species/taxa (option for future general permit as framework option)
- Special permit for potentially harvested species/taxa or for any fishing within low-use MPAs
- Special permits for scientific research and management activities in all areas (includes prospecting for bio-active materials)
- Existing FMP fisheries need no additional permit, but report incidental catch of coral reef species/taxa
- No permits for commercial take of wild live rock and live hard corals (special permit for take of small amounts for seed stock for aquaculture of live coral and for indigenous use)

Fishing Gears and Methods:

- Only the following selective and non-destructive gear and methods are allowed to minimize impacts to habitat: hand harvest, spear, slurp gun, hand/dip net, hoop net for Kona crab, throw net, barrier net for aquarium fish, surround/purse set net for targeted schooling fish (e.g., akule, baitfish, weke) with a minimum of bycatch, hook-and-line (powered and unpowered handlines, rod and reel, and trolling), traps (with conditions), and remote operating vehicles/submersibles
- Prohibited are use of spear with scuba at night in the NWHI and PRIA, or use of poisons, explosives, or intoxicating substances
- Traps may only be used in an environmentally sensitive manner (appropriate areas/conditions) and marked by owner

Insurance:

- For all vessels operating/transiting in MPAs to cover cost of removal and pollution liability in event of a vessel grounding, depending on category of vessel, type of permit and fishing area

Adaptive Management:

- Framework process to allow more rapid management adjustments to changing conditions
- Proposed for future consideration are: mooring buoys/anchoring areas in MPAs, vessel monitoring systems (VMS), general permits, local consistency for scuba/spearfishing and re-classifying species as currently or potentially harvested

Non-Regulatory Measures:

- Formal process to be established for coordination among all FMP Plan Teams to identify and address ecosystems impacts from existing FMP fisheries
- Facilitate consistent state and territorial level management of coral reef resources
- Create incentives for sustainable use and disincentives for unsustainable use of coral reef resources
- Foster public education outreach