

HABITAT COMMITTEE REPORT ON THE GROUND FISH ESSENTIAL FISH HABITAT ENVIRONMENTAL IMPACT STATEMENT

The Habitat Committee (HC) developed this statement on the Groundfish Essential Fish Habitat Draft Environmental Impact Statement (DEIS) through email communication. We reiterate some of the HC's earlier statements, particularly on description of Essential Fish Habitat (EFH), designation of habitat areas of particular concern (HAPC), and research and monitoring, but also have refined our thinking on measures to minimize adverse impacts to EFH due to fishing, after review of the DEIS (February 11, 2005).

Summary of Recommendations of Habitat Committee

- A. Designation of EFH: Adopt Alternative A2**
- B. Designation of HAPC: Adopt B2, B3, B4, B6, B7 and B.9.**
- C. Measures to Minimize Impacts of Fishing:
Adopt elements of C4.2, C7.2, C9.5, C9.6, C.10, and C.12, 13 and 14.**
- D. Research and Monitoring: Adopt a combination of D.2. and D.4.**

The HC believes that the designation, description and protection of EFH, as mandated by the 1996 Sustainable Fisheries Act, is a helpful tool for the Pacific Fishery Management Council. It helps moves fishery management into a broader ecological context and is a step forward in the incorporation of the principles of ecosystem-based management as called for by the U.S. Commission on Ocean Policy (2004), the Pew Ocean Commission (2003) and the U.S. Department of Commerce report to Congress on Ecosystem-based Management (1999).

The preparation of the DEIS to support the Council's upcoming decisions on EFH has focused a great deal of effort and has brought information together that would not otherwise have been available to managers in a usable format. While there are significant gaps and uncertainties in our understanding of marine habitat and the specifics of how changes in habitat condition lead to changes in fishery resource productivity, the process of compiling the available information has been integral in bringing these gaps and uncertainties to light. This, in turn, suggests priority areas for future monitoring and research efforts. The authors of the DEIS have done a remarkable job assembling and depicting alternatives and supporting information with very limited time and resources; they cannot be faulted for the data gaps and uncertainties that remain. Consequently, the DEIS represents a comprehensive compilation of the best information currently available, and is an adequate basis for decision-making by the Council.

The HC understands that industry and environmental groups are likely to come forward with new alternative formulations as refinements to those already presented in the draft DEIS for fishing impact minimization. While we are unable to comment on these hypothetical and unseen alternatives, we offer recommendations on the four decision areas based on the existing published alternatives. We provide a rationale for these recommendations and have prepared a matrix (attached) showing how the existing alternatives help to meet some of these principles.

We hope this is a useful tool that the Council can use to review new alternatives against. In arriving at our recommendations, we considered how each alternative would help achieve the following six principles or objectives:

General Principles

1. Understand impacts of fishing

All habitats, whether marine or terrestrial, experience natural disturbances. Fishing can also represent a disturbance to habitat, and management and conservation attention should be most concerned with disturbances that are quantitatively and/or qualitatively unlike the natural disturbances that marine habitats and constituent organisms experience and are presumably better able to withstand.

We must act with precaution as we seek improved understanding of fishing impacts to habitat of various types and under differing energy regimes. Study of impacts and recovery require areas where specific fishing disturbances can be studied experimentally as well as two types of control areas that are not impacted by any fishing and areas that are open to fishing impacts of all kinds.

As noted in the DEIS, most studies of fishing gear impacts on habitat have been conducted outside of the West Coast region. The HC supports the concept that ecological principles can be applied to data collected during studies of fishing gear impacts on marine habitats in other areas. However, specific studies conducted in this region will strengthen our understanding, particularly in the context of the unique and complex assemblage of species managed under the Council's groundfish FMP.

Areas chosen for study should be broadly representative of all habitat types in which PFMC managed groundfish occur. In particular, they should represent this diversity based on depth, substrate type, latitude and ecoregion (e.g. both above and below Pt. Conception). Many areas in the West Coast Exclusive Economic Zone (EEZ) are not currently fished. We recommend that unfished study areas be selected in collaboration with fishermen from all gear sectors in order to take advantage of these unfished areas and to minimize additional areas closed by regulation (see #6, below).

2. Focus on Priority Habitats

The HC feels that priority habitats that are vulnerable to disturbance by fishing gear, and that warrant protective measures include canopy kelp, seagrasses, seapens, and biogenic structure forming organisms such as corals and sponges that are associated with high relief rocky habitats, canyons, and seamounts.

As noted in the Scientific and Statistical Committee report to the Council in March 2005, the distribution and abundance of priority habitats is poorly understood and warrants further investigation.

3. Protect undisturbed areas

There may be other areas that hold unique habitats that are as yet undiscovered or poorly understood and potentially fragile. These areas should be candidates for future protection. As a precautionary step, the HC recommends that areas that are presently undisturbed should remain that way until better mapping information is available. A number of recent discoveries along the West Coast of unique and poorly studied habitats with associated species support this principle, including: a common, conspicuous, and previously undescribed species of black coral living in the Southern California Bight; multispecies aggregations of a deep-dwelling sculpin and a deep-sea octopod brooding eggs in a fluid seep area on the Gorda Escarpment off California; and methane seeps with associated carbonate rock structures and chemosynthetic communities along the shelf break off Oregon. These recent observations suggest that there are undiscovered unique areas scattered along the West Coast that warrant protection by limiting the expansion of existing fisheries.

4. Protect the forage base

The HC understands that prohibiting a directed krill fishery will take place through another management approach by the Council. The HC is very supportive of this action and encourages the Council to expand protection to all of the currently non-managed forage species as well. Preservation of a healthy forage base that is relied upon by managed groundfish species is an important element in the broader context of habitat protection and ecosystem-based management.

5. Timely implementation of protection measures

While there is substantial learning to be done on this topic, the HC feels that action on EFH protection proceed with a plan for effectiveness monitoring. This would be a precautionary approach with adjustments expected during each 5-year review period.

6. Utilize existing restricted areas to also achieve habitat objectives.

In working to select areas for habitat protection, we encourage the consideration of areas that have already received some protection for other purposes (e.g., bycatch reduction and stock rebuilding) so as to both realize the benefits that are already accruing to habitat from these measures, and to minimize the imposition of new regulatory restrictions on the fishing industry.

The HC understands that the Council has the flexibility to adopt any alternative, or blend of alternatives, provided that it is within the scope of the analyses contained in the draft DEIS. We note how helpful the GIS tool has been in dealing with the habitat-based management options in the DEIS and encourage the Council to use this tool during deliberations considering the various new and existing options. Our recommendations are explained below and accompanied by an attached table.

HC Recommendations on the Alternatives

A. Designation of EFH: Adopt Alternative A.2

The HC recommends adopting EFH Alternative A.2 (identified as 100% of the area where habitat suitability probability (HSP) is greater than zero for all species and any additional area in depths less than or equal to 3,500 m or 1914 fathoms) as its final Preferred Alternative. This recommendation reflects our belief that the maximum probabilistic approach to determining EFH, as is represented in this alternative, is reasonable given data uncertainties, and that the added precaution of including some areas beyond depths where data become particularly uncertain is also wise. It is our understanding that the proposed EFH designation includes not only substrate, but also the water column above that substrate, including surface waters.

B. Designation of HAPC: Adopt B.2, B.3, B.4, B.6, B.7. and B.9

The purpose of HAPC is to identify areas that 1) possess important ecological functions for groundfish, 2) are sensitive to human-induced environmental degradation, 3) are at risk of stress due to development actions, and/or 4) are rare habitat types for groundfish. We are aware that designating HAPC serves to concentrate attention on potential threats to these habitats, but provides no explicit protection.

The HC recommends that the Council adopt as its final alternative an amalgamation of Alternatives B.2, B.3, B.4, and B.6 (estuaries, canopy kelp, seagrass beds, and rocky reef areas). We also note that areas identified under Alternative B.7.(areas of interest) that are not already encompassed in the previous four draft alternatives have unique geological and ecological features of special value to fisheries and accordingly, many of these are also currently being used as research areas. As such, the HC believes that these areas merit the special attention afforded HAPC designation and deserve incorporation into the Council's final alternative. In addition, the HC recommends that the Council include Alternative 9 in its final alternatives as a mechanism to streamline future HAPC designations based on new information.

C. Measures to Minimize Impacts of Fishing to EFH: Adopt elements of C4.2, C7.2, C9.5, C.10, and C.12, 13 and 14.

The HC notes that while the importance of habitat to marine fishery resources is increasingly recognized, detailed understanding of the relationship of habitat condition to fishery resource productivity on the one hand, and to the individual and cumulative impacts of fishing activities on the other, is still being developed.

In light of the principles and considerations outlined above, the HC recommends adopting some elements of:

Alternative C.4.2 limits expansion of fisheries for all bottom tending gear

Alternative C.7.2 protects areas of interest as identified by HAPC alternative B.7 from all bottom tending gear. We note that this alternative specifically takes advantage of the cowcod closure

area and we recommend identification of a subset of the RCAs also to be identified for closure to encompass all habitat types, depths, and latitudes.

Alternative C.9.5 prohibits the use of dredge gear. Dredge gear is little used, has been or is being phased out, and is known to be destructive to habitat.

Alternative C.10 (Central California buyout and closure) has merit and is very progressive in its approach, but is limited in geographic scope. However, if the private parties involved (fishermen and the Nature Conservancy) jointly agree that this is a productive proposal, we believe that there are habitat benefits that deserve support.

Alternative C.12 is the Oceana alternative relating only to bottom trawl gear, while Alternatives C.13 contains the same areas but closes them to all bottom contacting gear and C.14 closes these areas to all fishing. (The HC thinks that all three approaches should be used in various combinations to meet its principles of allowing protection and research).

Discussion

It is clear that the Council, the scientific community, and the public are developing an increasing awareness that complex habitats of relief, including biogenic habitats such as seagrasses, kelp, corals, sponges and sea-pens are important to the growth and survival of managed species. Consequently, we recommend that the Council's Final Alternative include measures that will afford protection to these priority habitat types. The most direct method to protect these habitat types would be to identify measures that would prohibit fishing with mobile bottom tending gear in these areas. Because many of these features are associated with rocky substrate, the Council may prefer to focus its primary attention on this substrate type.

A comprehensive alternative that addresses specific habitat protection goals and criteria would be useful. One of the Council's most difficult decisions will be whether and how to apply habitat protection measures to only trawl gear or to other bottom-contacting fisheries as well. Our base of information on the spatial distribution and intensity of fixed gear commercial and recreational fisheries, as well as of the habitat impacts of these fisheries, is much less robust than it is for mobile, bottom-tending gear.

The HC recognizes that the Council has been placed in an extraordinarily difficult position of balancing the benefits of habitat protection against the costs of displaced fisheries, in the face of this uncertainty. Fixed gear and recreational fisheries target different species occupying different habitats than many trawl fisheries. However, we understand that fixed gear can impact habitat features through contact of gear, and shearing of lines as gear is retrieved. The HC recommends that the Council take initial measures in a precautionary fashion to protect priority habitat types. The Council should also assure that there is some full and on-going protection of areas that represent a full suite of habitat types, depth and latitude ranges to reflect uncertainty. However, all-encompassing depth-based measures that may have negative consequences to fisheries may be overly broad.

While we think Alternative C.8 to zone fishing activities is an interesting idea, it requires NOAA to do extensive research to demonstrate that any unavoidable adverse impacts would be minimal and temporary. Lack of available funds makes this option impractical. Further, it is silent on criteria to be employed to determine whether an area should be open or closed and much of its protective force would be deferred to the future.

The HC believes that habitat protection through new gear restrictions (Alternative C.9) can be appropriate, particularly if they are readily enforceable and accepted by the fishing industry. The HC recognizes that the Council's action to reduce catch of overfished species, using restrictions on large footrope trawl gear, has also seemed to have had the added benefit of protecting habitat by moving trawl effort off of high relief habitat.

In general, the HC cannot speak to the habitat benefits of the several options under this alternative. Much depends on where the gear is fished, and how it is fished. For example, in high relief areas with abundant emergent invertebrates (e.g. sponges or corals), or low energy environments with little disturbance, infrequent bottom contact by any gear may have a significant habitat impact.

We note that fishing gear is constantly evolving; development of habitat friendly fishing gear should be encouraged. While gear restrictions may act to protect habitat under present conditions and configurations, there are no assurances that the habitat protections envisioned will be maintained through time as gear configurations change. Much will depend on how legal and prohibited gear is defined in future regulations.

D. Research and Monitoring : Adopt a combination of D.2. and D.4.

The HC recommends that the Council adopt a combination of Alternative D.2, option 1 (mandatory logbooks for all groundfish operations) and Alternative D.4 (a system of research closures to provide areas for experimentation and observation of habitat condition in open and closed areas) as its final alternative for research and monitoring.

The HC believes that it is essential that the mandatory five year review of the Council's measures to identify and protect EFH be conducted with a much better understanding of the spatial distribution of habitat types and functions, the spatial distribution fishing activities, and the relationship of habitat condition to fishing activities and the productivity of fishery resources.

Collection of accurate spatial information on non-trawl fisheries is a significant need for the next EFH update. This information needs to provide a comprehensive picture of activity showing seasonal and interannual variability, effort and catch across a wide representation of the fleet. We believe a logbook program provides the best vehicle to collect the needed comprehensive information linking effort, harvest and location. Additionally we suggest the Council retain the option of requiring vessel monitoring systems (VMS) for circumstances where automated collection of precise locational information addresses management or enforcement questions. As the technology becomes available and affordable, adoption of an electronic logbook format should be encouraged to facilitate more broad and rapid use of logbook data.

Evaluation of the Council's measures to protect habitat from adverse effects of fishing, and of fishing impacts to habitat are essential to understanding whether any restrictions to fishing activities are warranted and justified. Developing these evaluations through carefully structured comparisons of open, closed and experimental areas that are matched for habitat type (substrate, depth and latitude) is necessary in order to clearly differentiate changes that are the result of Council management and conservation actions, as opposed to changes that may result from broader changes in oceanographic conditions and recruitment events. Clearly, implementation of research or conservation closures requires that goals and objectives be identified, as well as mechanisms for siting and monitoring. This is a topic the Council has endorsed in its MPA policy white paper. The HC encourages the Council to actively support funding to the participating agencies and universities for the necessary research to meet this goal.

Additionally, a specific plan for monitoring the effectiveness of the adopted EFH measures should be identified and funded so we can evaluate their effectiveness during the mandatory 5 year EFH review.

Habitat Committee Analysis of Groundfish EFH DEIS Fishing Impact Minimization Alternatives

(alternatives shown in **bold outline** are Council preliminary preferred Alternatives)

Principles → Fishing Impact Minimization Alternatives↓	Provides on-going protection of sensitive or special habitats from gear with bottom contact		Areas with little disturbance remain undisturbed		Utilizes existing closed or unfished areas		Considers prey base (other food chain interactions?)	Implementation to begin near-term
	all bottom contacting gear	all bottom trawl gear	all bottom contacting gear	all bottom trawl gear	all bottom contacting gear	all bottom trawl gear		
C.1 No action								X
Depth Based								X
C.2. 1. No large footrope trawl shoreward of 200 fm and no fixed gear shoreward of 100 fm								X
C.2.2. no large footrope trawl throughout the EEZ and no fixed gear shoreward of 100 fm								X
C.2.3. no large footrope trawl gear shoreward of 200 fm and no fixed gear shoreward of 60 fm								X
Close Sensitive Habitat								X
C.3.1. sensitive areas with low existing trawling efforts (higher threshold) closed to all fishing (all gear types)	X	X	X	X				X
C.3.2. sensitive areas (lower threshold) with low existing trawl effort closed to all fishing (all gear types)	X	X	X	X				X
C.3.3.same as .1 except no adjustment made for trawl effort	X	X	X	X				X
C.3.4. same as .2 except no adjustment made for trawl effort	X	X	X	X				X

Principles → Fishing Impact Minimization Alternatives ↓	Provides on-going protection of sensitive or special habitats from gear with bottom contact		Areas with little disturbance remain undisturbed		Utilizes existing closed or unfished areas		Considers prey base (other food chain interactions?)	Implementation to begin near-term
	all bottom contacting gear	all bottom trawl gear	all bottom contacting gear	all bottom trawl gear	all bottom contacting gear	all bottom trawl gear		
Prohibit Geographic Expansion of Fishing								
C.4.1. Trawl fisheries would be prohibited from fishing in areas that were untrawled during 2000-2002		X		X		X		X
C.4.2. All bottom tending gear types prohibited from fishing west from the 1094 fm contour	X	X	X	X	X	X		X
Prohibit a Krill Fishery								
C.5. Designate krill as a component of EFH and prohibit fisheries that target it.							X	X
Close Hotspots								
C.6. Prohibit bottom trawling in areas that have high habitat suitability (greater than 20%) for more than 50 species or life stages (results in most waters shallower than 200 m being closed to bottom trawling)		X						X
Close Areas of Interest								
C.7.1 close certain HAPC areas (Alt. B.7 areas) to bottom trawling		X				X (cowcod closure area)		X
C.7.2. close certain HAPC areas (Alt. B.7) to all bottom contacting fisheries	X	X			X (cowcod closure)	X (cowcod closure)		X

Principles → Fishing Impact Minimization Alternatives ↓	Provides on-going protection of sensitive or special habitats from gear with bottom contact		Areas with little disturbance remain undisturbed (limits expansion of fisheries)		Utilizes existing closed or unfished areas		Considers prey base (other food chain interactions?)	Implementation to begin near-term
	all bottom contacting gear	all bottom trawl gear	all bottom contacting gear	all bottom trawl gear	all bottom contacting gear	all bottom trawl gear		
Zoning Fishing Activities								
C.8.1. Fishing zones established for bottom tending mobile gear within 5 years where research shows unavoidable impacts would be minimal and temporary; no fishing outside 2000 m contour immediately		?		X (outside of 2000 m only)		?		outside of 2000 m only
C.8.2 Fishing zones established for all bottom contacting gears within 5 years where research shows unavoidable impacts would be minimal and temporary; no fishing outside 2000 m for all bottom contacting gear immediately	?	?	X (outside of 2000 m only)	X (outside of 2000 m only)	?	?		outside of 2000 m only
Gear Restrictions in areas identified as EFH for groundfish								
C.9.1. prohibit roller gear larger than 15 inches								X
C.9.2. prohibit the use of flat trawl doors								X
C.9.3. Limit the length of a single longline groundline to 3 nm								X
C.9.4. employ habitat friendly anchoring								X
C.9.5. prohibit dredge gear	dredge gear only							X
C.9.6. prohibit beam trawl gear	beam trawl gear only							X
C.9.7. prohibit set gillnets beyond 60 fm	set net gear only							X
C.9.8. prohibit dingle bar gear	dingle bar							X

