

MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke  
Executive Director

DATE: October 6, 1999

SUBJECT: Ecosystems Management

ESTIMATED TIME  
1 HOUR

**ACTION REQUIRED**

Receive report from Ecosystem Committee.

**BACKGROUND**

The Ecosystem Committee met on September 20 in Seattle. The purpose of the meeting was to review the preliminary HAPC analysis and discuss ways to incorporate ecosystem information into fishery management. Minutes from the meeting are attached.

## Minutes of the Ecosystem Committee Meeting September 20, 1999

The North Pacific Fishery Management Council's Ecosystem Committee met for one day workshop in Seattle. The purpose of the workshop was to examine opportunities for better incorporation of ecosystem information and theory into fishery management in the North Pacific. Committee members Dave Fluharty, Linda Behnken, Kevin O'Leary, Chris Blackburn, and Kristen Stahl-Johnson were present, along with approximately 25 others who attended. The meeting was based on a number of reports, as summarized below.

### Ecosystem Considerations

Pat Livingston provided an overview of this year's Ecosystem Considerations chapter. This year's preliminary chapter has been enhanced by including more information on ecosystem indicators of ecosystem status and trends, as well as ecosystem management performance measures. This is the plan team's first step at developing ecosystem management indices. The Committee agreed that the Ecosystem Chapter is evolving into a better document, appreciates the efforts of Pat Livingston and other contributors for their efforts.

Discussion on this topic ranged far and wide. Based on this discussion, the Committee made a number of recommendations to improve future Ecosystem Chapters. Future chapters should include:

1. A review existing literature on historic dynamics of the North Pacific ecosystem.
2. Additional integration of climate / oceanography / fish biology
3. Ways to integrate ecosystem concerns into TAC setting
4. Discussion on the burden of proof issue
5. Local and traditional knowledge
6. Relationship to SEIS
7. List of priority ecosystem considerations from the plan team

The Committee discussed ways to incorporate ecosystem considerations into the TAC setting process. The NMFS assessment scientists expressed doubts that the considerations could be quantified by some ecosystem model in the near future, if ever. However, the plan team and assessment folks could provide the Council with a) some guidance on what stocks raise ecosystem concerns, b) what the concerns are, c) how uncertainty is addressed in the ABC recommendation, and d) recommendations by the team on how to address unresolved concerns. The Committee recommends that the plan teams provide this information in a summary table to assist the Council with its decision making process.

Committee members were also interested in protection of long-lived species, species/habitat interactions, cumulative effects of management, as well as modelling the timing, intensity, and location of fisheries. The committee would like to highlight the section in the Ecosystem Chapter on ecosystem indicators, and a broader explanation of and response to the article on fishing down the food web by Pauley.

### Underwater Video of Seaguam Pass

Skip Zenger (NMFS) showed some underwater video footage he took in Seaguam Pass this summer. He used a towed camera protected by a cage. The objective of the study was to examine potential for recovery of bottom habitat within Atka mackerel closure areas. At this point, he has not analyzed the data, so no conclusions can be drawn from the footage. In general, he observed that hard substrates are covered with living biota, especially

sponges. Committee members were amazed at the richness and diversity of seabed life in an areas examined. The video shows very clear water with strong currents, and spectacularly colored living reefs (e.g., the 40 fathom area was nicknamed "the garden"). The deeper water area (80 fathoms) was characterized by shifting sand dunes. The Committee requested that we invite Skip to show a short segment of his video at the next Council meeting.

## HAPC Analysis

The Committee reviewed the preliminary analysis of habitat areas of particular concern (HAPC), which is part of the essential fish habitat requirements. HAPC are those areas of special importance that may require additional protection from adverse effects. HAPC is defined on the basis of its ecological importance, sensitivity, exposure, and rarity of the habitat. HAPCs already identified by the Council in its plan amendments last year include living substrates (e.g, eelgrass, kelp, sponges, coral) and freshwater areas used by anadromous fish. The analysis examined proposed HAPC habitat types including seamounts and pinnacles, the ice edge, the shelf break, and biologically-consolidated fine-grained sediments. Also examined were proposed specific HAPC areas including a deep basin in Prince William Sound, the Chrikov Basin north of St. Lawrence Island, and the red king crab bycatch areas around Kodiak Island. The proposed management alternatives included defining HAPC as a prohibited species and prohibiting all fishing in areas of gorgonian coral abundance.

The Committee recommended several additional options be considered. First, the Committee recommends that an option be added that would designate a HAPC category in the groundfish plans. This designation would allow for special management measures to be applied, and not simply make HAPC biota prohibited species. Concern was expressed about prohibiting commercial fisheries if potential exists for sustainable management. Biological data could be gathered under experimental fishing permit (federal waters), or through a commissioners permit (state waters). There are many unknowns in regards to HAPC biota, so fisheries management should take a precautionary approach. It was noted that ADF&G is considering a prohibition on a directed fishery for coral. As a possible way to improve our knowledge of HAPC, the Committee recommended a suboption be added to require reporting when and where HAPC biota is caught incidentally in commercial fisheries. The Committee also recommended that rather than prohibiting all gear types from gorgonian areas, that an option be added to just prohibit only bottom fishing gears (trawl, longlining, pot, dredge), and exempt those gears that likely have minimal impact (troll, jig). The objective of the regulations is to protect corals, so this option is worth exploring. The Committee acknowledged that marine reserve policy and enforcement concerns should also be considered when evaluating these options. Fishery data should be overlaid on coral distribution maps to examine possible impacts of proposed no fishing areas. Lastly, the Committee requested that distribution of living substrate HAPC in the Gulf of Alaska and Aleutian Islands be examined at as fine of a scale as possible.

## Report of the Ecosystem Principles Advisory Panel

Dave Fluharty provided a overview of Ecosystem Principles Advisory Panel's report on Ecosystem-based Fishery Management. This report was circulated at the June Council meeting. The Ecosystem Principles Advisory Panel was formed under the MSFCMA to develop recommendations to expand the application of ecosystem principles in fishery conservation and management activities. The panel was tasked to report to Congress on the extent to which ecosystem principles are being applied in fishery conservation and management activities, including research activities, and propose actions that should be undertaken to expand the application of ecosystem principles in fishery conservation and management.

The panel developed a list of basic ecosystem principles, and recommended that Fisheries Ecosystem Plans (FEP) be developed as a fist step towards a full ecosystem approach. Components of the plan include food web models, habitat needs, estimates of total removals, an assessment of uncertainty and buffers, indices of ecosystem

health and use, long term monitoring plans, and an assessment of other elements. The Committee noted that the current Ecosystem Considerations document represents a big step towards addressing the components of a FEP. The Committee recommends that FEP guidelines be added to the blueprint for future development of the Ecosystem Considerations chapter.

### **NRC Report on Sustaining Marine Fisheries**

The Committee reviewed the summary of the National Research Council's report on sustaining marine fisheries. The report assesses the current state of fisheries resources; the basis for success and failure in marine fisheries management; and the implications of fishery activities to ecosystem structure and function.

#### Summary of the NRC Committee's recommendations.

1. Adopt conservative harvest levels for single species fisheries.
2. Incorporate ecosystem considerations into fishery management decisions.
3. Adopt a precautionary approach to deal with uncertainty.
4. Reduce excess fishing capacity and define and assign fishing rights.
5. Establish marine protected areas as a buffer for uncertainty.
6. Include bycatch mortality in TAC accounting.
7. Develop institutions to achieve goals.
8. Conduct more research on structure and function of marine ecosystems.

A preliminary self-evaluation of current NPFMC fishery management policies relative to the NRC recommendations was prepared and distributed prior to the meeting. Although the preliminary evaluation noted that excess fishing capacity and marine reserves stood out as high priority items, it was acknowledged that improvements could potentially be made in all areas. The Committee recommended that this evaluation be further developed into a discussion paper and finalized at a future meeting. The Committee would then provide a copy to the NRC panel for their feedback and review. This paper could serve as general guidance on how to proceed with more sustainable fishery management in the North Pacific. Ideas on how to improve the analysis should be emailed to Dave Witherell.

### **Items for the Next Meeting**

The Committee discussed agenda items for the next meeting. The following items were discussed: a presentation on sustainable catches by Chuck Fowler, a review of the NRC evaluation discussion paper, review of HAPC analysis, guest lecturer from another country on ecosystem management, and discussion of MPA's, orcas, and sea otters. A meeting has tentatively been scheduled for January 2000.

#### Attendance List for September 1999 meeting:

Dave Fluharty (committee chair)	Chuck Fowler	Glenn Merrill
Chris Blackburn (member)	Paul MacGreger	Steve Ganey
Kristen Stahl-Johnson (member)	John Hendershedt	Ken Stump
Linda Behnken (member)	Brenda Norcross	Ivan Vining
Kevin O'Leary (member)	Tory O'Connell	Martin Dorn
Dave Witherell (staff)	Sara Gaichas	Bill Bechtol
Gordon Kruse (advisor)	Pat Livingston	Tom Peterson
Loh-lee Loh (advisor)	Andy Smoker	Tamra Faris
Jim Balsiger (advisor)	Shane Capron	Beth Sinclair
Clarence Pautzke	Bob McConnaughey	Lowell Fritz
Jane DiCosimo		