

**DRAFT SUMMARY MINUTES**  
**Joint Session of the Habitat Committee and the Ecosystem  
Based Fishery Management Subcommittee of the Scientific  
and Statistical Committee**

Pacific Fishery Management Council  
Hilton San Diego/Del Mar Hotel  
15575 Jimmy Durante Blvd  
Del Mar, California 92014

November 14, 2006

***Call to Order***

At its September 2006 meeting, the Pacific Fishery Management Council (Council) scheduled a joint session of the Habitat Committee (HC) and the Ecosystem-Based Fishery Management (EBFM) Subcommittee of the Scientific and Statistical Committee (SSC) to begin the task of reviewing the science of EBFM and the application of EBFM principles in other regions of the nation and to consider existing and potential future applications of EBFM in Council fishery management.

**HC Members in Attendance**

Mr. Stuart Ellis, Columbia River Inter-Tribal Fish Commission, Portland, OR  
Ms. Liz Hamilton, Northwest Sportfishing Industry Association, Oregon City, OR  
Mr. Huff McGonigal, NOAA, National Marine Sanctuary Program, Monterey, CA  
Dr. Charlie Petrosky, Idaho Department of Fish and Game, Boise, ID  
Ms. Fran Recht, Pacific States Marine Fisheries Commission, Portland, OR  
Ms. Teresa Scott, Washington Department of Fish and Wildlife, Olympia, WA  
Dr. Waldo Wakefield, NOAA, Northwest Fisheries Science Center, Newport, OR  
Dr. Hal Weeks, Oregon Department of Fish and Wildlife, Newport, OR

**SSC Members in Attendance**

Mr. Tom Barnes, California Department on Fish and Game, La Jolla, CA  
Mr. Robert Conrad, Northwest Indian Fisheries Commission, Olympia, WA  
Dr. Michael Dalton, National Marine Fisheries Service, Seattle, WA  
Dr. Martin Dorn, National Marine Fisheries Service, Seattle, WA  
Dr. Owen Hamel, National Marine Fisheries Service, Seattle, WA  
Mr. Tom Jagielo, Washington Department of Fish and Wildlife, Olympia, WA  
Dr. Peter Lawson, National Marine Fisheries Service, Newport, OR  
Dr. André Punt, University of Washington, Seattle, WA  
Dr. Steve Ralston, National Marine Fisheries Service, Santa Cruz, CA  
Ms. Cynthia Thomson, National Marine Fisheries Service, Santa Cruz, CA

## **Others in Attendance**

Ms. Carol Bernthal, NOAA, Olympic Coast National Marine Sanctuary  
Mr. Mike Burner, Pacific Fishery Management Council  
Mr. Alan Byrne, Idaho Department of Fish and Game  
Mr. John Field, NOAA, Southwest Fisheries Science Center  
Ms. Jennifer Gilden, Pacific Fishery Management Council  
Mr. Peter Huhtala, Pacific Marine Conservation Council  
Mr. Josh Lindsay, NOAA, Southwest Regional Office  
Mr. Kirk Lynn, California Department of Fish and Game  
Ms. Megan Mackey, Pacific Marine Conservation Council  
Ms. Jennifer Martin, PRBO Conservation Science  
Ms. Stacey Miller, NOAA, Northwest Fisheries Science Center  
Mr. Russell Porter, Pacific States Marine Fisheries Commission  
Mr. Santi Roberts, Oceana  
Mr. John Wallace, NOAA, Northwest Fisheries Science Center

## ***Review of Meeting Purpose and Goals***

Mike Burner provided an overview of the evolution of the joint session and a review of the Council direction for the meeting. The SSC has recommended to the Council that the SSC and its EBFM Subcommittee be charged with putting together an annual “State of the Ecosystem” type of report to the Council which would build off work being done on ecosystem assessment and principles by the National Oceanic and Atmospheric Administration (NOAA), the National Marine Fisheries Services (NMFS), and Regional Fishery Management Councils. Much of this work is in response to the Sustainable Fisheries Act and the resulting recommendations of the Ecosystem Principles Advisory Panel convened in 1999.

The Habitat Committee has also discussed EBFM principles and their potential application to the Council fishery management process. At the June 2006 Council meeting the HC reported to the Council their interest in developing a workable definition of EBFM based on existing definitions, describing actions the Council has already taken that address an ecosystem-based management approach, and to work with other advisory bodies to jointly discuss incremental steps the Council could take toward ecosystem-based management.

The purpose of this joint session is to coordinate the efforts of the SSC and the HC in regards to EBFM and to discuss a collaborative process of providing sound advice to the Council on the potential application of EBFM principles in West Coast fishery management.

## ***Review of Ecosystem Based Fishery Management (EBFM) Approaches in Other Regions and Regional Fishery Management Councils***

Dr. Hal Weeks briefed the group on EBFM approaches in other Regional Fishery Management Councils .

The North Pacific Fishery Management Council (NPFMC) and South Atlantic Fishery Management Council (SAFMC) have done perhaps the greatest amount of work with EBFM implementation. NPFMC efforts were sparked by stellar sea lion recovery issues. The NPFMC produced an ecosystem considerations document that has grown from 20 to 320 pages. One aspect of the NPFMC approach is to request all stock assessment authors address two questions when completing an assessment: 1) what are ecosystem effects on the stocks being assessed?; and 2) what are the ecosystem effects of the fishery for that stock (i.e. habitat impacts from bottom-tending gear, localized depletion, etc.)?

The SAFMC took a different approach than the NPFMC which stems from EFH provisions in the 1996 Sustainable Fisheries Act (SFA). Through their Essential Fish Habitat process, they developed a habitat plan and a conceptual approach toward converting that habitat plan into an ecosystem plan.

The Western Pacific Fishery Management Council (WPFMC) has also taken significant action to implement EBFM principles. The WPFMC replaced its species based Fishery Management Plans with five draft area-based management plans each based on a different geographic area and unique ecosystem managed by the WPFMC.

The Gulf of Mexico Fishery Management Council and the New England Fishery Management Councils have addressed the issue of EBFM have held workshops on the topic and the Mid-Atlantic Fishery Management Council has formed a subcommittee on EBFM, but Dr. Weeks was not able to find a lot of information or reports on these efforts. Dr. Weeks noted that there was a Congressional allocation of about \$2 million that was shared between four councils to conduct such workshops and to develop EBFM concepts.

The group discussed the lack of existing guidelines on EBFM and had questions about what authorities exist for implementing EBFM principles. Dr. Weeks noted that the Magnuson-Stevens Fishery Management Act (MSA) is largely silent regarding specific EBFM provisions, but the SFA's provisions for identifying and protecting EFH are a good starting point. The group noted that the MSA is under review for reauthorization, but it was unclear what the time line such a reauthorization will occur.

Dr. Punt asked if in the NPFMC there is evidence that their EBFM approach has changed how the NPFMC has made its decisions. Dr. Dorn said that NPFMC plan and its annual report on the ecosystem influence management indirectly. The ecosystem information provided to the NPFMC is considered under the NPFMC's precautionary single species management regime. Dr. Weeks added that he served on the NPFMC staff for a while and felt the NPFMC approach doesn't necessarily alter their decision rules, but it creates an ecosystem-based context within which their species based management plans are implemented.

Dr. Punt noted that the NPFMC has identified ecosystem indicators and that a key difference in ecosystem-based versus single species management is in the task of defining indicators for

ecosystem impacts. Dr. Dorn reported the NPFMC has begun the process of assessing ecosystem indicators and associating thresholds, but the indicators and potential thresholds have no management actions associated with them directly. Concepts such as comparing the level of fishing mortality relative to predation on a particular species are evolving.

Dr. Wakefield said part of the NOAA funding for EBFM was applied to ecosystem pilot projects on the West Coast including a small amount of money to develop the beginnings of an ecosystem Geographic Information System (GIS) tool and database at the Pacific States Marine Fisheries Commission (PSMFC). Additionally, the Northwest Fisheries Science Center is working on a pilot project to map seafloor habitat types as part of the groundfish EFH process.

The group briefly discussed the use of indicators in EBFM. There is not necessarily a need for quantifiable measures of indicators with specific numeric thresholds, but rather a qualitative system can be useful. Qualitative status ratings for ecosystem indicators such as a “red/green/yellow light” mechanism have proven useful in management. Dr. Punt noted that other programs have struggled with turning such a indicator system into management advice for use by decision makers, particularly when the indicators give a mixed signal (i.e. two greens and a red).

***Presentation: “Ecosystem Based Fishery Management, Some Practical Suggestions”***

In July 2006, PSMFC sponsored a Panel Discussion entitled “*Strengthening Scientific Input and Ecosystem-Based Fishery Management for the Pacific and North Pacific Fishery Management Councils*”. Panel participants included Ms. Recht, Dr. Punt, and Dr. Lawson, all of whom briefed the group on the discussions. Topics covered included developing a practical definition of an ecosystem-based approach to fisheries management, determining the characteristics or management elements of an ecosystem based approach to fisheries management that can be further incorporated into fishery management programs of the Council and the NPFMC, and reviewing the role of science under EBFM approaches. The Panel Discussion spawned a report as well as the paper presented by Dr. Lawson and Dr. Punt entitled “*Ecosystem Based Fishery Management, Some Practical Suggestions.*”

Group discussion focused on the development of a working definition of EBFM. The definition drafted by the July 2006 Panel (in box below) was agreed to be the best definition to date.

“Ecosystem-based fishery management recognizes the physical, biological, economic and social interactions among the affected components of the ecosystem and attempts to manage fisheries to achieve a stipulated spectrum of societal goals, some of which may be in competition.”
---

In particular, the development of societal goals including harvest, existence value, ecotourism, other tourism, etc. were discussed. These goals are not clearly defined or recognized under the current system and fishery management regimes don’t often consider existence values & non extractive tourism benefits. Any adequately broad spectrum of societal goals is likely to include goals that are mutually exclusive to some degree and balancing these competing goals is a long standing part of fishery policy decision making and will continue to be a central part of fishery management under a EBFM approach.

The group also discussed how EBFM approaches and the above definition would fit the existing mandates and provisions of the MSA. The group determined that nothing in the definition is outside

the realm of the current MSA framework.

Dr. Punt presented a Management Strategy Evaluation (MSE) modeling approach that can be used as a tool for comparing and contrasting alternate management approaches. The model simulates fishery management and stock assessment systems and under various management strategies and assumptions about management uncertainty and compares the outcomes to an established set of management goals. The MSE has the potential of testing various management responses, such as harvest level increases or decreases, to ecosystem indicators.

Dr. Punt also reviewed Atlantis, an ecosystem modeling tool. This ecosystem model is used very extensively to manage fisheries in Australia and the NWFSC is working on building the model for the West Coast.

Both the Atlantis model and MSE approach have potential benefits to the further development of an EBFM approach in either the Council or NPFMC arenas. However, both tools will require considerable technical work to complete the modeling effort and then to evaluate various alternative strategies.

### ***Current Council Actions Contributing to an Ecosystem Approach***

The Habitat Committee completed and presented an initial review of existing Council actions and policies that contribute to an EBFM approach (see table in Appendix A). Although the table is a first draft, it highlights a considerable amount of work the Council has already done that could easily be folded into a EBFM plan.

### ***Next Steps, Tasks for Each Group, and Future Meeting Planning***

The group agreed that this joint session was a useful first step in coordinating many ongoing efforts to help the Council address EBFM concepts, but more time will be needed to develop a comprehensive report and to complete the tasks discussed here. Due to time constraints the group did not draft a joint statement for the Council at the November 2006 meeting, but the HC will present some of the initial findings as well as a request for additional meeting time under the November 2006 Habitat Report to the Council.

ADJOURN

PFMC

03/23/07

## Appendix A

### Current Council Actions Contributing to an Ecosystem Approach (and Possible Next Steps) November 14, 2006 (DRAFT)

Topics	Current Council Actions	Potential Steps and/or Tools to Improve Fisheries Management/Move Towards an Ecosystem-Based Approach
Formalize Council intentions toward EBFM	<ul style="list-style-type: none"> <li>• Joint HC/SSC EBMSC meeting</li> <li>• Questions regarding fishing regulations in NMS (CINMS)</li> </ul>	<ul style="list-style-type: none"> <li>• Establish ongoing committee to continue explore implementing EBFM</li> </ul>
Establish EFH	<ul style="list-style-type: none"> <li>• Groundfish EFH mapping &amp; EIS</li> <li>• comprehensive assembly of groundfish life history info</li> <li>• Study fishing gear types and their environmental effects</li> <li>• Habitat suitability index - species assemblages</li> </ul>	
Spatial management (Place-based management) / Habitat protection measures	<ul style="list-style-type: none"> <li>• Bottom contact gear closures in areas of biogenic habitat</li> <li>• Gear restrictions; beam trawl, dredge gear</li> <li>• SSC Marine Reserves White paper</li> </ul>	
Protect prey	<ul style="list-style-type: none"> <li>• Krill ban</li> <li>• Low CPS harvest rates in recognition of roles as prey for other managed species</li> </ul>	<ul style="list-style-type: none"> <li>• Expand list of protected forage species</li> </ul>
Weak stock protection measures	<ul style="list-style-type: none"> <li>• Cowcod and RCA closures (effect benefits ecosystem)</li> <li>• Bycatch Reduction measures</li> </ul>	
Coordination with place-based processes / programs	<ul style="list-style-type: none"> <li>• Council consultations on nonfishing impacts in EFH (including comments to FERC and Klamath report)</li> <li>• Coordination between NMS and Council</li> </ul>	<ul style="list-style-type: none"> <li>• Foster coordination with state (and other federal) processes</li> <li>• Expand state MPAs into federal waters where appropriate</li> </ul>

Topics	Current Council Actions	Potential Steps and/or Tools to Improve Fisheries Management/Move Towards an Ecosystem-Based Approach
Acknowledge climate, oceanic, terrestrial, life history factors specifically in management (tools; models)	<ul style="list-style-type: none"> <li>• CPS FMP Temp elements</li> <li>• OPI coho forecast incorporates upwelling</li> <li>• Sablefish model incorporates ecosystem components (predation; forage; temperature)</li> </ul>	<ul style="list-style-type: none"> <li>• Ask NOAA's help in synthesizing available information relevant to California Current ecosystem and useful for management</li> <li>• Consider incorporating environmental or climatic/oceanographic factors into salmon forecasts</li> <li>• Expand use of freshwater, estuarine, juvenile survivals, pelagic age structures into models.</li> </ul>
Ecosystem monitoring	<ul style="list-style-type: none"> <li>• Research and data needs document describes data needed</li> </ul>	<ul style="list-style-type: none"> <li>• Track metrics: bird, mammal, and baitfish populations; socioeconomic trends; other ecosystem metrics/indicators in an Ecosystem SAFE document</li> <li>• More effective use / distribution to Research and Data Needs document to NMS and Academic communities</li> <li>• Partner with NMS to synthesize current monitoring information (incorporate ecosystem considerations chapter in rebuilding plans and Our Living Oceans document)</li> </ul>
Stock assessments	<ul style="list-style-type: none"> <li>•</li> </ul>	<p>Questions used in NPFMC to enhance SAFE document:</p> <ul style="list-style-type: none"> <li>• What are the ecosystem impacts on the stock you're assessing? (Oceanographic conditions, status of forage and predators).</li> <li>• What are the ecosystem effects of the fishery for the stock that you're assessing? (Impacts of mobile-tending bottom gear on habitat features, removal of prey and predator (impacts to food web), etc.)</li> </ul>