

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, 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 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 for the Council which would build off current work being done on ecosystem assessment and principles by the National Oceanic and Atmospheric Administration (NOAA), the National Marine Fisheries Services (NMFS), and the 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 expressed 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 working with other advisory bodies to 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 that all stock assessment authors address two questions when completing an assessment: 1) what are the 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, stemming from essential fish habitat (EFH) provisions in the 1996 Sustainable Fisheries Act (SFA). Through their EFH process, they developed a habitat plan and a conceptual approach for converting it 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 (FMPs) 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 has formed an Ecosystem Scientific and Statistical Committee, and the New England Fishery Management Council has formed a Habitat/MPA/Ecosystems Oversight Committee. Both have held workshops on EBFM. The Mid-Atlantic Fishery Management Council has also formed a subcommittee on EBFM, but Dr. Weeks was not able to find much information on these efforts. Dr. Weeks noted that a Congressional allocation of about \$2 million 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 original Magnuson-Stevens Fishery Conservation and Management Act (MSA) is largely silent regarding specific EBFM provisions, but the 1996 Sustainable Fisheries Act's provisions for identifying and protecting EFH are a good starting point. The group noted that (at the time) the MSA was due for reauthorization, but it was unclear when reauthorization would occur.

Dr. Punt asked if there was evidence that their EBFM approach had changed how the NPFMC makes 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 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 pertains to the difficulty of defining appropriate indicators for ecosystem impacts. Dr. Dorn reported that the NPFMC has begun the process of assessing ecosystem indicators and associated thresholds, but that these indicators and 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 begin developing an ecosystem 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 indicators with specific numeric thresholds; rather, a qualitative system could 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 an 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 led to a report as well as a 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.”

The group discussed societal goals such as harvest, existence value, ecotourism, and other types of tourism. These goals are not clearly defined or recognized under the current system, and fishery management regimes don’t often consider existence values and non-extractive tourism benefits. Any 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 an 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 approach simulates fishery management and stock assessment systems under various management strategies and assumptions about uncertainty, and compares the outcomes to an established set of management goals. MSE has the potential for testing various management responses, such as harvest level increases or decreases, to changes in ecosystem indicators.

Dr. Punt also provided an overview of Atlantis, an ecosystem modeling tool. Atlantis is used extensively in Australia to form the basis for MSEs. The NWFSC is working on building an Atlantis 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 and then to evaluate alternative management 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 that the Council has already done a considerable amount of work that could be folded into an 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.

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Appendix A

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

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"> • CPS FMP Temp elements • OPI coho forecast incorporates upwelling • Sablefish model incorporates ecosystem components (predation; forage; temperature) 	<ul style="list-style-type: none"> • Ask NOAA's help in synthesizing available information relevant to California Current ecosystem and useful for management • Consider incorporating environmental or climatic/oceanographic factors into salmon forecasts • Expand use of freshwater, estuarine, juvenile survivals, pelagic age structures into models.
Ecosystem monitoring	<ul style="list-style-type: none"> • Research and data needs document describes data needed 	<ul style="list-style-type: none"> • Track metrics: bird, mammal, and baitfish populations; socioeconomic trends; other ecosystem metrics/indicators in an Ecosystem SAFE document • More effective use / distribution to Research and Data Needs document to NMS and Academic communities • Partner with NMS to synthesize current monitoring information (incorporate ecosystem considerations chapter in rebuilding plans and Our Living Oceans document)
Stock assessments	<ul style="list-style-type: none"> • 	<p>Questions used in NPFMC to enhance SAFE document:</p> <ul style="list-style-type: none"> • What are the ecosystem impacts on the stock you're assessing? (Oceanographic conditions, status of forage and predators). • 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.)