The primary purpose of this Ecosystem Advisory Subpanel (EAS) work session was to review and comment on a draft report to the Pacific Fishery Management Council (Council) on initial stages of developing an Ecosystem Fishery Management Plan (EFMP). The Ecosystem Plan Development Team (EPDT) was tasked by the Council in November 2009 to prepare a report on developing an EFMP that includes a draft statement of purpose and need, a draft list of possible initial goals and objectives, and a draft range of options on the geographic range, managed species, and regulatory scope of the EFMP. Members of the EPDT attended to review the report and respond to EAS questions and comments. The final report is scheduled to be presented to the Council at its September 2010 meeting in Boise, Idaho.

Members in Attendance
Mr. Merrick Burden (Vice-Chair), Washington, Environmental Defense Fund
Ms. Susan Chambers, Oregon, West Coast Seafood Processors Association (Alternate for Mr. Frank Warrens)
Mr. Ben Enticknap, Oregon, Oceana
Ms. Kathy Fosmark, California, F/V Seeadler
Mr. Steven Fukuto, California, United Anglers of Southern California
Mr. Don Maruska, California, C/O Don Maruska and Company, Inc.
Mr. Scott McMullen, Oregon, Oregon Fisherman’s Cable Commission
Mr. Dan Waldeck (Chair), Washington, Pacific Whiting Conservation Cooperative

Members Absent
Mr. Geoff Le Bon, Washington
Mr. Frank Warrens, Oregon, President, Frank Warrens Automotive and Marine Services, Inc.

Ecosystem Plan Development Team Members in Attendance
Ms. Yvonne deReynier, National Marine Fisheries Service, Northwest Regional Office
Mr. Corey Niles, Washington Department of Fish and Wildlife
Ms. Cyreis Schmitt, Oregon Department of Fish and Wildlife, (AM only)

Others in Attendance
Mr. Mike Burner, Pacific Fishery Management Council (Council) Staff
Mr. Steve Joner, Makah Tribe
Mr. Steve Nelson, Program Manager, USAID Water and Coasts Team (AM only)
Call to Order and Administrative Matters

Mr. Dan Waldeck, Interim Chair opened the meeting at 8:30 a.m. The agenda was approved with little modification. Ms. deReynier noted that she would prefer that the morning agenda items on the EPDT report be treated more as an informal discussion and exchange of ideas rather than a formal presentation.

Mr. Burner reviewed recent developments in the Council schedule regarding the EFMP process. At its April meeting, the Council responded to an overload of time sensitive, core responsibilities scheduled for their June 2010 agenda by postponing several items for which June consideration was not an obligation. A report on ecosystem-based fishery management (EBFM) was postponed until the September 11-16, 2010 Council meeting in Boise, Idaho.

The group discussed the need for an electronic document library of EBFM publications and literature. Mr. Burner will look into establishing an FTP site and/or Council web page for this purpose. It was noted that some of the documents are proprietary or copyrighted materials that cannot be posted. Never the less, many documents are open source and in the public domain and it would be helpful to organize them in a central location.

Election of Officers

Several EAS members expressed appreciation for the work and organization skills of interim officers Mr. Waldeck and Mr. Burden. Mr. Mc Mullen nominated Mr. Waldeck and Mr. Burden as EAS Chair and Vice-Chair respectively. Mr. Waldeck and Mr. Burden were elected unanimously.

Report of the Ecosystem Plan Development Team (EPDT)

Ms. deReynier presented a flow chart diagram that connected the Council’s tasks and assignments with the various sections of the draft EPDT document and noted areas where the EPDT would appreciate EAS comments (see Appendix 1). The EPDT’s approach to the document has been to provide the Council with good information in response to specific requests without getting too ahead of existing guidance. The members of the EAS had reviewed the draft document and provided thoughtful comments in advance of the meeting, so, in the interest of time; Ms. deReynier opened the session to questions and comments rather than provide a detailed presentation.

Regulatory Scope

Mr. Enticknap spoke in favor of the range of regulatory scope that an EBFM plan could take; “an [advisory Fishery Ecosystem Plan (FEP)] or EFMP, an umbrella EFMP with selected [management unit and ecosystem consideration] species, a Regional Omnibus EFMP, and a Coastwide Omnibus EFMP.” The group discussed existing Council guidance on the topic.

Mr. Burner characterized the Council record as one more focused on desired outcomes than a firm recommendation on the type of plan to develop. The Council has discussed the informational benefits that a non-regulatory framework plan could bring in terms of improved science and better coordination among its four FMPs, but has also expressed an interest in centralizing regulatory actions such as essential fish habitat protection, spatial management, and fishery regulation within National Marine Sanctuaries as items that are common to the existing FMPs that may benefit from being treated in a coordinated EFMP.
It was noted that the Magnuson-Stevens Fishery Conservation and Management Act (MSA) has explicit and detailed provisions for FMPs whereas the legal guidance on implementing EBFM or a FEP is far less defined. The group generally agreed that what is important at this stage is to present the Council with a full range of regulatory options that clearly maps the tradeoffs of developing an advisory or informational FEP versus a full FMP.

**Review of Existing FMPs and Fishery Management Tools**

Mr. Burden suggested that a first step would be to review the existing FMPs for commonalities and management tools consistent with EBFM. It is important to first determine what existing mechanisms are useful in meeting EBFM objectives before developing a purpose and need statement. Does the Council have everything it needs within existing FMPs? If not, what is lacking and what sort of plan does the Council need to reach its objectives.

Mr. Maruska noted that the November 2009 statement of the Scientific and Statistical Committee supports this concept with the following suggested initial tasks:

- **Catalog aspects of ecosystem management that are already taking place under the current FMPs (e.g., habitat protection and protected species).**
- **Examine what gaps within or between the FMPs need to be filled by ecosystem based management.**
- **Analyze the goals and objective across the current FMPs and see if they can be more consistent.**
- **Analyze why it is important to augment single species management. What are the outcomes ecosystem based management may achieve that are not possible through single species management?**
- **Document the approaches to ecosystem management that have been used in other regions.**

The Council, other Regional Fishery Management Councils, and other nations all have experienced the trials and tribulations of implementing EBFM and there are certainly lessons learned that would benefit this process.

Mr. Maruska suggested that the EAS and the EPDT hold future meetings with other Council Advisory Bodies as well as representatives from other RFMCs to better understand what works and what rationale has been used for the various management approaches chosen.

Mr. Niles (EPDT) noted that he is still grappling with the topic of determining the Council’s objectives. He suggested that only when it is clear as to what the Council intends to accomplish can we fully determine the best regulatory vehicle. The MSA is clear on what is required of Council’s and their FMPs. The Council is interested in many of these same questions and it seems appropriate to present a suite of possibilities that address a range of objectives and appropriate management responses.

A “case-study” approach was suggested to help provide small-scale answers to get a handle on bigger issues. The California Current Ecosystem (CCE) is huge and perhaps a smaller scope would be a better starting place; a way to demonstrate how EBFM could make a difference. Mr. Enticknap characterized the North Pacific EBFM process as one of narrowed scope where the focus was on one system (Aleutian Islands) as a starting place to see what could be accomplished and learned. The EAS discussed possibly focusing on west coast nearshore management as a
possible subset of the CCE. However, because there is a paucity of focused research there is relatively little data, which could lead to unsatisfactory conclusions unrelated to the pros and cons of EBFM. Mr. Nelson noted that the International Council for the Exploration of the Sea has done work on cod in the North Atlantic as a case study for EBFM.

The group discussed the workload of summarizing the various approaches to EBFM and all agreed that the resulting report to the Council should be focused and not lengthy. Ms. Fosmark noted that California, through its Marine Life Management Act process, as a result of the implementation of the Marine Life Protection Act has developed a “lessons learned” type of document that may be of interest, and Responsive Management provided the Council with a public opinion poll that could provide useful information on public values on such things as protecting natural biodiversity versus food supply, and sustainability versus preservation. The EBFMP should consider these polls. The final report could simply have a short list of the most pertinent findings from a comprehensive review.

Ms. deReynier stated that this effort has been done to some degree and reported in the document and this initial review indicates that it is unlikely that there is an existing EBFM approach that exactly meets what is generally believed to be the Council’s interests, but there are pieces of other programs that may be useful.

Defining EBFM and Developing a Purpose and Need
Mr. Maruska agreed that choosing a tool before assessing the job makes no sense. To help understand the concept the EAS drew up a chart that expresses a progression from determining just what is EBFM, to what are the shortcomings of existing management, to what can be learned from other processes, to what should be done.

<table>
<thead>
<tr>
<th>Working table for the purpose of developing an EBFM definition and purpose.</th>
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<tbody>
<tr>
<td><strong>Topic</strong></td>
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<tr>
<td>What is EBFM and its value?</td>
</tr>
<tr>
<td>EBFM is a systems approach that looks at interactions of habitats and species to optimize ecosystem services in ways that encourage sustainability of the broader marine ecosystem and the health and resilience of fisheries, fish stocks, fishing communities. /1</td>
</tr>
</tbody>
</table>

/1 Biodiversity (species, genetic, age, etc.) and the human component (viable communities, seafood supply, etc.) were discussed as example criteria for assessing ecosystem sustainability.
Mr. Enticknap adapted the following graphic from the NPFMC materials on the Aleutian Islands FEP to help the group visualize what the scope of an EBFM approach might be. The solid oval represents the both the four Council FMPs and State managed fisheries for which direct fishery authority exists within the Council arena as well as other aspects of fishery management that the Council may want to consider and/or take action to protect (non-target predators, prey, and protected species, habitat, climate change). An EBFM approach would consider the interrelationships of the four FMPs, State managed species, non-target species, and the ecosystems they all rely on. The dashed oval below represents activities or entities that are interrelated to fisheries and fish stocks, but are generally outside the authority of fishery management agencies. The impacts to and from these entities could be considered under EBFM and, although not the direct authority of the Council, Council and/or public input on these matters could be strengthened a broader Council position based on ecosystem considerations within an EFMP.

The group reviewed several aspects of current fishery management that could benefit from the linkages depicted above and envisioned for EBFM:

- The Council has established many area-based conservation zones to avoid bycatch (*i.e.* salmon conservation zones for the Pacific hake fishery). These areas are generally constant over time, but it is likely that these conservation areas would benefit from a more adaptive strategy that adjusts conservation areas according to a contemporary understanding of oceanographic and ecological interactions.
- Under the trawl rationalization program, the timing of the harvest of individual quota shares is envisioned to fall to the discretion of the shareholder with potential improvements to socio-economic factors. However, there may be biological justification for when and where harvest occurs that could be considered under an EFMP.
- Groundfish fishery management increasingly considers impacts to communities when establishing harvest policies, but currently lacks a broad understanding of how communities operate and considerations tend to be segregated by FMPs. An ecosystem approach could provide for a big picture consideration of the cumulative impacts to communities across all Council managed species.
- Predicting effort in open access groundfish and albacore tuna fisheries is often highly dependent upon the availability of other fishing opportunities such as salmon. Issues of effort shift between fisheries managed under separate FMPs could be better understood
from an ecosystem perspective.

- The Council addresses many bycatch issues in fishery management, salmon bycatch in groundfish and coastal pelagic fisheries, halibut bycatch in groundfish fisheries, etc. as well as impacts to non-target protected fish and mammal species across several Council FMPs.

Ms. Schmitt described a diagram she is working on for the EPDT that, to some degree, would blend the tabular and graphic approaches presented above. Her vision is a diagram that depicts the graphical relationships between the various management tools, ecosystem services, and desired ecosystem characteristics and couples them with text description of the issues, concepts, case studies, and tradeoffs. The goal is an easily digested graphical summary of the interrelated concepts the Council will need to balance in its decision making.

Mr. McMullen noted that there is full a range of costs and benefits associated with EBFM, many that still need to be explored. He drew analogies to farming practices and noted that some, but not all, farming practices with ecological benefits increase production. There are potential consequences, intended or otherwise, that should be considered.

The EAS adopted the following working definition of EBFM and recommends it to the PDT for their consideration:

EBFM is a systems approach that looks at interactions of habitats and species to optimize ecosystem services in ways that encourage sustainability of the broader marine ecosystem and the health and resilience of fisheries, fish stocks, fishing communities.

The EAS noted that MSA Section 3 defines the terms “conservation and management” and “optimum yield” to include ecological, ecosystem, and marine environment considerations. The EAS recommended that the implications of these definitions to existing Council authorities should be further explored for their application to EBFM and the development of an FEP or EFMP.

MSA Section 3(5) and Section 3(33):

(5) The term "conservation and management" refers to all of the rules, regulations, conditions, methods, and other measures
(A) which are required to rebuild, restore, or maintain, and which are useful in rebuilding, restoring, or maintaining, any fishery resource and the marine environment; and
(B) which are designed to assure that—
   (i) a supply of food and other products may be taken, and that recreational benefits may be obtained, on a continuing basis;
   (ii) irreversible or long-term adverse effects on fishery resources and the marine environment are avoided; and
   (iii) there will be a multiplicity of options available with respect to future uses of these resources.

(33) The term "optimum", with respect to the yield from a fishery, means the amount of fish which—
   (A) will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and taking into account the protection of marine ecosystems;
   (B) is prescribed as such on the basis of the maximum sustainable yield from the fishery, as reduced by any relevant economic, social, or ecological factor; and
   (C) in the case of an overfished fishery, provides for rebuilding to a level consistent with producing the maximum sustainable yield in such fishery.
Additional Ecosystem Advisory Subpanel Comments

Document Flow and Organization
The EAS appreciated the presentation and layout of the current draft and found the relationship between the tasks assigned and the material presented to be well organized. However, the EAS recommended that the document would benefit from some transitional text to help the flow of the document and to clarify the linkages between the document sections. Additionally, the document would benefit from a glossary and consistent use of key terms such as, biodiversity, resilience (of what), and ecosystem health.

Purpose and Need
As discussed earlier in the meeting, the EAS found the purpose and need discussions in the document lacking in terms of a clear description of the management framework desired and what it is really going to do. The document talks about other approaches and outlines some ideas, but is foggy on what the focus of the plan will be. If the first step is to set up an informational FEP, the purpose and need statement should discuss what sort of management is envisioned as the plan evolves and future tiered actions are considered and existing FMPs should always be subject to oversights that lead to improvement.

The EAS gleaned four specific purposes from the draft PDT report. The EAS recommends these four items be considered by the PDT in developing the purpose and need statement, specifically:

The EBFM document provides a vehicle to (1) improve information and improve decision making; (2) identify gaps in information; (3) integrate across species-specific FMPs; and (4) provide a nexus to regional and national ecosystem-related endeavors.

Based on comments submitted by Mr. Maruska, the EAS recommends that the following items also be considered in the purpose and need statement (5) establish a platform or framework that enables management at the appropriate ecosystem scale for a species or complex of species, (6) create incentives for improved stewardship and (7) encourage innovation by offering an alternative pathway for management of a complex of species that might yield a more robust portfolio of fishing opportunities.

Goals and Objectives
The goal statement in the draft is focused on bringing a greater understanding of the CCE to the Council process. Mr. Enticknap felt this is too limited and should not be the goal of the plan. The goal should be broadened to include items such as achieving optimal harvest levels and desired ecosystem services while maintaining a healthy and sustainable ecosystem. The desire for improved information speaks more to tools needed to get to this broader goal.

Ms. deReynier noted that Council and National Marine Fisheries Service authority is limited to fisheries, an authority that alone cannot ensure a healthy ecosystem. Mr. Niles added that the Council does have some authority in the MSA to protect habitat, deep-sea corals, and to close all fishing if there is supporting rationale. Ms. deReynier noted that, however, even in that broader context, the Council has no authority over marine uses such as shipping, drilling, mining, but Council positions and comments on many of these issues could have greater influence with the backing of an ecosystem plan and/or rationale.
Framework for Future Management
The EAS is supportive of an evolutionary process that starts with an overarching or programmatic framework as well as the potential for specific management and regulatory actions that could build or tier off the initial framework. The EAS recommends that the following SSC comments from November 2009 for a plan framework should be considered and incorporated in the next draft of the document:

“...it will be important to establish a general framework in which [an EBFM] plan will operate. This framework should allow the Council to monitor ecosystem characteristics, and take actions to protect the California Current ecosystem or particular ecosystem components as necessary to achieve the goals of the plan.”

“The plan should give the Council the ability to manage ecosystem components that are not specifically treated in the existing FMPs.”

Broad Stakeholder Involvement
In order for the EFMP to be effective and broadly supported, one objective of the plan should be to seek input from multiple stakeholders. The Council process is a good vehicle for public input, but may not routinely involve the full suite of interested stakeholders, particularly those outside the realm of fishery management.

Summary of EAS Recommendations to the EPDT and Council staff
This is a summary of specific EAS recommendations as discussed at this meeting in no priority order. It should be noted that several EAS members provided detailed comments directly to the EAS and the EPDT in advance of the meeting only some of which have been captured in this document.

General recommendations:
- Continue to develop a full range of regulatory options that clearly explains the tradeoffs between the suite of options; from developing an advisory or informational FEP to a full EFMP.
- Review and carefully consider SSC recommendations from November 2009, specifically for reviewing existing FMPs and EBFM approaches around the nation and the world.
- Request that the Council tap the collective expertise of the Management Teams and Advisory Subpanels of the four FMPs to achieve a comprehensive understanding of existing and needed ecosystem-based management tools.
- Continue developing the diagram envisioned by Ms. Schmitt depicting the relationships and tradeoffs inherent in EBFM.
- Seek to maximize stakeholder input during development and implementation of an EBFM plan.
- Council staff should arrange agenda time for review and input from the Council’s other Advisory Bodies before or during the September Council meeting.

Recommendations specific to the draft EPDT report:
- Develop transitional text to help document flow and to clarify linkages between document sections.
- Add a glossary to the document so that key terms are well defined and used consistently.
• Consider revising the current goals and objective section to broaden the plan goals to achieve optimal harvest levels and recognize desired ecosystem services while maintaining a healthy and sustainable ecosystem.

• Review the MSA Section 3 definitions of “conservation and management” and “optimum yield” when describing existing Council authorities.

• Consider adding the following items under the purpose and need (a) establish a platform or framework that enables management at the appropriate ecosystem scale for a species or complex of species, (b) create incentives for improved stewardship, and (c) encourage innovation by offering an alternative pathway for management of a complex of species that might yield a more robust portfolio of fishing opportunities.

• Hew closely to the November 2009 SSC recommendations in general and specifically when considering the plan’s framework for future management.

**Future Work and Meeting Planning**

The group tentatively agreed to the following schedule of future events:

1. EAS comments and summary minutes are provided to the EPDT by mid-May.
2. EPDT reviews comments and begins revising the document. Mr. Waldeck and Mr. Burden will work with the EPDT on any needed EAS feedback.
3. EPDT meets in mid to late July to finalize the next draft and distribute to the EAS (and other Council Advisory Bodies?) for review. The EPDT would also draft a statement to the Council that includes recommendations for the next steps in the process.
4. EAS meeting on August 11 in Portland to review the revised draft and develop and EAS report to the Council for its September meeting.
5. The final EAS and EPDT reports are completed in advance of the August 25 deadline for the September Briefing Book.
6. Under this schedule, the full EAS or EPDT would not need to attend the September Council meeting, but the EAS and EPDT Chairs would attend to deliver their respective reports and respond to Council questions.

The EAS is interested in getting input from a wide range of Council Advisory Groups and noted that holding an EAS and/or EPDT meeting at a Council meeting could afford the opportunity to meet jointly with one or more groups. Specifically, the EAS found merit in meeting collaboratively with the Habitat Committee and the SSC. Also, to foster coordination and improve input to the Council the EAS it was suggested that SSCs EFMP Subcommittee meet to review the reports before the September session of the full SSC.

PFMC
05/10/10
May 4, 2010 meeting of the Pacific Fishery Management Council’s Ecosystem Advisory Subpanel, briefing notes from the Ecosystem Plan Development Team

November 2009 Pacific Fishery Management Council (PFMC) directions to its Ecosystem Plan Development Team (EPDT) were to prepare a report that includes:

- Draft Statement of Purpose & Need
- Draft list of possible initial Goals & Objectives
- Draft range of options on: a) the geographic range of an EFMP, b) the regulatory scope of the E-FMP, c) the management unit species within the EFMP
- Draft list of miscellaneous issues to be addressed by an EFMP

Other November 2009 directions from PFMC not explicitly tasked to EPDT, but expected from EPDT, EAS, and Council staff:

- Schedule presentations by the Northwest and Southwest Fisheries Science Centers on the state of science in support of ecosystem-based fishery management;
- Review the Council record of dialogue on ecosystem-based fishery management, including statements by the Council, its advisory bodies, and the public (11/09 agenda item D.1.a., attachment 1, Council staff white paper on development of an EFMP);
- Review the existing Council fishery management plans to identify existing approaches and commonalities regarding ecosystem approaches to management;
- Inventory ecosystem-related management tools for their applicability to an ecosystem-based fishery management plan process;
- Review existing ecosystem-based management efforts of other regional fishery management councils (11/09 agenda item D.1.b., NMFS Report).

April 7, 2010 EPDT Report:

1. Introduction
2. Background and Council History
3. Straw Statement on Purpose & Need
4. Straw Goals and Objectives
5. Regulatory Scope and Management Unit Species
6. Geographic Range and Scale
7. State of Ecosystem Sciences
8. References
9. Appendix A: examples of ecosystem principles and guidelines for management

Areas where Ecosystem Advisory SubPanel comments would be helpful (comment on whatever you’d like, of course, but we’d particularly appreciate hearing on):

- Is any information in the report confusing?
- Where does the report need more (or less) detail?
- Does the report need any additional discussion to address the Council’s assignments? If so, what do you particularly suggest we discuss?
- EAS members suggested, via email, various methods for rearranging the report. Is there any consensus on desired report arrangement, so as to better inform Council and the public?
- Does the report need any maps or other graphics?