

## **Ecosystem Committee Workshop Report**

September 16-17, 2013 8:30am-5pm

NMML conference room, Building 4, Alaska Fisheries Science Center, Seattle, WA

**Committee:** Bill Tweit (chair), Stephanie Madsen, Jim Ayers, David Fluharty, Steve Ignell, John Iani, Tim Towarak, Jeanne Hanson, Diana Evans (staff), Steve MacLean (staff)

Others attending in person or via webex included: Terra Lederhouse, Kerim Aydin, Sarah Ellgen, Melanie Brown, Pat Livingston, John Olson, Martin Dorn, Jim Ianelli, Stephani Zador, Mike Sigler, Steve Barbeaux, Phillip Levin, Chris Oliver, Jane DiCosimo, Jeff Napp, Jackie Dragon, Henry Mitchell, Ernie Weiss, Alf Haaken Hoel, Merrick Burden, Jon Warrenchuk, Mike Levine, Donna Parker, Erik Young, Megan Peterson, Lori Swanson, Janet Smoker

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The Chair opened the meeting with introductions and a discussion of the agenda, which is appended to this report as Attachment 1.

### **Part 1: Consideration of an EBM Vision Statement**

#### ***Presentations***

The Committee received a series of presentations relevant to the development of an ecosystem policy, the Council and NMFS' current state of ecosystem-based management (EBM) policy and science, and the use of EBM tools in other areas. Where available, copies of the presentations are posted on the Council website.

Phil Levin, of the Northwest Fisheries Science Center, gave his talk from *Managing Our Nation's Fisheries 3* about assessing ecosystem health in the face of a changing climate. He noted that defining a "healthy" ocean depends on the different values placed by individuals on ecosystem services, and that balancing those services differently dictates what action to take. He talked about Integrated Ecosystem Assessments (IEAs) as a process to inform management decisions, and help identify 1) what do we know, and 2) what do we want from the ecosystem (e.g., is the ecosystem healthy, is it vulnerable, and now what do we do). IEAs are a tool to help evaluate whether the objectives that we define for the ocean have positive or negative tradeoffs amongst each other.

The Chair, Bill Tweit, presented the various EBM goals and objectives that are included in current Council documents. He highlighted the groundfish workplan, last updated in 2007, identifying actions for fully implementing the groundfish management approach approved in the PSEIS in 2004; also goal statements from the Aleutian Islands Fishery Ecosystem Plan (AI FEP), the Arctic Fishery Management Plan (FMP). He also referenced the ecosystem goals that guide the Ecosystem SAFE report, which derive from the draft EBM policy developed by the Council's Ecosystem Committee in 1997.

Kerim Aydin provided an overview of AFSC EBM support for actions in the Council process, and a discussion of national NOAA IEA plans. He identified examples of how ecosystem considerations are increasingly being integrated into stock assessment, through the incorporation of environmental variables, and into impact analysis for management actions. The AFSC has also started preparing annual ecosystem assessments, and is beginning work on the next step, which is to identify formal ecosystem thresholds. Various tools and predictive models are under development to evaluate appropriate thresholds based on weighted, competing objectives, and other risk assessment tools. AFSC programs are also working with the NOAA Pacific Marine Environmental Laboratory (PMEL) to investigate recruitment processes in the light of climate model predictions. Especially informative to the Committee was a particular visual (see Attachment 2) describing how integrated ecosystem assessment is intended to bring together science and management, and the continuous cycle of dialogue.

Jim Ianelli provided a discussion of management strategy evaluation (MSE) work that is ongoing, especially through the Bering Sea Integrated Ecosystem Research Program (BSIERP). The current work is looking at multi-species OFL and ABC approaches, under different climate scenarios. The group is having difficulty modeling how decisionmakers will act in the Council process, and how individual fishermen will change behavior based on new programs. As an intermediate step, operating models are being developed to identify plausible scenarios based on retrospective behavior (e.g., relating maximum permissible ABC with actual catch quotas and harvests).

Dave Fluharty focused on how the Council's current EBM approach compares to other U.S. regions, using sixteen identified criteria, based on a review that he is authoring for NOAA's Ecosystem Science and Management Working Group. In his conclusion, he did not identify any areas where the North Pacific is lagging behind other regions, but he did provide some specific areas for moving forward: 1) defining a clear ecosystem-based fisheries management (EBFM) goal; 2) systematic monitoring to show ecosystem goal progress; 3) trade off analysis; 4) training of staff/Council/etc. regarding EBFM; 5) forecasting; and 6) link up with IEAs and coastal and marine spatial planning.

Terra Lederhouse, of the NMFS Habitat Division office in Washington, D.C., reported that her division is implementing the NMFS Habitat Blueprint by working with interested Councils to develop specific habitat objectives (rather than general goals), to guide research and help with measures to meet those objectives. NMFS is also interested in defining a habitat assessment process for prioritizing a) needs for stock assessment, or b) improving EFH information. Finally, changes are also being considered under MSA to allow Councils and NMFS to prioritize habitat activities.

Tim Towarak provided some comments about the importance of establishing an inclusive way of bringing communities into the fishery management process. He noted that it is necessary to consider both commercial and subsistence fishing communities, and cited the Federal Subsistence Board Regional Advisory Councils (RACs) as useful forums for the Council to interface with communities throughout the State. RAC members represent subsistence, sport fishing, and guiding interests, and also represent many communities in each RAC area. He also spoke to the value of including traditional knowledge in addition to other information in understanding ecosystems.

### ***Public Comment***

Four people provided public comment about the development of an ecosystem-based vision statement, and the Bering Sea coral conservation agenda item. Some commenters supported the existing articulation of the Council's ecosystem vision through the draft 1997 policy statement, or the groundfish management approach developed in the Groundfish Programmatic SEIS. It was also suggested that the Council could do more to operationally apply its existing policies. Commenters also thought that the Council should specifically define its goals and values for the ecosystem, and then use EBM tools to identify the tradeoffs of actions that meet those goals. One person also supported the opportunity to engage with headquarters in the development of habitat objectives. With respect to the Bering Sea canyons issues, people commented on the upcoming workshop, and the scope of its agenda.

### ***Discussion***

The Committee appreciated all the presentations, and learned a lot about the work that is going on at the AFSC and within NMFS. The Committee is supportive of the AFSC's work regarding integrating ecosystem indicators, developing multi-species TACs, and management strategy evaluations. With respect to the question of whether the Council should develop an ecosystem vision statement, the Committee agreed that many of the Council's existing policies, especially the management approach developed through the PSEIS, and the draft ecosystem policy from 1997, are still applicable and encompassing. The Committee discussed not wanting to reinvent the wheel, especially given the Council's full workload. In many cases, however, the conversations that led to the development of these policies occurred before current Council members joined

the Council. There may be a benefit to the current Council of taking ownership in its ecosystem policy, and understanding the individual responsibility it places on decisionmakers.

The Committee discussion also noted that while the North Pacific's EBFM is well developed, achieving the current suite of ecosystem-based management measures has been the result of hard, and often contentious, work. It was noted that the decisionmaking process works when there is consensus-building towards acknowledged common goals, rather than all-or-nothing positions that result in litigation. The Council can continue to improve its EBFM, and has the opportunity to be a national and international leader in this area. The Committee also heard that, from the perspective of the AFSC, feedback from the Council is important. The more focus the Council can provide to its management needs, especially in the broad realm of EBFM, the easier it is for NMFS to prioritize with its dwindling funds. The process of developing a vision statement may also help establish clear linkages in the North Pacific to national work on ecosystem programs, such as the integrated ecosystem assessments or the habitat blueprint.

Based on the presentations and discussion, the Committee came to the following conclusions. The Committee believes that the fisheries of the Alaska ecosystems are of critical importance to this country. The fisheries are critical to the longterm well-being and subsistence way of life of the people who live here. **The Committee believes that there is value in moving forward with a collective vision statement, because we are all committed to ecosystems and longterm healthy fisheries.** The Committee also thinks that research, monitoring, and observation is a critical element for achieving healthy ecosystems and fisheries, and we need to be vigilant about supporting research, monitoring, and observation in order to achieve the vision that we all agree on.

If the Council agrees that a collective vision statement should be developed, there are various options that the Council could pursue. One would be to reaffirm the management approach statement in the groundfish FMPs (developed through the Programmatic SEIS process), and/or the 1997 Ecosystem Committee's draft policy, the goals of which still guide the Ecosystem SAFE report. A second option would be to develop a comprehensive ecosystem-based fishery management policy, using the existing documents as a basis, but perhaps refining or adding to the objectives or approach. A third option would be to develop a new ecosystem-based vision statement, articulating the Council's overarching goals and principles for achieving them. Under any of the options, **the Committee recommends that a vision statement should include the following components:**

- Broad focus – encompass all Council ecosystems (Bering Sea, Aleutian Islands, Gulf of Alaska, Arctic)
- Protect fisheries from impacts from other sources (shipping, etc.)
- Science-based – management based on the best scientific information available, including local and traditional knowledge, as well as having scientists interacting with managers in the Council process
- Reflective of the need to bring people together to talk about tough issues, to find a path to mutually-agreed end goals (sustainable fisheries and healthy ecosystems) that everyone can agree on
- Bring in the human component (communities, social sciences, etc.)
- Acknowledge that EBFM includes tradeoffs that need to be addressed explicitly in decisionmaking
- Recognition of uncertainty, for example changing climate and associated ocean trends, and support for Council and other stakeholders to adapt to rapidly changing circumstances

The Committee offers the following example of the kind of vision statement that the Council might consider for adoption. The Committee is not endorsing this specific characterization, and encourages the Council to craft its own statement. This language does, however, provide an illustration and starting point for conversation.

*Healthy, biodiverse, resilient ecosystems that (1) are managed using a broad, precautionary, transparent, and inclusive process that is based on sound science (including local and traditional knowledge), allows for an analysis of tradeoffs, accounts for changing conditions, and mitigates threats; and (2) provide opportunities for vibrant sustainable fisheries, the subsistence way of life, undisturbed habitat, and designations for national fisheries food security areas.*

The Ecosystem Committee is willing to work further on crafting a vision statement, if the Council chooses to go that direction, and also to consider other implementation steps. An advantage of its diverse membership is that the Committee brings together other stakeholders (community, NGO, local and traditional knowledge) at the table with industry members and managers. The Committee also can play a role in the dialogue between scientists and managers, especially as the new science products continue to be developed and operationalized.

Lastly, the Committee also discussed some specific ways to improve knowledge about the development of ecosystem science among Council members and members of the public. While the Committee could certainly come up with other ideas, some examples came up during the workshop. One of these was to provide a history of the development, through both Council work and litigation, of the PSEIS management policy during the presentation of the PSEIS Supplemental Information Report. The Committee also discussed more collaboration between the Ecosystem Assessment division at the AFSC and the Council, to get the word out about the work that they are doing, perhaps even through the development of a briefing report or glossy.

## **Part 2: Operationalizing EBM in Council projects**

### ***AI FEP and Arctic FMP***

Stephanie Madsen briefed the Committee about the Aleutian Islands Risk Assessment workgroup's development of a Particularly Sensitive Sea Area (PSSA) designation and/or traffic routing patterns in the Aleutians, under the authority of the International Maritime Organization (IMO). The purpose of a PSSA proposal in the Aleutians is to mitigate and prevent impacts from shipping on fisheries and the ecosystem. Diana Evans noted that the workgroup intends to write a proposal for implementing routing measures and/or a PSSA designation which could be submitted to NOAA as early as spring of 2014, for internal review before being presented at the IMO. While at this stage it is the intent of a PSSA that it would not impact fishing or fishing industry activities, the Council may be interested in tracking this proposal as it develops, in order to ascertain that no unintended consequence of rerouting shipping vessels affects fisheries. The Committee also discussed that the IMO process for directing shipping traffic is being considered for Bering Strait and the Arctic, as well, with the same purpose of preventing impacts to fisheries and the ecosystem. **The Committee recommends that it receive further presentations on efforts to change international shipping patterns in the Aleutians and the Arctic, to see whether there are likely to be impacts to fisheries, and recommend whether the Council needs to engage in this effort as it moves forward.**

Stephani Zador gave a presentation on the Aleutian Islands ecosystem assessment. The assessment is structured into three ecoregions, representative of the spatial variability in the Aleutian Islands ecosystem. There are few direct physical indicators because of the lack of data available in the area. It is intended that every three to five years, the Aleutian Islands Ecosystem Assessment Team (which expands the AI FEP development team to include other experts) will reconvene to see whether the synthesis of indicators needs to be updated. Diana Evans added that the AI ecosystem assessment is the primary way that the AI FEP is integrated into the Council process on an annual basis. Although some human activity changes have occurred in the region since the completion of the FEP in 2007 (i.e., increase in shipping traffic, changes to the fisheries due to Steller sea lion restrictions), a wholesale revision of the FEP is not warranted at this time based on the lack of new environmental data. Diana also noted that one of the FEP's recommendations for further implementation related to a better accounting of ecosystem considerations and risk in the harvest

assessment process, which may be moving ahead with AFSC efforts to address uncertainty in annual catch limits. **The Committee concluded that the AI FEP document is still serving its intended purpose, is still being implemented, and is finding new uses.** The Committee will consider whether the FEP needs comprehensive updating at such a time as the AI Ecosystem Assessment Team identifies new information available in the Aleutians.

Regarding the Arctic, the Committee heard from Stephanie Madsen about a recent meeting of the Alaska Arctic Policy Commission, appointed by the State of Alaska legislature, on which she is the fisheries representative. The Commission is drafting policy statements with respect to increasing activity in the Arctic, which Stephanie will share with the Committee and the Council as they develop. Available funding for Arctic research and monitoring activities was also discussed at the meeting, and a concern expressed about Arctic funding coming at the expense of existing NOAA work in the Bering Sea. Steve Ignell noted that, to date, NMFS has accomplished its Arctic research through partner funding, primarily from BOEM. The Committee received the briefing, and looks forward to further updates on the Arctic Policy Commission's work. **The Committee recommends that the Council support the view that NOAA's research, monitoring, and observation activities in the Arctic, and the view that those activities should not be funded with a reallocation of core funding away from Bering Sea responsibilities.**

Darcy Dugan, of the Alaska Ocean Observing System (AOOS), provided an overview of the Spatial Tools for Arctic Mapping and Planning (STAMP) project that is being developed. This public, web-based interface maps real-time data from multiple agencies, including biological, forecast, satellite, physical characteristic, and human use data. The grant for this project expires in January 2014, but with further funding the project could be scaled up to include data for the whole of Alaska. **The Committee appreciated the presentation on the STAMP program, and noted that it appears to provide a powerful tool for analyzing spatial data.**

#### ***Bering Sea canyons and coral conservation***

The Committee received a presentation from Mike Sigler on additional information validating the coral model. He presented further evaluations of general biodiversity in the Bering Sea slope, noting that they did not find any specific tie to higher diversity in the canyons. He does not have the data to evaluate whether diversity of corals changes with respect to the canyons, although he did note that there is one specimen of a coral species that has, to date, only been found in Pribilof Canyon. He also described proposed fieldwork that is occurring this coming summer to further validate areas of likely coral habitat, as predicted in the model. Results of the research will not be available to the Council until 2015 at the earliest. Steve MacLean added that this information will also be presented at the Council's canyons workshop planned for mid-October, along with a discussion of collaborative research opportunities, and a preliminary discussion of management measures that could be included in a Council discussion paper on this issue. The Committee had many questions for Mike. One Committee member raised the issue that the Council's motion excluded sponges, even though they are essential for fish habitat, and Mike noted that even though the predictive model is specific to hard corals, the fieldwork will document both corals and sponges. **The Committee thanked the agency for their responsiveness in pulling together the additional information. The investigation of specific areas that are predicted to have a higher density of corals through field research is important, and the Committee hopes that this fieldwork will be a priority for funding.**

The Committee also received a presentation from Jim Ayers detailing a proposal for establishing scientific research closures in Alaskan waters, as a mechanism to conserve healthy ecosystems and to protect essential fish habitat. His proposed strategy identifies three types of scientific research closures. First, conservation and research closures for non-fishing activities would be established for areas that are critical for national food security (i.e., key fishing areas). Second, gear modification research areas would be identified to support industry doing research to see how to catch fish while reducing impacts to habitat. Third, restoration closures for recovery of Bering Sea slope shelf communities would be designated. Jim explained that specific

boundaries of closure areas would be identified by sitting down with industry and scientists, and then the areas would be monitored over time for a response. In order to illustrate the proposal, he provided some examples of potential research closures in the Zhemchug and Pribilof Canyons, which correspond with high value coral areas that were predicted from the AFSC model.

The Committee discussed the conceptual proposal for research closures, noting that there are logistical issues to be addressed, including how large the closure areas would need to be in order to achieve their purpose, and how to fund their monitoring. With respect to the example of identifying closures in the canyons, there was also further discussion about how best to identify the criteria for which areas to protect (for example, density, diversity, or height of coral could all be used as criteria). **Again, the Committee recognizes that research and conservation closures are one of the tools of ecosystem-based fisheries management, and scientific advice is a key component to determining their applicability. The Committee is open to discussing the concept of closures in the canyons. The Committee agrees that the agency's proposed fieldwork will provide valuable information in the midterm. Viewpoints differed among Committee members as to what to do in the interim, before the results of the agency's fieldwork are available.** Options range from not doing anything yet, to closing specific areas where independent data have validated that they meet specified criteria, to initiating a discussion of a research closure scheme in the canyons, with the involvement of scientists and stakeholders. The Committee also discussed, without reaching resolution, whether the Council needs to specify whether any management measures that may be considered for protecting corals would be taken under the MSA's deep sea coral authority, or under its EFH authority. The Committee is looking to the AFSC to provide more input as these issues are discussed further, including at the Council's workshop in October.



DAY 2

8.30a (PART 1 DISCUSSION continued)

11.00 a **PART 2: Operationalizing EBM in Council projects**

*Note, issues may be added to this section during the workshop, or the order of topics revised.*

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|--------|---|-------------|
| 1.00 p | 1. Next steps for implementation of AI FEP  | (Madsen)    |
| 2.00 p | 2. Next steps for implementation of Arctic FMP                                      | (Benton)    |
| 3.00 p | 3. Bering Sea coral conservation  |             |
|        | • Presentation of results from run of AFSC model to identify areas of high priority | Mike Sigler |
| 4.00 p | 4. Bering Sea research closure or gear modification areas                           |             |
|        | • What objectives would research closures be designed to address?                   | (Ayers)     |
| 4.00 p | <b>CONCLUDING RECOMMENDATIONS TO COUNCIL</b>  | (Tweit)     |

### Workshop Objectives

- Discuss and determine whether the Committee should recommend to the Council that an Ecosystem Based Management (EBM) vision statement is necessary, or whether that vision is sufficiently articulated in existing documents. If a vision statement is needed, draft a statement for recommendation to the Council
- Discuss how the Council's EBM vision is or should be operationalized in current and upcoming Council actions such as: FMPs, AI FEP, potential Bering Sea FEP.
- Discuss objectives of management measures in the Bering Sea canyons following the Council discussion and motion in June, including coral conservation and research area closures or gear modifications.

### Workshop Deliverables

1. Potential EBM vision statement to recommend to Council
2. Recommended next steps for operationalizing EBM
3. Recommendations on scope and function of a Bering Sea FEP
4. Recommendations on BS canyon measures
5. Others?

Excerpt from Kerim Aydin’s presentation:

NOAA Integrated Ecosystem Assessment Program <http://www.noaa.gov/iea/> (note: EBM vs. EBFM)

