

Development of a Bering Sea Fishery Ecosystem Plan (FEP)

Public input at the Seattle public hearing
September 15, 2014

Steve Marx, Pew Oceans Commission

- Encouraged by Council taking this up, want to be involved.
- Discussion of FEPs is different than ecosystem-based fishery management (EBFM). Councils have the authority and a mandate to do EBFM; the FEP is an opportunity to operationalize that for a specific region.
- *What should the objectives of a BS FEP be?* There are two kinds of objectives. First, there are objectives for the ecosystem, for example, the Council should protect and restore habitat integrity, or restore ecosystem function. But the FEP should be more procedurally focused on what you should do to address the ecosystem objectives. So the objective of the FEP could be as a tool to identify ecological, social and economic factors to help the council determine optimum yield (OY). The FEP would provide specific tradeoff values for those factors, and identify how the Council uses those tradeoffs to determine OY. Other ideas – the FEP could assess risk and uncertainty due to climate change.
- *What questions should the FEP answer?* The main question that the FEP should try to answer is with respect to OY. The FEP would provide the forum and tools for the Council to identify the OY factors, the tradeoffs among them, and evaluate the uncertainties involved in those tradeoffs to determine how to set catches and evaluate management measures. Other questions. What are the likely impacts of climate change on our fisheries and ecosystem? What uncertainties are associated? What buffers are needed to mitigate those uncertainties? On the same climate change note, identify process and procedures for how council takes precautionary action. The Arctic FMP is a good example of switching burden of proof. If climate change happens, and we know that there is a switch in fish distribution that has the opportunity to create changing fishing opportunities, the FEP would be the place to lay our criteria for how to evaluate new fisheries.
- *What kinds of actions should be considered in the FEP?* Broadly, those conservation and management measures (in the Magnuson-Stevens Act (MSA)'s required and discretionary provisions) that are intended to help a council to achieve OY from each fishery, and cumulatively from all the Council-managed fisheries. Hopefully there would be a good alignment between OY and the Council's goals for the ecosystem, but they are two different things, and FEP can provide guidance for how the Council achieves both goals. Specifically, the FEP should have a nexus to management action, it should provide guidance for doing things through existing regulatory authority.
 - One way to do that is through monitoring a suite of indicators that are broadly applicable to all fisheries, to provide context for specifications process. Should incorporate indicators of social and economic factors also, and these should be considered in determining management measures
 - Second way, use the initiative process that the PFMC has introduced, where the Council identifies needs, and prioritizes them, then picks a new one every year or couple of years, which leads to Council action.
 - Third is the holy grail of EBFM, where the FEP identifies specific thresholds for the indicators that are tied to the Council's objectives. The indicators are monitored, and crossing a threshold results in specific action. Even if it doesn't trigger specific action, the threshold could be tied to a specific alert system, and then the Council could consider alternatives for action.

- *Should the FEP provide specific or general guidance for fishery management?* Both. But broadly, the FEP should provide guidance on how to evaluate those ecological, social and economic factors. Also think of it as a social contract. Tell the public what those factors are, how to evaluate those factors, and how the Council uses that information to make decisions. Should be a bottom-up process, so the public understands and has input on the factors affecting OY, and a transparent process for evaluating spatial and temporal issues, for example, the implication of size and age issues on total allowable catches. Tool for keeping the Council accountable.
- *Would the FEP provide added value, over existing Council documents, and if so, how?* First, the Council has done a lot on precautionary management and incorporation of ecosystem considerations already. One of the things that an FEP could provide to add value is to have a suite of indicators tied to ecosystem goals and objectives. This would provide a feedback, management strategy evaluation-type loop, so that the Council can be diligent about monitoring progress towards its ecosystem objectives, and provide an opportunity for adaptive management, if things are not being achieved. Second, a descriptive function of FEP, describing ecosystem processes, relationships, etc., would provide added value by synthesizing the vast amount of available information about the Bering Sea into something palatable for the public, and also for decisionmakers.

Tim Essington, faculty at School of Aquatic and Fishery Science, University of Washington

- The North Pacific Council is widely acknowledged as being a leader in fisheries management. This FEP process is an opportunity to continue to cement that reputation. So encourage the Council to be bold in thinking about what you want to do, and look broadly at the menu of options. Learn lessons from the AI FEP, from around the US, and internationally (Australia, Canada). Amazing opportunity to do something really innovative with EBFM, to accomplish the goals that Steve Marx suggested.

Jackie Dragon, Greenpeace

- Concur with a lot of Steve Marx' comments
- Overarching objective of the FEP is to bring EBFM fully online for the Bering Sea. There have been comments about areas where EBFM is already being done, but an FEP can thread those together into a cohesive plan, rather than a piecemeal approach. Allows definition of what a cohesive EBFM approach is, and evaluates the tradeoffs involved.
- Note that some mandates for doing FEPs came out about 15 or more years ago (e.g., Ecosystem Principles Advisory Panel (EPAP) report).
- Important that the FEP leads to Council action. Even if the FEP isn't an action in and of itself, it should still signal clear objectives for Council action, and describe its utility into the future for implementing ecosystem-based approaches into individual FMPs.
- Two biggest things in the EPAP report to Congress – shifting the burden of proof, and precautionary management. Think those two things should be front and center, should be defined in this process. Know there are certain measures that have been taken already, but this is opportunity for bigger look.
- The FEP should provide a framework for explicit protocols at the TAC-setting level, to enable managers to incorporate ecosystem considerations directly into fishery management specifications. For example, habitat considerations, etc.
- Specific questions to consider, not exhaustive:
 - Describe the process and function of the ecosystem, and species interactions.
 - Assess the full range of ecosystem services and processes – including wild capture fisheries, but others too.
 - Include all available baseline information on community structure, and various habitats.
 - Evaluate effects of fishing over time on the ecosystem.

- Describe all Bering Sea forage fisheries, and their relationship to food webs.
- Provide an analysis of what is known about foraging habitats in North Pacific food webs.
- Look at the effects of fisheries on indigenous food sources in the region.
- Describe and address uncertainties and levels of risk associated with FMPs and previous Council actions.
- The FEP should promote using best available science.
- Framework should allow Council to make decisions based on what is known right now.
- Include a mechanism to evaluate the effect of change on species.
- Explore models and other analytical approaches to evaluate the impact of management actions on ecosystem.
- Look at the impact of bottom-contact fisheries on food webs, and include a mechanism to address them in the plan.
- Opportunity to address climate change factors, and provide information to support the resilience of ecosystem into the future.
- This process should provide recommendations for NMFS and the Council to address underlying conflicts in authorities between single species and multispecies goals for management, in MSA and other relevant authorities.

Mark Fina, US Seafoods

- Glad to hear that people are talking about this as a process. We have a good concept of the ecosystem, and how to manage fisheries from an ecosystem perspective, but at the moment we have a piecemeal process. We have certain knowledge gaps well identified, and somewhat filled, but we need to work to fill others. In order to do that, we need a flexible system that allows us to work on areas where we see a need. Concerned about a strict ecosystem plan that prescribes how we must manage, when the reality is that we are already impacted in what we can do by limited staff resources at the Council and the agency.
- Also, the process needs to consider how the FEP, or ecosystem planning, fits with what we already have in our management process? For example, the Groundfish Programmatic SEIS, or the Ecosystem SAFE report? How do those things work together?
- So how do we get the best out of the staff resources? Know that we can't fill all gaps at once. Need a plan that allows for flexibility, and that is responsive to what we learn.

Mike Levine, Oceana

- Taking a step back, think that it is great that we are here having this conversation, with leaders in science, management, modeling. Council and staff should be congratulated for the steps taken so far. We are happy that we're able to have that conversation.
- Recognize that the process to develop an FEP is iterative. The Pacific Council built on our FEP to create theirs. The North Pacific now has opportunity to build on that and move forward. Agree with Tim Essington that we need to look broadly, and think about the leadership opportunity to define a process going forward.
- Also, this is an important thing to do now, because we have sustainable fish populations (largely), and we know that ocean conditions are changing. The FEP can help us with the changing situations that may be coming.
- Thinking of the FEP as a regional implementation of EBFM is useful (agree with Steve Marx).
- As we think about an FEP process:
 - 1. Identify goals – developing the FEP itself is not a goal for the ecosystem, but the FEP can establish those goals. FEP can build on the Council's vision statement, and identify more specific goals for what that means. Think mostly these are goals we would all largely agree on. For example, maintain sustainable fisheries, preserve fish stocks into the future that allow for multiple uses including fishing.

- 2. Describe the ecosystem. What is there; when we perturb the ecosystem, what happens.
- 3. Lay out specific objectives. For example, protect the food web, or understand which indicators to monitor, or identify research gaps, or evaluate what are impacts on the ecosystem.
- 4. Action. What do you do with the information? How will it get used? Pacific Council identified initiatives for FEP actions.

Merrick Burden, Marine Conservation Alliance

- Agree with a lot of what is being said.
- Important to identify the difference between an FEP and EBFM. We are already doing EBFM components. So how can we do what we are already doing better than we are, through the FEP?
- Objectives. Consistent questions:
 - 1. Cumulative effects of management actions – of our actions on ecosystem, and other actions on us. Can we harness something through the FEP process to help those discussions.
 - 2. Consider data gaps and research
 - 3. Help to identify risks
 - 4. Adaptive management. Environment is going to start changing rapidly; can the FEP help us to think about those types of things?
- Actions. FEP can help us lay out management tools, options. We have a limited budget. FEP can help us evaluate how we should be spending our money. What stocks to be monitoring, what invertebrates, etc.
- Also, if we go through the cumulative effects planning, that brings us right to the development of strategic initiatives. Think Pacific Council FEP was good model for that.
- The FEP can identify a process for how to deal with some of these actions. But then we also want to deal with the specific issues as they arise.

Becca Robbins-Gisclair, Alaska Marine Conservation Council

- Overall, agree with what has been said so far. We spend a lot of Council time reacting to the latest crisis. The FEP is an opportunity to be more reflective, and to develop a framework for moving forward more proactively. Agree that it is a place to address tradeoffs, and think about balancing.
- Objectives. Agree with others mentioned; should also include consideration of subsistence needs, and consideration of traditional ecological knowledge. FEP is great place for that. Should bring in subsistence fisheries as well as halibut, or other fisheries that are under separate authority.
- Agree that need to have some management hook, otherwise the FEP will sit on shelf, and may not be worth the resources. The FEP needs a framework for how it will be used.

Comments from Ecosystem Committee members present

Bill Tweit

- Heard a lot of agreement, and a lot of common themes.
- Agree that privilege and responsibility to be in position to have these conversations.

Dave Fluharty

- The Bering Sea is a very differently coupled human-ecological system, compared to the Aleutian Islands, or other systems. This will be a challenge. There are multiple different groups that are involved in fisheries in different ways (subsistence, CDQ, etc.). We will need to do serious thinking in the analysis about the various human linkages with this system.

Stephanie Madsen

- Hope Council is able to manage expectations about the BS FEP. Concerned that the FEP won't be everything to all people. Already have a strong ecosystem basis in the system – PSEIS, Eco SAFE. Recognize that we have limited resources, and it's going to be the same people that do all the other work that we need done (Alaska Fisheries Science Center, Alaska Region, Council staff), and that those resources are contracting. So am really going to focus on the value added piece from my perspective. How does it provide value without duplication, and allow moving forward our ecosystem approach to management.

Jim Ayers

- A lot of interesting perspectives, and critical thinking, about what we are doing for ecosystem-based management. Similarities in goals and objectives. But our good management processes are not seamlessly organized, nor are they constructed in a way that the public can really understand what we are doing. The public needs to understand what fishery managers are doing, and where we excel over other regions, especially considering change coming with climate, etc.. What is in the ecosystem, what do we do in it, how do we use our science to understand impacts to that ecosystem, and what are adaptive measures to address. What are objectives that we want?
- Was Stephanie Madsen that formed the ecosystem committee, got us talking about this. Discussion about annual state of the ecosystem. Did that with EVOS. These are resources that belong to the world, and there are people all over the country who would like to know what is happening there, and how is it being managed. Alaska has 50% of all the fishery resources in the USA. Major source of protein for indigenous people, US people, and other parts of the world too. Obligation of the Council to the country to have an annual state of the ecosystem, given that these resources belong to the world, and there are people all over the country who would like to know what is happening there, and how it is being managed.
- Regarding inadequate funding. This is an essential issue; think there are funding opportunities.
- So great opportunity, and imperative to move forward. Think need to describe the ecosystem, activities, and some climate change adaptive management options. Not threatening to industry, and in my view will be a benefit to industry. We can do a better job of setting up a framework that other people can look at, and having a process that engages the people, including indigenous people. Set objectives, including measureable ones, that set us up to make adaptive management decisions.

Persons in attendance included:

- Kerim Aydin
- Jim Ayers
- Ian Baker
- Merrick Burden
- Molly Dischner
- Jackie Dragon
- Tim Essington
- Diana Evans
- Raye Evrard
- Mark Fina
- David Fluharty
- Becca Robbins Gisclair
- Jeanne Hanson
- Ellie Humphries
- Scott Jackson
- Laura Koehn
- Mike Levine
- Stephanie Madsen
- Steve Marx
- Jeffrey Napp
- Ivonne Ortiz
- Colin Sayre
- Margaret (Megsie) Siple
- Wataru Tahoue
- Bill Tweit
- Ernie Weiss
- Stephani Zador