

Staff Paper: NPFMC Ecosystem Workshop Ideas

November 2020

At the October 2020 Council meeting, the Council expressed a continuing interest in understanding and evaluating the impacts of environmental change on Council management of sustainable fisheries, and engaging with stakeholders and coastal communities who are at the front lines witnessing those changes. In 2018, the Council held an Ecosystem Workshop that provided an opportunity for dialogue and exchange of ideas between scientists, managers, and stakeholders. The Council expressed an interest in perhaps convening another workshop at some point, and asked its Ecosystem Committee and Community Engagement Committee to think further and consider a path forward.

To assist with this conversation, Council staff have put together a short summary of ongoing initiatives that the Council already has underway relating to this discussion, as well as some questions to consider about next steps.

Ongoing Council Initiatives

Bering Sea Fishery Ecosystem Plan

The Bering Sea Fishery Ecosystem Plan (BS FEP) was adopted by the Council to be a guide for developing policy options and associated opportunities, risks, and tradeoffs affecting FMP species and the broader Bering Sea ecosystem in a systematic manner. The FEP operates at a strategic planning level, to provide a framework that can inform and prioritize fishery, habitat, and ecosystem research, modeling, and survey needs, and as such is intended to provide a bridge between ongoing ecosystem science and Council policy.

The Council's BS FEP Team is evaluating the ecosystem status reports that are presented to the Council, and developing a strategic Ecosystem Health Report to inform the Council and monitor the FEP's ecosystem objectives. This would be a different report from the tactical ecosystem status reports that support groundfish harvest specifications. The Council has also initiated two Action Modules under the FEP, which are specific analyses or research efforts initiated by the Council, with a defined scope and which are intended to inform (though not force) actions that could be utilized in management. Taskforces that include both agency and external experts have been formed for each Action Module, and these are described below.

BS FEP LKTKS Taskforce

The Council has tasked the Local Knowledge (LK), Traditional Knowledge (TK), and Subsistence (LKTKS) Taskforce to develop protocols that identify, analyze, and incorporate LKTKS information into the Council's existing decision-making process. This Taskforce is considering how to integrate LK or TK observations related to ecosystem changes into the Council's process. Thus far, the Taskforce envisions its protocols containing guidance that is relevant for identifying, analyzing, and incorporating both ecosystem and fishery-specific LK and TK.

BS FEP Climate Change Taskforce

The Climate Change Taskforce was initiated to provide a synthesis of anticipated short to long-term climate change impacts on the Bering Sea ecosystem, including fish, protected species, fisheries, and coastal communities, and an evaluation and recommendation for management actions. The overarching goal for the taskforce will be to assemble information from recent ongoing and completed climate change efforts, present synthesized results to the Council and other stakeholders for feedback, and work with the Council and stakeholders to develop climate resilient management tools and policies and a plan for their implementation and evaluation. The end product is a synthesis and proposed Climate resilient fisheries report (e.g., “Bering Sea Fisheries and Climate Change Assessment Report”). The report will specify short-, medium-, and long-term management actions to build climate resilience in regional fisheries and fishing communities. The report will identify knowledge gaps, information requirements, and technological needs that should be addressed in order to promote resilience and adaptation to climate-induced changes.

Community Engagement Committee

The NPFMC Community Engagement Committee is an ad hoc committee established to develop recommendations on ways that the Council can improve its engagement with rural and Alaska Native communities. The committee is preparing its final report to be presented to the Council at the February 2021 Council meeting. Recommendations from the Community Engagement Committee may assist the Council as it engages rural and Alaska Native communities to plan and implement future workshops.

Although still being drafted at the time of this writing, the Community Engagement Committee recommendations include mechanisms to affect the inclusion of traditional and local knowledge in the Council process, increase the understanding of local or traditional knowledge at the Council staff and Council member levels, and including the Council in development of knowledge that includes local and traditional understanding of ecosystems and potential impacts to them. Specific recommendations will be provided to the Council in February 2021, after they have been reviewed and approved by the committee. Draft suggestions are listed below:

- Addition of a Tribal and Rural Community Liaison on Council staff
- Co-presentation from Tribal representatives on all agenda items;
- Establishment of a standing Community Engagement or Tribal Advisory committee;
- Council engagement in NMFS’ Tribal Consultation process;
- Modifying public comment procedures at Council meetings;
- Travel support for rural and tribal representatives;
- Increased presence of Council members in rural communities;
- Measuring effectiveness of Council engagement efforts;
- Continuing Council outreach programs;
- Oral and written public comment at Council and advisory meetings;
- Recording all Council and advisory body meetings;
- Cultural awareness training for Council members, staff, and partner organizations;
- Council recognition of co-produced knowledge;
- Recognizing Tribes as governments throughout the Council process.

Ecosystem Committee

The NPFMC Ecosystem Committee was established by the Council in 2006 to provide advice to the Council, serve as an educational forum, interact with the groundfish Plan Teams, and provide advice to the Council regarding ecosystem-based fishery management in the North Pacific. Initially the Ecosystem Committee was involved in: defining and proposing guidelines for ecosystem-based management in Alaska, defining the role of the Council in ecosystem-based management structures, and coordinating with NOAA and other organizations regarding ecosystem-based management. The Ecosystem Committee was also instrumental in the development of the Aleutians Islands Fishery Management Plan, and the Alaska Ecosystem Forum. Recently, the Ecosystem Committee has been heavily involved in the development of the Bering Sea Fishery Ecosystem Plan, including the taskforces identified above. The Ecosystem Committee has also provided a forum for introduction and discussion of ecosystem-related information from agencies and Alaska Native communities and governments. The Council recently requested that the Ecosystem Committee take a long-term view of how the Council could take a leadership role in the continuing evolution of ecosystem-based management. The Ecosystem Committee may be able to provide recommendations to the Council as it develops plans for future ecosystem workshops.

Related AFSC and other initiatives

The **ecosystem status report (ESR)** is produced annually by the AFSC in conjunction with the SAFE reports. The goal of the ESR is to provide ecosystem context for tactical fisheries management decisions. ESRs are organized by management region (large marine ecosystem or LMEs) with separate reports for the EBS, AI and GOA. The ESR provides information on indicators of ecosystem status, trends and ecosystem-based management performance measures. Each year the ESRs are augmented with new contributions and continue to evolve as information becomes available. Each ESR contains an ecosystem assessment, which summarizes and synthesizes climate, biological, and fishing effects (and possible future effects) in each area from an ecosystem perspective. This assessment ties together the myriad indicator data into a narrative of the current and likely future ecosystem state, including information based on new or unexpected observations that may have implications for groundfish management. In addition to the ecosystem assessment, ESRs include report cards which provide a succinct summary of the state of the ecosystem based on a short list of ecosystem indicators. Together, these reports provide context for ecosystem-based fisheries management in Alaska.

The development of **ecosystem and socioeconomic profiles (ESP)** is an AFSC initiative that provides a standardized framework to facilitate the integration of ecosystem and socioeconomic factors within the stock assessment process and provides context for operational use in quota setting. ESPs, like stock assessments, go through Plan Team and SSC review, and are included in SAFEs. ESPs are stock-specific, and have been developed or are in development for several stock assessments thus far including sablefish, GOA pollock, EBS cod, GOA cod, Saint Matthew Island blue king crab and Bristol Bay red king crab.

Both ESPs and ESRs may inform stock assessments. In contrast, the **risk table** (in which scores are done by the assessment author) categorizes information not used in the stock assessment model, and if specific information is already accounted for in the model, it should not be double counted as “high risk” in the risk table. The goal is that over the long term, more information will be included in the assessment.

Eventually, there will be examples of enhanced ESPs with more advanced analyses for the data rich or high priority stocks.

An ongoing, multi-disciplinary ecosystem modeling partnership that is largely led from the AFSC is **ACLIM 2.0: the Alaska Climate Integrated Modeling Project Phase 2: Building Pathways to Resilience Through Evaluation of Climate Impacts, Risk, and Adaptation Responses of Marine Ecosystems, Fisheries, and Coastal Communities in the Bering Sea, Alaska**. This second phase is just getting started, with the primary objective of the project to promote climate-resilient fisheries and coastal communities in the Bering Sea through actionable, integrated scientific advice to support climate-informed ecosystem-based fisheries management. Specifically, the project aims to address 4 main pressing issues related to climate change and the Bering Sea:

- Issue 1. Challenges to groundfish management arising from changes to species distributions and uncertainty about novel interactions in the NBS.
- Issue 2. Impacts of interacting changes in ocean conditions, circulation, and chemistry on shellfish and groundfish stocks.
- Issue 3. Novel challenges that may arise from shifting distributions (issue 1) and changes in productivity (issue 2) on protected species, subsistence resources, fishery interactions, and bycatch risk.
- Issue 4. Climate-driven changes in ecosystem structure and carrying capacity may require re-assessment of current management approaches and combined management and ecological responses may differentially impact stakeholders and coastal communities.

The Joint ICES/PICES working group on **Integrated Ecosystem Assessment (IEA) for the Northern Bering Sea-Chukchi Sea (WG44)** is a multi-year initiative with an international group of scientists and researchers whose objective is to produce an IEA of the Northern Bering/Southern Chukchi Sea while building equitable and collaborative relationships with Indigenous Peoples and researchers in the region. The IEA will include Indigenous perspectives and Indigenous knowledge in Indigenous voices such that the reports produced during this WG effort educate readers about the ways in which Indigenous Peoples are part of the ecosystem.

Discussion questions for Council regarding next steps

1. What was successful in the first workshop that you would like to repeat, or what was lacking in the first workshop that you would like to see come out of the 2nd workshop?
2. What are the Council's objectives for another NPFMC Ecosystem Workshop?
 - What are you looking for from a workshop? E.g., understand the state of science, understand perspectives in order to develop policy, coordinate with partners, get input from and dialogue with stakeholders (fishermen and communities), extend outreach about Council priorities and interest? Or begin to develop management outcomes for fishermen and communities that respond more rapidly to environmental change?
 - What information is now missing that another workshop could provide, and how could that information be used in the Council's decision making process?
 - There are at least three ways for seeing the purpose of a second ecosystem workshop related to engaging stakeholders: 1) Is the purpose to provide an opportunity for

meaningful **input** from communities, Tribes, and others who are concerned about the climatic future of the North Pacific? 2) Is the goal to provide a space to have a **two-way dialogue** between Local and Traditional Knowledge holders and western scientists about ecosystem observations? 3) Is the purpose of the workshop to **identify** ways that alternative forms of knowledge such as Local and Traditional Knowledge could be incorporated into the Council's process?

3. Type of workshop will differ based on primary goal
 - Opportunity for dialogue (information exchange, building a shared context, understanding perspectives)?
 - Action -oriented (Council response to specific facts or situation, tangible reactions to given scenarios (eg MSE output), workshopping of management responses?)
 - Note this approach is a much bigger task than the former: more prep work, more buy in, links directly to results of ongoing work
4. Given ongoing initiatives, when are conditions right for another NPFMC Ecosystem Workshop?
 - Should the workshop be more general in nature, or keyed to one or more of the Council's or NMFS' specific initiatives?
5. When the time is right, what is the best way to meet the Council's objectives?
 - The purpose of the workshop, and the level of urgency the Council and its committees assign to it, will determine whether it should occur in-person or virtually in light of the global pandemic. There are tradeoffs: in-person (face to face dialogue, hallway conversations) vs zoom (opportunity for widespread access, less individual input).
 - Who should be involved in organizing the workshop? Ecosystem Committee? Steering committee (who?)
 - What is the role of stakeholders in the workshop? Steering committee or just participants?
 - The Council's request to evaluate options for a second ecosystem workshop is responsive to public comment, and it may be appropriate for representatives from tribes, Alaska Native Organizations, or communities to be appointed to the Steering Committee.