



Ecosystem Committee

REPORT

January 26, 2021 9am – 3pm via web

The North Pacific Fishery Management Council's Ecosystem Committee (ECO) met on January 26, 2021 via the web. The agenda included an update from the December 2020 Council meeting, discussion of the BSAI FEP and Climate Change Task Force, an update on the 2020-2023 Alaska Deep-Sea Coral Research Initiative, EBFM Operationalization at the AFSC, best practices to prevent marine invasive species on fishing vessels, planning for the next ecosystem workshop, and future ECO planning. The [agenda](#) is available online.

Committee Members in attendance:

Bill Tweit (Chair)
Stephanie Madsen
David Fluharty
Gretchen Harrington

Jeremy Rusin
Jim Ayers
John Iani
Rose Fosdick

Theresa Peterson
David Benton
Steve MacLean (NPFMC)

Others in attendance:

Anne Marie Eich
Baine Etherton
Bridget Gerriss
Chris Tran
Diana Stram
Ernie Weiss
Ivonne Ortiz
Jerry Hoff
Jim Ianelli
Jon Warrenchuk
Kalei Shotwell
Kelly Gates
Kirstin Holsman

Mellisa Johnson
Michael LeVine
Nikhil Das
Pat Malecha
Raychelle Daniel
Seanbob Kelly
Staphani Zador
Steve Kasperski
Terry Haines
Vanessa Lowe
Dawn Winalski
Erin Fedewa
Joe Krieger

Megan Williams
Molly Zaleski
Nicole Kimball
Sara W
John Olson
Heather Coleman
Pam Goddard
Tom Hourigan
Allison Whitman
Dana Hanselman
Kate Haapala

Others may have also been in attendance and signed in with partial names or only with phone numbers.

Council meeting summary

Committee chairman Tweit summarized Council action from December 2020 regarding the ecosystem committee's recommendations to the Council. The Council approved the committee's recommendations to form a steering committee for the next ecosystem workshop, and approved the appointment of Bill Tweit, Rose Fosdick, and Stephanie Madsen to the steering committee. The steering committee has not yet met. The council also approved the ecosystem committee's recommendation for future work for the committee, focusing on ecosystem changes in the Gulf of Alaska and coast-wide issues such as climate

change impacts on forage fishes and, in response to a recommendation from the Council, determining whether the Council could have any role in addressing increasing levels of marine debris in the northern Bering Sea. The committee also heard a summary of the recommendations for the Council proposed by the Community Engagement Committee to improve the Council's engagement with rural and Alaska Native communities.

Bering Sea FEP Team and Climate Change Task Force update

Bering Sea FEP Team

The committee received a report from Diana Evans and Dr. Kerim Aydin about the Bering Sea Fishery Ecosystem Plan Team meetings from 2020.

Ms. Evans and Dr. Aydin summarized the March 2020 FEP Team meeting, focusing discussion on the development of research priorities for the FEP Team, and development of an Ecosystem Health Report Card, as recommended by the SSC 2019. Committee members questioned whether the development of research priorities was at a high, general level or whether specific research topics have been identified by the team. Committee members also had questions about how research priorities are forwarded to other agencies and funding bodies, and how progress toward implementing or completing research tasks is monitored. Ms. Evans replied that the priorities from the FEP Team are broad-level recommendations and not specific priority topics. They are designed to be considered by the SSC and Council as they develop research priorities through the normal Council process. Tracking progress toward completion remains a priority for the FEP Team.

The committee asked whether there is opportunity for the committee to review and comment on the research priorities developed by the Team. Ms. Evans responded that the research priorities have been developed cooperatively by the FEP Team, and are presented for the benefit of the committee. They are not intended to be edited by the ecosystem committee and there is no opportunity to comment at this time, although Ms. Evans noted that the ecosystem committee may wish to identify their own list of research priorities for consideration by the SSC and Council.

In response to a question by the committee regarding the process for tracking the effectiveness of securing funding for Council identified research priorities, Ms. Evans noted that the FEP calls for establishing such a tracking process, but that there has been limited work done to date to set this process up.

The committee noted that there is a lot of fishery science experience but not specific fishery operational experience on the FEP Team. The committee asked about the transparency of the process to develop the Ecosystem Health Report Card, and specifically where input from the public takes place. Dr. Aydin noted that a small Ecosystem Status Report team at the AFSC has been engaged in a literature review of the hundreds of potential indicators that could be or are being tracked. The intention is to bring that sorted list to the FEP Team at its meeting planned for May 2021. The meeting and the remaining process to complete the Ecosystem Health Report Card will be an open review process where the public is invited to provide recommendations to the Team. Ms. Evans noted that there has been much discussion at the FEP Team about how to prepare the report card with input from the public and other Council advisory groups, and they continue to follow that open process. **The committee requests clarification whether that process includes an opportunity for the ecosystem committee to review and provide comment on the draft report card.**

Climate Change Task Force Workplan

The committee received an overview of the Bering Sea Climate Change Task Force (CCTF) Workplan from Dr. Kirsten Holsman and Dr. Diana Stram. The CCTF met virtually in December 2020 to develop the workplan with the goal to facilitate the Council's work toward climate-ready fisheries management

that helps ensure both short- and long-term resilience for the Bering Sea. The workplan identifies an iterative process of review and synthesis with three objectives, with proposed CCTF activities.

This is the first time the committee has seen a report from the CCTF, and the committee had a number of questions and some concerns about the three objectives presented. The committee noted that the CCTF is designed to dissolve after its work is completed, but noted that some of the recommendations involve annual actions or an annual process to provide information to the Council. The committee recommended to the authors that the document should be reviewed and edited to provide more clarity about how the process is intended to carry out in the future. Dr. Holsman and Dr. Stram responded that the CCTF is piloting a process to mainstream climate information into existing onramps into the Council process, and does not intend that the CCTF will have an unlimited lifespan. The intention is to develop a process that fits well within the current Council framework and will be effective without an extant CCTF. They both agreed that the workplan can be edited to ensure that point is clear.

The committee asked whether the Team envisions that its synthesis of information could be used for other purposes such as NEPA analyses. Dr. Holsman responded that the intention is that the information could be used for multiple purposes including other analyses and risk assessments and potentially for NEPA analyses.

The committee noted that there is a lot of work that is now happening regarding climate change, and expressed concern about overlap between the CCTF and other processes and the amount of time that it requires to be up to date on all of the initiatives. Dr. Holsman appreciated that feedback and expressed that the intention is that other climate change initiatives would feed information into the Council process rather than for the CCTF to be duplicating those efforts. The committee also expressed that the report language is fairly technical and may not be effectively communicating the CCTF plans to a general audience. Dr. Holsman recognized that the report still contains a lot of scientific jargon that may be difficult to understand and could be simplified to help clarify concepts like resilience and adaptation.

The committee noted that rural residents may be aware of immediate changes that are occurring related to climate change and questioned how those immediate changes are addressed or included in the CCTF workplan. Dr. Holsman acknowledged that immediate changes are an important piece to highlight in the workplan and places where those sorts of data can be integrated is important to highlight. She suggested that more frequent updates to the ecosystem committee will be important moving forward. **The committee agreed that more frequent updates are important and suggested that the committee receive updates at least two times per year, and more frequently if necessary or useful.**

The committee had some discussion about the objectives identified in the CCTF workplan. The committee was in general agreement for objectives 1 and 2 but did not reach consensus on objective 3. One committee member questioned how information is integrated into the Council process over time, especially once the CCTF has been disbanded. Some committee members acknowledged that the material was complex, and the presentation should be edited for clarity, but felt that objective 3 was an important piece of the overall work of the CCTF. **The general consensus of the committee was that the workplan should proceed and that the presentation and report should be edited to more simply communicate the intention of objective 3 and how information will be integrated into the Council process is intended to continue beyond the CCTF. The committee also suggested that as the CCTF would benefit from including industry participants to address some of the concerns that were raised by the committee. The committee also noted that the CCTF workplan and outcomes are valuable not only for the NPFMC, but it represents a cutting-edge approach to the science and management of fisheries under climate change and that the CCTF workplan could have national and international impact.**

To conclude, Dr. Holsman thanked the committee for their feedback and comments. She reiterated that objective 1 is primarily information gathering, objective 2 synthesizes that information, and objective 3 is the “heart” of how the information gets to the Council. Objective 3 is necessary for the Climate Change

Module to be successful. The CCTF is proposing a process to test, and iterative review of that process is essential. The discussion highlighted the need to add details about how that review happens. The CCTF co-chairs stated that they are looking forward to the next presentation and review to the ecosystem committee.

Deep-Sea Coral Alaska Research Initiative

Dr. Jerry Hoff (AFSC) provided a summary of the workplan for the Deep-Sea Coral Research Technology program Alaska Initiative for 2020-2023. The Alaska initiative is part of an eight-year national effort. The Alaska Initiative involves a year of planning (2020), two years of research (2021 – 2022), and a year to finalize the report (2023). The objectives of the plan are to support research that contributes to the conservation and protection of deep-sea corals and addresses management needs throughout Alaska. It focuses on research and collection of new information on deep-sea coral taxonomy, distribution, diversity and life history, and natural and induced habitat changes. Dr. Hoff presented a number of projects and partners that make up the science initiative. Projects include: 1) validation of coral and sponge distribution modeling in the Gulf of Alaska, 2) recruitment, reproduction and larval supply of Alaskan deep-water corals, 3) joint Canada-USA seamount exploration in the Eastern North Pacific, and 4) assessing the effectiveness of area closures for maintaining healthy deep-sea coral and sponge communities.

In response to a question about the value of the cooperative cruise between seamounts in Alaska and Canada, Dr. Hoff stated that the planned survey would examine seamounts between Alaska and Canada that have not been visited much, to collect data to evaluate the connectivity, isolation, biodiversity, etc. from drop camera video, eDNA samples, etc.

One committee member stated that there is a process at the North Pacific Fisheries Commission (NPFC) to close or prohibit fishing on seamounts outside of 200 nm in the GOA basin and asked whether there were plans to conduct any surveys outside the EEZ. Dr. Hoff responded that there are no such plans, and the deep water in the deep basin may be too deep to survey with equipment available to the program.

One committee member asked Dr. Hoff if new information regarding coral and sponge would be available to the Council and NMFS to inform future EFH reviews. Dr. Hoff responded that any new data and results would be available.

The committee was interested in plans to work with gear types other than trawl gear, and asked whether the program is conducting cooperative research while the sectors are fishing or through an EFP outside the fishing season, and whether the program would look at traditional fishing grounds and how those areas compare with closed areas. Dr. Pat Malecha, one of the PIs for the validation project, responded that the plan is not complete yet, but they plan to deploy cameras first on the NOAA longline survey to see how much the line moves and how it interacts with the seafloor and invertebrates. They hope to expand to pot gear collaborating with the ADF&G sablefish survey but have not yet developed plans to collaborate with industry.

The committee noted that the Council has in the past closed much of the area in the EEZ to protect deep-sea corals. They noted that the closed areas do not seem to be part of this work, but stated that including the closed areas would be valuable to understand the context of the planned research, and to provide information to the Council about whether those closures are effective. Dr. Hoff stated that the program plans to examine closed areas in shallower water, but does not have access to the equipment necessary to survey deep water areas, below 1000 m.

The committee expressed their appreciation for the information and encouraged the program to consider collecting information from outside the EEZ to reflect the needs of the parties to the NPFC.

EBFM Operationalization at AFSC

Dr. Kalei Shotwell (AFSC) presented information about the Ecosystem and Socioeconomic Profiles (ESPs) developed at the AFSC. The ESPs are a standardized framework that facilitates the integration of ecosystem and socioeconomic factors within the stock assessment process and acts as a proving ground for use in management advice.

The committee asked if information that gets into the ESP is peer reviewed in the same ways as other documents and information used in the Council process. Dr. Shotwell explained that the ESPs receive scientific review along with the SAFE documents. The ESP is presented to the Plan Teams when the stock author provides their assessment. There is also an internal review process for ESPs and SAFE reports. Dr. Shotwell also stated that when the Center for Independent Experts (CIE) reviews a particular stock assessment, any ESP associated with that stock would also be reviewed.

The committee asked how the Preview of Ecological and Economic Conditions (PEEC) overlaps or does not overlap with the ESPs, as both have onramps for early information about ecosystem processes. Dr. Shotwell explained that PEEC provides an early look at what is happening in the ecosystem as a whole, while the ESPs would use that information in consideration of the particular stock for which the ESP is prepared.

The committee asked whether the dashboard, described in Dr. Shotwell's presentation, was a resource available to the public. Dr. Shotwell explained that the dashboard was not public facing but intended for use by stock authors and others in AFSC because some data presented in the dashboard are confidential. Dr. Shotwell stated that there is a template for an outward facing reporting page that will summarize data that are presented on the dashboard to address issues of confidentiality.

The committee also expressed interest in the EBM working group described in the presentation and asked if there is a way for the committee to get more information. Dr. Shotwell responded that the working group is just getting underway, but she could provide updates to the committee as their work progresses.

The committee asked whether subsistence information or information from community members is part of the ESP process, and whether the ESP team has had opportunity to speak with the community engagement committee about how local information can be evaluated in the assessment. Dr. Shotwell responded that all information is welcome, particularly local and subsistence information and information on how to engage with local communities. Dr. Shotwell stated that information from indigenous communities comes largely from the Annual Community Engagement and Participation Overview (ACEPO) report. The ESP program is not set up to gather firsthand information and must rely on existing programs to get information. One committee member stated that using data collected for a different program might invite a gap in communication. Dr. Shotwell responded that she could talk with community members about closing any communication gap, and to increase communication about how the ESP team fits into the process.

The committee asked whether ESPs are done in other regions, and what species are next for ESP development. Dr. Shotwell explained that the ESP program is unique to Alaska, but there has been interest from other regions about what is being done. Interest has come from the Pacific Islands, Northwest, and Northeast Science Centers. The ESP program started in 2017 with sablefish, ESPs for Eastern Bering Sea pollock and Atka mackerel are being developed.

The committee reiterated its interest in the development of ESPs, and for continued communication from the EBM working group. The committee looks forward to the next update from the ESP team and for information about how its feedback can be most useful.

Marine invasive species

Ms. Linda Shaw presented information on best practices to prevent aquatic invasive species from spreading due to biofouling on commercial fishing vessels. Globally, 55-70% of non-native species are established after spread by biofouling. In Alaska, the colonial tunicate *Didemnum vexillum* (D. vex) is established in Sitka, and the European green crab (*Carcinus maenas*) is established on Haida Gwaii and could spread to Alaska. Best practices to prevent the spread of marine invasives from biofouling of commercial fishing vessels include cleaning the hull and niche areas before moving between regions, cleaning and drying fishing gear and mooring equipment, maintaining anti-fouling paint integrity, disposing of bait and fish waste on land, and hauling out vessels when not in use.

The committee suggested that the marine invasives program should reach out to United Fishermen of Alaska to communicate best practices to commercial fishers throughout Alaska. UFA conducts webinars for members, and this presentation would be a good fit for their webinar series. The committee also suggested that Fish Radio would be a good outreach venue.

The committee also suggested that a way to track vessels at higher risk of spreading invasives, such as those that travel from Kodiak to California for the squid fishery, would be useful.

The committee noted that with climate changes and an opening of Arctic shipping lanes there is increased potential for the spread by commercial shipping vessels of marine invasives into the Arctic, and in ports where vessels transiting the Arctic lanes visit. Ms. Shaw agreed, and noted that Dutch Harbor is a high risk area for marine invasives because of the risk from shipping. She noted that there are international efforts to address risks to the Arctic, including the Arctic Strategy Plan and new efforts to coordinate NOAA work including work in the Arctic.

The committee commented that globally, marine invasives are seen as a large threat to marine ecosystem integrity, but noted that there was not information about impacts of marine invasive species in Alaska in the ESP presentation. The committee asked about what kinds of data could be provided to EBM scientists for their assessments. Ms. Shaw responded that there are some studies that provide habitat suitability projections with and without climate change projections and marine invasives. Some projections have been done for Alaska that address expansion of marine invasives. Ms. Shaw also stated that data from elsewhere could inform assessments of how invasives might impact Alaska.

The committee recommended that the marine invasives presentation should be presented to the Council and encouraged the program to conduct outreach through UFA to reach smaller vessels that might not participate at the Council level.

Ecosystem Workshop

The committee had some discussion about planning for the next Council State of the Ecosystem workshop, and noted that the Council approved developing a steering committee with three committee members appointed. The committee felt that the logical next step is for the steering committee to meet and consider needs for other steering committee members and then begin the process of planning. The committee felt that meeting in person rather than virtually is preferable, and acknowledged that this would likely mean a workshop in late 2021 or early 2022.

The committee recommended that the steering committee meet soon and begin planning for the state of the ecosystem workshop.

Future Ecosystem Committee work planning

The committee noted that this meeting was a catch-up meeting with some agenda items that have been on the plans for some time. Other committee agenda topics have been approved by the Council, and regular agenda items including updates on northern fur seal research and management, FEP development, marine

debris, and operationalization of EBFM should be scheduled for the committee. The committee acknowledged that although they had recommended meeting twice per year, the amount of work identified likely necessitates more than two meetings per year. Assistant Regional Administrator for Habitat, Gretchen Harrington, suggested that the committee might also be interested in receiving and update on development of species distribution models that the committee heard about in 2019.

The committee recommended that the committee chair and Council staff schedule a time to identify a list of priority agenda items and ideas, and schedule a committee meeting with the sole agenda item to review the agenda issues and develop a workplan for the committee. The committee requested that the next meeting occur soon to continue momentum on issues including the marine debris issue that the Council tasked to the committee.

The committee chair adjourned the meeting at 3:04 pm.