

**North Pacific Fishery Management Council Ecosystem Research Workshop**  
**February 7<sup>th</sup>, 2018 • Seattle, WA • Renaissance Seattle**

**Final Agenda**

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**Workshop context**

The marine ecosystems of the Alaska region and the fisheries managed by the North Pacific Fishery Management Council (NPFMC) will be significantly impacted by changing environmental conditions. NOAA Fisheries' Alaska Fisheries Science Center (AFSC) and the broader scientific community are undertaking efforts to understand the impacts of climate change on Alaska's ecosystems, the fisheries, communities, and subsistence lifestyles they support, and the robustness of the management framework with respect to long-term environmental shifts. This knowledge is incorporated into the Council's decision-making through existing processes as well as new processes under development, such as the forthcoming Bering Sea Fishery Ecosystem Plan.

**Workshop goal and objectives**

The Council is convening this workshop with the goal of engaging the broader Council community, including Council members, scientific and industry advisors, and stakeholders, in a discussion about how the growing body of ecosystem knowledge can be incorporated into the Council process. Specifically, this workshop will:

1. Provide all participants with a baseline understanding of the potential impacts of climate change on the region's ecosystems and managed fisheries, and efforts at the regional, national, and international levels to understand, anticipate, and respond to these changes.
  2. Provide updates on key efforts by the Alaska Fisheries Science Center to provide the Council with information and tools that can support management under changing environmental conditions, and identify opportunities for the Council community to provide input.
  3. Explore examples of the management challenges associated with changing resource conditions, and the information and tools that can help the Council and its stakeholders understand and respond to these changes.
  4. Identify potential next steps and opportunities for the Council community to stay informed of and provide input into scientific efforts, and consider how this knowledge can be incorporated into Council processes.
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**Main meeting room: Madison Ballroom**

**7:30 – 8:00 am      Nametag pickup**

*Nametags and breakout assignments provided for Council, Scientific and Statistical Committee (SSC), Advisory Panel (AP) and Ecosystem Committee (EC) members. Members of the public are welcome to attend and will not be assigned to breakouts.*

**8:00 – 8:15 am      Welcome and introductory remarks**

- Dan Hull, NPFMC Chair
- Katie Latanich, Fisheries Forum

**8:15 – 9:30 am      Workshop context and purpose**

- Anne Hollowed and Kerim Aydin, NMFS/AFSC
- George Hunt, University of Washington, NPFMC SSC
- Participant perspectives and discussion

Discussion:

- What’s working well? What makes the Council process well equipped to integrate ecosystem knowledge and respond to changing conditions?
- What can the Council community be doing more effectively to stay informed of ecosystem research, provide input, and integrate this knowledge into Council processes? What are the opportunities and challenges that should focus this group’s discussion?

**9:30 – 9:45 am      BREAK**

**9:45 – 11:30 am      Climate science and frameworks**

- Using ecosystem indicators to inform fisheries management – Stephani Zador, NMFS/AFSC
- The Alaska Climate Integrated Modeling Project (ACLIM) – Kirstin Holsman and Steve Kasperski, NMFS/AFSC
- Q&A and discussion

Discussion:

- Ecosystem indicator information has been incorporated qualitatively into fisheries management to effectively inform harvest quota deliberations, most recently for Gulf of Alaska Pacific cod. Should this process be formalized? If so, how?
- What feedback can the Council community provide to help inform the socioeconomic modeling component to ACLIM? How does this feedback enhance the model’s capabilities?
- How might ACLIM support managers’ ability to anticipate "cliff-edges" and adapt and minimize the impacts of change? How much lead time would management need to adjust to change (1 year warning, 5 year warning, 20 year warning)? What steps could the Council community take toward identifying management actions and tools to test?

**11:30 – 1:00 pm      LUNCH**

**1:00 – 3:15 pm      Management challenges** (presentations followed by breakout discussion)  
*Council, SSC, AP, and EC participants will be divided evenly and assigned to breakout groups. Members of the public may join any group.*

- Implementing an ecosystem approach to fisheries management: Gulf of Alaska Pacific cod - Steve Barbeaux, NMFS/AFSC
- Progress and prospects for predicting distribution shifts under ecosystem and climate changes - Jim Thorson, NMFS/NWFSC

**Breakout discussion:**

- How can scientists, managers and stakeholders respond to indications or projections of changing resource conditions? What are the potential opportunities—as well as the limitations or concerns—involved in using this information proactively?
- What are examples of the “ripple effects” that can result from changing resource conditions (e.g., impacts to stakeholders, shifts in effort, intersections with other management measures and Council priorities)? How can the Council community anticipate and account for these interactions?
- Does the current management framework provide the Council and stakeholders with the flexibility to handle these changes well?

**3:15 – 3:30 pm      BREAK**

**3:30 – 4:15 pm      Opportunities and next steps** (breakout discussions by role)  
*Four breakout sessions will be provided: 1) Council, 2) SSC, 3) AP, 4) Fisheries and ecosystem science. Council, SSC, and AP members will be assigned to their respective groups. EC members and members of the public may join any group.*

**Discussion:**

- Revisiting this morning’s discussion: What can the Council community be doing more effectively to stay informed of ecosystem research, provide input, and integrate this knowledge into Council processes? Have today’s discussions reinforced or changed your perspective?
- What next steps would you be interested to see the Council community explore in response to workshop discussions? (“Next steps” could include specific, actionable ideas as well as general questions, conversations to continue, etc.)

**4:15 – 4:30 pm      BREAK**

**Meeting room change: South Room**

**4:30 – 5:15 pm      Where do we go from here?**  
*Note: A thorough synthesis of workshop discussions will be provided during the staff tasking session on Monday, February 12th, and a detailed written summary will be available later this spring.*

Moderators: Fisheries Forum staff and Bill Tweit, NPFMC Vice Chair

**5:15 – 5:30 pm      Closing remarks and workshop follow-up**  
 Dan Hull, NPFMC Chair