



IN CONJUNCTION WITH FEB 2023 NPFMC
MEETING, SEATTLE, WA

OPPORTUNITY FOR PUBLIC INPUT FOR SSC WORKSHOP

Rapid change in the northern Bering and southern Chukchi Seas: Identifying ecosystem responses and effects on the management of Federal fisheries

INPUT NEEDED ON THESE CORE QUESTIONS

1. What do we know about the current and near-term future environmental and ecological states of the northern Bering Sea and southern Chukchi Sea?
2. What data do we need to collect and monitor in the northern Bering Sea and southern Chukchi Sea to support ecosystem-based fishery management of species in the Bering Sea Fishery Management Plans?
3. Science to Management: what tools do we have or need to apply these data to management of Bering Sea fisheries?

Following the workshop, the Council will consider the SSC's recommendations at a future meeting (tentatively April 2023) and communicate its strategic needs for fishery management in this region, during which there will be opportunities for the public to provide advice on the Council's strategic direction.

OBJECTIVES

The North Pacific Fishery Management Council's Scientific and Statistical Committee (SSC) is holding a workshop during the February 2023 Council meeting. The workshop is focused on rapid ecosystem changes in the northern Bering Sea and southern Chukchi Sea. Given recent extreme environmental events in the region, the Council has a need to understand how resilient fisheries management will be to these changes. The workshop will consider how species that are currently managed under the Bering Sea Fishery Management Plans will respond to environmental changes and the potential socioeconomic and cultural impacts on those fishermen, communities, and Tribes who rely on these marine resources.

The purpose of the workshop is to identify the science and monitoring requirements for supporting future Council decision-making under increased uncertainty. The workshop will include an exploration of proactive approaches for achieving management goals in a changing environment, and an assessment of how existing frameworks may or may not be able to address ecosystem variability.

While this workshop is primarily for SSC members to consider and make recommendations to the Council, the SSC desires public input and feedback on the important management questions that should be considered during the workshop. To this end, the SSC is asking you to help answer these questions from your perspective. Written public comments can be submitted ahead of the February workshop at this site: meetings.npfmc.org/Meeting/Details/2967. There will also be brief public comment periods each day during the workshop.



North Pacific Fishery Management Council

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DRAFT SSC WORKSHOP AGENDA

Rapid change in the northern Bering and southern Chukchi Seas - Identifying ecosystem responses and effects on the management of Federal fisheries

February 7-8, 2023, Courtyard Ballroom, Renaissance Hotel, Seattle, WA

February 7, 1:00 PM – 5:00 PM

- **What do we know about the current state and near-term future environmental and ecological states of the northern Bering Sea and southern Chukchi Sea?** This session will include a series of presentations and some discussion on the current state of this region. Invited presentations will focus on:
 - The physical Environment of this region including oceanography, climate trends, and extreme event expectations.
 - Lower trophic level response to change from phytoplankton, zooplankton, epibenthic invertebrates, and forage species considering also benthic-pelagic coupling.
 - Upper trophic level response to change including seabirds and marine mammals.
 - Commercial species response for key species where we have information on habitat, movement, or production shifts.
 - *Open discussion: what else should the SSC consider to address Council goals?*

February 8, 8:00 AM – 5:00 PM

- Moderated discussion from day 1 on gaps in understanding, priority focal areas or species, or actions needed.
- A presentation on incorporating climate predictions into ecosystem response predictions. This will include the Alaska Climate Integrated Modeling project and the Climate Ecosystem Fisheries Initiative led by NOAA.
- **What data do we need to collect or monitor in the northern Bering Sea and the southern Chukchi Sea?** The intent in both regions is focus on supporting the Bering Sea Fishery Management Plans. This will be a SSC discussion to include:
 - Resource surveys.
 - Biological information (e.g. early life history, distribution, growth, species interactions) on commercial species.
 - Other ecosystem information (ocean conditions, prey availability, seabirds and marine mammals).
 - Sources of knowledge from communities and industry (including local knowledge, traditional knowledge, and subsistence information).
- **Science to management: what tools do we have or need to apply these data to management of Bering Sea Fisheries?** Building on the [7th national meeting](#) of the Scientific Coordination Subcommittee (SCS7) established by the Council Coordination Committee, presentations and discussion will focus on:
 - Tools for addressing non-stationarity in harvest control rules and fisheries management.
 - Dynamic reference points.
- *Open discussion: what else should the SSC consider to address Council goals?*