

## Introduction to Climate Scenario Planning

**Prepared for the NPFMC Climate Scenarios Workshop, June 5-6 2024  
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Climate change is already impacting Alaska's marine ecosystems and federally managed fisheries, and the Council is taking steps now to build climate readiness and resilience into the NPFMC process. In June, the Council will convene a Climate Scenarios Workshop (CSW) to generate short- and long-term ideas for management approaches and tools to improve climate resiliency of federally managed fisheries in the North Pacific. More information about the [workshop](#) and how the public can participate is available on the Council website.

Leading up to the workshop the Council will host three interactive virtual discussions to begin exploring the questions and concepts participants will discuss at the meeting. The third of these sessions (tentatively scheduled for May 14, 2024 at 1pm AK) will focus on scenario planning and include an introduction to the scenarios that will be discussed at the workshop. More information on the dates, times, and topics for these virtual discussions will be available on the Council website and meeting calendar.

### Why use scenario planning?

Preparing for the impacts of climate change requires planning for a wide range of possible futures and not just the future we think is most likely. Scenario planning is a multi-step process that involves developing multiple, equally plausible scenarios or storylines about the future, and taking a structured, participatory approach to consider the implications. Scenario planning is a tool used in many settings, including business and natural resource management, and has been used by other regional fishery management councils.<sup>1</sup>

The Council's Climate Scenarios Workshop will use climate scenario planning to explore ideas for building climate resilience and readiness in an uncertain and unpredictable future. At the meeting participants will discuss hypothetical scenarios, consider the implications for managers, scientists, fisheries, and communities; and identify steps the Council could take to build resilience and meet management objectives across a range of possible futures.

### How were scenarios developed for the Climate Scenarios Workshop?

The 2-4 scenarios or "stories" discussed at the workshop will include short narratives and visuals. These scenarios are meant to be plausible and help us think about 'what *could* happen,' and are not meant to be predictive (what *will* happen?). While the stories themselves are simple, they are rigorously grounded in scientists' understanding of what the future could look like based on a range of climate projections.

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<sup>1</sup> For more information on the use of scenario planning in other Council processes: [Pacific Council Climate and Communities Initiative](#), East Coast [Climate Change Scenario Planning](#) (joint initiative of New England, Mid-Atlantic, and South Atlantic Fishery Management Councils, NMFS, and Atlantic States Marine Fisheries Commission)

*The scenarios are based on quantitative climate projections.*

While we know climate change will increasingly impact North Pacific fisheries, the extent of these impacts depends largely on factors that are outside of the Council's control, particularly global trends in CO2 emissions and warming. The scenarios discussed at the workshop are adapted from future global emissions scenarios developed by the climate change research community and adapted to the Alaska region.

*The scenarios are based on two key uncertainties identified by the Council community.*

Scenario planning exercises typically utilize scenarios defined by two key areas or axes of uncertainty. The scenarios that will be discussed in June are based on two areas of uncertainty identified by the Council's Bering Sea Fishery Ecosystem Plan Climate Change Task Force (CCTF), and presented to the SSC and Council in December 2023. These key uncertainties are:

1. Future conditions (including climate, ecosystem, markets, etc.) may be generally *more predictable or less predictable*.
2. In the future, fisheries management may be more focused on *single-species management*, or *cross-sector coordinated ecosystem-based management and multi-species management*.

*The scenarios were refined with input from different disciplines and ecosystem regions.*

These scenarios are modified from discussions stemming from the work of the CCTF over multiple years, underpinned by work from the Alaska Integrated Climate Modeling Project (ACLIM) team, broadened to include the Gulf of Alaska and refined by iterative input from the Council and its advisory bodies (SSC, AP, Ecosystem Committee).

*Each scenario includes similar ingredients.*

The scenarios that will be discussed at the the workshop provide different snapshots of the future, focusing on five elements:

- Global trends (e.g. development, population growth, global seafood markets)
- Climate trends (e.g., overall warming and specific impacts to Alaska regions)
- Management (e.g. management tools, priorities, approaches)
- Technology and information (e.g. investment in planning tools, predictive capabilities)
- Fisheries and communities (e.g. changes in productivity and distribution, adaptive behavior by fleets and communities)

*The time frame for these scenarios is not fixed.*

The scenarios are not meant to represent a set date in the future. The year is less important than the amount of change, which could be sooner under higher warming trends, or further in the future under lower warming.

**How will the scenarios be used at the workshop?**

The Climate Scenarios Workshop will include several breakout sessions, where participants will have in-depth discussions of individual scenarios. The discussion of each scenario will include

two parts. First, participants will reflect on what it might be like to exist in each future - for example, what are the causes for optimism and concern? What are the pressures facing fishery managers, fishery participants, and communities? Second, participants will reflect on what they might need from management, governance, and science in each scenario, and the tools, approaches, information products, sources, and other planning steps that could help support climate readiness.

### **How can the public participate?**

The public is invited to attend the workshop, either in-person in Kodiak or remotely using Zoom. Remote participants will participate in all-virtual breakout discussions. Pre-meeting materials will be made available to the public in May and will include the scenarios, discussion questions, and guidance on how participants can come prepared to share their ideas and experiences.