

Annotated Agenda
MAFAC Meeting – San Diego, California
May 31 – June 2, 2023

1. Title of Discussion: **Interdisciplinary Climate Science to Support Climate-Ready Fisheries**

2. Presenter: **Cisco Werner, PhD**
Director of Scientific Programs and Chief Science Advisor
Barbara Muhling, PhD
Project Scientist, Southwest Fisheries Science Center
Elliott Hazen, PhD
Research Ecologist, Southwest Fisheries Science Center

3. Objective/Purpose

Provide an overview of the integrated climate science work on the West Coast, the science challenges that NOAA Fisheries faces, and how we are working to prepare and address them to better serve our resource management needs through the NOAA Climate, Ecosystem, and Fisheries Initiative.

4. Background/Synopsis

NOAA Fisheries is facing growing challenges which affect trust resources, ecosystems, and NMFS management activities. As MAFAC members know, there is an urgent need to better prepare and respond to help promote resilience and adaptation of living marine resources (fisheries, protected species, habitats); commercial and recreational sectors and services, and resource-dependent communities.

Across our agency and across the country, we're confronting the challenge of understanding and mitigating the impacts of climate change on our coastal and marine resources while building healthier and more resilient ecosystems. Every day, NOAA Fisheries scientists are helping to answer key climate change-centered questions including what's changing, what's coming and how to respond. Their findings inform science-based management and conservation responses aimed at ensuring the health and diversity of living marine resources and the many people and communities that depend on them.

Future Seas is a physics-to-fisheries research project in the California Current System. It's a collaborative, interdisciplinary effort to explore potential impacts of climate change on U.S. west coast fisheries and to evaluate strategies for managing those impacts. It involves more than 30 researchers from NOAA and academic institutions.

The team is comprised of climate scientists, oceanographers, ecologists, economists, and social scientists working closely with fishers and fishery managers. Future Seas' scientists and researchers use dynamical, statistical, and conceptual models, combined in a framework to project physical, ecological, and socioeconomic change and to evaluate uncertainty in the models.

The Future Seas work is focused on pelagic species, fisheries, and ecosystems off the U.S. west coast, each of which involves a unique set of ecological and socioeconomic concerns.

Future Seas is funded by the NOAA Climate Program Office's Climate and Fisheries Adaptation (CAFA) program and the NOAA Fisheries Office of Science and Technology.

Dr. Cisco Werner, will open the session, and provide a short recap of the Climate and Ecosystems Fisheries Initiative, and the work underway to move from stock assessments to Climate-Ready Fisheries Management, and resources and funding it requires. This will lay the foundation for the next presentations by Dr. Barbara Muhling and Dr. Elliott Hazen. Dr. Muhling will provide an overview and examples of Future Seas work, and its major outputs; Dr. Hazen will discuss ways the SWFSC is working with partners to produce climate-ready information to be used in decision making for multiple stakeholders, and the role of Integrated Ecosystem Assessment (IEA) and Ecosystem Status Reports.

5. Action to be taken by MAFAC members:

Opportunity for discussion and questions. In particular, this session will help set the stage for MAFAC members and frame the conversation on Day 2, when the Climate and Ecosystems Subcommittee hosts two panels of external experts to discuss connecting climate science to management decisions, now and into the future, and explores what actions industry is doing.