



## Bering Sea Fishery Ecosystem Plan Climate Change Task Force Meeting Minutes (CCTF meeting 5)

January 18-20, 2022 and March 15-16, 2022

Adobeconnect: <https://meetings.npfmc.org/Meeting/Details/2853>

### Committee Members in attendance:

Diana Stram (NPFMC)	Brenden Raymond- Yakoubian (Sandhill Culture Craft)	Jeremy Sterling (NMFS MML)
Kirstin Holsman (AFSC)	Lauren Divine (City of Saint Paul)	Scott Goodman (NRC Associates)
Jason Gasper (NMFS RO)	Steve Martell (Sea State)	
Mike Levine (Ocean Conservancy)		
Todd Loomis (Ocean Peace LLC)		

### Members of the public, State and agency staff in attendance (all or part of meeting):

Jason Anderson	Nicole Kimball	Stephanie Madsen
Megan Williams	Teresa Peterson	Kerim Aydin
Michelle Stratton	Linda Behnken	Steve Marx
Rose Fosdick	Kendall Henry	

## Overview

The Bering Sea Fishery Ecosystem Climate Change Task Force met on January 18-20, 2022 and March 15-16, 2022 in a two-session working meeting to review the primary aspects of the Work Plan (approved in June 2021), schedule and milestones for CCTF work between now and 2025, and to develop a draft Climate Readiness Synthesis report for Council review.

### Objectives of CCTF Meeting 5 (parts 1 and 2)

The focus of the January meeting ([January CCTF mtg 5 part 1](#)) was to lay the groundwork for development of the Climate Readiness Synthesis and future planning while the March meeting ([March CCTF mtg part 2](#)) was to finalize the draft Climate Readiness Synthesis report for review in April<sup>1</sup>. Initial discussions in January included: MIRO board exercises and breakout groups and discussions of three potential case studies in the fisheries of pollock, snow crab and yellowfin sole. These case studies were discussed as an example exercise to identify connections, potential resilience and areas of concern. Following this, the CCTF elected to focus the next work product on preparing the first collating exercise (per Objective 1 of Work Plan to ‘*Evaluate the mechanisms and processes through which climate change information is currently included in the fishery management process, identify gaps, and help create opportunities to increase the inclusion of available information*’) into a Climate Readiness

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<sup>1</sup> The CCTF since decided that the Climate Readiness Synthesis report requires further development and will be available for review over the summer. See “Wrap up” section for more details on the next CCTF meeting and the Appendix for an update on the report progress and plans

Synthesis (CRS) report for Council review before addressing the utility and specific case studies to bring forward into the next steps of the CCTF working time frame at a subsequent meeting.

Per Council request in February, the CCTF in March was also asked to review the stakeholder-submitted EcoMatrix and provide comments accordingly.

### **Climate Readiness Synthesis (CRS) report:**

The CCTF in January identified three sections for the CRS report:

1. Management Overview
2. Knowledge Base Overview
3. SAFE report review for climate change information

The CCTF divided into 3 subgroups who worked during the January meeting and off-line between January and March to develop detailed outlines and draft sections of each report. During the March meeting each subgroup provided a progress report as well as identified hurdles, timing constraints and modifications in focus for discussion. Work then continued offline both after the adjournment of Day 1 with a progress update again on Day 2 as well as following the meeting to finalize the three sections and the CRS for Council review.

The subgroup assignments were as follows (noting that the CCTF, as a group, will finalize editing on all sections when completed):

1. Management Overview: Diana Stram, Jason Gasper, Mike Levine, Todd Loomis
2. Knowledge Base Overview: Brenden Raymond-Yakoubian, Lauren Divine, Steve Martell
3. SAFE report review for climate change information: Kirstin Holsman, Jeremy Sterling, Scott Goodman

### **Ecomatrix**

Development of EBFM-based concepts and tools related to climate change may assist the Council in meeting objectives of climate readiness and adaptation. The Council tasked the CCTF with conceptual review of a stakeholder-driven example of such a tool. Megan Williams (Ocean Conservancy) provided an overview of the EcoMatrix concept first presented in public testimony to the Council in December, and again in February. The concept is put forward by a coalition of Tribal, industry and NGO groups: ALFA, Aleut Community of Saint Paul, Ocean Conservancy, CBSFA, AMCC, Pew Charitable Trusts and Kawerek. The presentation to the CCTF is available on the CCTF eAgenda at: [EcoMatrix presentation to CCTF](#) and thus not summarized here. It was noted during presentation however that it is a proposed adaptation tool that is still in draft form and the selected indicators and content could still be modified moving forward by the proposers.

There was support for the idea as a concept, including the idea of bringing in more information to the TAC-setting process. Concerns and challenges were also noted, including connections between elements of the matrix, transparency, data selection methodology, the range of potential outcomes, how such a tool would be applied, the need to be management-relevant without being prescriptive, finding fit with the Taskforce's goal of suggesting process that can be handed off, and ensuring issues of ownership, certainty/uncertainty quantification, and traceability are addressed. Overall, the CCTF reviewed and supported the concept but not the adoption of it as a tool at this time. Some specific concerns noted by the CCTF included the following:

- General concern with how the matrix was constructed and the described consensus determination of connections and recommended management actions

- Potential overlap with already existing intent of stock assessment Ecosystem and Socio-Economic Profiles (ESPs). Currently these exist for EBS Pacific cod and Sablefish and are not limited to informing the ABC but to also provide additional information that may inform TAC-setting
- Concern that the implications as described rely on untested hypotheses, may contain misinformation and would benefit from additional transparency on clear authorship and context with cited studies to indicate context
- Concern that there is an established a formal scientific process for testing harvest control rules that is not consistent with this approach.

The CCTF feels that it would benefit from further development: and consideration of where it fits into the existing process. If this is simply a proposal to inform TAC-setting it could be brought forward separately by its authors during Groundfish specifications in December. While the CCTF did not endorse the adoption of this concept they thanked the proposers and presenter for working to create dialogue for how to incorporate qualitative and quantitative information to inform the development of management tools to address climate change. Should the proposers continue to address the concerns and feedback from the CCTF, the task force would be willing to continue to review this concept at a future meeting for more discussion.

Moving forward, the Taskforce will engage additional tools and ideas along these lines.

### **Future directions and considerations (Brainstorming Session)**

The CCTF discussed questions and considerations for the group at future meetings. This is in accordance with moving towards Objectives 2 and 3 of the work plan. In exploring those objectives, the CCTF will consider how to build the ability to be responsive and provide flexibility.

The Team discussed what paths are available now to address issues as they arise, such as taking emergency action and seeking disaster relief. The CCTF notes that these are available but also inherently inflexible and reactive and that a system that moves towards planned flexibility is desired. The CCTF also notes that current assessment tools, such as ESRs and stock assessments, are not necessarily designed to be long-term forward looking in terms of evaluating ecological and species-specific responses to a changing climate. Developing proactive tools and scenario planning processes to explore the implications of changing conditions is an important area of development work.

The CCTF noted that perhaps the Council process (and individual management actions when developed) should include considerations of how to respond to forecasts or unforeseen events and allow for greater flexibility built into the process from the beginning to allow for resilience and incorporate information that would allow for inherent dynamics, ecological or social systems to be preserved e.g. biological diversity or to increase or enhance diversity. Some participants noted that the Council CEC and LKTKS take in diverse knowledge systems and that the Council is working on enhancing engagement and outreach but that key aspects of community engagement should be included when considering climate change. They noted that key considerations include the costs associated with engagement (i.e. people participating in the Council process).

The CCTF noted that equity and justice (IPCC concepts) are components of readiness and resilience and that the process would benefit from broader participation moving forward. Additional ideas brought forward were the management implications of various tactical decisions and how they may perform under different climate scenarios. One suggestion was to ask stock assessment authors for their feedback on climate related responsiveness. The CCTF could suggest coordinating with some scenarios scoping workshops (e.g., ACLIM) and some regular engagement with authors and community members.

The CCTF noted the need for larger, more collaborative efforts. There was interest in exploring whether the CCTF and the broader FEP team or other working groups could do more strategic planning. There was also discussion about recommendations from the CCTF for the type of expertise and engagement for collaborative teams and responses. The CCTF noted examples of GOA cod and EBS snow crab as reactionary but perhaps examples for scenario planning moving forward.

The CCTF could also provide contrasting scenarios as case studies for projecting forward and exploring management outcomes: recruitment failure (cod, snow crab) and recruitment success (sablefish). ACLIM will be hosting a scenario workshop at the June Council meeting and possibly this will help to provide additional feedback useful in planning forward.

**Wrap up:**

Next meeting: possible during the week of Aug 15th (but additional staffing discussions of the timing of ACLIM, workloads and availability and outcomes are necessary before the CCTF schedules a summer meeting). The CCTF would plan to have a draft of the CRS available for public review over the summer and plan to rank (See example in Appendix) climate readiness by section and overall, at that time. The meeting would also provide a chance to address future planning and individual CCTF availability to tackle the next steps for addressing Objectives 2 and 3. Some additional items to discuss include the continued development of climate related indicators, the FEP objective 17 for CCTF involvement and that the PICES WG on the NBS Integrated Ecosystem Assessment (IEA) may be working to help inform and identify these indications thus coordination of timing and efforts would be important.

The need to increase public engagement in CCTF meetings was reiterated, and a suggestion was made to move to a Zoom platform for the next meeting if it is held remotely.

## Appendix (outline of CRS report and ongoing progress report)

### *Completed/remaining: Executive Summary (1 page)- Diana and Kirstin*

- Key findings
  - Section 1: Management overview
  - Section 2: SAFE reports
  - Section 3: Information & knowledge
- Key actions
  - Section 1: Management overview
  - Section 2: SAFE reports
  - Section 3: Information & knowledge

### *Completed/remaining: Section 1 Management*

- Fill in Ranking Table (see example below)
- Policy and management framework overview
- Include assessment of current climate change readiness or information
  - Table of management tools
- Include near-term / low hanging fruit actions, modifications to advance climate readiness

### *Completed/remaining: Section 2 SAFE review*

- Fill in Ranking Table (see example below)
- Include assessment of current climate change readiness or information
  - Review 18 search terms for ESRs, crab , and groundfish SAFE documents
    - 2021 (4,000+ pages)
    - 2020 (4,000+ pages)
    - 2019 (4,000+ pages)
  - Synthesize results
    - 2021
    - 2020
    - 2019
- Include near-term / low hanging fruit actions, modifications to advance climate readiness
  - ESRs
  - GPT mins
  - Groundfish-SAFE
  - Crab-SAFE

*Completed/remaining: Section 3 Information sources*

- Fill in Ranking Table (see example below)
- Include assessment of current climate change readiness or information
  - IKTK
  - Local Ecological Knowledge (e.g., fishing industry)
  - Monitoring surveys/ research
- Include near-term / low hanging fruit actions, modifications to advance climate readiness
  - IKTK
  - Local Ecological Knowledge
  - monitoring surveys/ research

**Example Ranking Methodology**

Please leave the "ranking categories" as is but fill in "Section specific details" for your section. These will be discussed as a group in Aug 2022 and we will then use them as a group to rank the readiness of each section.

*Example Ranking table from Section 2*

Ranking	Description	Section specific details
1. Not Ready	No climate information included	Climate change information does not occur implicitly or explicitly in the assessment model, text, or advice.
2. On the way to climate advice	Some implicit climate variability information included	Climate and ecological information is included in the assessment but climate change information does not occur implicitly or explicitly in the assessment model, text, or advice.
3. Somewhat ready	Some implicit climate change information included	Climate and ecological information is included in the assessment but climate change information is implicit only (not explicitly discussed) in the assessment model, text, or advice.
4. Nearly ready	Few modifications would result in climate readiness	Climate and ecological information is included in the assessment but climate change information is only explicitly discussed in a few places to set the context for future directions but it is not used to explain trends or future directions, nor is used to adjust ABC, modify the model, or provide other advice.
5. Climate ready	Process and information in place for regular (operational) climate change informed advice	Climate change information is used to explain trends or future directions (or lack of sensitivity to climate change), and is used to adjust ABC, modify the model, or provide other advice. The assessment is therefore "climate change informed".