

AD HOC CLIMATE SCENARIOS INVESTIGATION WORKGROUP REPORT ON THE CLIMATE AND COMMUNITIES INITIATIVE UPDATE

The Ad Hoc Climate Scenarios Investigation Workgroup (CSI) was created by Pacific Fishery Management Council (Council) vote at the September 2018 meeting. The Committee was charged with:

- Providing further framing and guidance for the Ecosystem Work Group (EWG) for Council review and approval and, in consultation with Management/Technical Teams (MTs), to compile proposed scenarios for Council consideration; and
- Providing guidance and a framework for EWG development of a more detailed description of activities that would occur under a scenario planning exercise, and a process and timeline for completion.

This report provides, for the Council’s consideration, a recommended outline of tasks and considerations to guide the EWG in crafting and compiling proposed scenario topics that the Council can choose from to implement the Climate and Communities initiative under the fishery ecosystem plan (FEP). Overall, the CSI envisions that Scenario Planning will help the Council identify ways to help support resilience in fishing industry/businesses, while meeting conservation objectives for stocks consistent with its fishery management plans (FMPs). Ideally, this should provide insight into potential ways to help maintain sustained access to fisheries in face of climate change. The Scenario planning process will not provide management recommendations but can provide potential management tools and options to inform management decisions that promote continued access to fisheries.

I. Definitions

“...as we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say, we know there are some things we do not know. But there are also unknown unknowns -- the ones we don't know we don't know...it is the latter category that tend to be the difficult ones.”

Secretary of Defense Donald H. Rumsfeld
DoD News Briefing, February 12, 2002

What is a Scenario?

A scenario, in the context of planning for future fisheries management, may be defined consistent with the Oxford English Dictionary definition as “a postulated sequence or development of events.” A scenario is essentially a plausible, consistent story about the future that challenges us to consider how we would operate under novel conditions. Nearly all of the various definitions for “scenario” agree on one thing: scenarios are not forecasts or predictions. Rather, they are an opportunity to identify potential solutions, bottlenecks, or areas that will require specific attention for success.

For the purpose of developing potential scenario topics, the Council should use the following definition:

Scenarios are plausible alternative futures—each an example of what might happen under particular assumptions. Scenarios provide a starting point for examining questions about an uncertain future and can help the Council consider alternative future management actions in concrete terms.

What is Scenario Planning?

Scenario Planning, at its core, is a way to address future unknown events. For the Climate and Communities Initiative, Scenario Planning will focus on how the California Current Ecosystem might change in the future and how West Coast fisheries and fishing communities might respond in light of specific assumptions of future climate impacts. Rather than focusing on the accurate prediction of a single probable future, scenario planning involves thinking creatively about how the system might develop under a set of possible futures (Davies, et al., 2015). More precisely, Scenario planning will help identify a specific set of uncertainties, challenges, or roadblocks and different potential “realities” of what might happen in the face of a changing climate. The Scenario Planning exercise(s) will allow the Council to examine specific potential events in detail and find paths forward that will help address those events should they become a reality.

II. Timeline and Products

We recommend the EWG move forward with scoping and fully describing a discrete set of potential Scenario Planning Topics for Council consideration and approval. This will include between 5 and 10 potential topics. The Council will select 2-3 topics for action.

1. Scenario Topic Scoping Recommendations - CSI pre-November 2018
2. Scenario Topics and Scenario Planning Process Scoping - November 2018 to March 2019
 - a. Joint Meetings/webinars work sessions with the EWG and MTs, and Habitat Committee
 - These may be combined with the existing EWG task to meet with MTs to discuss existing FMP measures that address climate.
 - b. Webinar with description of proposed process and products (for MTs, advisory bodies, public to be exposed to EWG scoping)
3. Council selection of Scenario Topics - March 2019
 - a. Consideration of EWG report (including 5-10 potential topics for consideration and comment)
 - b. Council selection of 2-3 Scenario Topics and approved process
4. Scenario Topic Planning – March 2019 to March 2020
 - a. Scenario Planning based on Council approved process
 - b. EWG Meetings to develop reports and products
 - c. Regular updates to Council on progress
 - d. Report results and recommendation in March 2020

EWG Scoping Product (March 2019)

Based on the November 2018 to March 2019 scoping, the EWG will prepare a report for Council consideration and public comment including the following:

1. Potential Scenario Planning Topics (see section III. Considerations)
 - a. Rationale for inclusion (how the scenario topic would address impacts to species, communities; how the scenario topic would inform council actions in the future)
2. Scenario Planning Process recommendations
 - a. Proposed timeline
 - b. Proposed meetings/workshops
 - c. Funding opportunities and collaborative efforts
 - d. Expert facilitation needs
 - e. Required participants for a Scenario Planning Working Group (to perform the planning process)
 - f. Recommendations on how to effectively engage and receive input from fishing communities, and
 - g. Other recommendations
3. Potential Scenario Planning Process Partners

III. Considerations for Proposed Scenario Topics

Timeframe

The timeframe for a Scenario Planning Topic should not be focused on short-term, interannual variations, nor look so far into the future as to be unusable. The CSI suggest a medium-term, 15-20 year window for describing future, potential shifts.

FMP Evaluation Examples

Consider how climate impact metrics intersect with each FMP (we do not expect the same metric to intersect with all Council FMPs in the same way). For example:

- Groundfish
 - Current stock status and quotas limit access to species
 - Scenario topics would focus on species or species group scale (group of species that are anticipated to have similar vulnerabilities) and fishery sector responses
- Coastal Pelagic Species (CPS)
 - CPS stocks, species availability, and ranges are anticipated to respond directly to global climate change
 - Scenario topics would focus on all FMP species and overall CPS fishery changes
- Salmon
 - Stock status is significantly controlled by terrestrial impacts, such as drought. Council is reactive to the terrestrial impacts/management and marine survival variability
 - Scenario topics would focus on Salmon-Groundfish interaction - if salmon stock is overfished, endangered or entirely disappears, how do we deal with other fisheries that have salmon impacts/bycatch

- Highly Migratory Species (HMS)
 - HMS Stock status is more controlled by international agreements, rather than directly by Council action
 - Scenario topics would focus on how the fishery responds to range shifts and species availability and if HMS fishery will expand or shift to other FMPs/species

Fishery Scales

Since the Council does not directly manage local communities or individual fishery participants and individual choice is something that will occur outside the Council process, the CSI recommends a focus on broader groups that interact within and/or between fisheries. Within the Council's realm of influence, what can the Council do that provides flexibility within fisheries, that communities and individuals can better take advantage of?

Resources Available

Are there funding, process, or information resources to draw from that make a particular topic ripe for Council consideration at this time?

IV. Criteria to Inform EWG-MT Scenario Topic Scoping and Recommendations

- Management tool availability - Existing FMP management tools available to take action to mitigate climate/community impacts that are within the Council authority
- Vulnerability and risk - in making recommendations on Scenario Topics, use available information on climate variability and risk relative to:
 - Individual species
 - Fishing communities
 - Vulnerability factors common to ALL scenarios:
 - Stock changes
 - Distribution changes
 - Productivity crash/boom
 - Human behavior changes (in response to species changes)
 - Portfolio changes, including access to Council and State-managed stocks; need flexibility to respond
 - Effort increase/decrease
- Level of certainty of potential outcomes

V. Final Product(s) from Scenario Planning (March 2020)

The final scenario planning product(s) will help inform future Council action. Based on the hypothetical scenarios, the final report(s) will provide options for existing Council management tools that could be applied and/or new tools that need to be developed. This report should not be a call for any specific action by the Council at the time of writing, but rather options for actions that the Council may take if certain scenarios appear to be playing out or proactive management that might help prevent unwanted outcomes.

The report(s) should not be comprehensive management plans. They should be relatively brief descriptions of the scenarios, potential likelihood of various outcomes, and potential responses. It is anticipated that these reports will provide flowcharts or “cookbooks” that assist the Council in preparing for climate related impacts to fishing communities and Council management actions in response.

VI. References Cited

Davies, T.K., Mees, C.C. and Milner-Gulland. E.J. (2015) Second-guessing uncertainty: scenario planning for management of the Indian Ocean tuna purse seine fishery. *Marine Policy* 62: 169–177.

PFMC
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