

COASTAL PELAGIC SPECIES ADVISORY SUBPANEL REPORT ON THE FISHERY  
ECOSYSTEM PLAN 5-YEAR REVIEW

The Coastal Pelagic Species Advisory Subpanel (CPSAS) commends the Ecosystem Workgroup (EWG) for their good work on the 5-year review, including the addition of Chapter 5. We recommend the following modifications to Chapter 5 and to the other chapters, as well as comments on the FEP Initiatives (See Attachment).

For Chapter 5, we concur with the EWG's comment that ecosystem considerations can be included in the stock assessment process at many points during stock assessment review. We suggest that the Ad Hoc Climate and Communities Initiative Core Team Report (September 2021) provide recommendations for action and an opportunity to improve the use of ecosystem information in the Council process. These recommendations should be included in the FEP. We note that all types of ecosystem considerations could be progressively integrated once the timelines for management response are better aligned with on the water observations by fishermen.

Our comments on Chapter 5 relate to section 5.2 *Climate-Ready Fisheries and Fishing Communities*. To help use the information presented in the Climate and Communities Initiative (CCI), we suggest additional focus in this chapter on the need for a Climate Vulnerability Assessment (CVA) linked explicitly to social and economic vulnerability and adaptive capacity of fishing communities to climate change. This CVA considers the readiness or resilience of the fishing communities themselves (Fisher et al., 2021). We also recommend linking Chapter 5 of the FEP to the CCI by including references to the related CCI documents in the chapter. We place high priority on the following Core Team recommendations (Agenda Item H.2.a CCCT Report 1):

Under CCCT recommendations for potential Council action to initiate **science-focused activities** to provide the Council with actionable information:

1.a.iv. Request that the IEA team include an appendix in the annual State of the California Current Ecosystem (CCE) Report that would provide information specific to climate change, taking into account the scenarios developed through the scenario planning process as well as developing climate early warning indicators.

1.b. The Council could task ABs to explore use of "civic science" through collaborative efforts in data collection that could be used to track climate change. The CPSAS expands on this concept through our proposal to adopt Initiative A.2.8, referenced below.

Under recommendations to implement revisions to ongoing **management practices**:

2.a. The Council could task advisory bodies to explore activities to increase flexibility, responsiveness, and adaptability within the Council process.

2.d. The Council could direct staff to update the Council each March on actions taken by other fishery management councils to better prepare fisheries for climate change.

2.e. The Council could direct staff to create a permanent Council webpage for climate-related work and resources to assist in educating and engaging the public across platforms.

2.f The Council could task the EWG to include reference to final Scenario Planning Report(s) in the FEP as example of potential impacts of climate change.

**Recommendations on candidate initiatives in the FEP Appendix**

The CPSAS re-reviewed the 10 current initiatives. We recommend expanding the CCI by adopting A.2.8, the Cross-FMP Effects of Climate Shift Initiative. As a path forward, the Council could assemble an advisory group, perhaps as a subcommittee of the EWG, to discuss both what is known within in the scientific community, current conditions on the water, and the concerns of fishing communities regarding the longer-term effects of climate change. That advisory group should consist of climate, and social scientists, a geographically diverse set of fishermen, fisheries managers, and potentially others. The committee could develop recommendations for forward-looking scientific investigations into the effects of climate change on West Coast fish and fisheries. The CPSAS supplemental report (Agenda Item H.2.a Supplemental CPSAS Report 1) provides further details on this concept.

Attached are comments on other FEP chapters for consideration by the Council. Thank you for considering the comments of the CPSAS.

PFMC  
9/13/21

### **Attachment: Additional comments**

We thank the EWG for making changes to this chapter to reflect many of our comments made last year. We suggest the following modifications in this final revised draft.

#### Chapter 3, section 3.3.5 Trophic Interactions in the CCE

The current narrative now says: “Although food-web-modeling studies show that most predators can switch among various forage species as their abundances vary (Koehn et al., 2016), the energetic value of various prey varies tremendously among predator species.”

We recommend repositioning the word “although” to highlight the scientific consensus that most predators can and do switch among various forage species as their abundances vary. Suggested change: “Food-web modeling studies show that most predators can switch among various forage species as their abundances vary (Koehn et al, 2016), although the energetic value of various prey species varies among predator species.”

#### Chapter 3, section 3.4.1 Historical Fisheries

Sardine story – p. 45 – does not differentiate the “northern” from “southern” sardine stock.

This paints a misleading picture in the narrative, for example:

*“By 2015, sardine were at low enough levels that the PFMC closed the directed commercial sardine fishery. As of 2020, sardine population size was low throughout the CCE.”*

**That statement is incorrect.** The CCE extends into Baja. The southern sardine stock that inhabits Baja California is abundant and present in Southern California. The Northern sardine stock also is present in Southern California and tens of thousands of tons have been observed by fishermen, as well as estimated by aerial surveys, inshore of National Oceanic and Atmospheric Administration Acoustic-Trawl surveys.

The FEP should include discussion of the recognition of southern sardines in stock assessments beginning in 2015, although management does not yet recognize the southern stock for management. This has led to the subtraction of an abundance of sardine in Southern California from stock assessments in recent years, on the presumption that they were “southern” sardines.

At the very least, the FEP should correct its statement to indicate that the northern sardine subpopulation was estimated to be low in the northern CCE.

The Council and the EWG should also be aware of the upcoming California Current Acidification Network (C-CAN) West Coast Ocean Acidification and Hypoxia Biological Core Principles Workshop, slated to take place in early 2022 (date and venue to be decided, but the workshop will be ZOOM-enabled for offsite participation).

The purpose of the workshop is to convene key industry stakeholders, tribes, and natural resource agencies to review what they are seeing on their aquaculture farms and in their fisheries and the associated state of the science with a focus on important west coast fisheries stocks, and to discuss what, where, and how we should be measuring critical life cycle changes to these important species.