

SUPPLEMENTAL COASTAL PELAGIC SPECIES ADVISORY SUBPANEL REPORT ON FISHERY MANAGEMENT PLAN AMENDMENT – SARDINE STOCK DEFINITION AND FISHERY MANAGEMENT UNIT REVISION

The Coastal Pelagic Species Advisory Subpanel (CPSAS) supports the Pacific Fishery Management Council (Council) reaffirming its decision to advance the preliminary preferred alternative and Adopt Alternative 1 as the interim final preferred alternative (iFPA) to manage Pacific sardine as a single stock, coastwide.

We support the Council moving forward with a process to revise management of the Pacific sardine fishery to a single stock with coastwide management. We are grateful for the National Marine Fisheries Service (NMFS) and Council Staff offer to prepare a review of the existing management and the evolution of sardine management over time that has resulted in the current fishery management plan (FMP), as well as potential future management for the revised stock. We offer several considerations below.

Review and Discussion of Parameters and Transparency

In preparing that review, we ask that NMFS include discussion of the various parameters incorporated into the specifications process, and their purpose, and discuss the potential to streamline the annual specifications and provide more transparency, facilitating a better understanding of its application and the results. Specifically, the review should explore whether certain parameters are necessary (or may be consolidated into fewer parameters). For example, consider whether the CUTOFF parameter is needed, or if precaution could be built into a stock size dependent (rather than environmentally dependent) E_{MSY} . Under this approach, the determination of whether to have a directed fishery could be driven by NMFS' ability to manage catch to the harvest specifications, rather than embedded in an assumption that the fishery cannot sustain directed fishing when the stock falls below a certain threshold, regardless of NMFS' ability to manage to the resulting catch limits. Similarly, the review discussion could include whether the Council's risk tolerance system of categories/tiers, sigma, and P^* can be modified or incorporated into other parameters within the control rules to make the specifications more transparent and understandable to stakeholders and the public. The discussion could include consideration of CPS management in other areas around the world and their relative success. This discussion could also explore alternative methods of accommodating both scientific and management uncertainty and the degree to which those methods are prescriptive, objective, and transparent.

Stock Assessments and Surveys

The review could also discuss the potential for annual surveys to be used in conjunction with (or in place of) stock assessments for establishing the age 1+ biomass of Pacific sardine for the specifications process, including any associated benefits and risks. This review might also consider whether total biomass is useful for this process and means of generating timely stock estimates from the most recent survey data.

Transboundary Management

The review process and next steps should also explore the implications of Pacific sardine being a transboundary population and management alternatives that adequately address the impacts of that facet of the managed stock. Ideally, one-stock management of Pacific Sardine would be based on a comprehensive understanding of the biological parameters of the whole population, including the portions occupying Mexican (and Canadian, if applicable) waters that had previously been attributed to separate stocks, with status determinations and specifications for that single stock reflective of the population over its full range. This understanding may not be achievable initially or during all time periods (for instance, depending on data availability). However, it would likely entail a continuous process, highlighting the need to prioritize resources and collaboration to better understand the impact of both the demographic component of the sardine stock and fisheries activity in Mexico and the possibility for coordination of management across the entire range. Nevertheless, management should be developed that readily adapts to management of US fisheries, independent of Mexican fishery management and stock information, when that information is not available.

As such, the review process and discussion should consider the potential for management of only fish in U.S. waters and the means of developing robust estimates of that portion of the population and whether a distribution term would be necessary, if management is based only on the portion of the population in U.S. waters. The discussion should also consider opportunities to supplement our understanding and management of the population outside of U.S. waters that may allow for better informed management within the U.S. management area. This should include discussion of the scientific merits of this approach, its risks, and benefits, as well as supporting regulatory authority.

Ecological Considerations

Transitioning to one-stock management does not preclude the need to consider spatial and temporal ecological differences that exist across the U.S. domain where sardine occur and regional and temporal management structures that may address those concerns. First, regional differences in adaptive evolutionary response (i.e. gene expression) remain unknown. Second, different geographic regions may have distinct reproductive areas, growth rates, and population dynamics. Third, as an important forage species in marine ecosystems, the role of sardines in food webs may vary regionally. For example, breeding seabirds are constrained to their colonies; regional prey depletion can lead to starvation and mortality even if prey densities remain robust elsewhere. Region or temporal specific management may address these genetic, population, and trophic and predator interests. A transition to single-stock management needs to consider management measures that address these ecological needs.

Prioritization of Workload

We ask that the Council prioritize the development of the new single stock management FMP amendment package. The analysis by its nature must review our understanding of the entire sardine population broadly and holistically, and its implications for management authority that extends only to U.S. waters. But, we ask that the process be tailored to move expeditiously toward the new one-stock management program. Expansive processes may overextend NMFS capacity and resources, substantially delaying progress. We should consider streamlined processes for the development of specifications and harvest control rule processes that are not overly time

consuming or costly, but balance the interest in moving forward efficiently against the need for thoroughness. Throughout these processes we ask that transparency of the specification process and its outputs (i.e., the resulting specifications process) be prioritized.

We ask that the Council consider allowing flexibility in a benchmark or update stock assessment for 2027. The most recent update assessment resulted in a suppressed biomass estimate, as the terms of reference restricted consideration of information beyond the prior benchmark assessment model. The update assessment generated an age 1+ biomass estimate of approximately 32,000 mt, despite a string of annual survey total biomass estimates that all exceeded 65,000 mt. Additional considerations for flexibility in an assessment can be applied to the terms of reference to allow for additional information to provide more accurate age 1+ biomass estimates based on scientific review. Additions to the terms of reference to incorporate this requested flexibility could be considered in June, with staff guidance. Overall, the choice between an assessment type should be based on the potential benefits of that choice and the workload implications for advancing the stock revision.

PFMC
04/09/26