

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON PACIFIC SARDINE STOCK DEFINITIONS

The Scientific and Statistical Committee (SSC) reviewed the fishery management unit (FMU) defined in the Coastal Pelagic Species Fishery Management Plan and, particularly, the sardine stock definitions within it. Council staff Katrina Bernaus provided background information and a range of alternatives for stock definitions. Matthew Craig, Southwest Fisheries Science Center geneticist, was available to answer questions. The SSC appreciates the comprehensive information provided in [Attachment 1](#) and compliments Council staff's effort. It was noted that the federally-employed SSC members did not have the opportunity to fully review the briefing book material due to the furlough, although they were able to attend this meeting virtually and provide input.

The SSC found the review to provide a comprehensive evaluation of Pacific sardine population structure and to be sufficient to support Council action to re-define the Pacific sardine stock. Recent literature on Pacific sardine (*Sardinops sagax*) population structure shows little evidence to support distinct subpopulations off the US West Coast. However, Pacific sardine biology is highly influenced by environmental factors, which may lead to regional differences in key life history traits that need to be considered in assessments and management. Regional management and assessments can be considered in the future even if Pacific sardine are delineated as one stock.

The presence of Japanese sardine (*Sardinops melanosticta*) in the US West Coast fishery may be a temporary event due to marine heatwaves, although there is evidence of local reproduction and southerly movement towards Mexico. Japanese sardine and Pacific sardine have been targeted and harvested by the same fishery, and it is impossible to distinguish between the two species on the water. If the Japanese sardine continue to be present, they should be treated consistently in assessments and catch accounting.

The alternatives outlined in Attachment 1 are the range of options for the Council to consider. However, there are management and science implications for each of these choices that should also be described. Depending on the Council's decision, there may be a need to revise current harvest control rules and reference points (*e.g.*, cutoff, distribution, minimum stock size threshold, E_{MSY}). Future stock assessments and associated data analyses (*e.g.*, survey data and ageing) may need to be redesigned as well. Each of these potential tasks takes time.