

## COASTAL PELAGIC SPECIES ADVISORY SUBPANEL REPORT ON METHODOLOGY REVIEW PLANNING

Members of the Coastal Pelagic Species Advisory Subpanel (CPSAS) and industry representatives met with Dr. Gerard DiNardo, Kristen Koch, and Dale Sweetnam on April 7 during the Pacific Fishery Management Council (Council) meeting, and previously at the March Council meeting, to discuss potential methods to augment present acoustic-trawl (AT) survey techniques and methods in order to:

1. Best acquire additional data for coastal pelagic species (CPS) inhabiting nearshore waters in less than 25 fathoms,
2. Enhance present data for CPS behavior including vessel avoidance,
3. Better understand reproductive behavior and recruitment, and
4. Better determine species composition of AT surveyed fish in temporal proximity to suspected CPS acoustic signal returns.

Industry and the Southwest Fisheries Science Center (SWFSC) have also agreed in principle to use industry aircraft when and where feasible to surveil along the research vessel transect lines as the research vessel conducts its transects. Additional ideas discussed were to employ purse seiners and their crew to sample schools sighted during the survey, to ascertain if species composition captured during daylight hours produce similar results to trawl sampling collected at night. Seiners could also do side-by-side sonar work in conjunction with the survey vessel to compare acoustic measurements and techniques. Placing a fishing vessel captain on the survey vessel itself as it conducts the survey was an idea promoted by SWFSC staff and endorsed by several fishing captains.

This would truly lead to a collaborative effort and could extend the survey into nearshore areas that remain off limits for the survey vessel. It is noted that recently the Marine Fisheries Advisory Committee (MAFAC) met in Boston and was given a presentation on “*Citizen Science and Crowdsourcing*”<sup>1</sup> as a “*Toolkit*” to find resources for research. Although this concept is not new, the presenters stated that there is renewed emphasis being placed on this practice. Dr. Cisco Werner attended the MAFAC meeting and commented that the collaborative effort contemplated with CPS fishermen and the SWFSC would fit the profile outlined in the Citizen Science program.

Industry members have stated over the years that the CPS complex of species has highly adaptive behavior and can change geographic distribution, migratory patterns, feed resources, and reproductive activity quickly as the expansion-contraction cycle matures or the habitat changes.

Many industry CPS participants the U.S. and Canada believe that the surveys missed a huge portion of the sardine population at the height of expansion into the waters of Southeast Alaska. We also believe the entire population did not always return to the waters off southern California

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<sup>1</sup> <http://www.noaa.gov/office-education/citizen-science-crowdsourcing>

to spawn. We believe both the SWFSC and industry have learned valuable lessons over the past decade.

CPSAS members express our gratitude to the SWFSC, in particular Dr. Gerard Dinardo, Kristen Koch, Dale Sweetnam and Dr. Cisco Werner for reaching out to industry, keeping an open mind, and paying respect to the people who make their living hunting in our coastal waters. We are optimistic that through this collaborative effort we will extend our present knowledge base for the CPS complex. The CPSAS fully supports the proposed methodology review scheduled for early 2018.

PFMC  
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