

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON  
EXEMPTED FISHING PERMITS (EFP) FOR 2010

The Scientific and Statistical Committee (SSC) was briefed by Mr. Tom Jagielo and Dr. Doyle Hanan on the west coast sardine survey application for an EFP in 2010. Dr. Kevin Hill of the National Marine Fisheries Service was also present to answer questions about how the survey results could be used in the next sardine stock assessment. The permit application expands upon an EFP that was conducted from Monterey Bay to the U.S./Canada international boundary in 2009, and is composed of a summer survey and an autumn pilot study. The coastwide summer survey is slated for July through early September 2010, and is divided into northern (WA-OR) and southern (CA) regions. The pilot study is proposed for the Southern California Bight during the autumn of 2010.

A coordinated synoptic summer survey would range from the Southern California Bight to the U.S./Canada international boundary. Survey design is a two-stage sampling approach that includes: 1) a photographic aerial survey, and 2) an at-sea point set sampling component to estimate species composition, school density, and biological characteristics of the fish, including the collection of otoliths for age determination. Changes from the 2009 survey design include a latitudinal expansion in survey coverage so that it encompasses the entire coastline, and an increase in the number of transects and point sets to achieve a reduction in the variance of biomass estimates. In addition, the 2010 survey design provides for eight vessels to participate in point set sampling, four from each region, which is double the number compared to 2009.

The autumn pilot study is designed to explore ways to further improve biomass estimates by using acoustic methods, LIDAR (Light Detection and Ranging), and night-time bioluminescence to determine school size, as well as aerial photography. The pilot study will be conducted off southern California during autumn months, which also provides an opportunity to investigate seasonal changes in abundance by comparison with summer results from the same area.

As part of their presentation to the SSC, the applicants included a supplemental handout that discusses the summer survey design revisions in accordance with Stock Assessment and Review Panel recommendations from September 2009. The SSC recommends that these changes be included in a revised EFP proposal.

The SSC further recommends that a revised proposal include explicit protocols for spatial distribution of point sets, to address a concern that the sets tended to be geographically clustered in the 2009 survey, and therefore, might not have captured possible spatial variability in the relationship between school size and biomass. Finally, the proposal should also provide the experimental design and survey protocols for the autumn pilot study.

There may be a correlation between the the estimates of abundance for 2009 and 2010 because they will be based upon the same data, and this needs to be addressed. An extended stock assessment update review is currently scheduled for the next sardine assessment during the

autumn of 2010, and provides a venue to address the technical basis for recalculating the variance from 2009 and incorporating the new 2010 survey results into the assessment.

There is a strong scientific basis for this application. The SSC recommends that it be approved for public review following submission of a revised proposal that addresses the issues described above.

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