

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
2016 METHODOLOGY REVIEW PRELIMINARY TOPIC SELECTION INCLUDING
DATA-LIMITED ASSESSMENT METHODS

Council Operating Procedure 26 describes the procedure for considering new methodologies related to the assessment and management of coastal pelagic species (CPS) and groundfish. The Scientific and Statistical Committee (SSC) reviewed two proposals for methodology reviews.

Southern California Coastal Pelagic Species Aerial Survey

Mr. Kirk Lynn (CDFW) outlined a proposal to review the Southern California Coastal Pelagic Species Aerial Survey (Agenda Item H.4.a, CDFW Report). The survey involves coastal and offshore sampling, and data have been collected since 2012. The survey includes areas not covered by the acoustic-trawl method (ATM) survey, and provides estimates for several coastal pelagic species, although the focus has been on Pacific sardine. The survey was suggested for a methodology review in November 2013 and an informal review was conducted in April 2014.

The design of the survey, as well as the data collection procedures, are well-specified. However, it is necessary to specify how the results from the survey can be used in stock assessments. The SSC notes that the major value of the survey is that estimates of biomass from its coastal portion during spring could be combined with the results of the ATM survey to provide an estimate of the absolute biomass of Pacific sardine and potentially other CPS.

It is necessary to show that the estimates of biomass from the survey are measures of absolute rather than relative biomass if they are to be combined with the results of the ATM survey. The SSC therefore recommends that the review of the aerial survey be deferred until analysis methods are developed that can be used to estimate quantities for use in stock assessments. In addition, the estimates of species-specific biomass by the pilots will need to be validated if the survey is to be used to provide estimates of absolute abundance.

Acoustic-Trawl Method

Mr. Dale Sweetnam (SWFSC) introduced Agenda Item H.4.a, SWFSC Report 1 that outlined the status of plans to conduct a second review of the ATM survey for assessing CPS. He noted that the Northwest Fisheries Science Center (NWFSC) and SWFSC need time to collect and analyze data using the new research vessel to explore issues raised during earlier reviews, and that the earliest a review could take place would be late 2016 or early 2017.

The SSC recommends that the NWFSC and SWFSC staff be given adequate time to conduct the analyses to inform a review meeting, and consequently that the review of the ATM survey be deferred until 2017. It was noted that the next full assessment of Pacific sardine is scheduled for March 2017, which means that the ATM index for that assessment would need to be based on the current rather than new acoustic systems.

Assessment methodology for data-limited CPS species

The SSC reviewed a white paper from the SWFSC on approaches to assessing data-limited CPS stocks (Agenda Item H.4.a, SWFSC Report 2). The methods included in the white paper

were those used for data-limited groundfish stock assessments, which are most appropriate for longer-lived species with well-defined stock-recruitment relationships. In contrast, CPS are short-lived with very variable recruitment that is substantially influenced by environmental conditions.

The SSC recommends a workshop be held to consider potential assessment methods that could be applied to short-lived species, with a focus on the central subpopulation of northern anchovy (see Agenda Item H.3.a, Supplemental SSC Report). The workshop should consider methods applied to other data-limited CPS and consider both model-based assessment approaches as well as approaches that use only a recent empirical estimate of biomass in a harvest control rule. The workshop will be most successful if the SWFSC is able to process the existing ichthyoplankton samples to assess whether it is possible to provide an updated Daily Egg Production Model estimate of the biomass of northern anchovy. The results of the workshop could be used to develop recommendations for future assessments, including the next assessment of northern anchovy.

PFMC
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