

COASTAL PELAGIC SPECIES MANAGEMENT TEAM REPORT ON CENTRAL SUBPOPULATION OF NORTHERN ANCHOVY MANAGEMENT UPDATE

In April 2018, the Pacific Fishery Management Council (Council) tasked the Scientific and Statistical Committee (SSC) to work with the Southwest Fisheries Science Center (SWFSC) to: 1) determine a method to estimate the nearshore component of the central subpopulation of northern anchovy (CSNA) stock not sampled by the Acoustic-Trawl Methodology, 2) determine the timeline and process necessary to conduct the near-term establishment of an overfishing limit (OFL) for the CSNA stock using the methods described in the SSC report ([Agenda Item C.4.a, Supplemental SSC Report 1, April 2018](#)), and 3) scope the process for recommending the frequency of revisions to OFLs and acceptable biological catches (ABCs) based on the potential impacts of changing reference points less frequently against potentially increased risk associated with not basing reference points on the most recent data.

At this meeting, the Coastal Pelagic Species Management Team (CPSMT) and Coastal Pelagic Species Advisory Subpanel (CPSAS) jointly received and considered presentations from the SWFSC and the SSC. For task 1, Dr. Juan Zwolinski (SWFSC) presented results of an extrapolation of the acoustic-trawl survey (AT) transects into nearshore areas to estimate coastal pelagic species (CPS) biomass, and also discussed acoustic surveys conducted by remotely-operated unmanned surface vehicles (USV, Saildrone, Inc.) that sampled nearshore waters that the AT vessel could not safely navigate ([Agenda Item E.4.a, Supplemental REVISED SWFSC Report 1](#) and [Supplemental SWFSC Report 2](#)). For task 2, the SSC discussed a report on a technique for calculating E_{MSY} using available information on spawning biomass, age-0 abundance and other parameters ([Agenda Item E.4, Attachment 1](#)). For task 3, Dr. Andre Punt presented a white paper describing an analytical tool to evaluate the effects of varying the frequency of OFL updates and the level of OFL-ABC buffers ([Agenda Item E.4, Attachment 2](#)).

The work presented advances the Council's ability to potentially utilize some of the proposed options for calculating an OFL for anchovy, for example either option C or D from [Agenda Item G.2.a, Joint SSC/CPSMT Report, April 2017](#) and [Agenda Item C.4.a Supplemental SSC Report 1, April 2018](#)). However, it appears that additional work on both the items presented at this meeting and other aspects of these options are necessary before they can be fully utilized.

Based on the information we received, the CPSMT provides the following specific comments and recommendations on the three items.

1. Nearshore estimates of biomass

The AT team calculated CPS abundance in nearshore waters not covered by the survey by 1) extrapolating the fish density based on the length of the eastern portion of the transects corresponding to the distance from the easternmost point of the transect to the shoreline, and 2) by using hydroacoustic data obtained from Saildrones inshore of the AT sampling. The CPSMT notes that both the extrapolation and Saildrone biomass estimate had extremely high CVs but prefers a measure of direct nearshore sampling if practicable. Saildrones, if associated with species compositions, would represent direct observations. Aerial and small vessel surveys can also be potentially used to inform nearshore biomass, pending continued research.

2. Computing E_{MSY}

Dr. Punt presented an approach that demonstrates a viable option for computing an E_{MSY} . However, as noted by the SSC, it appears that subsequent work is needed to refine the approach.

3. Frequency of revisions to OFL and ABC

The CPSMT agrees with the qualitative analysis and conclusions presented in the white paper on OFL frequency and also supports consideration of an MSE-lite approach, such as the approach Dr. Andre Punt presented that further evaluates the trade-off between assessment frequency and risk of overfishing. However, at this time the CPSMT is unsure of the value of entering into a full MSE process. CSNA is being fished relatively lightly and industry does not appear to be interested in greater harvest opportunity, therefore, it may not be worthwhile to spend resources on a full MSE.

However, if the Council does consider conducting an MSE (lite or full) the CPSMT notes that the key to pursuing an MSE is a clear understanding of what it intends to accomplish. Further, the CPSMT recognizes there are different definitions of MSEs and it may benefit the Council to be briefed on the full spectrum of MSEs. This could help achieve a common understanding of what MSEs can accomplish and what resources are necessary for the various levels including data, modeling, and human resource and time requirements.

PFMC
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