

COASTAL PELAGIC SPECIES MANAGEMENT TEAM REPORT ON CENTRAL
SUBPOPULATION OF NORTHERN ANCHOVY NEARSHORE ESTIMATION
METHODOLOGY, FREQUENCY OF OVERFISHING LIMIT REVIEWS, AND
ACCOUNTABILITY MEASURES

The Coastal Pelagic Species Management Team (CPSMT) reviewed reports on the joint meeting between members of the CPSMT, Coastal Pelagic Species Advisory Subpanel (CPSAS), and Scientific and Statistical Committee (SSC) (Agenda Item D.4, Attachments 1 and 2). The CPSMT also received presentations on the outcome of the October 3-4 joint meeting from Dr. Andre Punt and Greg Krutzikowsky. The CPSMT would like to thank all those who contributed to these reports.

Nearshore Biomass Estimation Methods

The CPSMT notes that a review of the acoustic trawl (AT) survey stated that use of the abundance estimates for central subpopulation of northern anchovy (CSNA) was subject to caveats (April 2018 Agenda Item C.3, Attachment 2, Table 3), which now have been largely addressed. However, the CPSMT continues to have concerns regarding the lack of nearshore survey coverage to complement AT biomass estimates for the CSNA. To that end, the CPSMT concurs that direct observations from comparable synoptic surveys are the best way to estimate nearshore biomass. However, nearshore data from direct observations may not be regularly available. In these instances, extrapolation may be the only way to account for nearshore biomass. Analyses comparing biomass estimates from nearshore surveys with those from extrapolation should be done to address inherent uncertainties and bias from extrapolation methods.

Funding for future AT and nearshore surveys is crucial; however, dedicated funding and funding levels are uncertain. The CPSMT continues to encourage NMFS to prioritize adequate funding critical to informing CPS management decisions on the West Coast (September 2019, Agenda Item C.1.a, Supplemental CPSMT Report 1).

Flowchart for Selection of Trigger Limits and Accountability Measures

The CPSMT sees value in a framework for updating the management reference points, e.g. overfishing limit (OFL) and acceptable biological catch (ABC), in response to monitoring data, as shown in the flowchart presented in Agenda Item D.4, Attachments 1 and 2. In 2018, the CPSMT proposed a qualitative framework for reviewing reference points for monitored stocks (November 2018, Agenda Item E.5.a). However, at that time the primary data available to the CPSMT were trend and indicator data. The flowchart now presented as Figure 2 (Agenda Item D.4, Attachment 1) is able to take advantage of the recent AT relative abundance estimates from Southwest Fisheries Science Center surveys. Although the CPSMT sees value in this flowchart, further work is needed to determine how it could be implemented into the CPS management structure. Additionally, it has been noted that the current flowchart does not provide clear direction on when or whether to revert back to the default ABC (ABC_d) when an alternate ABC has been triggered. Further review may identify other possible improvements.

Frequency of Updates to OFL/ABC

The frequency of updates to OFL/ABC analysis conducted by Dr. Punt (Agenda Item D.4, Attachment 2) provides informative results for making decisions on these variables. However, the CPSMT is not ready to provide explicit advice on the frequency for making changes to the variables Y, Z, and X in the flowchart as the CPSMT has not had time to fully review the tradeoffs associated with the various frequencies. Although the 8, 4, 2 model run appears promising in the results presented, should the Council choose to utilize the flowchart/framework in the future, the CPSMT would like to examine the modeling work results more fully. We do note, however, that although there may be lower risk in more frequent updates, this effect is mitigated when a large ABC buffer (i.e., low Q value) is used, such as the existing buffer. Additionally, the threshold values (x_1 and x_2) that trigger OFL or ABC changes are largely inconsequential in the modelling results, but may prove to have practical fishery management repercussions depending on the values chosen.

The model assumes that the entire ABC is taken each year. Dr. Punt's report states, "the conservation-related statistics reported in this document likely overestimate risk because they assume 100% attainment of the ABC" (Agenda Item D.4, Attachment 2). The fishery has on average taken less than half of the ABC over the last decade. It is also important to note that the modeling analysis suggests the current management framework for CSNA that incorporates a buffer of 75 percent from the OFL to the ABC ($Q = 0.25$) is risk averse, both over time and to changes in stock size. However, we see the flowchart as a tool that potentially could provide scientific guidance on when to consider changes to the OFL and/or ABC values.

CPSMT Recommendations

The CPSMT recommends further consideration of the flowchart/framework, noting that it is premature to select specific values for the variables examined at this meeting, and there is a need to evaluate how it might align with current management. The CPSMT could discuss a timeline required to evaluate the framework at its February 2020 meeting and report back to the Council in April 2020.

PFMC
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