COASTAL PELAGIC SPECIES ADVISORY SUBPANEL REPORT ON MANAGEMENT FRAMEWORK FOR THE CENTRAL SUBPOPULATION OF NORTHERN ANCHOVY

For this agenda item, the Coastal Pelagic Species Advisory Subpanel (CPSAS) reviewed the Coastal Pelagic Species Management Team (CPSMT) Report on Management Framework for the Central Subpopulation of Northern Anchovy (CSNA) (Agenda Item H.3.a, CPSMT Report 1) and related documents. We also joined the Scientific and Statistical Committee (SSC) webinar to hear a presentation from CPSMT member Mr. Greg Krutzikowsky and listen to SSC discussion regarding the Team's rationale for its recommendations.

The CPSAS thanks the CPSMT for its extensive work to develop a conceptual management framework and flowchart for CSNA. We appreciate the CPSMT's forethought in suggesting a path forward that considers both anchovy conservation and industry stability. The CPSAS supports this approach.

We also recognize that all the work, modeling and analyses by the CPSMT and SSC strived to achieve consistency in light of the variable population dynamics of CSNA. The Report of the Joint Meeting of the SSC CPS Subcommittee, CPSMT and CPSAS in October 2019 stated: "An ideal management scheme would implement changes when necessary, but not more frequently than necessary. The frequency of changes should be balanced by the objectives of limiting both conservation risk and disruption to the fishery." (Agenda Item D.4, Attachment 1, November 2019).

CPSMT Report 1 stated that the CPSMT "…kept in mind the modeling assumption that the entire acceptable biological catch (ABC) was taken by the fishery each year resulted in an overestimation of the conservation related statistics in the modeling results because the fishery has not reached that level of ABC attainment (See landings, Figure 3). This was also noted by both Dr. Andre Punt in his November 2019 report and by the SSC report." (Agenda Item D.4.a, Supplemental SSC Report 1, November 2019, in which "…the SSC cautions that the values for the performance statistics in Agenda Item D.4, Attachment 2, November 2019, should be interpreted in a relative sense rather than treating them as absolute estimates."

In our November 2019 statement, we stated that the CPSAS can support the flowchart developed and analyzed at the October 2019 meeting as helpful information to provide guidance for conducting stock assessments and updates to overfishing limit and ABC, but a majority could not support a rigid application of the framework at that time.

Since that time, the CPSMT has developed recommendations for parameters to fill in the flowchart, based both on statistical considerations and practicality (including workload management). We offer the following comments, concerns and suggestions:

- The CPSMT settled on a definition of long-term biomass (B_{LT}) as 10 years and short-term biomass (B_{ST}) as 3 years. B_{LT} would be generated from stock assessments and (B_{ST}) would be a rolling three-year average computed from CPS acoustic trawl method (ATM) surveys with a nearshore correction factor (or nearshore ATM surveys, which are preferred). The flowchart

called for recalculation of new B_{ST} every two years and a reduction in ABC if B_{ST} fell at least 40 percent below the existing ABC.

The CPSAS appreciates consideration of the need for fishery stability in setting the long-term biomass. We also agree with CPSMT rationale that a three-year rolling average is appropriate to reduce the "noise" (and extra workload) that would occur with annual or even bi-annual adjustments. A majority can support a three-year rolling average short-term biomass, but only if the short-term assessment considers multiple indicators in addition to ATM surveys, such as CalCOFI DEPM surveys, aerial surveys and possibly Juvenile Rockfish surveys, as well as trends identified in Annual Integrated Ecosystem Assessment (IEA) Reports. We recommend consideration of multiple indices both in light of shortcomings identified in methods reviews of ATM surveys and the potential for those surveys to not run in some years, as occurred in 2020. The California anchovy fishery takes place in a relatively small area as close to the harbor as possible, and only larger anchovy are marketable. Fishery landings have not approached the ABC since the reduction fishery declined in the early 1980s. If the anchovy population is low, or other CPS are available, the probability is that fishermen will not be targeting anchovy.

- The model shows that there is almost no difference in results among the three choices for Y, the frequency for conducting stock assessments (4, 8, 16 years), so the CPSMT recommended an eight-year schedule for stock assessments and updates to OFL. The two parameters should be linked because it would be inappropriate to revise an OFL independent of a stock assessment.

  The CPSAS agrees that eight years is a reasonable period, in light of additional recommendations, including retaining the current Q at 25 percent (which was originally intended as a precautionary measure to offset infrequent stock assessments), and the two-year "check in" to consider the short-term biomass and change the ABC if necessary.

- The management team saw no reason to change the current buffer between OFL and ABC, Q = 0.25. This "very large" buffer is acknowledged to provide for a low risk of overfishing, based on modeling results. (CPSMT Report 1)

  The CPSAS notes that this ultra conservative approach complements CPSMT's recommendations and supports parameters that provide as much flexibility as possible in developing a management framework for CSNA, such as the eight-year assessment / OFL schedule and 0.4 as the trigger to adjust ABC in the short-term.

- The CPSMT Report suggested it may be worth considering making a change of the fishing year to a July 1-June 30 season, paralleling sardine and Pacific mackerel. The CPSMT further suggested the possibility of a regular Council agenda item in April, in conjunction with the sardine assessment.

  The CPSAS could support a change in seasonal start date, but if the Council approved that change, we suggest a June Council meeting as more appropriate to discuss anchovy, as needed. A June Council schedule would provide time to consider the use of the IEA Report, which is presented to the Council in March, and would allow more time to incorporate additional

indices, such as the spring CalCOFI DEPM survey and the California Department of Fish and Wildlife aerial survey, into the assessment of both short-term and long-term abundance.

- The CPSMT Report provided suggestions for how this framework information could be incorporated into the management process. For example, an eight-year framework to conduct assessments and update OFL could simply be included in the stock assessment priorities framework, and the two-year check in could be incorporated into the SAFE document, with recommendations for update, following flowchart parameters, made only as needed, rather than having a defined explicit, and rigid, biannual management framework.

  The CPSAS can support a flexible framework that considers both anchovy conservation and industry stability. The key word is flexibility: a majority can support the Management Team suggestion to plug in the 8-year anchovy stock assessment / OFL frequency into the stock assessment priority framework, and have the Management Team "check in" on anchovy status on a biannual schedule via the SAFE document. The flowchart concept could be incorporated into the SAFE document as a guideline, and the CPSMT could signal a need to address the Council to implement changes only when necessary, but not more frequently than necessary.

  A majority of the CPSAS see no need for another FMP amendment, in light of the small size of the anchovy fishery coupled with current and proposed highly precautionary management policies. Nor can we support a rigid framework with biennial regulatory specifications.

  We could envision (in the FMP) a statement that the objective, as stated in the Joint report, is: "An ideal management scheme would "implement changes when necessary, but not more frequently than necessary. The frequency of changes should be balanced by the objectives of limiting both conservation risk and disruption to the fishery." (Agenda Item D.4 Attachment 1, November 2019), along with a simple statement describing that stock assessments and OFL revisions would occur on an 8-year schedule, or as needed, with a "check in" on a biannual schedule and revisions to ABC made if warranted, then reference the COP and SAFE. The flow chart and COP would be included for illustration and reference the SAFE document for details.

Recommendations (expanded from the November 2019 CPSAS Report):

- Continue the stepwise process to gather the information required for a benchmark CSNA assessment in 2021 and to further develop and simplify the framework for anchovy management.
- Support the use of industry vessels as the preferred method to conduct nearshore acoustic and aerial surveys in conjunction with offshore ATM surveys to provide the nearshore estimate needed for CPS biomass estimates.
- Utilize multiple indices to assess anchovy population abundance and trends.
- Provide sufficient flexibility to achieve the objective: implement changes when necessary, but not more frequently than necessary.

In closing, we call attention to the final statement in the CPSMT Report, pointing out that modeling analysis provides confirmation that the current management framework is risk averse over time to changes in stock size.

Minority Report:
The Conservation representative recommends the Council direct the CPSMT to include the OFL flowchart framework for CSNA in the November 2021 CPS FMP amendment scoping agenda item. The Magnuson-Stevens Act requires the inclusion of harvest control rules – how to set and specify allowable catch levels – in FMPs, and that a regulatory specifications process is needed to implement the harvest control rule, ensure accountability, and provide certainty to the public. The Council may amend its COP Schedule 9 to describe a biennial specifications process for CSNA. The Conservation representative notes that using the CPSMTs recommended X_2 parameter, the ABC will remain constant unless the $Q*E_{msy}*B_{st}$ value declines 40% from the default ABC value, even with a specifications process in place every two years. There is ample room for flexibility in the proposed anchovy management framework, as well as for integration of new best available information.

The entire CPSAS thanks the Council for consideration of these comments and recommendations.

PFMC
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