SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON CENTRAL SUBPOPULATION OF NORTHERN ANCHOVY (CSNA) OVERFISHING LIMIT (OFL) PROCESS

The Scientific and Statistical Committee (SSC) discussed the joint SSC/Coastal Pelagic Species Management Team (CPSMT) report "Central Subpopulation of Northern Anchovy Overfishing Limit Process" (Agenda Item G.2.a, Joint SSC/CPSMT Report, April 2017), as well as a request by Mr. Chuck Tracy (PFMC) to consider the merits of the status quo overfishing limit (OFL) for the central subpopulation of northern anchovy (CSNA), recommendations for OFL determination in the future, and the best interim approach if the preferred method for establishing an OFL is not yet available.

The SSC reiterates its concern that the current OFL is based on a model using data from over two decades ago and collected under dramatically different environmental and abundance conditions (Agenda Item G.4.a, Supplemental SSC Report, November 2016). However, the SSC also reiterates the need for methodology review of the updated acoustic trawl method (ATM) survey before using the ATM biomass estimate for the CSNA as a basis for management reference points (Agenda Item C.3.b, Supplemental SSC Report, April 2011). The SSC supports holding an ATM methodology review in early 2018 (Agenda Item G.3.a, Supplemental SSC Report, April 2017).

In the absence of an approved biomass estimate for the CSNA, the only available option for a new OFL is option A, which would involve updating the Conrad (1991) analysis with data on catch and abundance through 1994 as reported in Jacobson et al. (1995). However, the analysis would still be based on outdated information, and would not be responsive to changes in stock abundance.

In the near term, an approach based on an approved CSNA biomass estimate from the ATM survey (Option C or D) would be an improvement on the status quo because it would make use of more recent information and be more responsive to changes in stock abundance. Option D would require multiple years of data to smooth over, thus Option C would likely be available sooner than Option D.

Although more time consuming, a full assessment, as called for in Option B, has the advantage of making use of the widest range of information about the CSNA. Full stock assessments are generally the preferred approach when sufficient data are available. However, a stock assessment would be sensitive to biological assumptions that may be more consequential for short-lived and dynamic stocks such as northern anchovy. Consequently, there is no way to ensure that a stock assessment would be superior to a simpler approach without evaluating the diagnostics from a completed model. This approach would also require a new assessment (or accepted projection method) every time a new biomass estimate was needed to update the OFL.

The SSC considers all of the options listed in the joint SSC/CPSMT report as potentially viable and would review a well-documented technical analysis based on any of the options identified in the report. The SSC would work with the analysts to identify an appropriate review mechanism.

In choosing the F_{MSY} proxy, care must be taken to choose a value that is applicable to the type of biomass (e.g., total versus spawning stock biomass) estimated by the survey. Any new OFL calculation would require consideration of the appropriate acceptable biological catch control rule.

Literature Cited

Jacobson, L.D., Lo, N.C.H., Herrick Jr., S. F., and Bishop, T. 1995. Spawning biomass of northern anchovy in 1995 and status of the coastal pelagic fishery during 1994. NOAA Southwest Fisheries Science Center Administrative Report LJ-95-11.

Conrad, J.M. 1991. A bioeconomic analysis of the northern anchovy. NOAA Southwest Fisheries Science Center Administrative Report LJ-91-26.

PFMC
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