Scientific and Statistical Committee Report of March 19, 2024 Meeting

to

Mid-Atlantic Fishery Management Council
April 11, 2024
Tab 12

Agenda: March 19, Webinar

- *State of the Ecosystem Report*

- *Overview of NEFSC Cooperative Research Programs*

- *Review of OFL-CV Working Group Initial Recommendations*

State of the Ecosystem Report

- The SSC
  - Appreciated comprehensive report, transparency of methods, accessibility of underlying data, and ongoing improvements.
  - Suggested use of methods that indicate changes in variance over time.
  - Suggested improvements for several indices, especially those based on ratios.
  - Encouraged further fine-scale spatial and temporal analyses such as those associated with heat-wave effects on scallops.
  - Appreciated syntheses of results from stock assessments (e.g., recruitment anomalies) and encouraged more.
  - Encouraged refinement of indices related to economic indices for Economic and Social Profiles. See forthcoming report by National Academies of Science.

Overview of NEFSC Cooperative Research Program Activities

- The SSC
  - Appreciated comprehensive overview and focus on immediate utility for stock assessments.
  - Noted that hook-and-line pilot survey must be statistically sound and integrated with existing measures of relative abundance.
  - Highlighted importance of weekly samples from squid fisheries to help develop improved models for these short-lived species.
  - Encouraged further development of approaches that integrate study fleet observations with existing monitoring programs (observer, VTR, Dealer, and VMS)

- A follow up to report to Council in October 2023. Working Group met 3 times between October 2023 and March 2024 to work on improvements.

- What is it?

  - Complex but transparent process of evaluating nine factors for setting uncertainty (Coefficient of Variation) of Overfishing Limit (OFL) into three separate "bins" (60%, 100%, 150%). These are used to compute the Acceptable Biological Catch (ABC) consistent with the Council's Risk Policy.

- Key issues raised in 2023.

  - Are all 9 factors necessary?

  - Can it be streamlined?

  - How valuable are the interim data updates between setting ABCs?

  - How will new "state space" models affect characterization of uncertainty?

  - Updating when an assessment is delayed?

- Recent worldwide literature review of stock assessment performance suggest that 60% CV may be overly optimistic. Earlier simulation studies support this conclusion.

- Three of the nine criteria used for were found to be difficult to interpret or aspirational rather than operational. Suggested deleted the following criteria
  - Criteria 7—Informed by prediction error
  - Criteria 8—Assessment accuracy under different fishing pressures
  - Criteria 9—Informed by simulation analyses or full MSE.

Review of OFL CV Working Group Recommendations (3 of 4)

- Acknowledge that poor data quality cannot be overcome by modeling or other factors, regardless of their sophistication.

- Therefore consider two tiers of criteria:
  - Tier 1 {Data Quality, Model Appropriateness, Retrospective Pattern}
  - Tier 2 {Empirical Comparisons, Ecosystem Factors, Recruitment Stanzas}

- Tier 1 evaluation will be primary determinant of OFL-CV.

Review of OFL CV Working Group Recommendations (4 of 4)

- Public concerns included:
  - Reduced likelihood of using the 60% CV bin. (Lower CVs imply smaller difference between OFL and ABC).
  - Need to consider differences in uncertainty among commercial and recreational fisheries.
  - Better description of effects of the OFL CV on estimation of ABC and relationship to Council's Risk Policy
- SSC will finalize recommendations at its May meeting and make recommendations to Council in June.
- If approved, will be used for assessments in July.
- A "dress rehearsal" for a existing assessment will be prepared to work out any glitches.

Questions?