

Status Report

Selecting an Appropriate CV for an OFL

MAFMC

Scientific and Statistical Committee

October 2017

TOR 1) The level of uncertainty that the SSC deems most appropriate for the information content of the most recent stock assessment, based on criteria listed in the Omnibus Amendment.

Four Assessment Categories

- Assessment accounts for all significant sources of uncertainty, CV for OFL calculated internally
- Some sources of uncertainty still unquantified: Assessment Working Group recommends a CV for OFL estimate that is acceptable to the SSC
- SSC selects an appropriate CV for the OFL estimate
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History of Selecting a CV

- ABC Control Rule: default for OFL is 75% of F_{msy} if CV cannot be determined.
- Based on meta-analysis, SSC selected a default of CV = 100% (lognormal distribution)
- Recently, SSC has used CV = 60% for assessments that do a better job of accounting for scientific uncertainty

History of Selecting a CV

- However, the SSC's selection of 100% or 60% has been made without defined criteria besides "expert judgment" consensus
- A Working Group was established to develop criteria for selection of an appropriate OFL CV when it is not calculated internal to the assessment or the Assessment Working Group recommends an unacceptable value.

Objective

We intend to elevate confidence in ABCs by establishing a replicable process that meets Council risk policy objectives, and identifies relevant components of assessment uncertainty to be provided to the SSC.

The SSC's approach to setting OFL CVs will:

- Result in prudent decisions for catch advice that are consistent in meeting the objectives of the Council's Risk Policy in considering the trade-offs of biological, social, and economic benefits;
- Be based on clear and transparent decision criteria; and
- Be supportable with evidence.

Clear and Transparent Decision Criteria

- Model identification
- Retrospective analysis
- Empirical estimates of abundance, stock biology, and fishing pressure
- Relation of reference points to ecosystem factors and comparisons to other species
- Trends in recruitment
- Prediction error
- Simulation analysis or full MSE
- Assessment accuracy under different fishing pressures

Decision Criteria Will Not Be Scored

- Scoring will give a false sense of quantification
 - how would criteria be weighted?
- Narrative from the assessment team or review panel will be more helpful to the SSC
- CV would be placed in one of three bins 30-50% apart:
 - low,
 - medium
 - high

Additional Work

- Working Group will develop a structured approach for addressing decision criteria that avoids weighting or scoring
- Values for bins will be determined (e.g., 60%, 100%, and 150%)
- Will work with Dr. John Wiedenmann (Rutgers), currently under contract to MAFMC

Timeline

- Webinar in upcoming month
- Final presentation to Council at December meeting
- Presentation at National SSC Meeting (January 2017 in San Diego)