2022 SSC comments:

Based on recent tagging and genetic studies, the SSC encourages further exploration of fish movement as a potential major cause of population changes. Movement should be considered in concert with high natural mortality events for future models, and specifically consideration should be given to an Alaska-wide stock or GOA/EBS model.

Specific additional recommendations include:

* The SSC reiterates their encouragement for the authors to consider whether information from the IPHC setline survey and NMFS longline survey, alongside the NMFS bottom trawl survey, may provide a superior basis for apportionment recommendations, perhaps through the use of an integrated spatiotemporal model or a multi-survey random effects model.
* Along with analyses addressing other previous recommendations, the SSC looks forward to an investigation of large residuals in the fit to pot fishery data and for smaller fish in the fit to bottom trawl survey data.
* The SSC suggests including information on changes in fishing practices that may explain the increase in the mean length of cod caught in pot fisheries (Figure 2.14).
* The SSC requests the authors provide the mean catchability used in the calculation of the temperature-adjusted and time-varying q

The SSC appreciates the preliminary evaluation of conditional age-at-length patterns and recommends further evaluation of growth-related issues, including updating the length-weight relationship with more recent data, evaluating if there have been significant growth changes, and examining empirical weight at age.

The authors noted that incomplete fishery length compositions are used for the current year in the assessment. It appears that a fairly substantial amount of catch occurs after October, at least in 2022. The SSC requests that the authors evaluate the benefit of including these data by showing the complete versus incomplete length compositions for the past few years and a retrospective of the assessment including and excluding these data.

The SSC supports the authors’ inclusion of the previously excluded State water catches, which should improve the accuracy of the assessment. The SSC requests that the authors determine if there are any observed length composition data from State catches to determine if there might be any difference in selectivity for those fisheries, recognizing that it is not a large amount of total catch.

2022 PT comments:

The Team recommended adding confidence intervals on the mean lengths by depth strata. Additionally, the Team recommended that the authors compare total fishing effort or catch (in addition to total sample size) to be sure that the observer coverage is capturing effort appropriately.

The Team recommended that the data for length-weight relationships be reevaluated and examined for sensitivity to the trends over time and areas.

The Team recommended the authors look at the model-predicted mean weight-at-age (by gear type), and compare to the observed weight-at-age data to see if there are discernible spatial or temporal patterns that the model is missing. I

the Team recommended that an evaluation comparing how growth changes may affect the residuals be pursued. The Team also recommended the author investigate whether size-based selectivity affects the patterns observed.

The Team recommended examining the updated MCMC tools (e.g., adnuts) and diagnostics.

the Team recommended that it be re-examined against a fixed value for comparison.