

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON REPORTS AND  
RECOMMENDATIONS FROM GROUND FISH SCIENCE WORKSHOPS AND  
METHODOLOGY REVIEWS

The Scientific and Statistical Committee (SSC) discussed reports and recommendations from two workshops and one methodology review, conducted in the fall and winter of 2016-2017, to support groundfish stock assessment data, science and analytical methods. The SSC also discussed reports from the Oregon Department of Fish and Wildlife (ODFW) and the Groundfish management Team (GMT).

**I.2, Attachment 1: Report of the Groundfish Historical Catch Reconstruction Workshop**

Dr. David Sampson (SSC Groundfish Subcommittee chair) provided an overview of the Groundfish Historical Catch Reconstruction Workshop. The focus of the workshop was on understanding and improving analytical approaches for estimating total catches at the species level prior to 1981 (the PacFIN and RecFIN era), although some presentations discussed potential improvements for the analysis of more recent data (including uncertainty estimates).

Presentations on catch reconstructions for all three West Coast states were included, and potential improvements to all of these efforts were identified. There was greater emphasis on the Washington catch reconstruction, which is less developed than those in California and Oregon. The workshop included an attempt to recreate catch reconstructions used in recent assessments with data queries and analyses conducted on site. This revealed inconsistencies for some species, including historical catches of darkblotched rockfish, which will be revised for the 2017 stock assessment update.

Dr. Theresa Tsou (WDFW) provided the SSC with an update regarding Washington catch history reconstruction efforts conducted since the workshop, focused on lingcod and rockfish, to support upcoming assessments. There was uncertainty as to whether the Washington reconstruction will include complete or partial historical tribal landings.

The SSC is in agreement with the recommendations in the workshop report, noting that several of the recommendations address issues relevant to upcoming stock assessments. The SSC is supportive of a methodology review for the Bayesian methodology for model-based catch estimation as an off-year science activity in 2018. Finally, it was noted that there is still much more work to be conducted in improving catch reconstructions in all three states, and ongoing or anticipated future efforts should be reviewed at future catch reconstruction workshops.

**I.2, Attachment 2: Groundfish Productivity Workshop Report**

Dr. Martin Dorn (AFSC) provided an overview of the report of the Groundfish Productivity workshop. The format of the meeting was presentations by scientists in academia and management agencies. Most talks focused on the challenges associated with estimating spawner-recruit relationships, including the functional shape of such relationships and the resulting uncertainties associated with subsequent estimates of productivity and potential yield.

The report includes extended abstracts, highlights of panel discussions, and a series of recommendations and conclusions. The SSC recommends adopting the ten recommendations and conclusions listed in the workshop report, with the following caveats:

The SSC clarifies that recommendation 5b (“Evaluation of different three-parameter models and alternative leading parameters for incorporation into Stock Synthesis”) reflects the desire to include a wider range of alternative stock recruit relationship functional forms in the Stock Synthesis modeling platform. Similarly, recommendation 5d refers to the need to continue to perform meta-analyses that assume nonparametric shapes.

With respect to point 7 (regarding the gradual increase of steepness estimates for rockfish from ~0.6 to ~0.8 since the initial productivity workshop in 2002), the SSC notes that the most recent estimate of the steepness prior suggests a decline in the steepness point estimate from ~0.78 to ~0.72. This would lead to less of a difference between inferred productivity (yield) from the steepness prior estimate and the lower yield associated with the SPR-based reference points used by management. The SSC recommends that a workshop that includes specific analyses exploring the consistency among reference points be scheduled for the next non-assessment year in 2018.

## **I.2, Supplemental SSC Groundfish Subcommittee Report on the Review of Assessment Methodologies Proposed for Use in 2017 Assessments**

Dr. David Sampson presented an overview of the results of the Groundfish Subcommittee Report on the Review of Assessment Methodologies. The SSC recommends adopting the recommendations in the workshop report, and will revise the Accepted Practices Guidelines for Groundfish Stock Assessment document accordingly, with the following modifications:

The SSC discussed the geostatistical GLMM software developed and maintained by Dr. Jim Thorson (VAST, vector autoregressive spatial temporal model, [www.fishstats.org](http://www.fishstats.org)). For fisheries-independent survey data, the software includes a range of options that can either replicate previously recommended model complexity levels or use more advanced analytical methods. The SSC recommends that analysts have the latitude to use this software, and strongly encourages analysts to compare model results with and without autoregressive features. Analysts need to provide appropriate diagnostic statistics if they intend to use the geostatistical features of the model.

With respect to the revised set of priors for natural mortality (M), the recommendation should be to set the fixed value equal to the median rather than the mean value of the prior.

### **I.2.a, ODFW Report: Regarding Speciation of Unspecified Rockfish Landings in Oregon for Inclusion in Stock Assessment Time Series of Removals**

Mr. Patrick Mirick (ODFW/GMT), discussed results of this analysis with the SSC. He noted that for species that had their own market categories (such as Pacific ocean perch), catches do not change much, but total landings of other species do undergo substantive changes (such as darkblotched and yelloweye). This document should be consulted in the development of rockfish catch histories from Oregon.

### **Agenda Item I.2.a, GMT Report 2: Discard Mortality Rates Applicable to the Nearshore Fishery**

The SSC discussed the GMT report on discard mortality rates applicable to the nearshore fishery. The SSC concurred that if fishing practices in the nearshore sectors are comparable, then it would be reasonable to apply the previously endorsed recreational mortality rates to the commercial nearshore fishery using "sport-like" jig and pole gears for the 20 to 30 fathom depth bin. However, the SSC did not review a complete comparison of fishing practices between the two sectors.

With respect to the mortality rates applied with the use of a descending device, the GMT report expressed a diversity of opinions regarding whether recreational rates should be applicable to the nearshore commercial fishery. Given these concerns, the SSC would recommend a more formal analysis be conducted prior to considering a change in these rates.

PFMC  
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