

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON OFF-YEAR SCIENCE AND STOCK ASSESSMENT METHODOLOGY REVIEW FINAL TOPIC SELECTION

The Scientific and Statistical Committee (SSC) reviewed the proposals by the California Department of Fish and Wildlife (CDFW) ([Agenda Item F.10.a, CDFW Report 1, November 2017](#)) and the Oregon Department of Fish and Wildlife (ODFW) ([Agenda Item F.10.a, ODFW Report 1, November 2017](#)) for methodology reviews of their remotely operated vehicle (ROV) video transect survey data collection programs and proposed approaches for incorporating the information into assessments of nearshore groundfish stocks. Dr. John Budrick (CDFW) was available to discuss the CDFW proposal and Mr. Patrick Mirick (ODFW) was available to discuss the ODFW proposal. The SSC also reviewed the report by the Northwest Fisheries Science Center (NWFSC) ([Agenda Item F.10.a, NMFS NWFSC Report 1, November 2017](#)) and received a presentation by Dr. James Hastie (NWFSC) on the NWFSC prioritized list of groundfish research activities planned for 2018.

Under the Council's Operating Procedures, methodology reviews are needed for new methods that will be used in upcoming stock assessments; typically the review panels include external experts. Methodology reviews require specific terms of reference, developed in consultation with the proponents of the methodology, to focus the review process. In contrast, off-year science workshops provide opportunities for wider ranging discussions of topics relevant to the Council's assessment and management process. Workshops may result in new methods or new data sources that require a subsequent review to approve their application in the Council process. Routine or small adjustments to stock assessment methods or data or topics not requiring external reviewers may be reviewed by the SSC in consultation with the Council's advisory bodies.

The SSC offers the following observations and recommendations regarding the nine topics identified in the [Situation Summary](#) for possible off-year science workshops and stock assessment methodology reviews.

Off-Year Science Workshops

The SSC anticipates that the following two workshops could lead to improvements in the Council process for groundfish stock assessments and management.

Review of the Data-Limited Methods Toolkit for use in groundfish stock assessments. The first workshop is closely related to this Situation Summary item. The workshop goal is to broaden the suite of stock assessment methods applicable to stocks with limited data (e.g., by including compositional data). The workshop would identify methods in the Data-Limited Methods Toolkit that would be relevant and acceptable in the Council process and those that would not. Methods beyond those in the Toolkit would be also considered. This workshop could probably be scheduled for the spring of 2018 and is the SSC's highest priority topic for an off-year science workshop. It would benefit from the participation of invited experts.

Follow-up workshop on historical catch reconstruction. The second workshop is related to this Situation Summary item. However, the scope would likely be limited to producing a catch reconstruction for skates, in keeping with the NWFSC's interest in this topic (NWFSC Item 9).

The skate catch reconstruction will require the development of estimates of both landed and discarded catch. Other species could be reviewed at this workshop if new reconstructions are available. The workshop, which could be scheduled for the fall of 2018, would not require the expertise of outside reviewers.

Methodology Reviews

Three items from the Situation Summary list would be suitable for formal Methodology Reviews during 2018.

Improve catch estimation methods in sparsely sampled mixed stock fisheries. Work by the Southwest Fisheries Science Center on the Bayesian statistical approach associated with this topic was presented previously to the SSC Groundfish Subcommittee ([Agenda Item I.2, Attachment 1, March 2017](#)). If the approach is approved, it would likely lead to the eventual replacement of the current ad hoc system of borrowing sample data to partition mixed-species landings (e.g., rockfish) to the species level. The SSC was informed that a demonstration application of the methodology could be ready for a formal review during February or March 2018. The SSC views this as its highest priority groundfish methodology topic for 2018.

Proposed remotely operated vehicle (ROV) survey of nearshore stocks, California & Oregon. The SSC recommends a second methodology review during 2018 of the CDFW and ODFW programs for collecting video transect survey data, which were developed independently but use similar approaches. A specific focus of the workshop will be how the data can be used to inform stock assessments. This second Methodology Review could probably take place during the fall.

SSC Groundfish Subcommittee Activities

Best practices for modeling conditional age-at-length data. Although this item was listed in the Situation Summary as a workshop, the SSC recommends that this activity be addressed by the SSC's Groundfish Subcommittee (GFSC) at a GFSC meeting or webinar late in 2018 or early in 2019 to revise the Accepted Practices Guidelines. Other potential revisions to the Guidelines include approaches for developing representative compositional data (NWFSC Item 22) and items that may be identified at the upcoming GFSC webinar scheduled for December 1.

The GFSC will need to conduct a review of the two research activities currently underway for the characterization and propagation of stock assessment uncertainty (σ) for use in acceptable biological catch (ABC) calculations ([Agenda Item E.2.a, Supplemental SSC Report 1, September 2017](#)). Results based on these two research activities, which will primarily be used by the SSC, will not require a full methodology review. However, they will require approval by the SSC and Council.

Remaining Situation Summary Topics

- *Workshop on transboundary issues in groundfish stock assessments.* Dr. Hastie indicated that Canadian data had been assembled during the 2017 assessment cycle for yelloweye rockfish, yellowtail rockfish, and Pacific ocean perch, and that NWFSC stock assessors could explore how those data could be incorporated into or used to inform the corresponding Council assessments (NWFSC Item 19). He also stated that Dr. Michelle McClure (NWFSC) is on a binational committee that is working to improve coordination of assessments for transboundary stocks. A transboundary workshop would be appropriate only after preliminary results have

been produced, reviewed with Canadian scientists, and terms of reference defined for potential transboundary assessments.

- Follow-up workshop on modeling stock productivity in groundfish stock assessments. The Center for the Advancement of Population Assessment Methodology (CAPAM) held a workshop on recruitment during October 2017. Multiple GFSC members attended the workshop and publications from the workshop are likely to be available in late 2018. The GFSC plans to review the workshop findings and incorporate relevant points into revised Accepted Practices Guidelines for the 2019 assessment cycle.
- Workshop to determine best practices for modeling recreational catch per unit effort. A CAPAM workshop related to modeling catch per unit effort data is planned for fall 2018. The SSC will revisit this topic following the CAPAM workshop.

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