

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON METHODOLOGY REVIEW PRELIMINARY TOPIC SELECTION

The Scientific and Statistical Committee (SSC) met to discuss potential topics to be reviewed by the SSC Salmon Subcommittee (SSC-SSC) in fall 2024. The Salmon Technical Team (STT) was present for the discussion but did not propose any methodology review topics to the SSC. The SSC notes that many possible topics for salmon methodology review have come up in other discussions in the Council process over the past year, including but not limited to:

1. Forecast evaluation metrics. In its November 2023 statement on the salmon methodology review ([Agenda Item D.3.a, Supplemental SSC Report 1, November 2023](#)), the SSC recommended reducing redundant metrics for evaluating forecast performance. Several metrics have been used and work could identify which metrics should be emphasized for various contexts.
2. Integration of salmon stoplight indicators into the pre-season salmon process. Currently, the salmon stoplight indicators are presented in the California Current Integrated Ecosystem Assessment Team's Ecosystem Status Report each March. This type of ecosystem information may be valuable to pre-season salmon management analyses and actions.
3. Incorporation of uncertainty into salmon management. Forecasts and abundance estimates should include uncertainty bounds.
4. Application of risk tables to the Salmon Fishery Management Plan (FMP). Council action in March 2024 tasked the Ecosystem Work Group to work with National Marine Fisheries Service and the appropriate advisory bodies to "broaden the application of risk tables to the Salmon FMP as described in [Agenda Item H.2.a Supplemental HC Report 1](#)."
5. Comprehensive review of salmon reference points. The SSC reiterates its suggestion to establish a formal process that outlines how and when salmon reference points and conservation objectives are reviewed and updated (see [Agenda Item D.4.a Supplemental SSC Report 1 April 2022](#) and the SSC-SSC report appended to [Agenda Item C.10.a Supplemental SSC Report 1 June 2021](#)). Conservation objectives and reference points (e.g., $SMSY$ and $FMSY$) for Sacramento River fall Chinook and multiple Washington Coastal fall Chinook were derived from publications produced in 1984 and do not incorporate any information on run sizes, productivity, or other available biological parameters from the last 40 years. In contrast, the SSC notes that the values for reference points are routinely updated as a part of the groundfish stock assessment process, and populations with assessments that do not incorporate recent data are identified as having greater uncertainty.
6. Investigation of whether the performance of the Oregon Production Index-Hatchery (OPI-H) forecast might be improved with disaggregation. Currently, the OPI-H forecast includes natural origin Coho, which are also separately forecasted and then subtracted from the aggregate OPI-H forecast before use in the Council salmon management process. During discussion at the 2023 Salmon Methodology Review, the analysts for the new OPI-H methods mentioned that a next step was looking at whether forecasting the current aggregate might be improved by forecasting different components separately, starting with separating out the natural origin fish. Documentation of how the aggregate OPI-H forecast

is broken into components used by the STT is also needed, following best practices for technical documentation and with enough detail that it can be reproduced by other users.

7. Exploration of alternative approaches to the Sacramento Index forecast. This topic was identified as a potential topic in April 2023, and remains a high priority topic ([Agenda Item E.4.a, Supplemental SSC Report 1 April 2023](#)).

The Research and Data Needs database (research-pfmc.psmfc.org) lists a number of potential projects ranked as “high priority” for PFMC salmon management. Some of these projects may have been completed since the last time the list was reviewed (2018). One potential use of time at the Salmon Methodology Review in fall of 2024, or at an SSC-SSC meeting, is review of that list. If any of these projects have been completed outside the Council process, they may be ready to be reviewed and incorporated into Council salmon management.

PFMC
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