

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON SALMON METHODOLOGY REVIEW

Typically there is a joint meeting of the Scientific and Statistical Committee (SSC) and the Salmon Technical Team (STT) in October to review new salmon methodologies or proposed changes to existing methodologies. However, there were no methodologies that were ready for review this fall. Instead, the SSC and STT were given a brief presentation by Mr. Larrie LaVoy of the Washington Department of Fish and Wildlife about a two-year (2003 and 2004) pilot project involving mark-selective fisheries for chinook in Washington Marine Catch Areas 5 and 6 in the Strait of Juan de Fuca. He compared projections from the chinook Fishery Regulation Assessment Model (FRAM) with results of a creel survey and test fishery data collection program conducted during the fisheries. Although the comparison provided some indication of FRAM performance, a number of problems were identified with evaluating the model against results from a creel survey. There are many parameters and outputs from FRAM that can be compared to analogous creel survey estimates. A comprehensive set of comparisons is needed along with estimates of the uncertainty associated with the creel survey.

The SSC is concerned that proposals for mark-selective fisheries for both chinook and coho will increase in the future. It is important that sufficient resources be dedicated to the information and analytical challenges presented by these fisheries, including both preseason projections of impacts (FRAM) and postseason estimates of stock specific impacts. Continued validation of model performance is needed. While this has not been required in the past, the additional complexity of modeling mark-selective fisheries for chinook, with their multiple year life history, increases the opportunity for the model to fail which increases the risks to the stocks. If more extensive selective fisheries are proposed for chinook, this additional risk should be recognized. Proposals for more extensive selective fisheries should require that fishery monitoring be conducted to continue and extend the evaluation of model performance. These fisheries should be designed so that the mortalities in the proposed selective fishery do not exceed those from a currently existing non-selective fishery that is more limited in duration, or alternatively, that the total estimated impacts for a specific wild stock of concern are not greater than some specified amount.

The SSC had hoped the results from this comparison would help validate the mark-selective version of chinook FRAM. Overall results indicated that FRAM produced reasonably good predictions for encounter rates. However, the fisheries were too small and the data too variable to reach any firm conclusions about stock-specific predictions of impacts. Also, it is not possible to assess model predictions of non-landed mortalities with this comparison. The SSC is no closer to being able to recommend adoption of the mark-selective version of chinook FRAM for use in evaluating Council fisheries than it was two years ago. One missing element continues to be the detailed model documentation that we anticipate the Model Evaluation Workgroup will produce.

PFMC
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