

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
REPORT ON THE BYCATCH WORKSHOP AND OBSERVER DATA UPDATE

Dr. Michael Dalton (panel chair) presented the review panel report on the bycatch model. The Scientific and Statistical Committee (SSC) commends the review panel for a thorough and careful review of the bycatch model and data inputs. The panel report includes a number of recommendations for improving the bycatch model. These include both short-term recommendations for 2003 and 2004 and longer term recommendations for model development. The SSC fully endorses the panel recommendations. A key panel recommendation was that "as soon as feasible, the bycatch rates currently used in the model be replaced with rates from the observer program, in accordance with guidance by the SSC."

Dr. Jim Hastie presented observer estimates of bycatch rates from the first year of the observer program (bi-monthly periods 5 and 6 of 2001 and bi-monthly periods 1 through 4 of 2002). To estimate bycatch rates, haul weights of retained catch were adjusted by fishtickets. Adjusted logbook data are not yet available to estimate retained catch. To calculate bycatch rates for use in the bycatch model, observer data can potentially be post-stratified by target fishery, period, area, and depth zone. Dr. Hastie presented tables of bycatch ratios (total bycatch/total landings) for various levels of stratification. As expected, there is a clear tradeoff between the level of stratification and precision of the estimated bycatch ratio. Lower coefficients of variation (CV) are obtained when fewer strata are used.

The SSC considers the example of a four-cell stratification (north-south, shallow-deep) as just one of several possible stratifications of the observer bycatch data. It is important to have a good stratification scheme, one which takes into account both the tradeoff between the number of strata and precision of the bycatch estimates and the utility of the model to evaluate complex management alternatives. Formal model selection criteria, such as AIC (Akaike Information Criterion), may be one possible approach to determine the appropriate level of stratification.

Comparison of bycatch projections for 2003 between observer-based bycatch rates and bycatch rates used previously indicates higher catch projections (in some cases much higher) for all overfished groundfish stocks with the exception of widow rockfish.

Bycatch projections using observer bycatch rates with alternative stratifications indicate sensitivity to the level of stratification, particularly whether or not a target fishery strata is defined. The SSC notes that with only a year of observer sampling available, the data are too sparse to support fully stratified bycatch estimates (i.e., by target fishery, bi-monthly period, area, and depth zone), particularly in the southern area. Additional work is needed to (1) characterize uncertainty in bycatch projections, and (2) further evaluate the sensitivity of bycatch projections to alternative levels of stratification.

The SSC considers the bycatch rates based on observer data to be the best available scientific data for use in the bycatch model. Notwithstanding the unresolved issues regarding stratification, the SSC recommends bycatch rates based on observer data be used for evaluating management alternatives for 2004 and for inseason management in 2003. The SSC urges the Council to move quickly to use the new bycatch rates for inseason management, as delay could severely restrict the range of potential management alternatives later in the year. For this meeting, the SSC recommends the Groundfish Management Team omit the target fishery strata and consider only bycatch rates stratified by area, depth zone, and perhaps season. Target fisheries were defined on the basis of historical fishing patterns, and there is little evidence these targeting strategies still exist under the current management policies.