New England Fishery Management Council

Scientific and Statistical Committee
Meeting Summary
June 3, 2006
Holiday Inn, East Boston, MA

Attendance

Committee: Dr. Sullivan (Chair), Dr. Hoenig (Vice-Chair), Dr. Rothschild, Dr. Rosenberg, Dr. Maguire, Dr. Kahn, Dr. Sharov, Dr. Gilfillan, Dr. Kaufman
Others: Dr. Hart, Mr. Kellogg, Mr. Applegate, Mr. Larson, Dr. DuPaul, Dr. Kenchington, Mr. Smolowitz

Review of Scallop MSY Estimates

The Scientific and Statistical Committee (SSC) reviewed a paper and presentation given by Dr. Hart in consultation with the Scallop PDT, *What is MSY for U.S. Sea Scallops*. The paper was prepared at the request of the NEFMC as part of the background information needed for Amendment 11 to the Sea Scallop FMP. After committee discussion, including asking Dr. Hart questions about the data and methods used in the estimates of MSY, the committee reached the following conclusions about the MSY estimates:

1. The analysis done by the Center and the PDT is a reasonable approach to estimating MSY from a yield-per-recruit standpoint. A variety of approaches were used that sufficiently covered the range of possible approaches.

2. There are unequal consequences from choosing higher or lower points from the MSY range. If MSY is underestimated the fishery may be unnecessarily restricted resulting in the loss of short-term benefits. If MSY is overestimated; however, overfishing may be allowed which is difficult to correct and may have long-term consequences.

3. MSY is the long-term average yield under optimal and stable conditions (e.g. current selectivity, exploitation rates, and environmental conditions) and not necessarily the short-term yield. MSY should guide long-term management strategy.

4. The Council should prepare a plan for greatly reduced annual yields in the future based on the historical record.

5. In setting OY below MSY the Council should recognize that there is a disproportionally greater gain in reductions to bycatch species relative to reductions in the target species.

6. The report reviewed by the SSC has specified MSY values for Georges Bank that range from 9,000 to 15,000* (20-33 million pounds) and for the Mid-Atlantic that range from 11,000 to 20,000 metric tons (24-44 million pounds). The Council should realize, as mentioned earlier, that these are average yields under idealized management conditions and may not reflect short-term or even long-term yields under other management practices. This range does not truly cover all the uncertainties in the estimation of MSY and does not completely account for the variability in gear selectivity, recruitment, dredge efficiency, natural mortality and the time period analyzed.

   * The actual range was estimated to be as high as 24,000 metric tons but that range was decided to be too high because it is not consistent with historical landings and was influenced by a few samples from a single year class (1998).

7. The above statements address MSY but management decisions will be implemented in terms of OY and in that process, certain adjustments need to be made including reductions due to spatial management constraints (e.g. EFH closed areas).

8. In the planning of expected yields, one examining historic average yields in contrast to yields under MSY levels might been considered because the high range of MSY estimates provided are obviously higher than the highest yields achieved under current management practices.

9. The SSC notes that the lower end of the MSY estimates provided above are higher than reported landings in most years since 1957 (actual catches may have been higher for a number of reasons). Several management measures implemented since the mid 1990s have improved yield-per-recruit and stronger recruitment in recent years (particularly in the Mid-Atlantic) would have been expected to increase MSY. The SSC is confident that the lower end of the MSY range may be achievable, but the upper end is unlikely to be.