SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON YELLOWFIN TUNA STATUS

Dr. Mark Maunder (Inter-American Tropical Tuna Commission) briefed the Scientific and Statistical Committee (SSC) on the stock assessment conducted for yellowfin tuna in the Eastern Tropical Pacific. The results in document E.2.a, Attachment 6 are slightly different from those presented to the SSC. The SSC reviewed the assessment, noting that there is currently no Terms of Reference document for Highly Migratory Species stock assessments. The report on the yellowfin tuna stock assessment, however, includes most of the information typically included in a stock assessment report used for Council decision-making and hence could be reviewed by the SSC. Based on its review of the assessment, the SSC endorses the assessment, and its use for status-determination purposes.

The SSC notes that the stock assessment is not spatially-structured although the length-frequency of yellowfin catches differ spatially, and by gear-type. The SSC is unclear whether the impact of not having a spatially-explicit model is substantial, but recommends that this issue be examined as part of future assessments.

The assessment indicates that the stock has been relatively stable since 1984. For the base-case assessment, the stock is estimated to be close to $B_{MSY}$ with a fishing intensity slightly above $F_{MSY}$, i.e. under the base-case assessment overfishing is occurring, but the stock is not in an overfished state. The base-case assessment assumes that recruitment is independent of spawning biomass (i.e. steepness equals one). The extent to which fishing intensity exceeds $F_{MSY}$ depends on the relationship between spawning biomass and recruitment; the lower the value of steepness, the greater the implied extent of overfishing. Dr. Maunder noted that steepness for yellowfin tuna was unlikely to be one, but that it was also unlikely to be much lower than one.

The recruitment used in the calculation of $B_{MSY}$ is the average over the entire period considered in the assessment. However, Dr. Maunder noted that the results of the assessment are consistent with a change in average recruitment in about 1984. The value of $B_{MSY}$ would have been higher had it been based on recent (post-1983) recruitment. The SSC was not able to determine whether the stock would be estimated to be currently below $B_{MSY}$ had $B_{MSY}$ been defined this way.

Finally, the SSC notes that, at present, very few US-flagged vessels operate in the commercial fishery for yellowfin tuna and hence that multi-national management arrangements are needed to stop overfishing.

PFMC
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