SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON THE NORTH PACIFIC ALBACORE TUNA PRECAUTIONARY MANAGEMENT FRAMEWORK

The Scientific and Statistical Committee (SSC) reviewed the Highly Migratory Species Management Team (HMSMT) report to the Council on a precautionary management framework for North Pacific Albacore Tuna (Agenda Item D.5.b, HMSMT Report). Dr. Sippel from the HMSMT presented the report to the SSC. Dr. Kit Dahl was also available to answer questions. The SSC discussion focused on elements that should be included in the precautionary management framework for North Pacific Albacore Tuna being developed by the Northern Committee of the Western and Central Pacific Fisheries Commission.

Overall, the SSC supports the use of this document as a starting point for management discussions. The current interim reference point, $F_{SSB\text{-}ATHL}$, is effort-based and provides a status quo reference point that assumes that the current mix of gear types remains constant. The definition of effort is key to any reference point based on fishing effort, and some effort metrics may be more informative than others (e.g., number of vessels or vessel-days vs. number of hooks in the water). Currently, fishing effort for this species is not measured to the degree needed to support reference points based on fishing effort.

The SSC agrees with the HMSMT that management reference points should consider the availability and quality of catch data and biological information for the stock. Reference points can be based on biomass or fishing mortality, or proxies for F_{MSY}. The SSC has previously recommended that spawning potential ratio (SPR) reference points be considered as potential fishing mortality proxies for North Pacific albacore. Biomass-based reference points, which are a fundamental part of the control rules currently proposed, are problematic given the high uncertainty associated with biomass estimates for this species.

Harvest Control Rules (HCRs) need to consider data quality and the implementation of management recommendations. A more effective presentation of the information in Figure 1 of the HMSMT report would be to plot stock status versus catch and stock status versus effort/F separately because the interpretation of these plots depends greatly on the definition of the y-axis. The SSC recommends against considering the more complex sliding scale harvest control rule, as illustrated in the right-hand panel of Figure 1, because the high uncertainty associated with this stock's parameter estimates and status do not support implementation of a more complex HCR.

The SSC notes that the biomass-based HCRs currently proposed are not robust to the effects of decadal scale environmental variability on North Pacific albacore biomass and distribution.

PFMC
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