

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
BIENNIAL HARVEST SPECIFICATIONS AND MANAGEMENT MEASURES

The Scientific and Statistical Committee (SSC) reviewed the alternative approaches to derive proxies for status determination criteria (SDC) for bigeye and yellowfin tunas as set forth in [Joint SWFSC-WCR NMFS Report 1](#). This review was necessitated by the adoption of new modeling approaches by the Inter-American Tropical Tuna Commission for bigeye and yellowfin tuna. These new “probabilistic” assessments involve using an ensemble of alternative models and parameterizations that are weighted based on a set of criteria including model fit and the plausibility of the results. The SSC Highly Migratory Species (HMS) Subcommittee met on February 4th, 2021, via webinar to discuss (A) the new probabilistic assessments for these species, (B) Best Scientific Information Available determinations, and (C) best practices for determining Management Limit Reference Points and SDC using results of these probabilistic assessments. The SSC, while discussing all three, focused on the last of these.

Ms. Sarah Shoffler (Southwest Fisheries Science Center [SWFSC]) and Ms. Amber Rhodes (West Coast Region [WCR]) provided context for the SSC discussion and answered questions. The SSC agrees that applying the proxy for the Maximum Fishing Mortality Threshold outlined in [Joint SWFSC-WCR NMFS Report 1](#) is a reasonable approach for these assessments. For the Minimum Stock Size Threshold (MSST), the SSC agrees that the second example under Alternative 3 is appropriate whenever the central values of natural mortality rate (M ; either a fixed value or the median of a distribution for each individual model) are greater than 0.5 for all models in the ensemble. Option 1, whereby the assessment results include reference levels consistent with domestic SDC, is preferred in cases where some or all of these M central values are below 0.5 (including when M is age-dependent and this is true for a subset of ages). If only a small minority of the models have M central values below 0.5, the above proxy for MSST may still be acceptable.

As mentioned previously ([Agenda Item J.3.a, Supplemental SSC Report 1, November 2018](#)), it should not be necessary for the SSC to routinely review HMS status determinations. However, the SSC would be willing to review the application of the HMS SDC for other species or for future assessments as needed.

PFMC
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