



New England Fishery Management Council

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Dr. John F. Quinn, *Chairman* | Thomas A. Nies, *Executive Director*

To: Tom Nies, Executive Director

From: Scientific and Statistical Committee

Date: September 18, 2019

Subject: Terms of Reference – Specify overfishing levels (OFLs) and develop allowable biological catch (ABC) recommendations for monkfish for fishing years for 2020-2022.

The SSC met on August 21, 2019 in Providence, Rhode Island, to address the following terms of reference (TORs):

- 1) Review information from the June 2019 operational assessment for monkfish and provided by the Monkfish Plan Development Team (PDT).
- 2) Specify OFLs and develop Allowable Biological Catch (ABC) recommendations for both the Northern and Southern Management Areas for fishing years 2020-2022. ABC recommendations should be provided under the current control rule and/or under any new control rule that the SSC might recommend.

To address these TORs, the SSC considered the following information:

B.0 - Terms of Reference – Specify overfishing levels (OFLs) and develop allowable biological catch (ABC) recommendations for monkfish for fishing years for 2020-2022

B.1 - August 16, 2019 memo from Monkfish Plan Development Team to SSC – Monkfish ABCs for FY 2020 - 2022

B.2 - An Excerpt from the “Operational Assessment of the Black Sea Bass, Scup, Bluefish, and Monkfish Stocks, Updated Through 2018”

B.3 - Risk Policy Matrix for Monkfish

TOR

The SSC reviewed the PDT memo as well as the monkfish section in the 2019 operational assessment document, thereby addressing TOR 1. The SSC continues to support the use of the index-based assessment as the source of catch advice for monkfish in both the Southern and Northern Management Areas. The index-based approach precludes formal estimation of reference points and stock status for monkfish in both Management Areas.

The SSC considered the alternatives provided by the PDT for fishing years (FY) 2020-2022 and **recommends the following ABCs: 8,351 metric tons (MT) for the Northern Management Area and 12,316 MT for the Southern Management Area.** Given the absence of analytical assessments for monkfish, the SSC concluded that **OFLs cannot be determined for either the Northern or Southern Fishery Management Areas. Therefore, the current ABC control rule could not be**

used as a basis for ABC recommendations and a different approach was used (see below). This represents the best scientific advice from the SSC and addresses the second TOR.

RATIONALE INCLUDING SIGNIFICANT SOURCES OF UNCERTAINTY

As indicated above, the SSC was unable derive OFLs for the monkfish populations in either Management Area. The PDT recommended an increase of 10% in the ABC for the Northern Management Area ABC. The SSC concurred with this recommendation and agreed that a more conservative ABC is appropriate than the 20% increase emanating from the Plan B assessment. The 10% ABC increase was deemed appropriate given the uncertainty associated with the contribution of the 2015 year class to stock biomass over the next 3 fishing years. Also, the 2019 NEFSC spring and autumn trawl survey relative abundance indices for monkfish in the Northern Management area show a decline.

For monkfish in the Southern Management Area, the SSC concurred with the PDT recommendation of a status quo ABC given the flat trend in recent NEFSC survey abundance indices. As noted by the PDT, the status quo ABC specifications for the Southern Management Area have not resulted in catch limits being exceeded since their implementation. Given no evidence of any negative impacts on monkfish in the southern area from the recent management specifications, the SSC recommends that the current ABC in the Southern Management Area continue during the next three fishing years.

ADDITIONAL COMMENTS

The SSC discussed future needs and technical recommendations for the monkfish populations in the two management areas. The SSC recommends gaining improved age and growth information for conducting analytical assessments in the future. If such assessments are able to be performed with the new data, formal estimation of stock status criteria and reference points will be possible.

The SSC also recommends investigating the 2015 recruitment event and its effect on discards and biomass trends. If the high discard rates in the current fishery are primarily due to the 2015 cohort, it is important to understand if discarding will decline as this year class becomes fully recruited to the fishery.

The SSC encourages investigating various alternative approaches for assessing monkfish as recommended by the peer review panel including surplus production models that incorporate process error and other data limited approaches (such as those available in the DLM toolkit and ICES assessment tools).

The SSC discussed examining NEFSC survey abundances for monkfish during the 2020-2022 period to evaluate whether adjustments to the specifications might be needed to account for unanticipated changes in the abundance of monkfish in either of the two Management Areas. The SSC recommended that a “rumble strip” approach be developed (such as the approach used for scup) to ensure that the monkfish ABCs during the specification period are concordant with current stock abundance. The rumble-strip approach could examine various data such as survey abundance, size compositions, and fishery catch and length-frequencies to evaluate whether any unforeseen adverse changes had occurred in the monkfish populations in either of the two Management Areas. If so, a management action might be needed to be address this situation.

Summary of recommendations

- 1. The SSC could not determine OFLs for monkfish in the Northern and Southern Management Areas as analytical assessments are not available from which to estimate stock status criteria and biological reference points.**
- 2. For FY 2020-2022, the SSC recommends an ABC of 8,351 MT for monkfish in the Northern Management Area, and an ABC of 12,316 MT for monkfish in the Southern Management Area.**
- 3. The SSC recommends a research track assessment be pursued for monkfish to develop analytical assessments once the current age and growth research initiatives are completed. In the interim, various data-limited assessment approaches should be investigated.**