



New England Fishery Management Council

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Eric Reid, *Chair* | Thomas A. Nies, *Executive Director*

**DATE:** January 23, 2023

**TO:** Thomas A. Nies, Executive Director

**FROM:** Scientific and Statistical Committee (SSC)

**SUBJECT: Terms of Reference – Acceptable biological catches for monkfish, 2023 through 2025**

The SSC met via webinar on January 20, 2023 to address the following Terms of Reference (TORs):

**Terms of Reference**

A. Consider the remand of the New England Fishery Management Council to reconsider the October 2022 recommendation of the Scientific and Statistical Committee (SSC) for setting acceptable biological catches (ABCs) for monkfish in both the northern and southern management areas for fishing years (FY) 2023-2025.

B. Consider all relevant information about the status of monkfish provided by the 2022 Management Track Assessment, Peer Review Report, and the Monkfish Plan Development Team (PDT) focusing on this latest request of the Council.

C. Recommend monkfish ABCs that will prevent overfishing, meet the objectives of the fishery management plan, and consider the Council's Risk Policy Statement. Specifically, the Council requests the SSC consider an approach that uses an average of the approach taken for setting FY 2020-2022 ABCs and the October SSC recommendation.

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

**Information**

1. Presentation: Monkfish PDT report (NEFMC staff)
2. Memo from Monkfish PDT to SSC re ABCs for FY 2023 – 2025, January 12, 2023
3. Framework Adjustment 13 draft environmental assessment, January 13, 2023
4. Memo from SSC to NEFMC re monkfish OFLs and ABCs, November 21, 2022

**Background Documents**

1. The Council's Risk Policy Road Map (2016), that includes the Risk Policy Statement and Implementation Plan, see pp. 4-5 and 10-12.
2. State of the Ecosystem and Current Conditions. NOAA/NEFSC. Available at: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/ecosystems/state-ecosystem-reports-northeast-us-shelf>
3. Memo from Monkfish PDT to SSC re OFLs and ABCs for FY 2023 – 2025, October 19, 2022 (typos later corrected)

4. Monkfish stock assessment
  - a. Draft 2022 monkfish stock assessment report
  - b. 2022 monkfish stock assessment peer review report
  - c. 2016 monkfish stock assessment and peer review report
  - d. 2019 monkfish stock assessment and peer review report
5. Index-Based Methods Work Group
  - a. Draft report and three individual peer review reports. Available at: <https://www.noaa.gov/information-technology/index-based-methods-working-group-id437>
  - b. Legault et al manuscript
6. Risk Policy Matrix for Monkfish
7. 2022 Monkfish Fishery Performance Report
8. Monkfish AP meeting summary, November 28, 2022
9. Monkfish Committee meeting summary, November 29, 2022

**SSC members in attendance:** Mike Carroll, Jeremy Collie, Kevin Friedland, Adrian Jordaan, Lisa Kerr, J.-J. Maguire, Conor McManus, Jason McNamee, Cate O’Keefe, Fred Serchuk, Kevin St. Martin, Terry Stockwell, Sam Truesdell, Hiro Uchida, John Wiedenmann, Lindsey Williams

## **TERMS OF REFERENCE**

*A. Consider the remand of the New England Fishery Management Council to reconsider the October 2022 recommendation of the Scientific and Statistical Committee (SSC) for setting acceptable biological catches (ABCs) for monkfish in both the northern and southern management areas for fishing years (FY) 2023-2025.*

During the January 20, 2023 meeting, the SSC considered the Council’s remand of monkfish ABCs for FY 2023-2025 and supported the Council’s request to reconsider the ABCs for northern and southern monkfish management areas. The SSC considered the motion passed by the NEFMC which stated:

*Accept the SSC ABC recommendations for FY 2023-2025 (for both areas) and to remand the Monkfish ABCs for both areas back to the SSC to facilitate a transition to the appropriate application of Ismooth for monkfish stocks. Specifically, we request that the SSC consider setting ABCs for the FY 2023-2025 as the average of the Ismooth approach (multipliers applied to recent 3-year catch) and the recent ABC approach (Multipliers applied to the recent ABCs). Further, the Council notes that application of Ismooth multipliers should be revisited during the next monkfish assessment.*

*B. Consider all relevant information about the status of monkfish provided by the 2022 Management Track Assessment, Peer Review Report, and the Monkfish Plan Development Team (PDT) focusing on this latest request of the Council.*

The SSC considered all available information provided for the January 20, 2023 meeting, as well as information previously provided to the SSC for the October 26-27, 2022 meeting, focusing on the Council’s request.

*C. Recommend monkfish ABCs that will prevent overfishing, meet the objectives of the fishery management plan, and consider the Council’s Risk Policy Statement. Specifically, the Council requests the SSC consider an approach that uses an average of the approach taken for setting FY 2020-2022 ABCs and the October SSC recommendation.*

The SSC previously provided catch advice for northern and southern monkfish management areas in a November 21, 2022 memo to Executive Director Nies. The SSC catch advice recommendations were based on applying the Ismooth multipliers to the most recent 3-year average catch to calculate the Annual Catch Targets (ACT) for the northern and southern management areas, the ACT was increased by the management uncertainty buffer (3% for monkfish) to calculate ABCs. This was a change in the application of Ismooth multipliers, which were previously applied to recent ABCs which is inconsistent with best practices for use of the Ismooth approach. The more appropriate application of the Ismooth approach is to apply the multipliers to recent catch as survey indices are assumed to be directly related to removals (i.e., catch) and ABCs are not necessarily related to catch. Transitioning from applying the multipliers to recent ABCs to recent average catch resulted in a substantial reduction in catch advice for monkfish stocks (i.e., a 34% and 69% reduction in the northern and southern management areas, respectively). The NEFMC asked the SSC to consider a transition to the appropriate application of the Ismooth approach for monkfish stocks setting ABCs for the FY 2023-2025 constant as the average of the Ismooth approach (multipliers applied to recent 3-year catch) and the recent ABC approach (multipliers applied to the recent ABCs).

**The SSC recommends use of a transition approach as the basis for catch advice for monkfish in both the northern and southern management areas.**

**The SSC recommends OFL be unknown for the northern and southern management areas for FY 2023-2025 (as determined in advice provided in November 21, 2022 memo), and recommends revised ABCs of 6,224 mt for the northern management area and 5,861 mt for the southern management area to be held constant for FY 2023-2025.**

## **RATIONALE INCLUDING SIGNIFICANT SOURCES OF UNCERTAINTY**

The SSC was challenged in how to consider this remand but determined that consideration of a transition approach is reasonable and agreed with adoption of a transition approach to setting catch advice for FY 2023-2025. The transition approach recognizes that the application of Ismooth multipliers to catch is best practice but allows for a transition to alleviate fishery disruptions and adverse economic impacts that may result from substantial catch reductions in a single management action resulting from the correction to the Ismooth approach for setting catch advice. The SSC considered two transition approaches: 1) a constant ABC based on an average of the Ismooth multiplier applied to the most recent ABC (previously used approach for FY 2020-2022) and to 3-year average catch (approach proposed by the SSC in October 2022) and 2) a ramped ABC (phasing in the transition over FY 2023-2025). The SSC recognized that either approach transitions to the appropriate application of Ismooth multipliers to catch. During the SSC discussion a common concern raised with respect to both transition approaches was that the advice is based in part on recent ABCs that were derived from a previously rejected stock assessment.

The SSC recommended a transition approach that uses a constant ABC based on an average of the Ismooth multiplier applied to the most recent ABC (previously used approach for FY 2020-2022) and to 3-year average catch (approach proposed by the SSC in October 2022) as the basis for catch advice. This transition approach reduces catch advice by ~25% in the north and over 50% in the south from recent ABCs. This approach is consistent with the Council's request of the SSC.

Monkfish stock status is unknown as reference points are undetermined for this stock, which makes it challenging to determine whether ABCs will lead to overfishing. However, the proposed ABCs

represent large reductions from recent ABCs and the SSC believes the recommended ABCs are not likely to lead to overfishing. Neither management area has previously been declared overfished and while recent declines in the average survey indices in both the northern and southern areas resulted in Ismooth multipliers <1.0, the biomass indices are not at historically low levels, nor do they show any truncation of size classes in either management area. In addition, other surveys (i.e., ASMFC shrimp survey in the north and scallop survey in the south) show conflicting trends to the bottom trawl survey. The transition approach results in an ABC that is lower in the southern management area relative to the northern management area, an outcome consistent with results of the recent NEFMC surveys. Based on the chain sweep study, absolute biomass in the north is higher than in the south, which further supports a lower ABC in the south relative to the north. The SSC noted that adopting higher ABCs based on this transition approach would likely result in accepting additional risk, a fact that was acknowledged by the Council in deliberations over the motion to remand.

Information from members of the fishing industry was provided by the PDT and through public comment during the webinar indicating that recent monkfish catch is influenced by several factors. External drivers on monkfish fishing effort and landings include pandemic-related reductions, market dynamics with reduced prices in recent years, increased fishing costs (i.e. fuel costs), shifts in seasonal availability of monkfish to the fishery in relation to warming ocean temperatures (most notably in the southern management area), and fluctuations in targeting of monkfish and other species in response to price and abundance/availability differences (the skate fishery was noted to be an important interacting fishery for monkfish). It was noted that proposed increases in mesh size used for targeting monkfish have been supported by the fishing industry as a potential mechanism to increase product quality and size and reduce the likelihood of overfishing. The SSC highlighted the importance of these external factors in considering a transition plan for ABC advice. The public comments made during the meeting were consistent with the Monkfish AP input in the fishery performance report provided to the SSC.

## ADDITIONAL COMMENTS

During the SSC discussion, general concerns were raised regarding the appropriateness of the underlying assumptions of the Ismooth approach for setting catch advice for monkfish. The approach adjusts catch advice based on recent catch and changes in relative abundance derived from the survey which implies that catch is a key driver of changes in resource biomass and that the resource will respond to changes in catch. The SSC recognized socioeconomic impacts and catch stability for the fishery as important factors in recommending revised catch advice based on a transition approach. This highlights challenges with the ABC control rules that do not directly articulate a path for the SSC to consider stability in catch advice setting.

## SUMMARY OF RECOMMENDATIONS

- 1. The SSC recommends use of a transition approach as the basis for catch advice for monkfish in both the northern and southern management areas.**
- 2. The SSC recommends OFL be unknown for the northern and southern management areas for FY 2023-2025 (as determined in advice provided in November 21, 2022 memo), and recommends revised ABCs of 6,224 mt for the northern management area and 5,861 mt for the southern management area to be held constant for FY 2023-2025.**

| Fishing Year | Management Area | OFL (mt) | ABC (mt) |
|--------------|-----------------|----------|----------|
| 2023-2025    | Northern        | Unknown  | 6,224    |
| 2023-2025    | Southern        | Unknown  | 5,861    |