



Mid-Atlantic Fishery Management Council
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Chub Mackerel Fishery Management Action Team (FMAT)

Meeting Summary

April 27, 2018

FMAT members in attendance: Greg Ardini (NMFS), Julia Beaty (MAFMC), Doug Christel (NMFS), Ben Galuardi (NMFS), Sarah Gurtman (NMFS), John Manderson (NMFS), Diane Stephan (NMFS), Alison Verkade (NMFS)

Others in attendance: Purcie Bennet-Nickerson (Pew Charitable Trusts), Taylor Daley (University of Southern Mississippi), Greg DiDomenico (Garden State Seafood Association), Joseph Gordon (Pew Charitable Trusts), Jeff Kaelin (Lund's Fisheries), Meghan Lapp (Seafreeze, Ltd.), Robert Leaf (University of Southern Mississippi)

Amendment Goals and Objectives

The FMAT revised their previously recommended goals and objectives for the Chub Mackerel Amendment.¹ The FMAT recommended the following goals and objectives for chub mackerel. The goals are high-level values and priorities. The objectives are specific, actionable steps towards achieving those goals. The Council is in the process of revising the Fishery Management Plan goals and objectives for other Council-managed species. The goals and objectives below reflect the structure of the revisions under consideration for other species (e.g. summer flounder, surf clams, and ocean quahogs).

The goals and objectives are meant to guide development of management actions for chub mackerel. Any management alternatives considered should be consistent with the goals and objectives.

- **Goal 1:** Maintain a sustainable chub mackerel stock.
 - **Objective 1.1:** Prevent overfishing and achieve and maintain sustainable biomass levels that promote optimum yield in the fisheries and meet the needs of chub mackerel predators.
 - **Objective 1.2:** Consider, to the extent practical, the role of chub mackerel in the ecosystem, including its role as prey, as a predator, and as food for humans.
- **Goal 2:** Optimize economic and social benefits from utilization of chub mackerel, balancing the needs and priorities of different user groups.

¹ For more information, see the summary of the June 2017 FMAT meeting, available at: <http://www.mafmc.org/actions/chub-mackerel-amendment>.

- **Objective 2.1:** Allow opportunities for commercial and recreational chub mackerel fishing, considering the opportunistic nature of the fisheries, changes in availability that may result from changes in climate and other factors, and the need for operational flexibility.
- **Objective 2.2:** To the extent practical while meeting the other objectives, allow the *Illex* squid fishery to proceed without additional limiting restrictions when *Illex* are available.
- **Objective 2.3:** Balance social and economic needs of various sectors of the chub mackerel fisheries (e.g. commercial, recreational, regional) and other fisheries, including recreational fisheries for highly migratory species.
- **Goal 3:** Support science, monitoring, and data collection to enhance effective management of chub mackerel fisheries.
 - **Objective 3.1:** Improve data collection to better understand the status of the chub mackerel stock, the role of chub mackerel in the ecosystem, and the biological, ecological, and socioeconomic impacts of management measures, including impacts to other fisheries.
 - **Objective 3.2:** Promote opportunities for industry collaboration on research.

One FMAT member cautioned that the objectives should be phrased in a manner that avoids conflicting with applicable law. He also mentioned that narrowly focused objectives could raise the risk that the final measures may not address every aspect of the amendment's objectives. Broader objectives allow greater flexibility in developing management measures and avoiding conflicts with the Fishery Management Plan (FMP) objectives.

The FMAT discussed the need for special management considerations given that the chub mackerel fishery is opportunistic and prosecuted by a small fleet at the seasonal northern edge of the range of the stock. Climate variability, which may include systematic change, is likely to influence the availability of this species. The FMAT acknowledged that the commercial chub mackerel fishery in the mid-Atlantic and southern New England is an alternative fishery that provides flexibility to commercial fishermen. This type of operational flexibility is an ecosystem consideration as it allows fishermen to target stocks when they are abundant and can help reduce fishing pressure on stocks that are less abundant. The FMAT recommended that such operational flexibility be encouraged, but also cautioned that the chub mackerel fishery should be carefully managed given that it occurs at the seasonal northern edge of the range of the stock. Objective 2.1 is meant to address these considerations.

The FMAT agreed that economic allocations, including within and among different regions, should not be the sole purpose of any management alternative. The goals and objectives above were crafted with this consideration in mind.

The FMAT discussed the possibility of combining objectives 2.2. and 2.3. Objective 2.2 could be considered a specific example of the concerns addressed in objective 2.3. However, the FMAT agreed that the needs of the *Illex* squid fishery are unique enough to warrant a standalone objective (i.e. objective 2.2). There is significant overlap between the *Illex* squid fishery and the chub mackerel fishery. The two species are caught by the same vessels in similar areas at the

same time of year. Fishermen, fish dealers, processors, and other businesses rely on *Illex* squid to a much greater extent than chub mackerel. The *Illex* squid fishery is more established and more valuable than the chub mackerel fishery, which, as stated above, is largely opportunistic. Participants in the *Illex* squid fishery have requested that their fishery operations be considered when developing chub mackerel management alternatives to minimize negative impacts to the *Illex* squid fishery.

Limited quantitative data are available on the contribution of chub mackerel to the diets of any predators in this region. The Council plans to fund a study to help fill this data gap. One member of the public asked how the goals and objectives above would change if this study determines that chub mackerel are not an important prey species for any predator. The FMAT agreed that this would not necessitate a change in the goals and objectives as written above. One FMAT member noted that social concerns related to certain recreational fisheries for apex predators would remain if the study found that chub mackerel are not an important prey species.

One member of the public suggested that the word “consider” in objective 1.2 be replaced with “protect” or “maintain”. The FMAT did not support this recommendation because it would be difficult to measure success in meeting such an objective given currently available data.

Management Unit

National Standard 3 states: “to the extent practicable, an individual stock of fish shall be managed as a unit throughout its range”. The FMAT discussed considerations related to the management unit for chub mackerel, including the National Standard 3 Guidelines and examples from other FMPs.

Chub mackerel are wide ranging. They are found throughout the U.S. east coast, the Gulf of Mexico, the Caribbean, and in South American waters. Only U.S. waters can be included in the management unit. Few data are available on chub mackerel in the Caribbean.

The FMAT reaffirmed their previous recommendation that the chub mackerel management unit include U.S. waters from Maine through Texas. The FMAT noted that the Council could develop separate management measures for different regions within the management unit.

The National Standard 3 Guidelines state that “a less-than-comprehensive management unit may be justified if, for example, ...the unmanaged portion of the resource is immaterial to proper management”. The FMAT cautioned against considering the portions of the chub mackerel stock in the South Atlantic and Gulf of Mexico to be “immaterial to proper management” from both biological and fishery perspectives. The FMAT recommended that the management unit not be decoupled from the biology of the stock. For example, the scientific literature and fisheries-independent survey data suggest that the Gulf of Mexico may include important chub mackerel spawning habitats.

Most commercial landings in recent years occurred at the seasonal northern edge of the range of the stock (i.e. the mid-Atlantic and southern New England). Excluding other areas which may be used more extensively by the stock could lead to management challenges if landings in those areas increase in the future. The FMAT emphasized that a management unit from Maine through Texas would allow the Council to react most efficiently to future changes in the fishery. Given the recently developed market for chub mackerel caught in the mid-Atlantic and the influence of the environment on availability, it is possible that landings in the South Atlantic or Gulf of Mexico could increase rapidly from one year to the next, as occurred in the mid-Atlantic and New England (Figure 1). Given the biology of the stock, major changes in fisheries in other regions could potentially negatively impact the mid-Atlantic and southern New England fishery. Including other regions in the management unit would allow the Council to react to any fishery changes which could negatively impact mid-Atlantic fisheries. This would not preclude the Mid-Atlantic Council from collaborating with other councils as necessary and appropriate.

A comprehensive management unit (e.g. Maine through Texas) is also beneficial for National Environmental Policy Act purposes. Considering a broad stock area from the beginning could help facilitate analysis of future management actions addressing different parts of that range.

The FMAT recommended that future stock assessments consider the full range of the stock.

One FMAT member noted that genetic differentiation is not the only relevant consideration when evaluating sub stock structure. Genetically-similar contingents with distinct migratory patterns, spawning seasons, and other life history characteristics can play important roles in stock dynamics and resiliency of schooling pelagic fish.

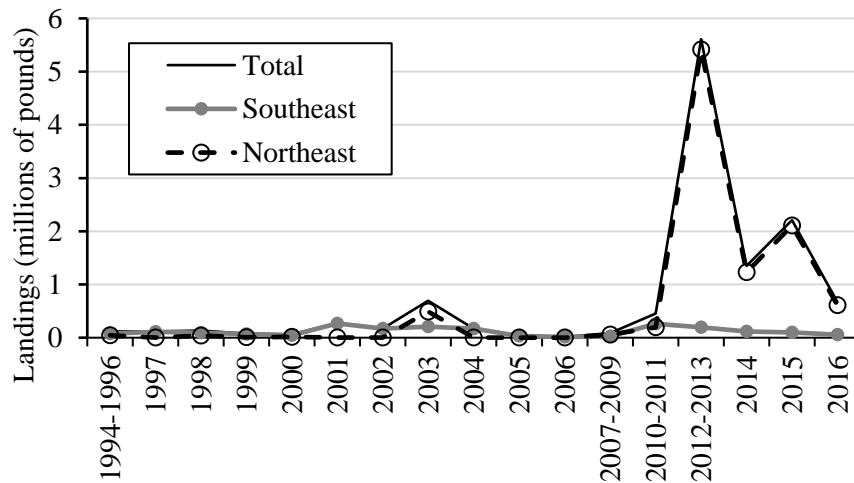


Figure 1: Dealer-reported chub mackerel landings, 1994-2016. Data for some years are combined to protect confidential information representing fewer than three vessels and/or dealers. Southeast data include landings from North Carolina through Texas. Northeast data include landings from Maine through Virginia.²

² Figure 1 does not include recreational harvest. The FMAT did not revisit their previous discussions of recreational data. Due to the similarities in appearance between Atlantic mackerel and chub mackerel, there is likely some degree

Forage Considerations

The FMAT discussed the possibility of accounting for chub mackerel's role in the ecosystem as a forage species through the setting of optimum yield (OY). The regulations for other Council-managed species allow the Council to set OY at a lower level than the acceptable biological catch (ABC) level recommended by the Scientific and Statistical Committee (SSC) based on social, economic, or ecological factors.

The FMAT noted that limited data are available to quantify the appropriate reduction from the ABC to OY (if any). It may be worth bringing in individuals with ecosystems expertise, including SSC members and other experts, when considering how to use OY to address ecosystem concerns.

One FMAT member recommended consideration of a simple metric for calculating OY which could be easily modified as new information becomes available. For example, the ABC could be reduced by a certain percent to ensure that some chub mackerel are set aside for ecosystem considerations. Another FMAT member expressed concern about the uncertainty of any numbers that would be considered, as well as the perception that the Council uses multiple conservative "buffers" when setting quotas.

The FMAT agreed that a forage ABC control rule³ is not currently feasible for chub mackerel given existing data limitations and the lack of a quantitative stock assessment.

One FMAT member noted that forage considerations have been addressed for other species through the calculation of natural mortality and status determination criteria.

Management Measures to Address Potential Localized Depletion of Chub Mackerel Predators

As previously stated, limited quantitative data are available on the contribution of chub mackerel to the diets of any predators in the mid-Atlantic. The Council is funding a study to help fill this data gap. This study will take place over 2018-2019, with final results likely not available until 2020.

The Council developed the first management measures for chub mackerel fisheries in the mid-Atlantic through the Unmanaged Forage Omnibus Amendment. These measures will expire on January 1, 2021. The Council plans to take final action on the Chub Mackerel Amendment in late 2018 or early 2019 to ensure that new management measures can be implemented before the current measures expire.

of undocumented or inaccurately reported catch in recreational fisheries. For more information, see the summary of the June 19, 2017 FMAT meeting, available at: <http://www.mafmc.org/actions/chub-mackerel-amendment>.

³ For an example, see figure 4 in the Council's 2014 white paper on managing forage fishes in the mid-Atlantic region, available at: <http://www.mafmc.org/eafm/>

The results of the diet study will not be available in time to inform development of alternatives in the Chub Mackerel Amendment. For this reason, the FMAT recommended that this amendment not include management alternatives aimed at preventing localized depletion of chub mackerel predators. For example, some stakeholders have requested that the Council consider spatial/temporal closures of the commercial chub mackerel fishery to prevent localized depletion of recreationally-important species such as white and blue marlin and bigeye and yellowfin tunas. Two FMAT members said the potential for localized depletion is very difficult to assess given currently available information on predator diets and chub mackerel patterns of movement and habitat use. The FMAT concluded that this amendment does not need to consider all issues relevant to chub mackerel. Other subsequent actions could address other issues as more information becomes available to support additional analysis.

Other Recommendations

The FMAT did not revisit their previous recommendations on several topics, including research recommendations, essential fish habitat, and their previous recommendations for “considered but rejected” alternatives (including minimum fish size restrictions, gear restrictions, and limited access provisions). For more information on these recommendations, see the summary of the June 19, 2017 FMAT meeting, available at: <http://www.mafmc.org/actions/chub-mackerel-amendment>.