



Atlantic States Marine Fisheries Commission

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Atlantic Striped Bass Technical Committee

Meeting Summary

Webinar
June 9, 2021

Technical Committee Members: Kevin Sullivan (Chair-NH), Alexei Sharov (MD), Brendan Harrison (NJ), Carol Hoffman (NY), Ellen Cosby (PRFC), Gail Wippelhauser (ME), Gary Nelson (MA), Gary Shepherd (NOAA), Kurt Gottschall (CT), Luke Lyon (DC), Nicole Lengyel Costa (RI), Olivia Phillips (VA), Steve Minkinen (USFWS), Tyler Grabowski (PA)

Staff: Katie Drew (ASMFC), Emilie Franke (ASMFC), Toni Kerns (ASMFC), Maya Drzewicki (ASMFC)

Public: Angela Giuliano (MDDNR), Jeffrey Horne (MDDNR), Mike Celestino (SAS-NJ), Simon Brown (MDDNR), Tony Wood (NOAA)

The Atlantic Striped Bass Technical Committee (TC) met via webinar on June 9, 2021 to discuss tasks supporting the development of Draft Amendment 7. Staff provided background on each task and questions for the TC that were identified by the Management Board and Plan Development Team (PDT).

Recruitment Trigger

The current recruitment trigger is tripped when any Juvenile Abundance Index (JAI) shows recruitment failure (i.e., an index value lower than 75% of all other values in the reference time series) for three consecutive years, at which point the Board will review the cause of recruitment failure and determine the appropriate management action. The TC's task is to identify alternative options for the recruitment trigger would better account for inherent variability and would be tripped during periods of below average recruitment.

Staff presented figures showing when alternative trigger options would trip on the JAI time series and the coastwide recruitment estimate from the assessment model. Options using different triggers (e.g. 2 consecutive years, 3 out of 5 years, 3-year average) or a different reference point (e.g. median of the reference time series) performed similarly to the current trigger. Applying the current trigger to the Age-1 indices and the recruitment estimates from the stock assessment also performed similarly to the current trigger. However, changing the reference period to only include more recent years instead of including the low recruitment seen in the 1970s/1980s resulted in tripping the trigger more often.

The TC noted that the current trigger is effective in identifying recruitment failure. If the Board wants a trigger that is tripped more proactively to indicate a period of low recruitment, the TC

can provide several options, but it is unclear what the management response to that trigger would be. The TC recommended that any response to the trigger should include SSB projections that account for the current level of recruitment to address the question of whether there is enough recruitment to maintain the stock at the target level. The focus should be on the consequences of low recruitment, understanding when SSB is likely to fall below the target or threshold levels, and how to tailor harvest strategies to reduce that risk.

The TC noted that options for a trend-based trigger could be considered and there needs to be more discussion on how to use the coastwide model estimate of recruitment vs. using the JAIs. The TC also noted that not all indices included in the trigger exercise are equally reflective of population-level recruitment, so the Board may want to consider weighting the indices differently when reacting to the trigger. G. Nelson has developed some projections correlating Age-1 indices with YOY indices which could be useful for this discussion.

Next Step: A small group of TC members and staff will further discuss options for a trigger that would be tripped during periods of low recruitment, including trend-based options (e.g. considering slope), changing the reference period, using model estimate of coastwide recruitment, etc.; consider the use of SSB projections in conjunction with recruitment estimates.

Question for the Board: What would be the management response to a trigger that trips during periods of low recruitment?

2015 Year Class

The public and the Board expressed concern that the relatively strong 2015 year class will soon enter the current slot limit (28-35"). Given the last five years of average or below average recruitment, Board members noted that protecting the 2015 year class is important for rebuilding the stock overall. Some Board members expressed concern that changing size/slot limits every year to protect one particular year class will be complex and that the 2015 year class has already entered the fishery. The TC's task is to address the following questions about the 2015 year class:

- Has the 2015 year class remained strong relative to other year classes?
- Are there other year classes to consider protecting?
- If Amendment 7 is implemented in 2023, is it too late to protect the 2015 year class?
- What is length-at-age over time for the 2015 year class?

For length-at-age estimates, TC members suggested using lengths and ages from tagging data to develop growth curves. Staff also noted that the Stock Assessment Subcommittee (SAS) Chair previously started analysis of observed vs. predicted size-at-age and the overlap among ages at each size that could be applicable. To address the question of other year classes to consider protecting, the TC noted that both the 2017 and 2018 year classes were above average in a few of the JAIs and could be included in this analysis.

The TC discussed the importance of developing stock projections alongside this information about the 2015 year class to estimate what the contribution of the 2015 year class will be to the spawning stock by 2023 when Amendment 7 is likely implemented.

The TC discussed the challenges of addressing questions about specific year classes, including that there is no model-based accepted growth curve for striped bass and the high variability of size-at-age depending on location along the coast. The TC noted these questions about the current strength of the 2015 year class and other recent year classes are difficult to answer without a full stock assessment. The TC expressed concerns about the use of slot limits to protect a specific year class and increased discards associated with the use of a slot limit. Because most fish are released alive, the harvest component is relatively small so changing the size limits to protect one year class may not have a big impact on stock health. The TC also noted that harvest pressure is shifted to sizes just outside the slot limit and the Board should consider whether protecting one year class aligns with the goal of maintaining a diverse age structure.

Next Step: A small group of TC members and staff will develop methods to estimate length-at-age for the 2015 year class with the goal of developing a TC-approved method for estimating length-at-age; compare length-at-age in 2023 (and forward) for the 2015, 2017, and 2018 year classes; consider developing projections of year classes over time.

Retrospective Analyses

Management Triggers

The PDT is developing options to modify the SSB and F-based management triggers for consideration in Draft Amendment 7. A Board member requested that any newly proposed triggers be tested to evaluate their performance implemented during Amendment 6 to address the question of whether different triggers could have helped the Board be more proactive in addressing poor stock status. As an example of how to approach this question of past trigger performance, staff presented draft figures showing when the current triggers would have tripped in the time series from past assessments. Staff noted the challenge of this analysis considering our understanding of stock status has changed with the 2018 assessment.

The TC discussed the challenges of doing this analysis considering changes to the assessment model over time, changes to the reference points, and not knowing how the stock would have responded if different triggers led to different management actions. The TC noted that fully answering the question of how different triggers would have performed is only possible with a full management strategy evaluation (MSE).

TC recommendation: After discussing the possibility of including past assessments and past time series in this type of analysis, the TC agreed that any retrospective analysis of management triggers for this Amendment 7 process should only use the current reference points and the time series from the 2018 assessment. The TC also noted the importance of

considering the probability of exceeding or going below a certain trigger, especially given the Board's concern about the triggers relying on point estimates.

Conservation Equivalency (CE) vs. Coastwide Measures

The PDT is developing options to specify when CE can be used and requirements for CE proposals for consideration in Draft Amendment 7. A Board member requested an analysis of the performance of CE measures at the state/region level vs the performance of coastwide measures. For example, how could performance be evaluated if some states implement a slot limit and others implement a minimum size limit?

The TC emphasized that identifying and comparing the effect of different management measures is not possible without a full MSE and robust simulations. Differences in performance are influenced by changes in effort, fish availability/year classes, environmental factors, etc. There is a lot of year-to-year variability even under consistent regulations due to different year classes moving through the stock and variability in effort and angler behavior.

TC recommendation: Any performance analysis, even if there are multiple years of data (e.g. for Addendum IV), cannot isolate the effects of different management measures (CE vs. coastwide) from the effects of effort changes and fish availability. Staff will work with TC to articulate concerns and difficulty of trying to compare performance of different management measures.