



Summer Flounder, Scup, and Black Sea Bass Monitoring Committee (MC) and Technical Committee (TC)  
May 11, 2023 Webinar Meeting Summary

**Monitoring Committee and Technical Committee Attendees:** Tracey Bauer (ASMFC), Julia Beaty (MAFMC), Peter Clarke (NJ F&W), Kiley Dancy (MAFMC), Steve Doctor (MD DNR), Alexa Galvan (VMRC), Mark Grant (GARFO), Hannah Hart (MAFMC), Mike Schmidtke (SAFMC), Rachel Sysak (NY DEC), Mark Terceiro (NEFSC), Corinne Truesdale (RI DEM), Sam Truesdell (MA DMF), Chelsea Tuohy (ASMFC), Greg Wojcik (CT DEP), Rich Wong (DNREC), Anthony Wood (NEFSC)

**Other Attendees:** Kim Bastille, Chris Batsavage, Alan Bianchi, Bonnie Brady, Lou Carr-Harris, Joe Cimino, Justin Davis, Ben Dyar, Greg DiDomenico, Michelle Duval, Tony Friedrich, Jeremy Hancher, Jesse Hornstein, Rich Kasprzak, Toni Kerns, Meghan Lapp, Nichola Meserve, Adam Nowalsky, Will Poston, Scott Steinback, Scott Thomas, Mike Waine, Kate Wilke, Westley Wlodyka, Renee Zobel

The Summer Flounder, Scup, and Black Sea Bass Monitoring Committee (MC) and Technical Committee (TC) met via webinar on Thursday, May 11, 2022, to review and reassess the configuration of the Recreational Demand Model (RDM) and to discuss the potential for a timeline adjustment to the recreational management measures setting process for the three species.

***Recreational Demand Model Configuration***

***Catch-Per-Trip***

Atlantic States Marine Fisheries Commission (Commission) and Northeast Fisheries Science Center (NEFSC) staff provided an overview on a key component of the RDM, catch-per-trip. Using the RDM, catch-per-trip is calculated from Marine Recreational Information Program (MRIP) data and is used to calibrate the model and project future catch-per-trip. The calibration component of the RDM replicates the market for recreational fishing using a complete year of MRIP catch-per-trip data as a baseline year. NEFSC staff recommended that the model continue using a single year for calibration, as this strategy worked favorably when setting 2023 measures. In the projection component of the RDM, the model originally used a single year of MRIP data to calculate future catch-per-trip when setting 2023 recreational measures. Prior to the December joint Council/Board meeting, the model transitioned to a multi-year average, which improved the precision and decreased the variability of harvest estimates. The MC/TC agreed that a multi-year average was the best choice for the projection component of the model. Staff asked the MC/TC for feedback on the number of years that should be used to calculate catch-per-trip in the future and whether preliminary year data should be used in that calculation. NEFSC staff recommended using a 3-year average, including preliminary current year data, and down weighting the previous two years. This helps to emphasize the most current information to capture current regulations, fishing behavior, and changes in availability while also addressing concerns about variability in the MRIP data and the potential for outliers.

As described in more detail below, **the MC/TC supported using preliminary data in the three-year average used to project catch per trip and down weighting the first two years. The MC/TC also agreed to discuss and decide upon an appropriate weighting scheme at a future meeting.**

#### Questions and feedback from the MC/TC:

- One MC/TC member asked if the modelers had completed an evaluation of the impact of regulation changes on catch-per-trip. The modelers noted that this kind of evaluation is difficult to carry out given that fluctuations in catch-per-trip can be the result of a variety of factors including, but not limited to, regulation changes, changing resource availability, COVID, and expenditure changes.
- One MC/TC member asked if the model accounts for changes in the availability of a species. NEFSC staff explained that it does, which is why it is important that the model uses the most recent years of data.
- One MC/TC member asked if assumptions would need to be made for missing wave data if preliminary data are used in the RDM. The modelers noted that for a similar model used for Atlantic cod and haddock, missing waves are filled in with the respective waves from the previous year. In past years, prior to the availability of the RDM, the MC/TC filled in missing waves by assuming the proportion of annual harvest by wave will be the same as the prior year or a multi-year average. This same approach could also be used to fill in missing waves in the RDM. Alternatively, it was suggested by an MC/TC member to only incorporate MRIP data that is available and not try to estimate what MRIP harvest will be for the rest of the year. The MC/TC agreed to further discuss the methods for filling in missing waves at a future meeting.
- One MC/TC member noted that a goal of the Percent Change Approach was to move away from heavily focusing on a single year of MRIP data and place less emphasis on current year preliminary data. The approach of using multiple years of data to project catch-per-trip seems appropriate and aligns with the intent of the Percent Change Approach.

NEFSC staff also presented identified challenges and proposed solutions to catch-per-trip issues encountered during the 2023 recreational measures setting process. **The MC/TC did not oppose any of the suggestions.**

#### NEFSC identified challenges and suggestions for improvement:

- In the 2023 recreational measures setting process, the RDM assumed a constant catch-per-trip across each year. However, this can result in predicted harvest during periods in which there has been no harvest in recent years. To address this, the modelers suggested using catch-per-trip data by wave. The modelers cautioned against breaking down the data further by month as two-month waves are the finest level of aggregation of the MRIP data. The modelers will further break down catch-per-trip data by state. When data are sparse, the modelers proposed aggregating the data either spatially (e.g., by region) or temporally (e.g., across waves or years) to account for uncertainty and increase precision. However, data should not be aggregated across years where there have been significant regulations changes due to these changes affecting targeting behavior and catch-per-trip.
- The model does not account for mode-specific catch-per-trip despite mode-specific measures occurring in several states in recent years. For future model updates using mode-specific catch-per-trip, modelers suggested using catch data by mode for shore vs. boat. However, the modelers cautioned against further splitting catch-per-trip by for-hire and private vessels due to the data becoming more uncertain.

### Other Aspects of RDM

NEFSC staff asked the MC/TC for feedback on how the RDM uses directed trips as a data source. Directed trips data accounts for how effort is distributed across the year. The RDM splits directed trips bi-monthly and state-by-state using MRIP data from the calibration year.

- During the 2023 recreational measures setting process, many states were interested in seeing how regulation adjustments at the daily, weekly, or mode-specific level would result in getting closer to the 10% required reduction. However, these adjustments were not explicitly modeled but accounted for using a post-estimation process. Another challenge was that bi-monthly effort estimations for some states had outliers resulting in unusually high harvest predictions.
- To account for mode-specific regulations and daily estimation of effort, the modelers suggested a method for calculating directed trips per day rather than estimating MRIP data at the daily level or completing post-estimation adjustments. This calculation would involve estimating directed trips per day at a higher level of aggregation and then distributing those estimates across the month. Next, to mitigate the influence of outliers, modelers suggested using multiple years of data on a case-by-case basis to estimate directed trips.

While the group discussed how to deal with outliers, time did not allow the MC/TC to suggest how outliers should be accounted for in the 2024 recreational measures setting process. **Council staff agreed to circulate a document to the group on how the MC/TC has previously dealt with outliers, and the MC/TC supported adding the discussion of outliers to a future meeting agenda.**

### ***Confidence Intervals***

When setting 2023 recreational management measures for summer flounder, scup, and black sea bass, the MC/TC agreed to use an 80% confidence interval (CI) under the Percent Change Approach. They expressed an interest in revisiting this topic and therefore discussed it again during this meeting. After a brief discussion, the MC/TC reaffirmed their previous conclusion that an 80% confidence interval sets sufficient bounds around the estimates allowing for appropriate management response. **The MC/TC supported the continued use of an 80% CI for setting 2024 measures.**

### ***MC/TC Comments on the Appropriate Level of Precision in Meeting the Required Reduction/Liberalization***

After the first application of the Percent Change Approach for setting 2023 measures, a 10% reduction in harvest was required for black sea bass and scup while summer flounder measures remained status quo. Some states found that they needed to take significant management action to achieve small percentage changes in harvest (e.g., 0.1% change in coastwide harvest). Because of this, the MC/TC discussed if it was appropriate to set a range around the harvest target sufficient for meeting a coastwide reduction or liberalization.

One MC/TC member voiced a concern that setting a level of precision around the target may not be appropriate under the Percent Change Approach. For example, confidence intervals are only intended to be used when determining the required coastwide percentage change in harvest and are not intended to also be used when setting measures to meet that required change. Concern was also expressed that setting a level of precision will result in some states trying to meet the bare minimum. Ultimately, **the group did not recommend an acceptable range around the harvest target that would be considered sufficient when setting measures.**

The modelers showed an example of metrics used for the cod and haddock fisheries showing the likelihood of measures resulting in catch remaining under the annual catch limit (ACL). Selected measures for these species must have at least a 50% probability of being below the ACL for all species. A similar output added to the RDM results could show the probability of the selected measures resulting in harvest at or below the harvest target as determined by the Percent Change Approach. Multiple members of the MC/TC voiced support for adding this output to the model results. However, the group agreed that this may not be the most important information for managers to consider, given that the RDM is already restricted to measures that have at least a 50% probability of harvest remaining at or below the harvest target. When deciding among alternatives that all have at least a 50% chance of success, managers will focus more on socioeconomic considerations. The modelers noted that the percent likelihood of harvest remaining at or below the harvest target is easy to generate and can be provided in the future for managers to use as they see fit.

### ***Future Timeline for Reviewing***

Under the Percent Change Approach, measures are set for two years with review in interim years. **The MC/TC agreed to review model configuration decisions in interim years between measure setting years to allow for sufficient time and thought to go into the decisions and potential model changes before measure setting years.** One MC/TC member suggested reviewing this process again at the end of 2023 and under circumstances where large regulation changes are implemented.

### ***Recreational Measures Setting Process and Timeline***

The MC/TC discussed the pros and cons of using preliminary current year data in the RDM. As described above, the MC/TC supported the use of preliminary partial year data in the RDM to capture information about the most recent dynamics of the fisheries, particularly if regulation changes occurred in the current year. When setting 2023 measures, the RDM used preliminary 2022 data through wave 4 (i.e., through August), consistent with the approach used for setting recreational measures for these species for many years prior to the availability of the RDM. However, this resulted in 2023 state and federal measures being finalized in the spring of 2023. The group discussed the potential for using no preliminary data for the current year, or of using only preliminary data through wave 3 (i.e., through June) to allow measures to be finalized closer to January 1 in future years. However, this creates challenges due to some of these missing waves representing the peak of the recreational fishing season for summer flounder, scup, and black sea bass. One member noted that as environmental and fishery conditions change, the importance of including specific waves may vary and may need periodic reevaluation.

Another constraint is that the recreational harvest limits (RHLs) are set in August. Because the RHL is an input into the Percent Change Approach, it would not be possible to determine with total certainty what overall percent change would be needed until the RHL was adopted. One MC/TC member suggested that once preliminary wave 4 estimates are released (~October 15), states could work on their measures alongside the process for federal measures with the understanding that they will not know the final required percent change in harvest until it is approved by the Council and Board in December. This could increase the chances that all state and federal measures could be approved at the joint Council/Board meeting in December.

**Given the time left in the meeting, the MC/TC could not agree on the best path forward for changing the timeline, and the group supported returning to this discussion later.**

### ***Other Improvements to Recreational Measures Setting Process***

NEFSC staff provided an update on ongoing work with the RDM. NEFSC is committed to improving the modeling process for a more streamlined measures-setting process. To address this goal, the NEFSC has hired a contractor to develop a graphical user interface (GUI) for the RDM, which, once complete, will allow managers to run the model independently and test as many regulation options as they would like. NEFSC staff suggested setting up a work group to meet monthly to provide input on the GUI development. Work group meetings will be open to the public. **The MC/TC supported the formation of a GUI development work group with a member of each state serving as a representative to provide feedback to GUI developers.**

***Other Topics***

While time did not allow for a group conversation on the topic, the MC/TC representative from Virginia agreed to work with the RDM modelers to compare results of the RDM to the current methodology to adjust black sea bass measures after their wave 1 fishery. While Virginia is currently the only state that adjusts measures after a wave 1 fishery for black sea bass, this discussion will be beneficial for other states should they chose this option in the future.