Summer Flounder, Scup, and Black Sea Bass Monitoring Committee

Webinar Meeting Summary

September 20, 2023

Monitoring Committee Attendees: Tracey Bauer (ASMFC), Julia Beaty (MAFMC), Peter Clarke (NJ F&W), Kiley Dancy (MAFMC), Lorena de la Garza (NC DMF), Steve Doctor (MD DNR), Alexa Galvan (VMRC), Hannah Hart (MAFMC), Emily Keiley (GARFO), Rachel Sysak (NY DEC), Mark Terceiro (NEFSC), Corinne Truesdale (RI DEM), Chelsea Tuohy (ASMFC), Rich Wong (DNREC)

Other Attendees: Kim Bastille, Alan Bianchi, Lou Carr-Harris, Anna-Mai Christmas-Svajdlenka, Greg DiDomenico, Jeff Kaelin, Meghan Lapp, Adam Nowalsky, Scott Steinback, Renee Zobel

The Mid-Atlantic Fishery Management Council's Summer Flounder, Scup, and Black Sea Bass Monitoring Committee (MC) and the Atlantic States Marine Fisheries Commission's Summer Flounder, Scup, and Black Sea Bass Technical Committee (TC) met jointly via webinar on Wednesday, September 20, 2023 to discuss use of the Recreational Demand Model (RDM) in setting future recreational management measures for these three species. The primary objective of this meeting was for the MC/TC to decide on the years of data to inform the catch-per-trip assumptions for the upcoming specifications cycle. The group also reviewed how the RDM accounts for uncertainty and variability in the Marine Recreational Information Program (MRIP) estimates.

Briefing materials considered by the MC and TC are available at:
https://www.mafmc.org/council-events/2023/sept-20/sfsbsb-mon-tech-com.

Recreational Demand Model: Catch-Per-Trip Assumptions

The RDM uses catch-per-trip data from prior years to inform assumptions about catch in upcoming years. The group discussed the most appropriate years of data to inform these assumptions for the upcoming specifications cycle. The group agreed that inclusion of preliminary current year data through wave 4 (i.e., through August) would be beneficial as it would allow for consideration of the most recent conditions. Assumptions would need to be made about catch-per-trip in waves 5 and 6 for the current year.

The group agreed that inclusion of multiple years of catch-per-trip data helps increase sample size and precision, which is important given variability in the recreational estimates, especially at the state and mode level. However, the group agreed that using too many years of data may lead to less reliable results given how the regulations and availability change over time. The group also did not support including 2020 data, given the impacts of the COVID-19 pandemic on MRIP estimates. Therefore, the MC/TC agreed with using the most recent two years of data to

balance the need to use multiple years to increase precision with concerns about the 2020 data. Specifically, <u>for the upcoming specifications, the group agreed that preliminary 2023 and final 2022 data should be used to inform the assumptions for waves 1-4 and final 2021 and 2022 data should be used to inform the assumptions for waves 5 and 6.</u>

It was noted that in the past, missing waves from the current year were filled in with data from prior years using various approaches that considered how changes in measures could have impacted harvest by wave. This may be less of a concern with the RDM as both discards and harvest in prior years are considered. Changes in regulations may impact how many fish are harvested as opposed to discarded and this is estimated through the model. However, changes in effort across years based on changing regulations would be challenging to accurately model.

The group discussed whether to weight current/recent years more heavily than prior years to account for recent stock conditions and regulations and therefore better predict conditions in the upcoming years. However, some MC members expressed concern with the potential options for weighting the different years of data. One MC/TC member recommended averaging multiple years of data rather than weighting the years differently. One MC/TC member expressed concern that the various weighting schemes discussed were arbitrary and felt that the catch rate would reflect stock status each year based on regulations for that year anyway. Another MC/TC member also questioned if there was a way to empirically determine how the different years should be weighted. There were no recommendations on how to empirically generate a weighting scheme. The group ultimately recommended a simple average of the two most recent years of data (i.e., weighting equally at 50% each). However, assigning different weights to each year could be further considered for future specifications cycles.

The MC/TC agreed that these conversations should be reviewed each specifications cycle. The weighting scheme as well as the number of years of data should be re-evaluated in future years and on a species-by-species basis to allow for consideration of changes in factors that may influence catch-per-trip. The rationale for the option chosen this year was to provide a reasonable compromise given the specific data limitations and needs for this year.

RDM Incorporation of Data Uncertainty

The group also reviewed recent improvements in the RDM and considerations related to accounting for uncertainty and outlier estimates. The model now incorporates the uncertainty (or variance) associated with MRIP point estimates of directed trips and catch-per-trip as follows. First, estimates of the mean number of directed trips and mean catch-per-trip, as well their standard errors, are computed using MRIP data. Directed trips estimates are computed at the state, month, mode, and kind-of-day (weekend or holiday, weekday) level, while catch-per-trip estimates are computed at the state, wave, and mode level. Then, based on these mean estimates and their standard error, 100 distributions of directed trips and catch-per-trip are generated. Note that the distributions are generated at the daily level, allowing for adjustments to the open season at one day intervals. The model is run 100 times, each time using one of the 100 distributions of directed trips and catch-per-trip to reflect the estimated sampling uncertainty in MRIP's point estimates. For example, a highly uncertain MRIP estimate of directed trips in a given state, month, and kind-of-day in 2022 will produce a wide range of directed trips across model runs for this strata in 2024 and contribute to the overall variance of the final model output.

In the past the group has had discussions about how to identify and adjust outlier point estimates. The group agreed this is not necessary for this specifications cycle given that the RDM addresses uncertainty and variability in the underlying data by sampling from the distribution of trips and catch-per-trip and does not rely just on the point estimates. The MC/TC was generally supportive of this approach, and it was noted that adjusting outliers could be revisited in the future.

Public Comment

An Advisory Panel (AP) member asked if the model only removes high anomalous trip estimates or if low estimates are also accounted for. In response, it was noted that rather than removing data, uncertainty is incorporated by running the model 100 times and randomly sampling from the distribution of trip estimates in each stratum. This allows for a wider range around uncertain high estimates but a narrower range around low estimates. The AP member also questioned if the model accounts for instances when anglers catch multiple species on the same trip to avoid double counting trips. It was noted that custom coding filters the MRIP data to only count a trip as directed on one species, based on what the angler reported as their primary target. So, if all three species were caught but only one was targeted, it would not count as three separate directed trips. The directed trip estimates incorporate all modes based on the Fishing Effort Survey and intercept survey data.