

Ecological Reference Point February Check-In

February 21, 2025 12:00 PM – 2:00 PM

Members in Attendance: M. Cieri, M. Celestino, J. Boucher, A. Schueller, A. Buchheister, M. Dean, D. Chagaris, H. Townsend, J. McNamee
Staff: K. Drew, J. Patel, J. Boyle
Public: J. Ault, T. Lilly, R. Kane, P. Himchak, C. Flora, J. N., J. Higgins, J. Kaelin, S. Gehan

Species Data Updates

Menhaden M update

SAS formed a natural mortality working group who went through the data for the mark-recovery model. The work group discussed primary and secondary magnets. The group decided to use the data set from Coston, which is a data set from a NOAA report. The group decided on a base run which produced an M (0.925) that was ~20% lower than the original M, and the base run is waiting to be reviewed by the SAS.

Weakfish

The weakfish ASAP model was run through 2023. This is the same model as used in the previous benchmark, which estimates a time-varying M that is input into the model to produce SSB trends similar to the Bayesian model but which also include estimates of age-0 biomass for this species.

Next steps: K. Drew to send model output to D. Chagaris, A. Buchheister, and J. McNamee

Zooplankton

NOAA provided the final zooplankton estimates to modelers. This included adjusting seasons to align with ERP seasons; however, they were unable to provide standard deviation/uncertainty estimates. After further review, it was recommended that pteropods were dropped from the zooplankton; however, this may be a potential research recommendation for the future.

Bay anchovy updates

The white paper on anchovy biomass estimation has been completed. The catchability coefficient (q) estimation by NOAA for the NEFSC bottom trawl could not be replicated, so a separate q was calculated by calibrating the estimates of modeled biomass to published literature estimates of anchovy biomass in Chesapeake Bay (E. Houde's work). The new catchability coefficient was similar in scale to the NOAA catchability coefficient.

Atl. Herring

The 2024 assessment update (terminal year of 2023) received a small update with 2024 landings data (this did not include survey data) at the request of the Council/SSC. It was still recommended that the ERP work group use the 2024 update for the current ERP models. The Research Track assessment will be reviewed the week after the ERP assessment workshop, so it may be too late to incorporate into this assessment.

Bluefin tuna

The diet data for bluefin tuna were completed using a method similar to striped bass and weighted by sample size and study area. Large menhaden were found to be the largest component of bluefin diet. The biomass and Z estimates are available from the ICCAT 2021 assessment (estimated through 2020, projected through 2024). Bluefin tuna seasonal proportional abundance for the NWACS regions were developed from satellite tagging data and spatial modeling. Landings are harder to apportion into the NWACS domain, since ICCAT reports by fleet (nation and gear) in place of area fished.

Next steps: M. Dean to look at NOAA database and ICCAT US/Canada R&R fleet to approximate

Model Updates

NWACS-MICE

Everything is updated for this model except for weakfish. Diet matrices for this model are also completed but the group may want to revisit some decisions (e.g., partitioning diet data by size class) at the assessment workshop. There has been no progress on the spatial model since last call.

NWACS-Full

The NEAMAP and ChesMMAP data were received for this model. These data included diet data and indices of abundance for non-assessed species and species groups. There seemed to be no strong trends in indices except for a decline in skates, which are not super-informative for the EwE model. There are 11 new non-MICE species in diet data. The group is still waiting on ACCSP landings and effort by gear. A standardized data aggregation was developed and processed to increase organization and reproducibility of assessment. There were notably some changes to the stanzas within the model to align more closely with NWACS-MICE (mainly reducing the number of stanzas in the MICE species groups). This model will add osprey as a species and reparametrize the highly migratory species group with bluefin tuna-specific data.

Next steps: A. Buccheister to process landings and effort data, finalize data matrix, balance Ecopath model, and calibrate Ecosim model.

VADER

A. Sharov pointed out the issue regarding equations for striped bass growth and mortality on during the last check-in. These have since been resolved and resulted in no major changes to the model, but did resolve slight bias. This model was fully recoded in rTMB. There were some issues with bluefish assessment file, and it was confirmed that .RDS file (output of WHAM) should be read into R with readRDS. D. Chagaris provided example code for that.

Next steps: J. MacNamee will consult with D. Chagaris, A. Buchheister, and J. Patel to get most on that issue to get their most up-to-date diet data

Timeline & Next Steps

The group will schedule follow-up check-in calls at the Assessment Workshop to review final model results

before report writing. A. Schueller will give the MWG report. The VADER agenda item will also be moved.

Next steps: J. Patel to send out updated agenda for the Assessment Workshop