

SEDAR 62 Assessment Webinar III
Gulf of Mexico Gray Triggerfish
September 12, 2019 from 1:00 PM to 1:40 PM
Summary Report

The length-based model includes the following indices:

- Recreational East (MRFSS)
- Recreational West (MRFSS)
- Commercial East
- Commercial West
- Headboat East
- Headboat West
- SEAMAP Larval Survey
- SEAMAP Trawl (1987 – 2007)
- SEAMAP Trawl East (2008 – 2017)
- SEAMAP Trawl West (2008 – 2017)
- SEAMAP Combined Video Survey

The model begins in 1945, assumes one area (east and west Gulf combined), one season, combines genders, a maximum age of 10 years, and uses 2 cm length bins for lengths from 2 – 74 cm. Shrimp discard data are partitioned using the “super-year” approach from 1946 – 1971 and 1971 – 2017. Three time blocks for the recreational fleet account for changes in the recreational minimum size limit and seasonal closures. Two time blocks for the commercial fleet account for both the minimum size limit and closed seasons.

The model uses a Lorenzen estimate of natural mortality, a von Bertalanffy growth curve for both sexes combined, assumes the age at which 50% of fish are sexually mature is two years, a steepness value of 0.97, $\Sigma_R = 0.6$, initial rate of fishing mortality of zero, and that discard mortality for all fleets is 25%. Selectivity patterns for all fleets follow a double normal curve except for the commercial longline fleet, the SEAMAP vertical line survey, and the SEAMAP video survey, which follow a logistic curve.

The Headboat West index shows drastic decline in 2008, almost to zero. Other fleets do not show the same decrease. Could be a circle hook effect, a regulatory effect, or something else. The analysts proposed truncating the index at 2008, and removing the data from 2009+. The same method would also be applied to the Headboat East index. Fishermen did not think the drop in the landings in the western Gulf headboat fleet were incorrect, and cautioned against removing them. Recreational landings across all fleets generally decreased in 2008, but have increased somewhat since 2014 – 2015.

Outstanding tasks include mirroring commercial and recreational catch across the Gulf, and running diagnostics and sensitivities. Additionally, downweighting the headboat indices may help to resolve model instability related to the drop in landings after 2008.

<p>Assessment Webinar IV will be held October 2, 2019 The completed stock assessment report is due to the Council on December 31, 2019</p>
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