SEDAR 64 Assessment Webinar III
Southeastern US Yellowtail Snapper
November 4, 2019 from 10:00 AM to 11:30 PM
Summary Report

Data Update

Selectivity for the MRIP index is now set to 'double normal', and retention uses a time block of 1990-2017. Catchability is now allowed to vary from 1999-2017, which reflects changes in fisher behavior (transition from sandballing to chumming to power chumming).

Model Fits

Fits to MRIP discards have improved, as have fits to commercial and MRIP catch-per-unit-effort. Commercial length composition data still underestimate small fish and overestimate large fish. Fits to commercial discards underfit the observed data, but follow a similar trend. Headboat fits are good for CPUE and discards. Model fitting of MRIP length composition data to observed data are generally poor but improve somewhat over time. Model fitting of MRIP discard lengths are improved, but still generally poor. Recruitment deviations are less variable over time, and the spawner-recruit curve is estimating a steepness of 0.66. No retrospective pattern is apparent in fishing mortality (F) or recruitment.

Currently, the stock is predicted to be below $SSB_{SPR30\%}$, and F is thought to be above F_{MSY}. The stock biomass level is predicted to be just above 75% of $SSB_{SPR30\%}$. SSB is estimated to be at 3,000 metric tons (mt), compared to 10,000 mt in the last assessment.

The last two years of recruitment are highly variable compared to the previous 20 years. Analysts are missing some data for 2017 (the RVC juvenile index was unavailable in that year). The Panel was concerned about the effect of uncertainty in recruitment on projections. Recruitment appears stable from 1995 – 2010, then increases to 2016, and then is lower in last couple years.

The model predicts overfishing has been occurring for the last 30 years. Recruitment may be more environmentally driven than influenced by fishing. Further, the model is presently estimating steepness; the Panel asked if it was possible for the model to converge while estimating MSY. The analysts will perform a sensitivity with estimated MSY.

Sensitivities

Ignoring 1991 and prior years of catch and effort ignores a key MRIP outlier, estimates steepness at 0.89, shows less variability in recruitment deviations, and results in a higher estimate of stock biomass. Fishing mortality rates remain still similar.

The model is very sensitive to natural mortality (M) at age. The base M = 0.16, upper = 0.22, and lower = 0.14. The upper bound is similar to SEDAR 27A (last assessment). Low Ms are more often seen with longer-lived fish. Higher Ms are more often seen with with shorter

lifespans. The maximum age for yellowtail snapper used in SEDAR 64 is 28 years, as opposed to 23 years in SEDAR 27A.

Changes in initial estimates of F have little effect on model results, with the trend in F being similar between runs.

To-Do

- Annual variation in commercial catchability
- Use of recruitment platoons (multiple recruitment events per year vs. only one event per year).
- Outstanding sensitivity runs: index removal.
- Model start date to be changed to 1992.
- Use FL-only growth data, $t_{max} = 20$.

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Assessment Webinar IV will be held on December 9, 2019 at 11:00 AM eastern time

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Participants:

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