

**SEDAR 68: Gulf of Mexico Scamp
Assessment Webinar IV – Summary
April 19, 2021, 10:00 AM – 12:00 PM**

Gulf Scamp:

Data Updates

The SEFSC is considering a data change to inputting recreational landings data in weight, as opposed to in number of fish, to better reflect how the recreational fleets in the Gulf are managed. This change is expected to result in a substantial change to the model, as historically, recreational data have been input in numbers of fish and then weights by year were estimated within the model. Inputting recreational landings in number has resulted in sometimes substantial differences between the SERO ACL monitoring dataset and the model-predicted landings. Inputting these recreational fleet landings in weight will help alleviate this discrepancy. The analyst expects to set the coefficient of variance at 0.05 for the recreational landings data, which would assume that those landings are known. Panelists noted concerns about fitting the recreational landings with such precision, knowing that a CV of 0.05 likely underestimates the uncertainty about those data. This assumed precision in the recreational landings is necessary for model fitting; sensitivity analyses can be performed with varying CVs for the recreational landings to discern model sensitivity to those data.

Estimated Dirichlet parameters were reviewed, which showed similar values to model-estimated values. A simulation including discards as fleets matched well to the input data. Fleet-specific selectivities were mostly unchanged since the last webinar. Modeling the discards by fleet as their own fleets would require accepting higher amounts of uncertainty by fleet. For landings, a CV of 0.01 is being used for commercial data, and 0.05 for recreational data. Commercial landings have generally decreased over time, while recreational landings, though highly variable year-to-year, have increased. Time blocks are being used to model retention by fleet, to account for regulatory changes. Commercial discards are low in magnitude, and though the model predicted values fall within the CVs, the data themselves are not well-known. The model is underfitting recreational fleet discards, especially from 2008 – present. Fits to length composition data across model runs are decent, but dependent on sample size; lower sample sizes for a fleet tend to correspond to poorer fits to the data for that fleet. Residual patterns from AW3 remain, but those patterns are less pronounced; regulations on other species, and the effects of those regulations on scamp, may be worth exploring in the future.

Fits to the indices were reviewed. Commercial vertical line data pre-IFQ were poorly fit. Headboat data were fit relatively well by the retention base model (AW4), which is an improvement over AW3. The fits to the combined video survey follow the trends in the observed data, but are not fit generally well. Fits to the Reef Fish Observer program are poor.

Final steps are to perform model diagnostics, which will include the jitter analysis of starting parameters; likelihood profiling of R_0 , σ_R , steepness, and initial F_s ; jack-knife analyses removing one index at a time from the model; and, bootstrapping. Sensitivity analyses will

include consideration of a 1962 model start year; inclusion of males in the estimates of SSB; high and low estimates of natural mortality; and, estimating steepness.

The completed Assessment Report is due to SEDAR on July 16, 2021
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Participants

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