SEDAR 70: Gulf of Mexico Greater Amberjack
Operational Assessment Terms of Reference
DRAFT: August 2019

1. Update the approved base model from the 2016 Update of SEDAR 33 Gulf of Mexico greater amberjack with data through 2018.

2. Document any changes or corrections made to model and input datasets and provide updated input data tables. Document changes in MRIP data, both pre- and post-recalibration, in terms of the magnitude of changes to catch and effort.
   - Evaluate spawning condition and abundance data from Gallaway et al. for greater amberjack on artificial structures in the western Gulf of Mexico.

3. Update model parameter estimates and their variances, model uncertainties, estimates of stock status and management benchmarks, and provide the probability of overfishing occurring at specified future harvest and exploitation levels. Provide commercial and recreational landings and discards in pounds and numbers.
   - Use the following status determination criteria (SDC):
     - MSY proxy = yield at $F_{SPR\ 30\%}$ or $F_{Rebuild}$ (if overfished)
     - MSST = $0.5*B_{SPR\ 30\%}$
     - MFMT = $F_{SPR\ 30\%}$ or $F_{Rebuild}$ (if overfished)
     - If different SDC are recommended, provide outputs for both the current and recommended SDC.
   - Unless otherwise recommended, use the geometric mean of the previous three years' fishing mortality to determine $F_{Current}$. If an alternative approach is recommended, provide justification and outputs for the current and alternative approach.
   - Provide yield streams for the overfishing limit and acceptable biological catch in pounds:
     - Annually for five years
     - Under a "constant catch" scenario for both three and five years
     - For the equilibrium yield at F_{MSY}, when estimable

4. Develop a sensitivity run using a secondary model, such as a surplus production model (e.g., Just Another Bayesian Biomass Assessment model [Winker et al. 2018], ASPIC) to compare with the proposed base model from Stock Synthesis.

5. Develop a stock assessment report to address these TORS and fully document the input data and results of the stock assessment and the comparison model.