SEDAR 72: Gulf of Mexico Gag Grouper
Operational Assessment Terms of Reference
DRAFT: August 2019

1. Update the approved 2016 Update of SEDAR 33 Gulf of Mexico gag grouper base model with data through 2019.

2. Document any changes or corrections made to model and input datasets and provide updated input data tables.
   - Re-evaluate the potential effects of red tide on gag, with consideration of past red tide events through 2018.
   - Document changes in MRIP data, both pre- and post-recalibration, in terms of the magnitude of changes to catch and effort.
   - Reconsider the way the retention and selectivity parameters were specified for recreational fleets based on past work with gag grouper.
   - Consider the SEFSC's improved approach for estimating commercial discards.

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.
   - Examine spawning stock biomass with respect to females only, and males and females combined, as the data allow.
   - Use the following status determination criteria (SDC) adopted in Amendment 30B:
     - MSY proxy = yield at F_{MAX} or $F_{Rebuild}$ (if overfished)
     - MSST = $0.5*B_{MAX}$
     - MFMT = F_{MAX} 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 stock assessment report to address these TORS and fully document the input data and results of the stock assessment and the comparison model.