SEDAR

SouthEast Data, Assessment, and Review

4055 Faber Place Drive #201
North Charleston SC 29405

Phone (843) 571-4366
Fax (843) 769-4520
www.sedarweb.org

SEDAR 85: Gulf of Mexico Yellowedge Grouper

Operational Assessment Terms of Reference

April 2022

1. Update the approved SEDAR 22 Gulf of Mexico Yellowedge Grouper base model with data through 2021.

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 by mode if possible.
   - Include available length frequency for the commercial fleet(s).
   - Update life history data (e.g., growth, reproduction, mortality) if warranted.
   - Consider the SEFSC's improved approach for estimating commercial discards and determine how the IFQ program affected discards.

3. To the extent possible, the following should be considered for inclusion in the model:
   - Consider potential effects of red tide on yellowedge grouper, with consideration of past red tide events in 2005, 2014, 2018, and 2021.
   - Consider whether steepness can be estimated, with or without a prior. If steepness is fixed, evaluate the sensitivity of that assumption.
   - Consider the effects of the *Deepwater Horizon* MC252 oil spill from April 2010 on the yellowedge grouper stock.

4. 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 or MSY proxy ($F_{30\%SPR}$) = yield at F_{MSY}
     - MSST = 0.75*B_{MSY}
     - MFMT = F_{MSY} (or proxy) and $F_{Rebuild}$ (if overfished)
     - OY = 90% of MSY or MSY proxy ($F_{30\%SPR}$), per Reef Fish Amendment 48
     - If different SDC are recommended, provide outputs for both the current and recommended SDC.
   - Describe changes in catch advice as they relate to the use of FES-adjusted MRIP recreational catch and effort data, versus changes related to stock abundance.

- 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 and spawning stock biomass 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

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