



# Gulf of Mexico Fishery Management Council

*Managing Fishery Resources in the U.S. Federal Waters of the Gulf of Mexico*

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## **Gulf of Mexico Red Grouper Operational Assessment Scope of Work DRAFT: June 14 2021**

1. Update the approved SEDAR 61 Gulf of Mexico red grouper base model with data through 2022.
2. Document any changes or corrections made to model and input datasets and provide updated input data tables.
  - Document any changes in MRIP data, both pre- and post-recalibration, in terms of the magnitude of changes to catch and effort. Compare to values from SEDAR 61.
  - Update life history data (e.g., growth, reproduction, mortality) if warranted.
  - Consider the treatment of recreational harvest:
    - Consider inputting recreational catch in weight (i.e., pounds) instead of in numbers of fish.
    - Re-evaluate error estimates for recreational landings.
3. Explore the potential effects of red tide with consideration of past red tide events, and more recent events in 2018 and thereafter.
  - Explore age-specific episodic mortality of red grouper due to red tide.
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):
    - $MSY \text{ proxy} = \text{yield at } F_{MSY} \text{ or } F_{Rebuild} \text{ (if overfished)}$
    - $MSST = 0.5 * SSB_{MSY}$
    - $MFMT = F_{MSY} \text{ and } F_{Rebuild} \text{ (if overfished)}$
    - $OY = 75\% \text{ of } F_{MSY}$
    - 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 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.

**In-person Workshop**

An in-person data and assessment workshop **is not** recommended for this assessment.

**Topical Working Group**

A topical working group **is not** presently thought necessary for this operational assessment.