



# 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 Cobia Operational Assessment Scope of Work DRAFT: September 2021**

1. Update the approved SEDAR 28 Update Gulf of Mexico cobia base model with data through 2023.
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. Compare to values from SEDAR 28 Update for Gulf cobia.
  - Update life history data (e.g., growth, reproduction, mortality) if warranted.
    - Evaluate any new data on discard mortality.
  - Re-examine Stevens and MacCall method of developing subset of trips targeting cobia.
3. To the extent possible, the following should be considered in developing the base model:
  - Consider whether steepness can be estimated, with or without a prior. If steepness is fixed, evaluate the sensitivity of that assumption.
  - Explore logistic selectivity for recreational and commercial fisheries.
  - Explore uncertainty in landings data using appropriate methods in sensitivity analyses.
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):
    - $MSY \text{ proxy} = \text{yield at } F_{MSY} \text{ or } F_{Rebuild} \text{ (if overfished)}$
    - $MSST = 0.75 * SSB_{MSY}$
    - $MFMT = F_{MSY} \text{ and } F_{Rebuild} \text{ (if overfished)}$
    - $OY = ACL$  as defined by the Gulf and South Atlantic Councils in CMP Amendment 18 (GMFMC and SAFMC 2011).
    - 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.
  - 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.
  - 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.

**Topical Working Group**

A topical working group **is not** recommended for this assessment.