



# 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 Scamp Operational Assessment Terms of Reference January 10, 2022**

1. Update the approved SEDAR 68 Gulf of Mexico scamp base model with data through 2020.
  - 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 68.
  - Update life history data (e.g., growth, reproduction, mortality) if warranted.
    - Re-evaluate maximum size and asymptotic size in light of modeling issues noted during the SEDAR 68 Research Track Review Workshop.
    - Re-estimate age data using the updated growth curve, and update the aging error matrix as necessary.
    - Re-evaluate the representativeness of length and age composition data.
  - Consider the treatment of recreational and commercial harvest:
    - Consider inputting recreational catch in weight (i.e., pounds) instead of in numbers of fish.
    - Re-evaluate error estimates for recreational landings.
    - Re-evaluate fleet-specific gear selectivity and retention
  - Investigate retrospective bias and provide results of other model diagnostics.
  
2. 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):
    - $MSY = \text{yield at } F_{MSY} \text{ (or proxy; e.g., } F_{30\%SPR})$
    - $MSST = (1-M) \cdot B_{MSY}$
    - $MFMT = F_{MSY} \text{ (or proxy) and } F_{Rebuild} \text{ (if overfished)}$
    - $OY = 90\% \text{ of } MSY$
    - If different SDC are recommended, provide outputs for both the requested 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.
  - Once projections are parameterized and the scientific uncertainty evaluated, 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

3. 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 requested for:

- Life History (aging, fitting of growth curve, maximum age cutoffs, other items as necessary) (*via webinar*)