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 Spanish Mackerel
Operational Assessment Scope of Work
DRAFT: February 2020

1. Update the approved SEDAR 28 Gulf of Mexico Spanish mackerel 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.
   - Include available length frequency for the commercial fleet(s).
   - Update life history data (e.g., growth, reproduction, mortality) if warranted.
     - Consider age-dependent versus constant natural mortality estimates.

3. To the extent possible, the following should be considered for inclusion in the model:
   - Consider whether steepness can be estimated, with or without a prior. If steepness is fixed, evaluate the sensitivity of that assumption.

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 proxy = yield at F_{MSY} or $F_{Rebuild}$ (if overfished)
     - MSST = $0.75*SSB_{MSY}$
     - MFMT = F_{MSY} and $F_{Rebuild}$ (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 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.

<u>In-person Workshop</u>

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