



# SEDAR

## SouthEast Data, Assessment, and Review

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### SEDAR 67 Gulf of Mexico Vermilion Snapper

#### Assessment Terms of Reference

January 2019

1. Update the approved Gulf of Mexico vermilion base model from SEDAR 45 with data through 2017. Provide a model consistent with the previous assessment configuration to incorporate and evaluate any changes allowed for during this assessment.
2. Evaluate and document the following specific changes in input data or deviations from the benchmark model previous assessment model.
  - Explore the effect of the IFQ program on commercial CPUE, and examine model sensitivity to plausible alternative commercial CPUE time-series.
  - Conduct a sensitivity run with all fishery dependent indices of abundance removed from the model.
  - Pending new information on discard mortality rates or large increases in discard levels, explore model sensitivity to including discards.
  - Investigate the impact of FES adjusted MRIP data, if available, on model outputs.
  - Combine FWC and NMFS video surveys into a single index, if possible.
  - Obtain age or length composition data from shrimp bycatch fisheries to better inform shrimp selectivity estimates, if possible.
3. Document any revisions or corrections made to the model and input datasets, and provide updated input data tables. Provide commercial and recreational landings and discards in numbers and weight (pounds).
4. Update model parameter estimates and their variances, model uncertainties, and estimates of stock status and management benchmarks. In addition to the base model, conduct sensitivity analyses to address uncertainty in data inputs and model configuration and consider runs that represent plausible, alternate states of nature.
5. Project future stock conditions regardless of the status of the stock. Develop rebuilding schedules, if warranted. Provide the estimated generation time for each unit stock. Stock projections shall be developed in accordance with the following:

Scenarios to Evaluate (preliminary, to be modified as appropriate)

1.  $F_{OY} = 75\% F_{MSY}$  (project when OY will be achieved)



2.  $F_{\text{REBUILD}}$  (if necessary)
  3.  $F=0$  (if necessary)
  4. Equilibrium yield at  $F_{\text{MSY}}$
6. Develop a stock assessment report to address these TORs and fully document the input data, methods, and results.

