



SEDAR

SouthEast Data, Assessment, and Review

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SEDAR 34 HMS Bonnethead Shark Standard Assessment Terms of Reference March 2013

1. Update the approved SEDAR 13 Bonnethead Shark model with data through 2011. Provide a model consistent with the previous assessment configuration to incorporate and evaluate any changes allowed for this update.
2. Evaluate and document the following specific changes in input data or deviations from the benchmark model.
 - Review updated life history information (age and growth and reproductive parameters)
 - Evaluate fishery-independent abundance indices derived for Mississippi, Alabama, Georgia, and South Carolina
 - Evaluate MRFSS/MRIP conversion factors
 - Evaluate commercial and recreational discard information
3. Document any changes or corrections made to model and input datasets and provide updated input data tables. Provide commercial and recreational landings and discards in numbers and weight. Provide available average weights by gear and year used to derive average number of fish calculations.
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 analysis 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:
 - A) If the stock is overfished, then utilize projections to determine:
 - Year in which $F=0$ results in a 70% probability of rebuilding ($\text{Year } F=0_{p70}$)
 - Target rebuilding year ($\text{Year } F=0_{p70} + 1 \text{ generation time}$) ($\text{Year}_{\text{rebuild}}$)
 - F resulting in 50% and 70% probability of rebuilding by $\text{Year}_{\text{rebuild}}$
 - Fixed level or removals (TAC) allowing rebuilding of stock with 50% and 70% probability
 - B) Otherwise, utilize a P^* approach to determine:
 - The F needed and corresponding removals associated with a 70% probability of overfishing not occurring ($P^* = 0.3$)
 - C) If data-limitations preclude classic projections (i.e. A, B above), explore alternate projection models to provide management advice.



6. Develop a stock assessment report to address these TORs and fully document the input data, methods, and results.