SEDAR 4. South Atlantic and Caribbean Deepwater Snapper-Grouper
Workshop Terms of Reference

I. Terms of Reference for the Data Workshop.
1. Evaluate stock structure and develop a unit stock definition.
2. Evaluate the quality and reliability of life-history information (Age, growth, natural mortality, reproductive characteristics); develop models to describe growth, maturation, and fecundity by age, sex, or length as appropriate.
3. Evaluate the quality and reliability of fishery-independent measures of abundance; develop indices by appropriate strata (e.g., age, size, and fishery) for use in assessment modeling.
4. Evaluate the quality and reliability of fishery-dependent measures of abundance; develop indices for use in assessment modeling.
5. Evaluate the adequacy of the NMFS logbook data as a fishery-dependent measure of effort and catch rates; develop indices of abundance for use in assessment modeling.
6. Evaluate the quality and reliability of commercial and recreational fishery-dependent data for determining harvest and discard by species; develop estimates of total annual catch including both landings and discard removals by species.
7. Evaluate the quality and reliability of data available for characterizing the size and age distribution of the catch (landings and discard); characterize commercial, recreational, and headboat landings and discard by size and age.
8. Evaluate the quality and reliability of available data for estimating the impacts of management actions.
9. Recommend assessment methods and models that are appropriate given the quality and scope of the data sets reviewed and management requirements.
10. If data are not adequate for assessment modeling of each species listed in the complex, evaluate the feasibility of (1) using specific members of the stock complex as indicator species, or (2) using other metrics to evaluate stock status.
11. Provide recommendations for future research (research, sampling, monitoring, and assessment).
12. Prepare complete documentation of workshop actions and decisions, and generate introductory, descriptive, and research needs sections (1-4, 9) of the stock assessment report.

II. Terms of Reference for the Assessment Workshop
1. Select appropriate modeling approaches, based on data availability and management requirements.
2. Estimate relevant stock parameters (abundance, biomass, fishery selectivity, stock-recruitment relationship etc.).
3. Analyze uncertainty and provide measures of precision for stock estimates.
4. Evaluate current SFA benchmarks, estimate alternative SFA benchmarks if appropriate, and develop stock control rules.
5. Provide declarations of stock status relative to SFA benchmarks.

6.   For those species lacking data to produce estimates of stock parameters, develop proxy recommendations of stock status.
7.   Estimate probable future stock conditions and develop rebuilding schedules if warranted.
8.   Provide recommendations for future research and data collection (field and assessment).
9.   Fully document all activities, and draft stock assessment model and results sections of the stock assessment report (sections 5-9).

III. Terms of Reference for the Review Workshop
1.   Evaluate the adequacy and appropriateness of data used in the assessment; make a clear declaration regarding the use of "best available data".
2.   Evaluate the adequacy, appropriateness, and application of models used to estimate stock parameters (e.g., abundance, biomass, exploitation).
3.   Evaluate the adequacy, appropriateness, and application of models used to estimate SFA parameters and population benchmarks.
4.   Evaluate the adequacy, appropriateness, and application of models used for stock projections.
5.   In the event that modeling or input data errors are discovered that cannot be resolved at the Review Workshop and that lead to rejection of the proposed assessment model: (1) Provide clear guidance for correcting the assessment, and (2) Recommend a process for review and approval of suggested changes.
6.   Develop research recommendations regarding both input data and assessment methodologies.
7.   Develop a Consensus Summary (Appendix 1 of the stock assessment report).
8.   Develop an Advisory Report (Appendix 2 of the stock assessment report).