SEDAR

SouthEast Data, Assessment, and Review

South Atlantic Fishery Management Council
Gulf of Mexico Fishery Management Council
Caribbean Fishery Management Council
NOAA Fisheries
Atlantic States Marine Fisheries Commission
Gulf States Marine Fisheries Commission

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SEDAR 17. South Atlantic Vermilion Snapper and South Atlantic Spanish Mackerel

Workshop Terms of Reference

FINAL (Amended 7-2-08)

I. Data Workshop

1. Characterize stock structure and develop a unit stock definition. Provide a map of species and stock distribution.
2. Tabulate available life history information (e.g., age, growth, natural mortality, reproductive characteristics, discard mortality rates); provide appropriate models to describe growth, maturation, and fecundity by age, sex, or length as applicable. Evaluate the adequacy of available life-history information for conducting stock assessments and recommend life history information for use in population modeling.
3. Consider relevant fishery dependent and independent data sources to develop measures of population abundance. Document all programs used to develop indices; address program objectives, methods, coverage, sampling intensity, and other relevant characteristics. Provide maps of survey coverage. Develop values by appropriate strata (e.g., age, size, area, and fishery); provide measures of precision. Evaluate the degree to which available indices represent fishery and population conditions. Recommend which data sources should be considered in assessment modeling.
4. Characterize commercial and recreational catch, including both landings and discard removals, in pounds and number. Discuss the adequacy of available data for accurately characterizing harvest and discard by species and fishery sector. Provide length and age distributions of the catch. Provide maps of fishery effort and harvest.
5. Provide recommendations for future research in areas such as sampling, fishery monitoring, and stock assessment. Recommend sampling intensity by sector (fleet), area, and season.
6. Develop a spreadsheet of assessment model input data that incorporates the decisions and recommendations of the Data Workshop. Review and approve the contents of the input spreadsheet within 6 weeks prior to the Assessment Workshop.
7. Prepare complete documentation of workshop actions and decisions (Section II. of the SEDAR assessment report); prepare a list of tasks to be completed following the workshop, including deadlines and personnel assignments.

2. Assessment Workshop

1. Review any changes in data following the data workshop, any analyses suggested by the data workshop, and provide estimated values for any required data in DW TOR 4 that are not available from observations. Summarize data as used in each assessment model. Provide justification for any deviations from Data Workshop recommendations.
2. Develop population assessment models that are compatible with available data and recommend which model and configuration is deemed most reliable or useful for providing advice. Document all input data, assumptions, and equations. Document model code in an AW working paper.
3. Provide estimates of stock population parameters (fishing mortality, abundance, biomass, selectivity, stock-recruitment relationship, discard removals, etc) by age and other relevant categorizations (i.e., fleet or sector); include representative measures of precision for parameter estimates.
4. Characterize uncertainty in the assessment and estimated values, considering components such as input data sources, data assumptions, modeling approach, and model configuration. Provide appropriate measures of model performance, reliability, and 'goodness of fit'.
5. Provide yield-per-recruit, spawner-per-recruit, and stock-recruitment evaluations, including figures and tables of complete parameters.
6. Provide estimates for SFA criteria consistent with applicable FMPs, proposed FMPs and Amendments, other ongoing or proposed management programs, and MSA National Standards. This may include: evaluating existing SFA benchmarks, estimating alternative SFA benchmarks, and recommending proxy values.
7. Provide declarations of stock status relative to SFA benchmarks; recommend alternative SFA benchmarks if necessary.
8. Project future stock conditions. Provide estimates of exploitation, stock abundance and yield (discards and directed harvest) in pounds and numbers for a minimum of 10 years into the future. Fully document all projection assumptions (e.g., recruitment, selectivity, discard mortality). Develop rebuilding schedules if warranted; include estimated generation time. Stock projections shall be developed in accordance with the following:
    A) If stock is overfished:
        F=0, F=current, F=Fmsy, Ftarget (OY),
        F=Frebuild (max that rebuild in allowed time)
    B) If stock is overfishing
        F=Fcurrent, F=Fmsy, F= Ftarget (OY)
    C) If stock is neither overfished nor overfishing
        F=Fcurrent, F=Fmsy, F=Ftarget (OY)
9. Evaluate the impacts of past and current management actions on the stock, with emphasis on determining progress toward stated management goals and identifying possible unintended fishery or population effects.
10. Consider the data workshop research recommendations. Provide additional recommendations for future research and data collection (field and assessment); be as specific in describing sampling design and sampling intensity.
11. Prepare an accessible, documented, labeled, and formatted spreadsheet containing all model parameter estimates and all relevant population information resulting from model estimates and any projection and simulation exercises. Include all data included in assessment report tables, all data that support assessment workshop figures, and those tables required for the summary report.
12. Complete the Assessment Workshop Report (Section III of the SEDAR Stock Assessment Report), prepare a first draft of the Advisory Report, and develop a list of tasks to be completed following the workshop.

13. Perform a probabilistic analysis of proposed reference points and provide the probability of overfishing at various harvest or exploitation levels. (Added 7-2-08)

3. Review Workshop

1. Evaluate the adequacy, appropriateness, and application of data used in the assessment*.
2. Evaluate the adequacy, appropriateness, and application of methods used to assess the stock*.
3. Recommend appropriate estimates of stock abundance, biomass, and exploitation*.
4. Evaluate the methods used to estimate population benchmarks and management parameters (*e.g., MSY, Fmsy, Bmsy, MSST, MFMT, or their proxies*); provide estimated values for management benchmarks, a range of ABC, and declarations of stock status*.
5. Evaluate the adequacy, appropriateness, and application of the methods used to project future population status; recommend appropriate estimates of future stock condition* (e.g., exploitation, abundance, biomass).
6. Evaluate the adequacy, appropriateness, and application of methods used to characterize uncertainty in estimated parameters. Provide measures of uncertainty for estimated parameters*. Ensure that the implications of uncertainty in technical conclusions are clearly stated.
7. Ensure that stock assessment results are clearly and accurately presented in the Stock Assessment Report and Advisory Report and that reported results are consistent with Review Panel recommendations**.
8. Evaluate the SEDAR Process. Identify any Terms of Reference which were inadequately addressed by the Data or Assessment Workshops; identify any additional information or assistance which will improve Review Workshops; suggest improvements or identify aspects requiring clarification.
9. Review the research recommendations provided by the Data and Assessment workshops and make any additional recommendations warranted. Clearly indicate the research and monitoring needs that may appreciably improve the reliability of future assessments. Recommend an appropriate interval for the next assessment.
10. Prepare a Peer Review Consensus Summary summarizing the Panel's evaluation of the stock assessment and addressing each Term of Reference. Develop a list of tasks to be completed following the workshop. Complete and submit the Consensus Report within 3 weeks of workshop conclusion.

* The review panel may request additional sensitivity analyses, evaluation of alternative assumptions, and correction of errors identified in the assessments provided by the assessment workshop panel; the review panel may not request a new assessment. Additional details regarding the latitude given the review panel to deviate from assessments provided by the assessment workshop panel are provided in the *SEDAR Guidelines* and the *SEDAR Review Panel Overview and Instructions*.

** The panel shall ensure that corrected estimates are provided by addenda to the assessment report in the event corrections are made in the assessment, alternative model configurations are recommended, or additional analyses are prepared as a result of review panel findings regarding the TORs above.