SEDAR

SouthEast Data, Assessment, and Review

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SEDAR 30. Blue Tang and Queen Triggerfish
Terms of Reference

Final March 2012

Assessment Workshop Terms of Reference

1. Review any changes in data following the data scoping and any analyses suggested by the data scoping. Summarize data as used in each assessment model.
2. Develop population assessment models that are compatible with available data and document input data, model assumptions and configuration, and equations for each model considered.
3. Provide estimates of stock population parameters, if feasible
   - When available, include fishing mortality, abundance, biomass, selectivity, stock-recruitment relationship, and other parameters as necessary to describe the population
   - Include appropriate and representative measures of precision for parameter estimates.
4. Characterize uncertainty in the assessment and estimated values.
   - Consider uncertainty in input data, modeling approach, and model configuration.
   - Consider other sources as appropriate for this assessment
   - Provide appropriate measures of model performance, reliability, and 'goodness of fit'
   - Provide measures of uncertainty for estimated parameters
5. Provide evaluations of yield and productivity
   - Include yield-per-recruit, spawner-per-recruit, and stock-recruitment models
6. Provide estimates of population benchmarks or management criteria consistent with the available data, applicable FMPs, proposed FMPs and Amendments, other ongoing or proposed management programs, and National Standards.
   - Evaluating existing or proposed management criteria as specified in the management summary
   - Recommend proxy values when necessary
7. Provide declarations of stock status relative to benchmarks or alternative data-poor approaches if necessary.
8. Perform a probabilistic analysis of proposed reference points, stock status, and yield.
   - Provide the probability of overfishing at various harvest or exploitation levels
   - Provide a probability density function for biological reference point estimates.

- If the stock is overfished, provide the probability of rebuilding within mandated time periods as described in the management summary or applicable federal regulations.

9. Project future stock conditions (biomass, abundance, and exploitation) and 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)

   D) If data-limitations preclude classic projections (i.e. A, B, C above), explore alternate models to provide management advice.

10. Provide recommendations for future research and data collection.
    - Be as specific as practicable in describing sampling design and sampling intensity
    - Emphasize items which will improve future assessment capabilities and reliability
    - Consider data, monitoring, and assessment needs

11. Complete the Assessment Workshop Report for Review (Section III of the SEDAR Stock Assessment Report).

Review Workshop Terms of Reference

1. Evaluate the data used in the assessment, addressing the following:
   a) Are data decisions made by the Assessment Workshop sound and robust?
   b) Are data uncertainties acknowledged, reported, and within normal or expected levels?
   c) Are data applied properly within the assessment model?
   d) Are input data series reliable and sufficient to support the assessment approach and findings?
2. Evaluate the methods used to assess the stock, taking into account the available data.
   a) Are methods scientifically sound and robust?
   b) Are assessment models configured properly and used consistent with standard practices?
   c) Are the methods appropriate for the available data?
3. Evaluate the assessment findings with respect to the following:
   a) Are abundance, exploitation, and biomass estimates reliable, consistent with input data and population biological characteristics, and useful to support status inferences?
   b) Is the stock overfished? What information helps you reach this conclusion?
   c) Is the stock undergoing overfishing? What information helps you reach this conclusion?
   d) Is there an informative stock recruitment relationship? Is the stock recruitment curve reliable and useful for evaluation of productivity and future stock conditions?
   e) Are the quantitative estimates of the status determination criteria for this stock reliable? If not, are there other indicators that may be used to inform managers about stock trends and conditions?
4. Evaluate the stock projections, addressing the following:
   a) Are the methods consistent with accepted practices and available data?
   b) Are the methods appropriate for the assessment model and outputs?
   c) Are the results informative and robust, and useful to support inferences of probable future conditions?
   d) Are key uncertainties acknowledged, discussed, and reflected in the projection results ?
5. Consider how uncertainties in the assessment, and their potential consequences, are addressed.
   - Comment on the degree to which methods used to evaluate uncertainty reflect and capture the significant sources of uncertainty in the population, data sources, and assessment methods
   - Ensure that the implications of uncertainty in technical conclusions are clearly stated.
6. Consider the research recommendations provided by the Assessment workshop and make any additional recommendations or prioritizations warranted.

- Clearly denote research and monitoring that could improve the reliability of, and information provided by, future assessments.
- Provide recommendations on possible ways to improve the SEDAR process.

7. Provide guidance on key improvements in data or modeling approaches which should be considered when scheduling the next assessment.
8. Prepare a Peer Review 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 Peer Review Summary Report in accordance with the project guidelines.

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.