Red Snapper Stock Assessment
SEDAR 73 included data through 2019 and indicated that the Red Snapper stock in the South Atlantic is not yet rebuilt and is experiencing overfishing. Compared to the last benchmark assessment (SEDAR 41, 2017), this assessment suggested lower levels of overfishing in terminal years and higher values of stock size relative to their benchmarks. The South Atlantic SSC reviewed results of SEDAR 73 in April 2021 and July 2021.

Short-term Actions Underway

- At their July 2021 meeting the SSC revisited the results of SEDAR 73 and addressed the requests from the committee from their June 2021 meeting. The SSC addressed the following items:
    - Provide short-term fishing level recommendations considering alternative recruitment scenarios and the benefits of descending device usage.
    - Provide guidance on effects of alternative recruitment assumptions on the rebuilding plan
    - Review the alternative assessment approach offered by SEFSC

- Per the committee direction in June, staff drafted an options paper for consideration by the Committee at its September 2021 meeting. Actions in the options paper address:
    - Revising the ACL and ABC based on SSC recommendations
    - Revise sector allocations to address revised MRIP estimates

Issues for Consideration at the September 2021 Meeting

CHAIR STATEMENT SUMMARIZING THE ISSUE:

- The Council appreciates the efforts by SEDAR and the SEFSC to prepare the SEDAR 73 operational assessment, and by the SSC to review the assessment results and develop fishing level recommendations.
- However, given the difficulties experienced by the SSC in evaluating the assessment projections and developing fishing level recommendations, the uncertainties in this and the prior assessments identified by the SSC, and ongoing controversies with assessment results, the Council questions whether a typical Operational age structured assessment is the proper tool for evaluating the Red Snapper stock and fishery as it exists at present. In addition to the uncertainties noted by the SSC in its report of May 2021, the Council highlights the following specific items to support this position:
    - The vast majority of fish removed from the stock by fishing activities are those discarded dead. Therefore, no age or length information is available to characterize these removals as is required for supporting accurate stock assessments.
    - Estimates of discarded fish are generally accepted as having higher uncertainty than landed fish, due to errors in ID and recall as well as potentially intentionally misleading reports.
    - The private recreational sector is the largest component of the Red Snapper fishery, yet the short seasons over the past 10 years prevent use of the primary survey, MRIP, to estimate landed catch.
        - Consequently, data inputs for the landings and discards portions of the private recreational sector come from different surveys that use

different methods, generating estimates that have not been properly calibrated. Additionally, the data used to monitor landings and evaluate ACLs are not the same data used in the stock assessment.

- Despite multiple benchmark assessments conducted since 2007, the assessment remains unable to estimate steepness, a critical parameter for informing management benchmarks and projecting future recruitment.
    - As a result, management benchmarks cannot be estimated directly and must be assumed from proxies and future recruitment is assumed based on past conditions.
    - While the stock is declared to be experiencing overfishing based on a proxy overfishing definition, other observable indicators of stock performance – record high recruitment, biomass, and abundance; expanding age structure; expanding stock range – are hardly indicative of overfishing.
    - The lack of a steepness estimate and associated stock-recruitment relationship results in rebuilding projections that provide no increase in recruitment for the remainder of the rebuilding period despite predicted gains in spawning stock abundance and stock age structure over the next 20 years of the rebuilding period. It is challenging for the Council to manage the stock for increased abundance of older fish when the projections show no benefits to abundance and recruitment from increased abundance of older fish.
    - The lack of a steepness estimate and associated stock-recruitment relationship led the SSC to state that they lack the ability to predict future recruitment and to caution that there is a high level of uncertainty in any recruitment assumptions. This has led to considerable difficulty in providing fishing level recommendations, and great uncertainty in the recommendations that are provided.
- Each subsequent assessment of Red Snapper has resulted in lower estimates of stock productivity as indicated by MSY:
    - SEDAR 15: MSY = 2,319,000 lbs.
    - SEDAR 24: MSY = 1,842,000 lbs.
    - SEDAR 41: MSY proxy = 763,000 lbs.
    - SEDAR 73: MSY proxy = 404,000 lbs.
- Productivity dropped between SEDAR 41 and SEDAR 73, despite SEDAR 73 including the revised MRIP catch estimates that indicate historically higher catches.
- The Council finds it difficult to interpret such low and declining productivity given the obvious evidence of stock expansion and improvement, and is concerned that it may be the culmination of the data deficiencies, input uncertainties, and model misspecification issues noted by the SSC.

Actions for Council Consideration

1. Initiate an immediate framework action to reduce discard removals

   Discards account for 90% of the fishing mortality experienced by the stock, according to the SEDAR 73 stock assessment.

    - Include action to consider gear modifications suggested by the SG AP
        - single hook rigs

        - larger hooks
        - leader modifications
        - natural bait prohibition
        - slot limit

2. Increased outreach and data collection
    - Support increased outreach activities on best fishing practices
    - Expand and promote the Release App to improve information available on discarded fish for consideration in the next assessment.
3. Create a Council Workgroup to lead an MSE approach to develop management strategies that reduce discards and increase landed yield across the entire Snapper Grouper fishery, while balancing the needs for fishery access and resource use while preventing overfishing and rebuilding overfished stocks.
    - Direct staff to develop a project plan for Council review in December 2021, including a timeline, costs, and potential participants.
4. Prioritize a Research Track Assessment for Red Snapper at the next available opportunity
    - Replace White Grunt assessment with Red Snapper (RT)
    - Consider new sources of data such as for-hire reporting, Release reports, and Florida State Reef Fish Survey to better describe discarded fish by size and depth of release and address descending device usage and best practices adoption.
    - Consider alternative assessment methods that may address the ongoing inability of the current model to estimate stock productivity, and resolve issues and uncertainties in prior assessments noted by the SSC and peer reviews.
5. Initiate an FMP amendment to:
    - Revise MSY, ABC, ACLs and allocations.
    - Incorporate recommendations of the SAFMC Recreational and Joint Section 102 working groups
    - Incorporate results of the MSE project
    - Consider additional recommendations of the SG AP
        - Spatial (depth) or time closure of bottom area.
        - Alternative harvest season timing
        - Recreational federal fishing license for the Snapper Grouper fishery.