

Review of: "Estimates of Atlantic Goliath Grouper (*Epinephelus Itajara*) Bycatch Mortality in Commercial Fisheries of the Southeastern US From 2002 to 2022"

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Potential competing interests: No potential competing interests to declare.

Review of Manuscript Titled “Estimates of Atlantic Goliath Grouper (*Epinephelus itajara*) bycatch mortality in commercial fisheries of the southeastern US from 2002 to 2022”

Goliath Grouper have undergone three stock assessments conducted under the auspices of the Southeast Data, Assessment, Review (SEDAR) process. During the data workshop of a SEDAR assessment, state and federal agencies present their data sources for possible inclusion in the assessment model. The Southeast Fisheries Science Center's Coastal Fisheries Logbook Program has been examined numerous times for producing discard estimates for a number of species in the snapper grouper complex. Poffenberger (2003) produced the first discard estimates for Yellowtail Snapper in SEDAR 3, using a similar approach as applied in the reviewed manuscript. However, over time, Poffenberger enhanced the methodology for producing discard estimates, which can be seen in subsequent SEDAR documents. During SEDAR 7, Poffenberger and McCarthy (2004) continued to refine the methodology by including data filtering and stratification based on several factors that included characteristics of the fishery (e.g., gear and area) and regulations (e.g., type of permit endorsement and season). The stratified methodology continues to be used when estimating discards unless the data are insufficient to do so.

Goliath Grouper were assessed in SEDAR 6, 23, 47. Neither SEDAR 6 nor SEDAR 47 included commercial discards. However, SEDAR 23 (2010) included a working paper by K. McCarthy that calculated Goliath Grouper discards using the base modeling approach described in Poffenberger and McCarthy (2004). Although estimates of discards were calculated, McCarthy concluded the report with the following paragraph:

“The number of trips reporting Goliath grouper discards in the US South Atlantic and Gulf of Mexico was very low. Goliath grouper discards were reported on 15 or more trips during only two years from either longline or vertical line vessels. During six years, five or fewer longline trips reported Goliath grouper discards; however, five or fewer vertical line trips reporting Goliath grouper occurred in only two years. Discard totals, calculated from such relatively rare events, should be used cautiously.”

As I was reviewing the current manuscript, Dr. David Gloeckner with the Southeast Fisheries Science Center presented on the reliability of the commercial discard logbook data for producing discard estimates at the South Atlantic Fishery Management Council's Scientific and Statistical Committee meeting on April 17, 2024. As stated previously, the logbook has been used to produce commercial discard estimates in past assessments; however, Dr. Gloeckner indicated during

his presentation that the Science Center currently is not recommending the use of the commercial discard logbook for producing discard estimates. A link to the presentation and corresponding white paper can be found on the Council's website (<https://safmc.net/events/april-2024-ssc-meeting/>).

Given the current recommendation of the Science Center and the complexity of the previous methodology used for producing commercial discard estimates, I cannot support the methods proposed in the current manuscript.

References:

McCarthy, K. 2010. Calculated Goliath grouper discards from commercial vertical line and longline fishing vessels in the Gulf of Mexico and US South Atlantic. SEDAR 23-DW-04. SEDAR, North Charleston, SC. 8pp.

Poffenberger, J. 2003. Yellowtail snapper discards. Sustainable Fisheries Division. Southeast Fisheries Science Center. Miami, FL. Unpublished manuscript.

Poffenberger, J and K. McCarthy. 2004. Estimates of Red Snapper Discards by Vessels with Federal Permits in the Gulf of Mexico. SEDAR 7-DW-22. SEDAR, North Charleston, SC. 13pp.

Recommendation: Reject