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.

The manuscript is well written and brings interesting information that may be useful for the establishment of conservation measures. However, there are some flaws that must be addressed to make it more appropriate for the reader's interpretation.

2 Methods

2.1 Data

It would be interesting to include a map of the fishing area in the SEUS. It is supposed to have such information from logbooks as well as catch data.

2.2 Analyses

What statistical test was used to assess the significance of the linear regressions a and b?

2.3 Relevant literature

In Figure 1, the meaning of the letters A and B must be explained.

What statistical test was used by Collins et al. (2014) to assess the relationship of barotrauma x depth in Figure 1 and barotrauma x size in Figure 2?

We applied the resulting regression equation from *M. microlepis* mortality in McGovern et al. (2005) (Figure 3) to *E. itajara* capture data to estimate capture-release barotrauma mortality.

- It is appropriate to bring the equation in the text, instead of in the caption of Figure 3.

From my point of view, there are an excess of figures in section 2.3, even more than in the results. The authors can only cite the information contained in the graphics as a reference, leading the reader to access the cited manuscripts.

3 Results

3.1 Barotrauma

Line 2 - What are the units of catch data? Tons or kg?

Figure 5. It is quite confusing: what does the no. of discards mean? Number of fish discarded? It looks like there are a lot of points for each year. Does it represent a unique fishery? What is the estimated R^2?

Figure 6. The solid line does not represent the mean depth, but the linear regression trend line.

Table 1. The authors presented the logistic regression from the manuscript of McGovern et al. (2005) (Fig. 3), but do not present it from their own data. It is possible to plot the regression of McGovern et al. along with the regression for *E. itajara* in the same graph, which will be useful for comparison purposes.

Should it be possible to merge tables 1 and 2 as only one?

3.2 Venting

We used 30 m depth of capture as a minimum depth for venting E. itajara based on Collins's observations (Collins 2014). We then calculated the number of fish caught in the commercial fishery between 2002 and 2022 at depths of 30 m or greater, and the number caught at depths less than 30 m. (This sentence is a repetition of the Methods section. It is not necessary to repeat it again in the results.)