Fisherman Feedback: Gray Triggerfish Response Summary

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SEDAR100-DW-21

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Fisherman Feedback: Gray Triggerfish
Response Summary
October 2025

The Gulf Council asked fishermen, divers, and other federal fishery stakeholders what they have noticed about gray triggerfish and gray triggerfish fishing in recent years. Active fishermen are a rich source of information and may notice trends or phenomena that scientists and managers may not observe, also known as local knowledge. Local knowledge expands the types of information gathered by fisheries scientists and managers to gain a better, more contemporary understanding of what is happening on-the-water.

Comments were collected using the Fisherman Feedback web-based tool that was advertised via press release, social media, and on the Council's website. As a result, 200 unique responses were received between July 29 – August 29, 2025.

Respondents self-selected their association with the fishery (Figure 1). Respondents were not limited to a singular category, and some identified with more than one sector. A majority of respondents identified with the private angling component of the recreational fishing sector. All respondents who indicated they were commercial fishermen additionally selected participation in some component of the recreational fishery. The absence of commercial-only fishermen makes the gray triggerfish Fishermen Feedback report unique compared to other reef fish stocks.

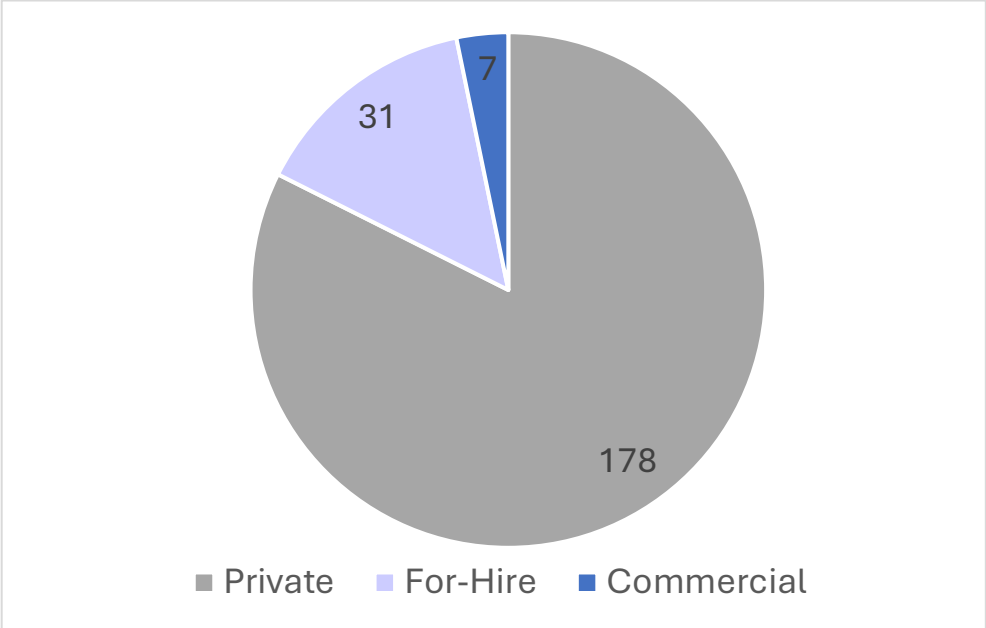

***Figure 1**: Results collected from the tool asking individuals to self-identify their fishing sector association. While 200 individuals answered the survey question, they were not limited to a singular response and some identified with more than one sector of the fishery, resulting in a total of 216 responses.*

Respondents were provided a grid of 21 areas in the Gulf of America (Gulf) where they were able to self-identify the general location(s) of their observation (Figure 2). Respondents were not limited to a single area, and many identified multiple areas. The majority of respondents fish between Mobile Bay in Alabama and Apalachicola, Florida with the highest density concentrated off the Florida/Alabama state line.

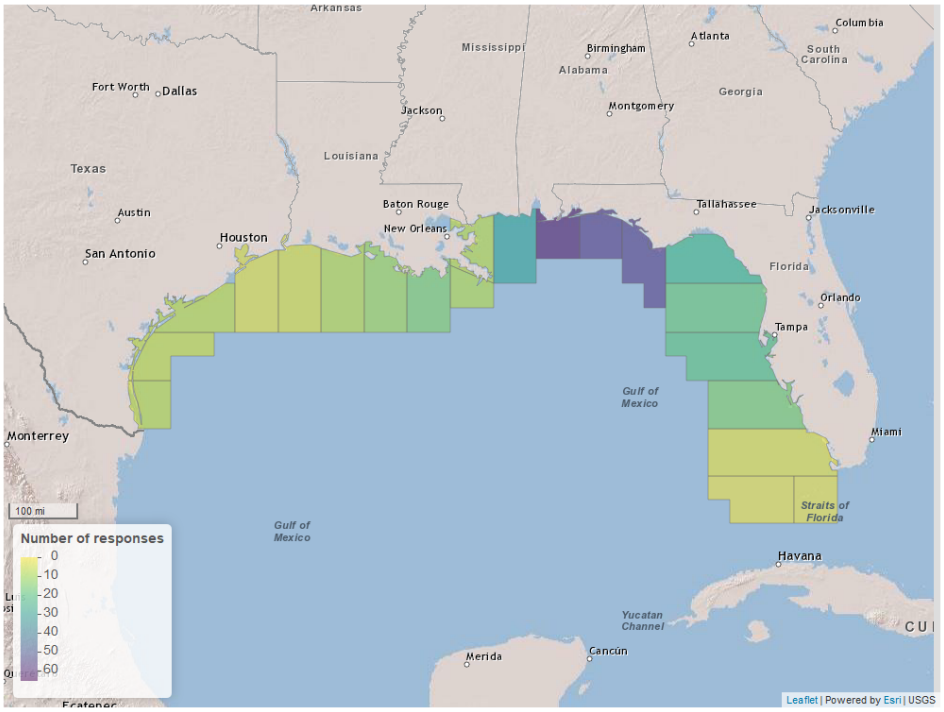

Figure 2: *Number of responses received in each of 21 areas in the Gulf. Respondents could select more than one area, so the total number illustrated in the map (n=339) exceeds the number of individual responses (n=200).*

The overall sentiment of each response was classified as positive, negative, or neutral/mixed through manual analysis. The analysis showed that most comments expressed negative sentiment (Figure 3). Comments were classified as neutral when they were observational in nature, with sentiment either absent or hard to discern. Additionally, any comments that included an equal mix of positive and negative sentiments were also considered to have an overall neutral/mixed sentiment.

The comments that expressed negative sentiment indicated that there are too many gray triggerfish and that they are overpopulated. Respondents indicated that they are a nuisance because they steal bait, making it hard to fish for other species, and that they outcompete other species. Many of the negative comments indicated that management measures for gray triggerfish are inappropriate and/or ineffective. Specifically, anglers suggested a higher bag limit and a reduction in the minimum size limit. Some respondents indicated that the large minimum size limit was driving an increase in discard mortality because many undersized fish were being

thrown back in pursuit of a legal fish. Some negative comments also indicated shark depredation is an issue.

Neutral or mixed comments most commonly indicated that the population is healthy and regulations were inappropriate. Neutral comments that were observational in nature indicated that gray triggerfish have small mouths making them less susceptible to being caught on gear intended for other species and indicated that gray triggerfish are less active at night. Comments reflecting positive sentiment indicated that the population is abundant.

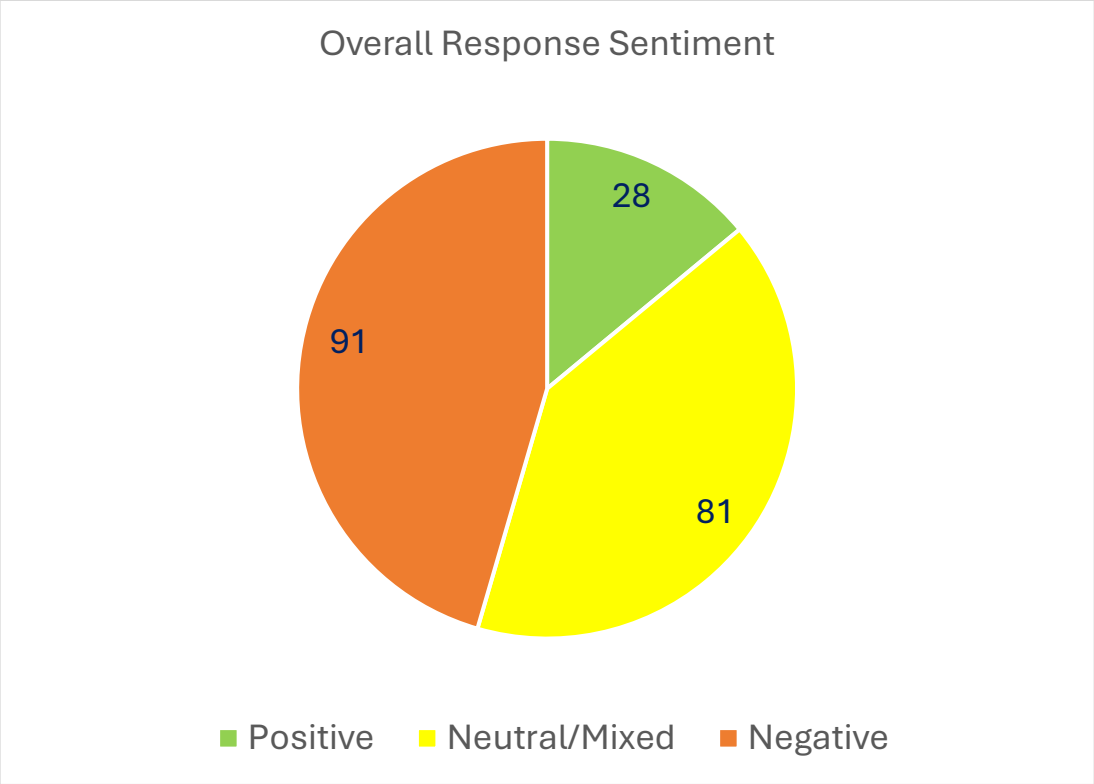

***Figure 3**: Number of responses indicating positive, negative, or neutral/mixed sentiment (n=200) classified by manual analysis.*

Overall sentiment was also categorized by fishing sector (Figure 4). Respondents self-identified their fishing sector and were not limited to a singular response. Private recreational and for-hire sectors expressed negative sentiment most frequently. The commercial sector expressed similar proportions of positive and negative sentiment.

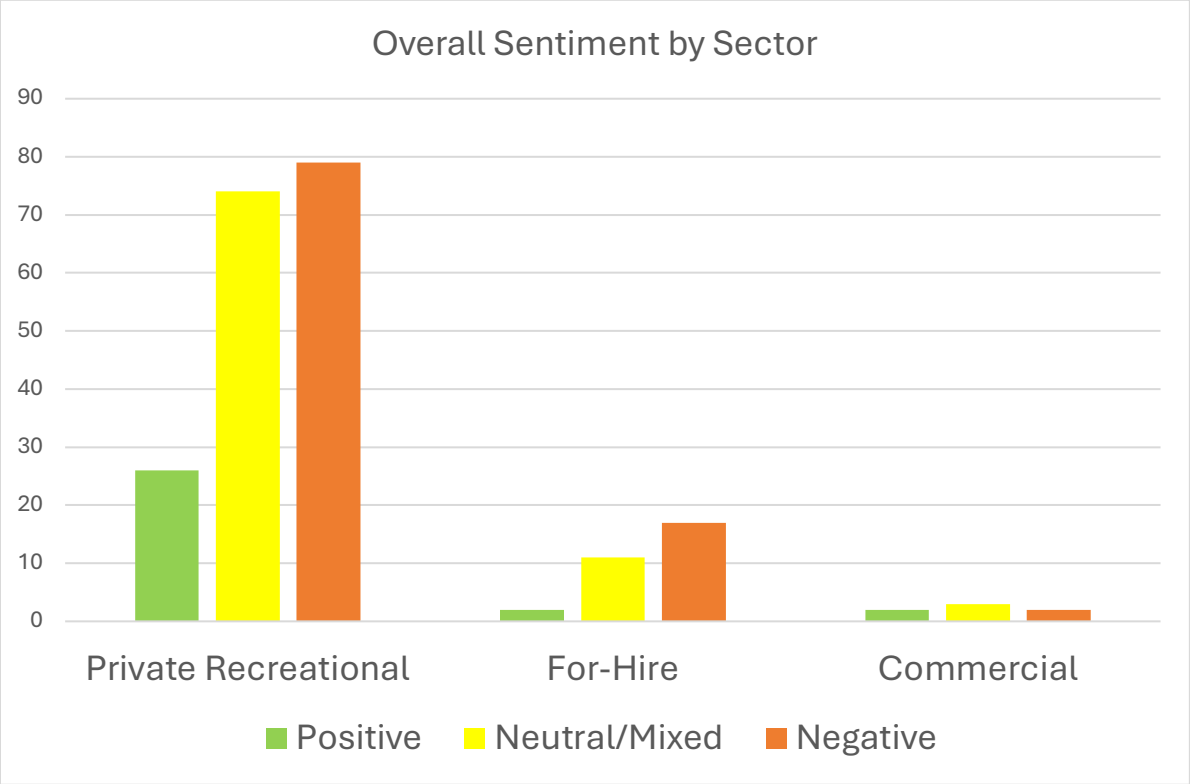

Figure 4*: Number of responses indicating positive, negative, or neutral/mixed sentiment sorted by commercial, private recreational, and federal for-hire fishing sector. Sentiment was classified by manual analysis and sector was self-selected by each respondent. Respondents were not limited to a singular sector declaration in their response (n=216). Comments that were not associated with the three primary fishing sectors were not analyzed.*

Overall comment sentiment was also sorted by location (Figure 5). A high proportion of negative comments were seen in areas from Louisiana through peninsular Florida.

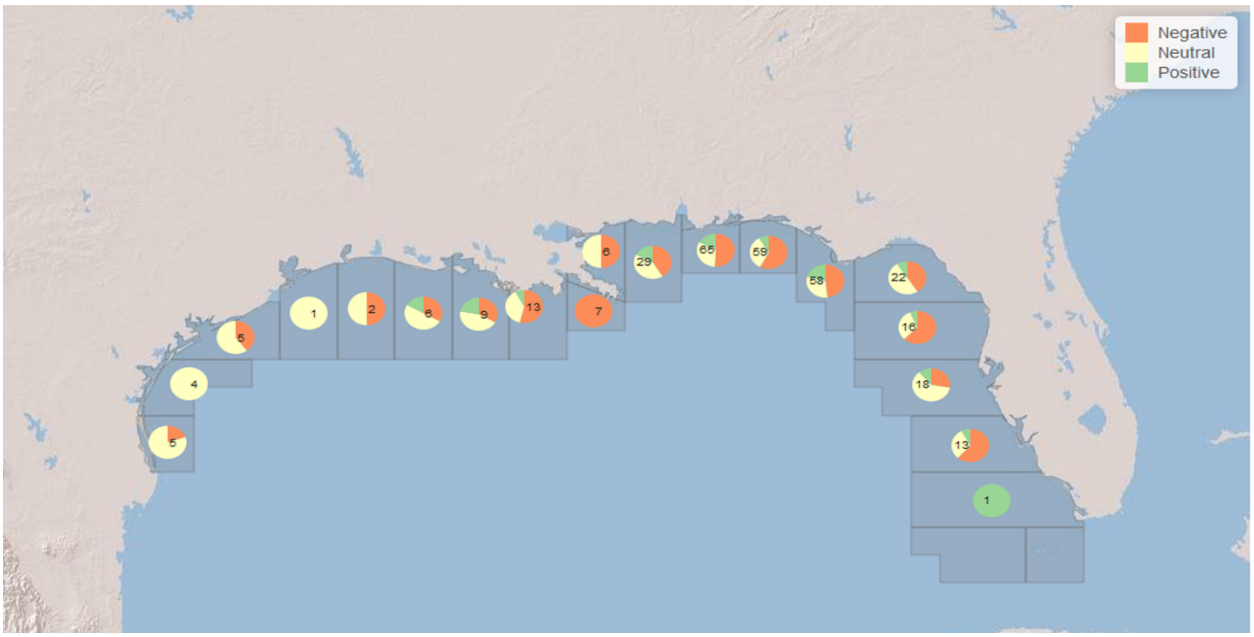

***Figure 5**: Sentiment analysis for each area. Each comment (n=200) was characterized as positive, negative, or neutral/mixed based on independent review of each comment by two reviewers. Each comment was then linked to one or more areas based on the self-reported locations. Respondents could select more than one area, so the total number illustrated in the map (n=339) exceeds the number of individual responses.*

Comments from the 200 respondents were analyzed for sentiment focusing on the condition of the stock. Of the 200 comments, 25 did not provide comments that were determined to be related to the condition, health, or abundance of the stock, resulting in 175 unique comments applicable to stock condition. These comments were then classified based on whether they indicated that the stock was in good, negative, or neutral health (Figure 6). Most comments indicated that the stock was in good condition.

Specifically, positive comments mostly indicated that there are plenty of large fish in deeper waters and that there are lots of small fish, mostly concentrated in shallower depths. Neutral/mixed comments mostly indicated that there were lots of small fish, just under the size limit. While it was perceived to be positive that there were lots of small fish, it was perceived to be negative that none were of the legal size limit. Respondents indicating something negative about the stock were dissatisfied by the lack of large fish and some speculated that the gray triggerfish population was unhealthy because the eggs and juvenile fish were being eaten by red snapper.

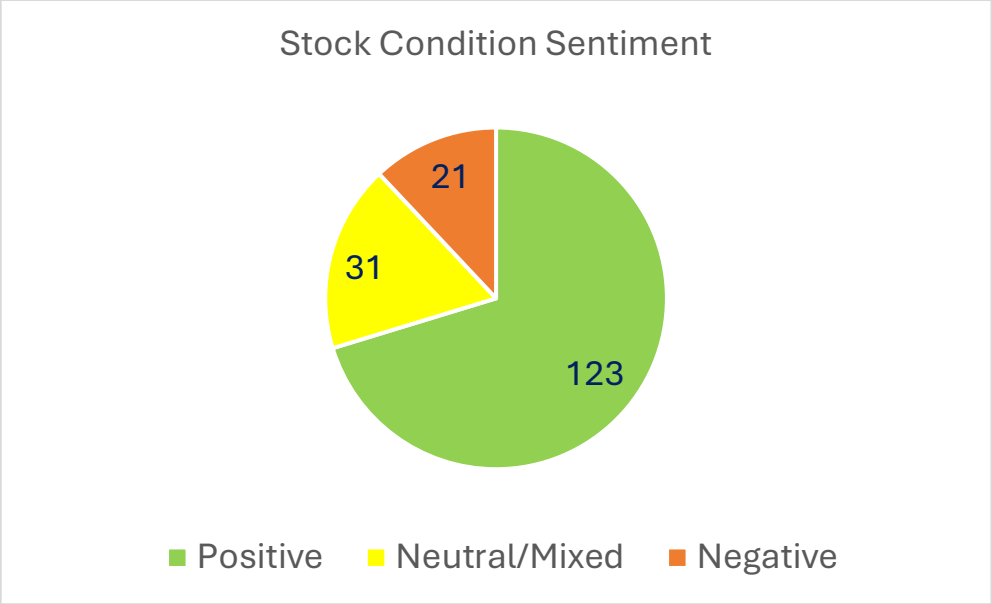

***Figure 6**: Number of comments indicating positive, negative, or neutral/mixed sentiment regarding stock condition (n=175)*

Results were also analyzed by sector (Figure 7). Respondents from all sectors expressed a similar proportion of positive, negative, or neutral/mixed sentiment comments surrounding stock condition. Positive perceptions of the stock condition were most common followed by neutral/mixed sentiment. Negative perception of stock condition was expressed the least across all sectors.

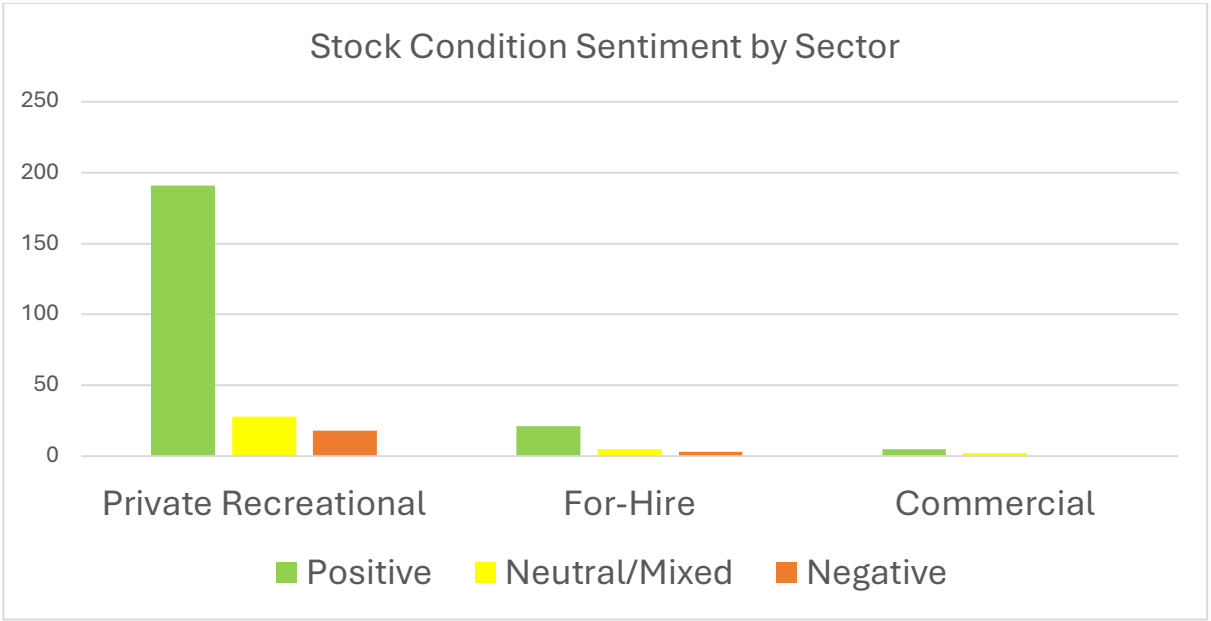

***Figure 7**: Number of responses related to stock condition (n=175) that indicate positive, negative, or neutral/mixed sentiment and sorted by commercial, private recreational, and federal for-hire fishing sector. Sector was self-selected by each respondent. Respondents were not limited to a single sector, so the total number of responses depicted in this figure exceeds the number of responses related to stock condition that were received (n=191). Comments that were not associated with the three primary fishing sectors were not analyzed.*

The sentiment of comments related to the condition, health, or abundance of the stock were also sorted by location (Figure 8). Except for a few areas, respondents across most of the Gulf indicated positive sentiment regarding the condition of the gray triggerfish stock with the exception of two areas in south Texas, two areas off the coast of the Texas/Louisiana state line, and two areas near the Louisiana/Mississippi state line, indicating the highest proportions of negative or neutral/mixed sentiment.

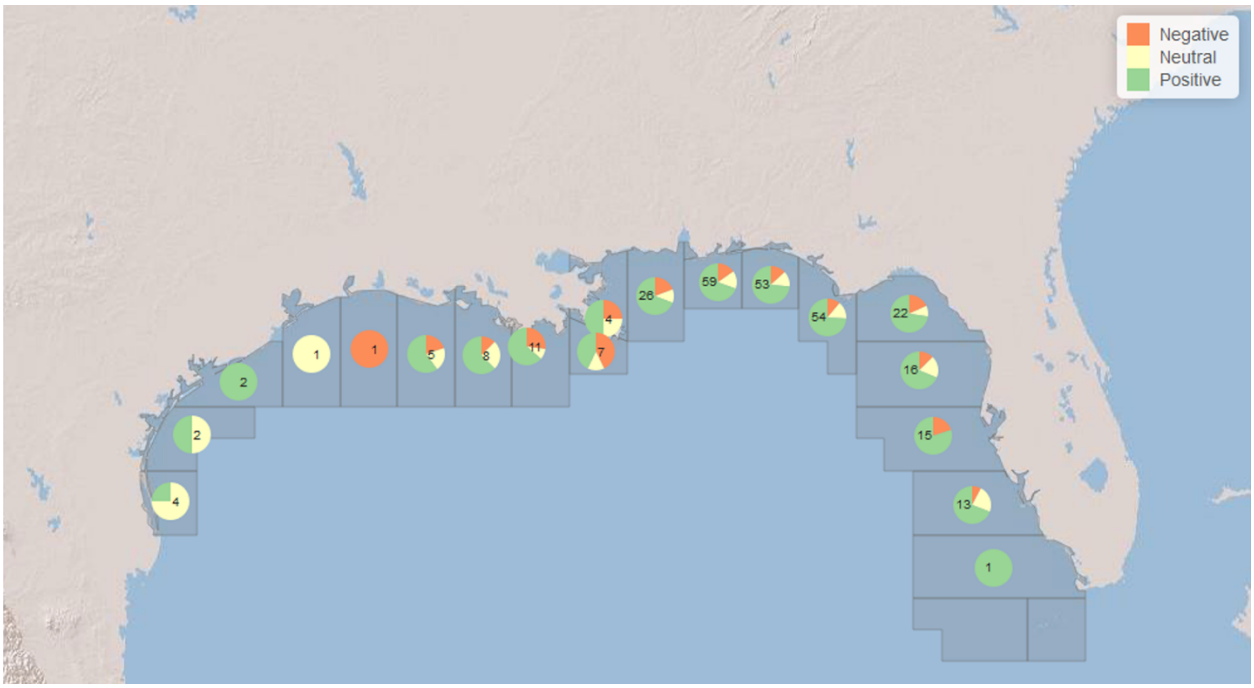

Figure 8*: Sentiment analysis of the perception of stock condition by location. Each comment related to the health, condition, and/or abundance of the stock was characterized based on whether it indicated something positive, negative, or neutral/mixed about the stock (n =107). Each comment was then linked to one or more areas based on the self-reported locations. Respondents could select more than one area, so the total number illustrated in the map (n=239) exceeds the number of individual responses related to stock condition.*

Comments were analyzed for the words most frequently used to contribute to either positive or negative sentiment through automated analysis (Figures 9 and 10). The words that occurred most frequently in comments with a positive sentiment were large, abundant, plentiful, and healthy. This seems to indicate that most of the positive sentiment expressed was based on a positive perception of the abundance or condition of gray triggerfish. The words that occurred most frequently in comments with a negative sentiment were small, less, and limits. This seems to indicate that most of the negative sentiment expressed was based on the small size of available gray triggerfish and a dissatisfaction with the current regulations, or limits.

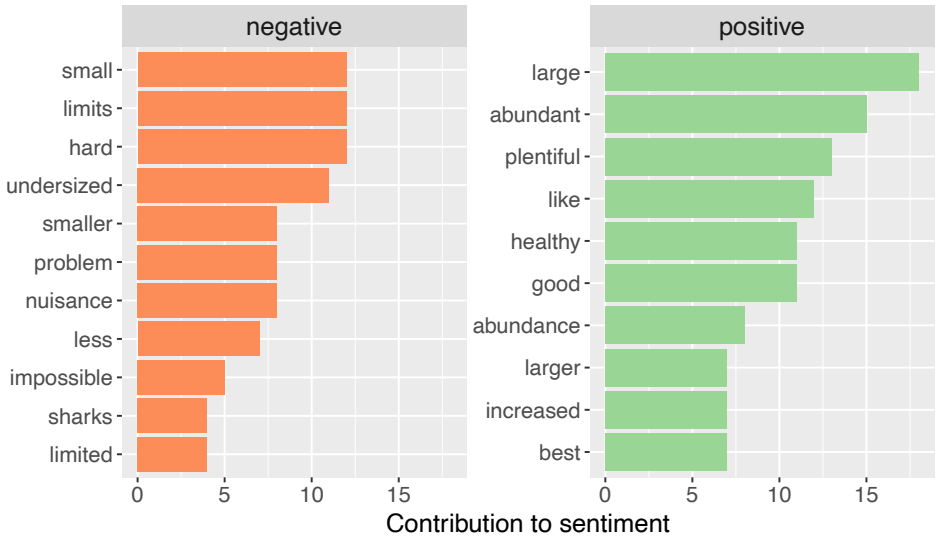

***Figure 9**: Most frequently used words contributing to comment sentiment identified using automated sentiment analysis.*

***Figure 10:** Most frequently used words contributing to comment sentiment identified using automated sentiment analysis.*

The results of Fisherman Feedback for gray triggerfish will be submitted to the NOAA Southeast Fisheries Science Center and shared with the Council and its Scientific and Statistical Committee as the SEDAR 100: Gulf Gray Triggerfish Stock Assessment is completed and reviewed. The information collected through the tool is not intended to be considered as an index of abundance for direct incorporation into the stock assessment model. Instead, results of this effort are meant to supplement the role played by fisheries observers to the stock assessment process, and incorporate local knowledge into the stock assessment process. The on-the-water perspective

offered by respondents to this tool should be used to ground-truth the science and enhance our understanding of the stock.

Methods

Manual sentiment analysis was conducted by two independent readers and overall comment sentiment was broadly characterized as positive, neutral/mixed, or negative. Readers also determined whether comments were related to the condition, health, or abundance of the stock. Those comments were analyzed again and classified based on whether they indicated that the stock was in good, negative, or neutral health. Readers then compared characterizations and resolved any disagreements in interpretation so that both readers agreed.

Automated sentiment analysis characterized each response using the 'tidytext' package in R. For this analysis, the words in each comment were compared to a revised version of the 'Bing' lexicon library which has been amended with characterizations for words commonly used in reporting fishery information. The library categorizes words into positive, negative, or neutral sentiment and scores every word in each comment accordingly. This was used to identify the most common words associated with a positive and negative sentiment.