Fisherman Feedback: Hogfish
Response Summary
August 2025

The Gulf Council asked fishermen, divers, and other federal fishery stakeholders what they have noticed about hogfish and hogfish 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, 127 unique responses were received between June 20 – July 21, 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.

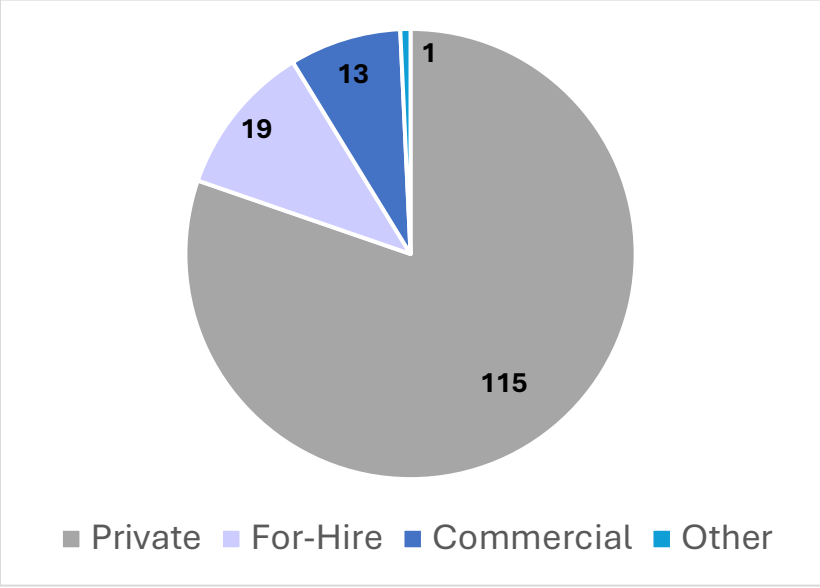

***Figure 1**: Results collected from the tool asking individuals to self-identify their fishing sector association. While 127 individuals answered the survey question, they were not limited to a singular response and some identified with more than one sector of the fishery, resulting in a total of 147 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 off peninsular Florida with the highest density concentrated off Tampa Bay and the area immediately to the north.

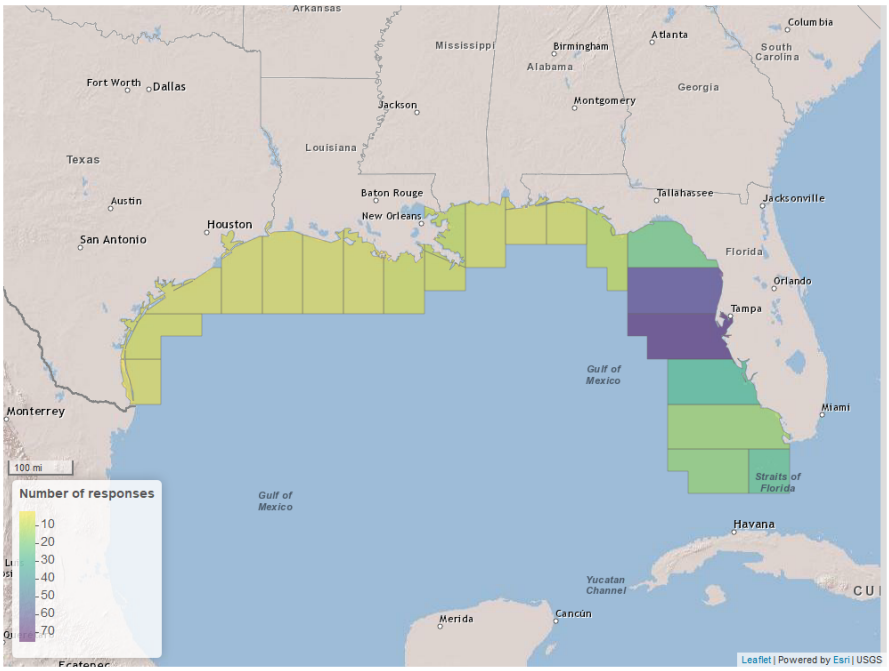

Figure 2: *Number of responses received in each of 21 areas in the Gulf. Respondents could select more than one area, so the total number illustrated in the map (n=279) exceeds the number of individual responses (n=127).*

The overall sentiment of each response was classified as positive, negative, or neutral/mixed through manual analysis. The analysis showed that most comments were neutral or mixed in nature (Figure 3). These 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.

Many of the neutral/mixed comments mentioned that there were lots of undersized hogfish. This was considered neutral/mixed because, while having an abundance of fish is positive, their small size is a negative. Similarly, many of the neutral/mixed comments indicated that while the fishery is healthy, it was still appropriate to consider a bag limit reduction or increase in size limit to combat high fishing pressure and discards associated with hook-and-line fishing. Some neutral/mixed comments indicated that there was no change in the condition of the hogfish stock in recent years. Other neutral/mixed comments that were observational in nature indicated that hogfish move deeper into cooler water in the summer months.

Comments reflecting negative sentiment indicated that there was too much fishing effort on hogfish from all sectors as a result of the truncated gag grouper season. This has caused effort to shift to hogfish. Hook-and-line fishing for hogfish was frequently noted as a cause for concern because of increasing pressure and the high level of discards associated with barotrauma. Comments with positive sentiment frequently highlighted that there are lots of hogfish. Numerous positive comments also indicated that spearfishing had little to no bycatch.

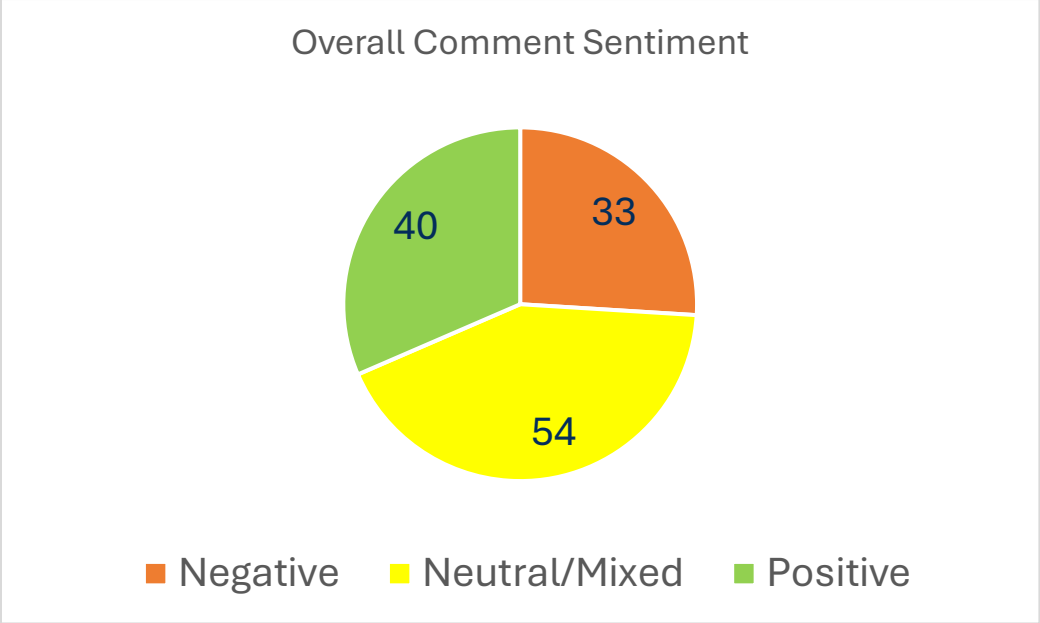

***Figure 3**: Number of responses indicating positive, negative, or neutral/mixed sentiment (n=127) classified by manual analysis.*

Overall sentiment was also categorized by fishing sector (Figure 4). Respondents self-selected their fishing sector and were not limited to a singular response. There was no clear trend in sentiment exhibited across sectors. While both private recreational and commercial sectors expressed the most neutral/mixed sentiment, they differed in the balance of positive and negative comments. The commercial sector had the lowest proportion of positive comments while private recreational anglers had the highest proportion of positive comments. The for-hire respondents expressed a nearly equal number of positive and negative sentiments.

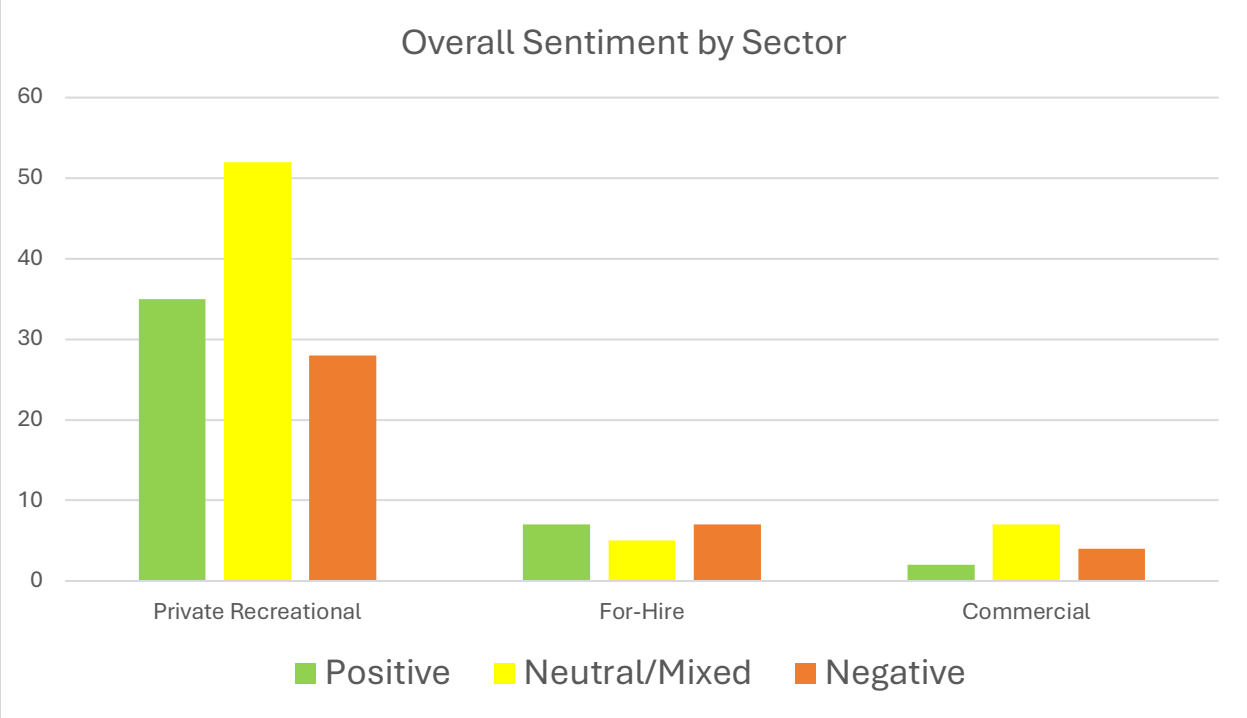

Figure 4*: Number of responses indicating positive, negative, or neutral/mixed sentiment sorted by commercial, private recreational, and federal for-hire fishing sector. Sentiment was classified by manual analysis and sector was self-selected by each respondent. Respondents were not limited to a singular sector declaration in their response (n=279). Comments that were not associated with the three primary fishing sectors were not analyzed.*

Overall comment sentiment was also sorted by location (Figure 5). The highest proportion of negative comments were seen in areas of the western Gulf where hogfish are not prevalent. The most positive comments were collected off the Florida coast just north of the Tampa Bay region and off Tampa Bay.

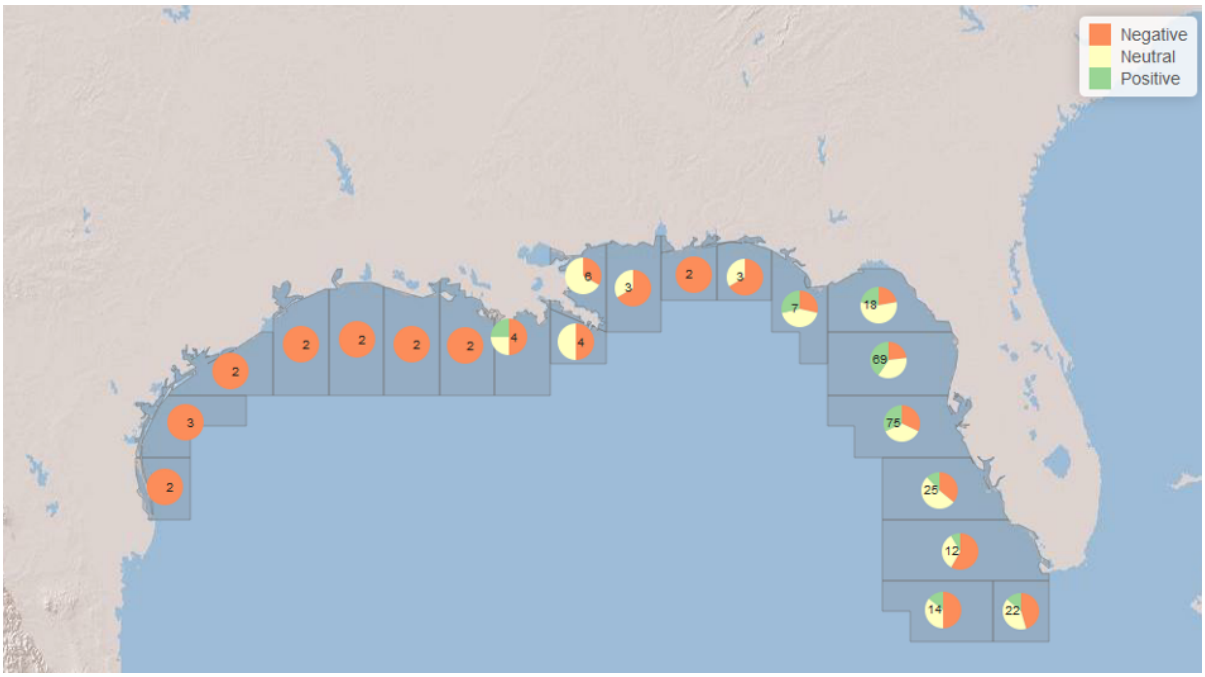

Figure 5*: Sentiment analysis for each area. Each comment (n=127) was characterized as positive, negative, or neutral/mixed based on independent review of each comment by two reviewers. Each comment was then linked to one or more areas based on the self-reported locations. Respondents could select more than one area, so the total number illustrated in the map (n=279) exceeds the number of individual responses.*

Comments from the 127 respondents were analyzed for sentiment focusing on the condition of the stock. Of the 127 comments, 20 did not provide comments that were determined to be related to the condition, health, or abundance of the stock, resulting in 107 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.

The comments that indicated something about the condition of the hogfish stock were mostly positive in nature. Those comments mostly indicated that the stock has improved or remained robust throughout the years. The comments that indicated something negative about the stock condition suggested that red tide has impacted the stock. Respondents also attributed hook-and-line fishing with recent declines in the stock due to high fishing pressure and high discard mortality.

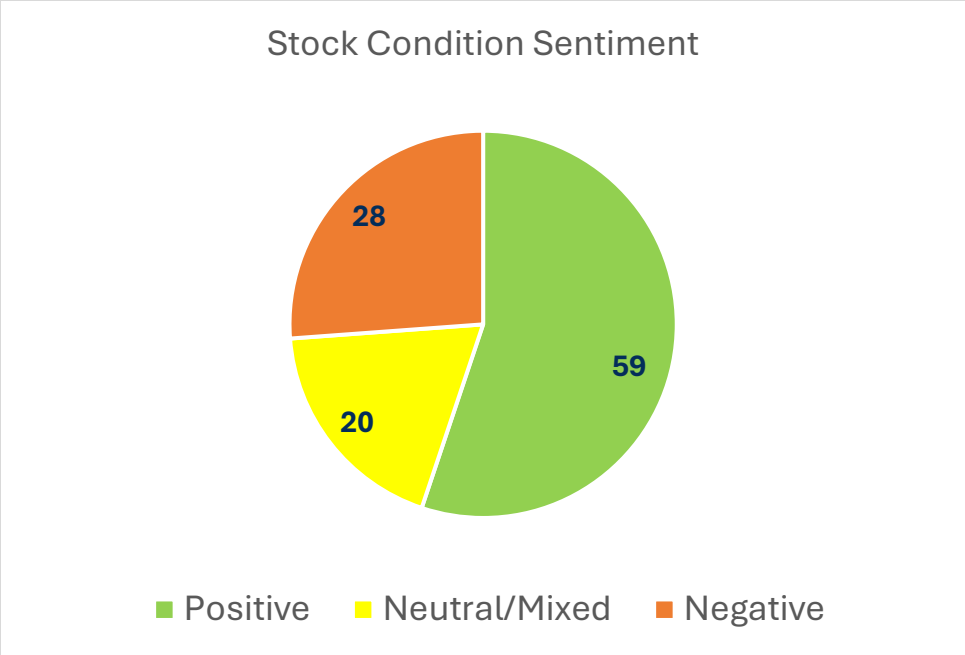

***Figure 6**: Number of comments indicating positive, negative, or neutral/mixed sentiment regarding stock condition (n=107)*

Results were also analyzed by sector (Figure 7). Respondents from all sectors expressed positive perceptions of the stock condition.

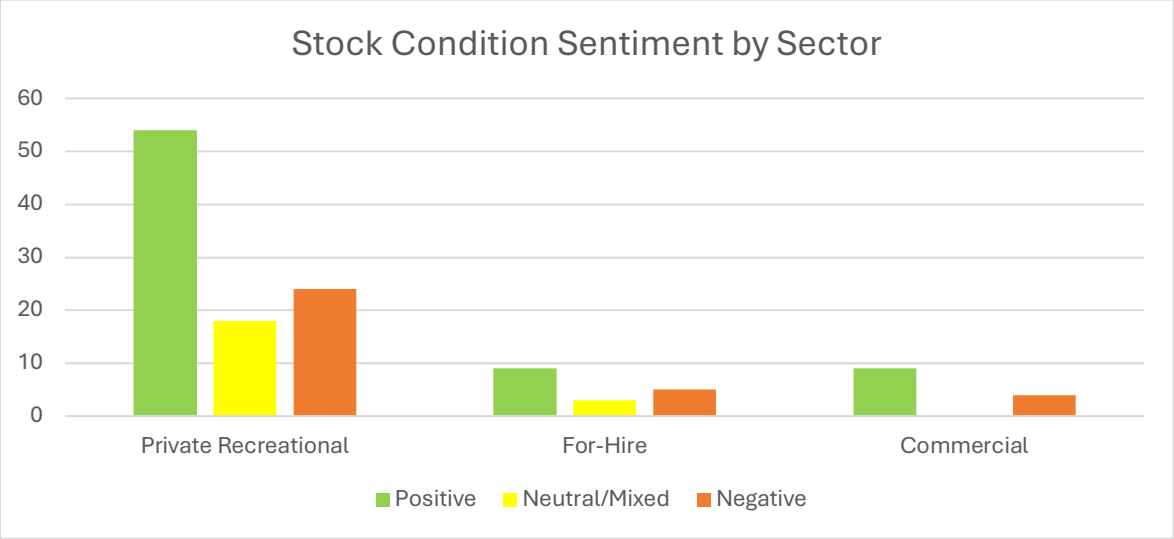

***Figure 7**: Number of responses related to stock condition (n=107) that indicate positive, negative, or neutral/mixed sentiment and sorted by commercial, private recreational, and federal for-hire fishing sector. Sector was self-selected by each respondent. Respondents were not limited to a single sector, so the total number of responses depicted in this figure exceeds the number of responses related to stock condition that were received (n=126). 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). The area of the coast between Alabama and central Texas had few respondents and most areas indicated negative sentiment regarding abundance, except for a few

locations off the Louisiana coast. This reflects the natural range of the hogfish stock and the general absence of fish in those areas. Positive indications of stock abundance were concentrated off all areas of Florida.

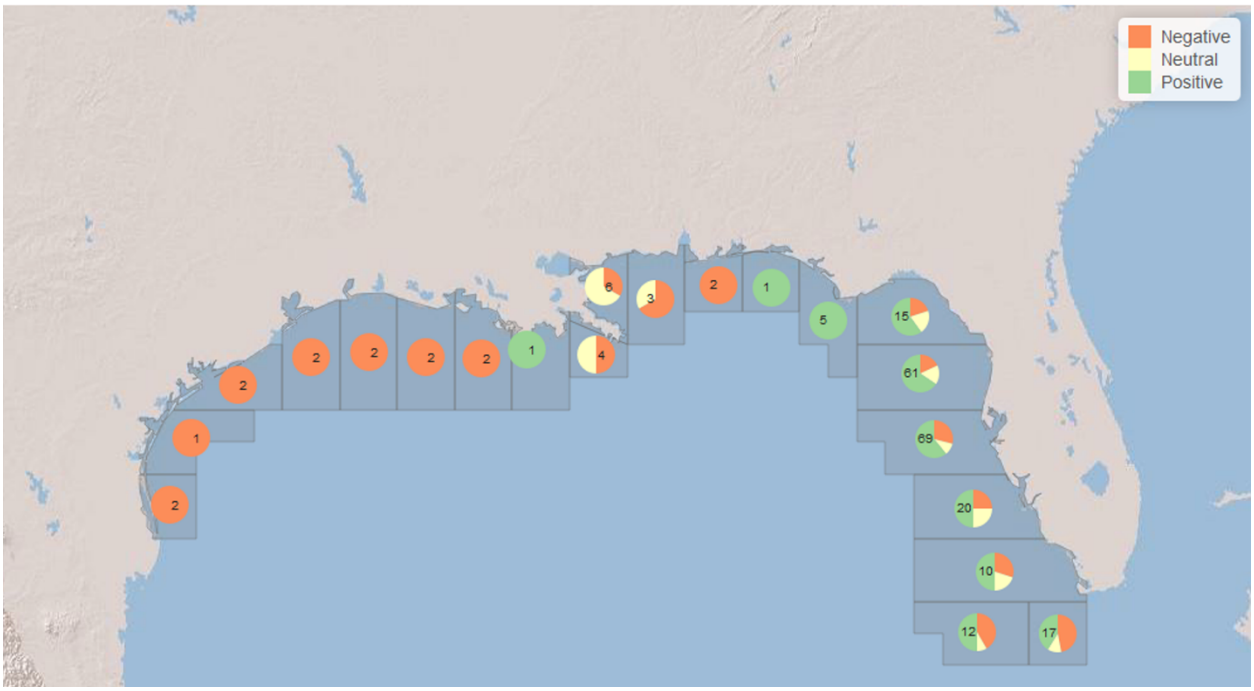

***Figure 8**: Sentiment analysis of the perception of stock condition by location. Each comment related to the health, condition, and/or abundance of the stock was characterized based on whether it indicated something positive, negative, or neutral/mixed about the stock (n =107). Each comment was then 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 good, plenty, increase, 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 hogfish. The words that occurred most frequently in comments with a negative sentiment were small, less, limits, and undersized. This seems to indicate that most of the negative sentiment expressed was based on the small size of available hogfish and a dissatisfaction with the current regulations, or limits.

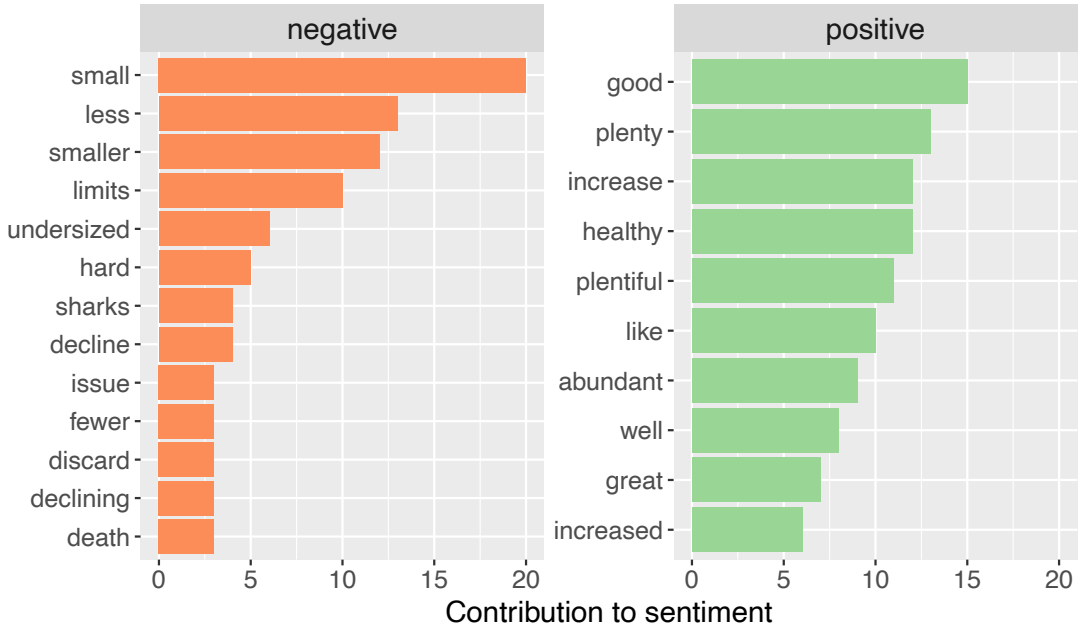

***Figure 9**: Most frequently used words contributing to comment sentiment identified using automated sentiment analysis.*

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

The results of Fisherman Feedback for Hogfish will be submitted to the NOAA Southeast Fisheries Science Center and shared with the Council and its Scientific and Statistical Committee as SEDAR 94: Florida Hogfish 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. 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.