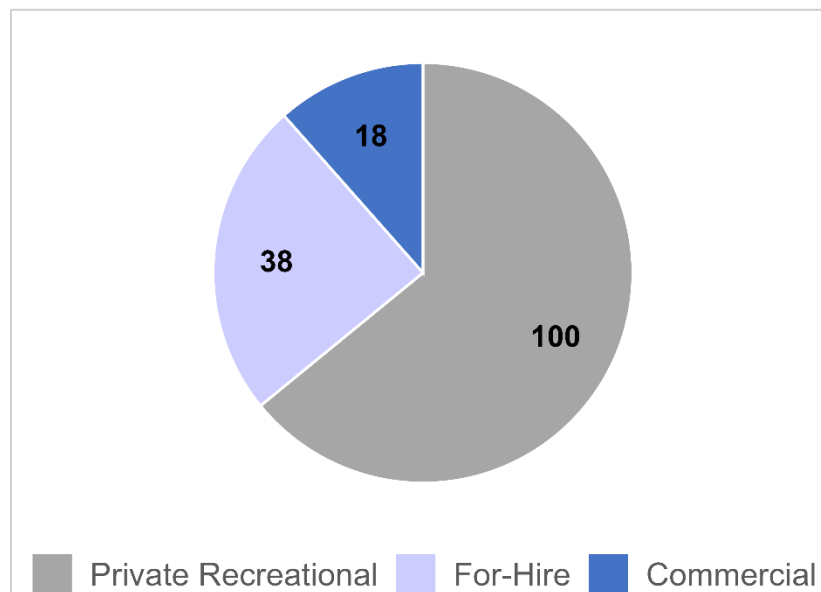


## Fisherman Feedback: King Mackerel Response Summary August 2026

The Gulf Council asked fishermen, divers, and other federal fishery stakeholders what they have noticed about king mackerel and king mackerel 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.

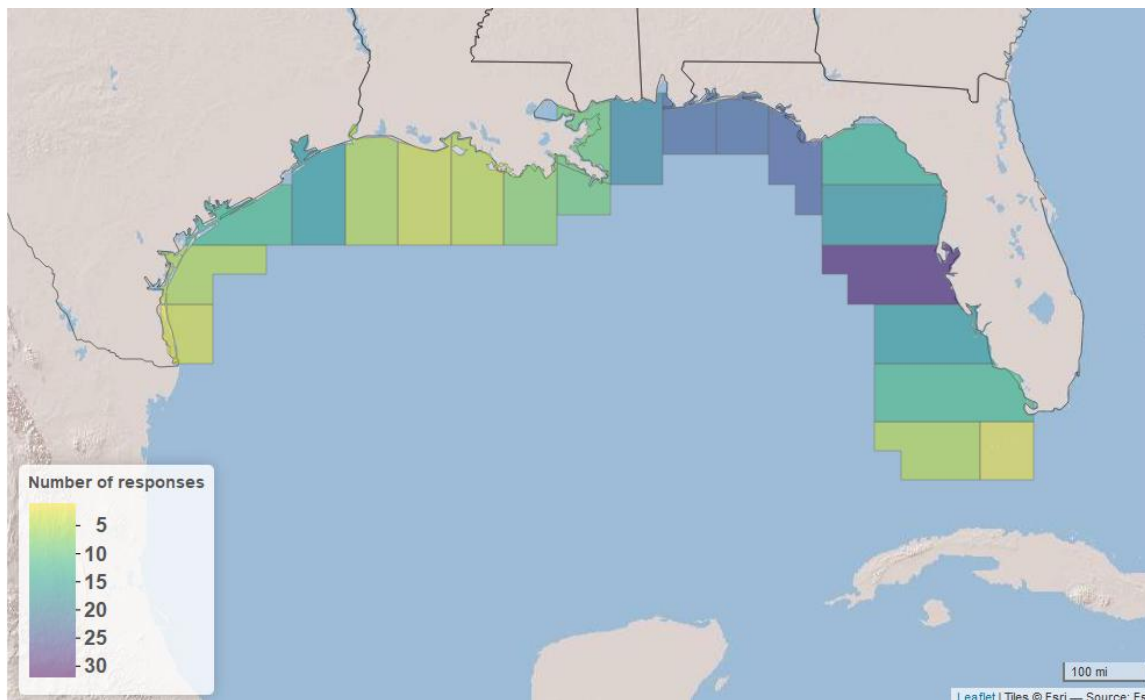
Comments were collected using the Fisherman Feedback web-based tool that was advertised via press release, social media, and on the Council's website. As a result, 134 unique responses were received between June 12, 2026 – July 12, 2026.

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, resulting in a total of 156 responses. A majority of respondents (64%) identified with the private recreational fishing sector, followed by for-hire (24%), and commercial (12%). Two respondents did not identify with either sector and were therefore omitted from analysis regarding sectors.



**Figure 1:** Results collected from the tool asking individuals to self-identify their fishing sector association. While 134 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 156 responses.

Respondents were provided a gridded map 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 greatest number of responses came from the eastern Gulf (Zones 4-11) and eastern Texas (Zone 18), with the highest density concentrated off Tampa Bay (Zone 5). The lowest number of responses came from the Florida Keys (Zones 1 and 2), southern Texas (Zones 20 and 21), and western Louisiana (Zones 15-17).



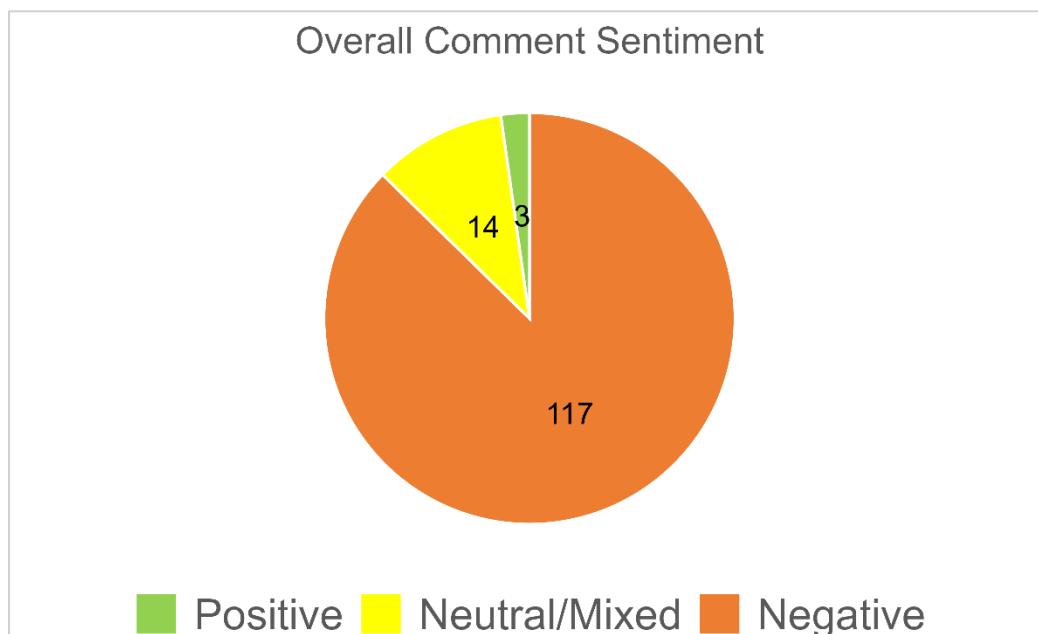
**Figure 2:** Number of responses received in each of 21 areas in the Gulf. Respondents could select more than one area, so the total number illustrated in the map ( $n=291$ ) exceeds the number of individual responses ( $n=134$ ).

The overall sentiment of each response was classified as positive, negative, or neutral/mixed through manual analysis. The analysis showed that most comments (87%) were negative in nature (Figure 3), followed by neutral/mixed (10%), and positive (2%). Comments were classified as either positive or negative based on overall sentiment of their response, while 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 respondents also expressed that there are fewer fish, especially nearshore, and the remaining fish are much smaller than historical catches. Some respondents reported a modification in historical migration behavior with runs being shorter and at different times than previous years. This belief was backed by many respondents claiming the forage fish (spanish sardines, “pogies”, menhaden, little tunny, and herring) were not present anymore. Many of the

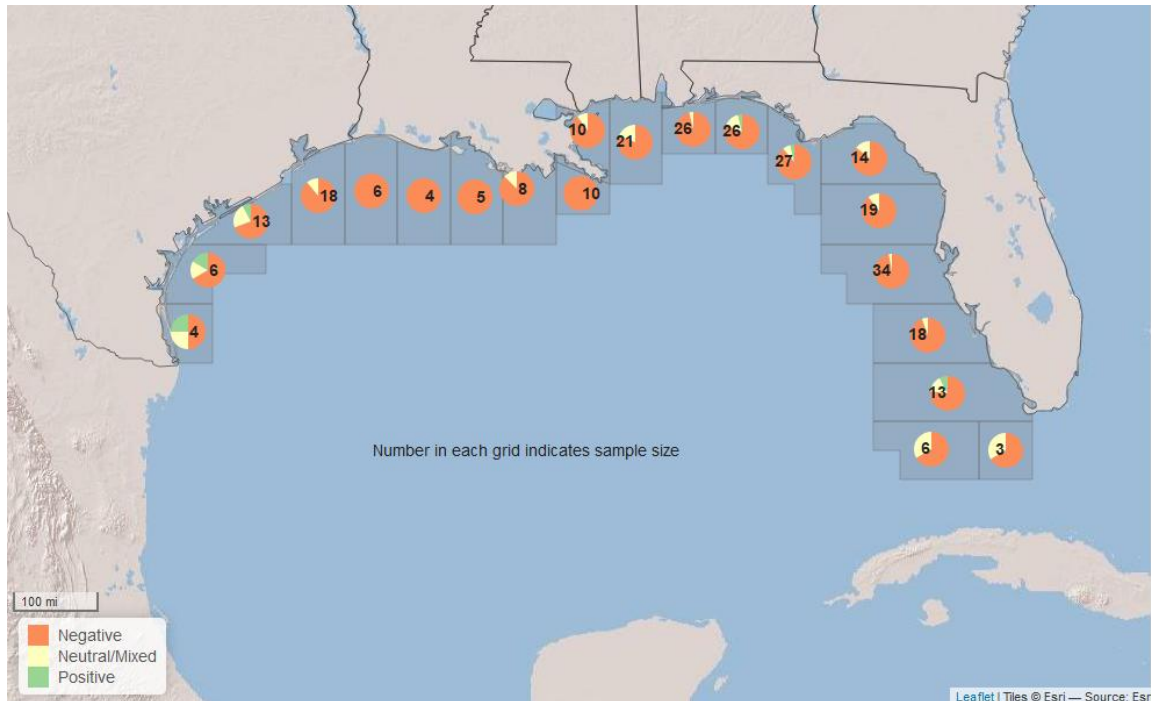
negative comments mentioned that commercial fishing is to blame for reduced abundance. Specifically, many respondents mentioned the gillnet fishery causing too much harm, and commercial boats following the entire migration of king mackerel. A few respondents blamed tournament fishing because they target breeders, and specifically the big females. Another common theme in negative comments suggested that the removal of oil rigs, red tide events, and the dispersant used during the BP oil spill have contributed to the decrease in king mackerel abundance. A few respondents also claimed that king mackerel are “junk” fish and are not actually targeted outside of tournaments and commercial fishing.

Only three of 134 comments were classified as positive. Those comments indicated that king mackerel are plentiful in the Gulf and easy to catch, especially in the fall. Many of the neutral/mixed comments indicated that there were many small king mackerels and few large ones. Additionally, other neutral/mixed comments mentioned the population is doing slightly better but is not as healthy as it was 8-10 years ago. Other neutral/mixed comments indicated that they are tougher to find, but when you find the bait pods, it is easy to catch their limits.



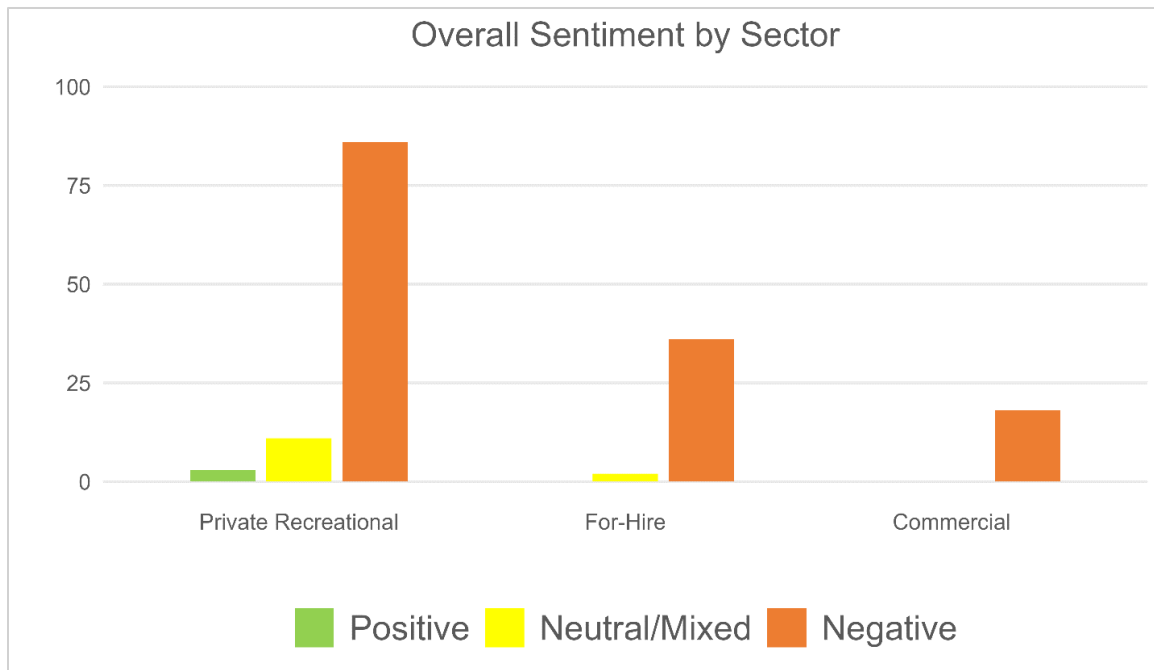
**Figure 3:** Number of responses indicating positive, negative, or neutral/mixed sentiment (n=134) classified by manual analysis.

Overall comment sentiment was also sorted by location (Figure 4). Negative comments were ubiquitous throughout the Gulf, contributing to the majority of responses in each region with no apparent geographic trend. The only positive comments were collected off the Texas coast (Zones 19-21), the western Florida panhandle (Zones 8 and 9), and southwest Florida (Zone 3). Additionally, there was no apparent geographic trend in the distribution of neutral/mixed comments.



**Figure 4:** Sentiment analysis for each area. Each comment ( $n=134$ ) 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 ( $n=291$ ) exceeds the number of individual responses.

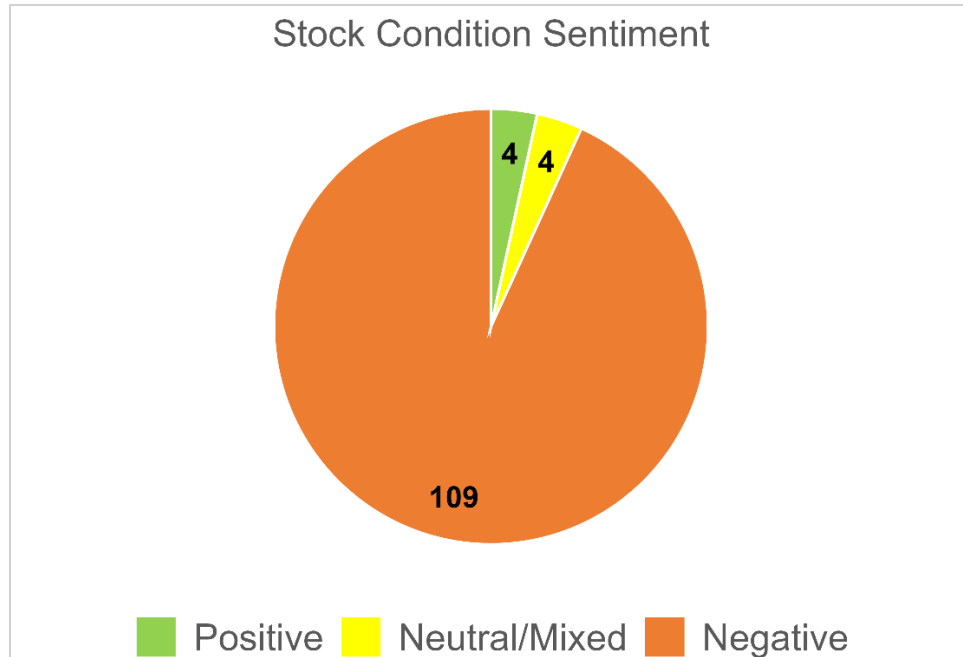
Overall sentiment was also categorized by fishing sector (Figure 5). Respondents self-selected their fishing sector and were not limited to a singular response. All sectors exhibited primarily negative overall sentiment in their responses. Both recreational sectors had some neutral/mixed responses, but all commercial responses were negative. Additionally, the three positive responses came from the private recreational sector.



**Figure 5:** 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=156). Comments that were not associated with the three primary fishing sectors were not analyzed.

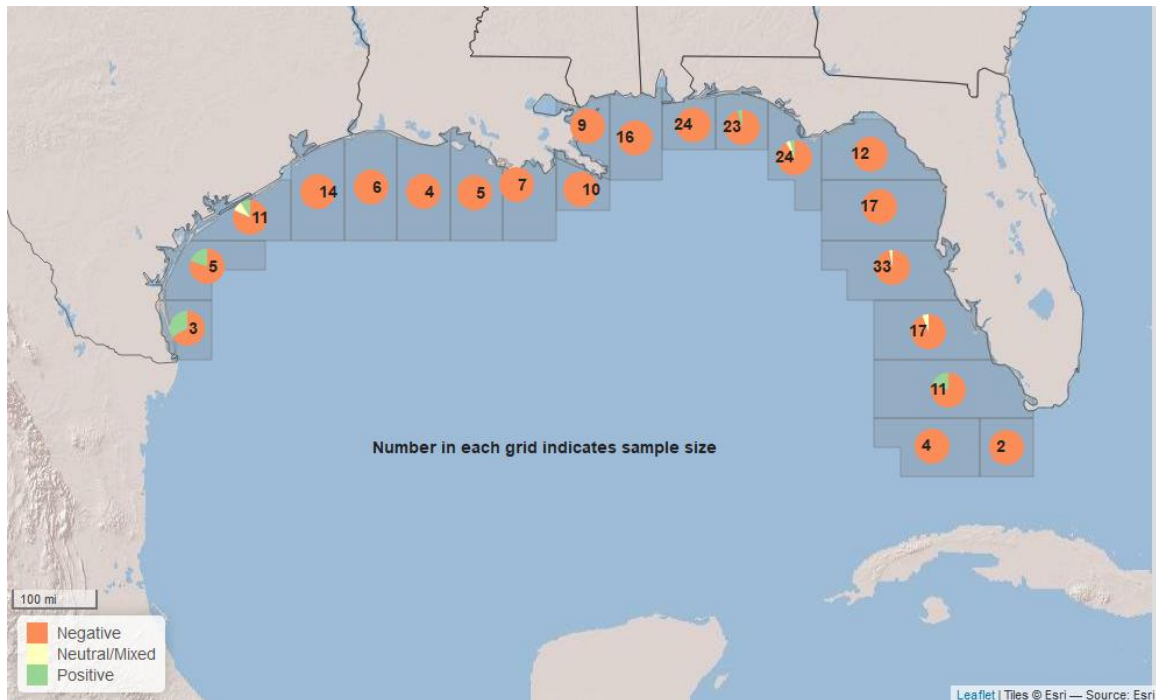
Comments from the 134 respondents were analyzed for sentiment focusing on the condition of the stock. Of the 134 comments, 17 did not provide comments that were determined to be related to the condition, health, or abundance of the stock, resulting in 117 unique comments applicable to stock condition. 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 poor condition (93%) and indicated that the stock has been depleted throughout the years and that larger fish were not present anymore. The comments that indicated something positive about the stock condition (3%) suggested that they appear to be plentiful and can even be a nuisance predator when snapper fishing. The comments that indicated neutral/mixed sentiment about the stock condition (3%) suggested small kingfish are abundant, however large kingfish are hard to find. Many respondents also attributed commercial fishing – specifically commercial gillnetting, to the reduced population of king mackerel.



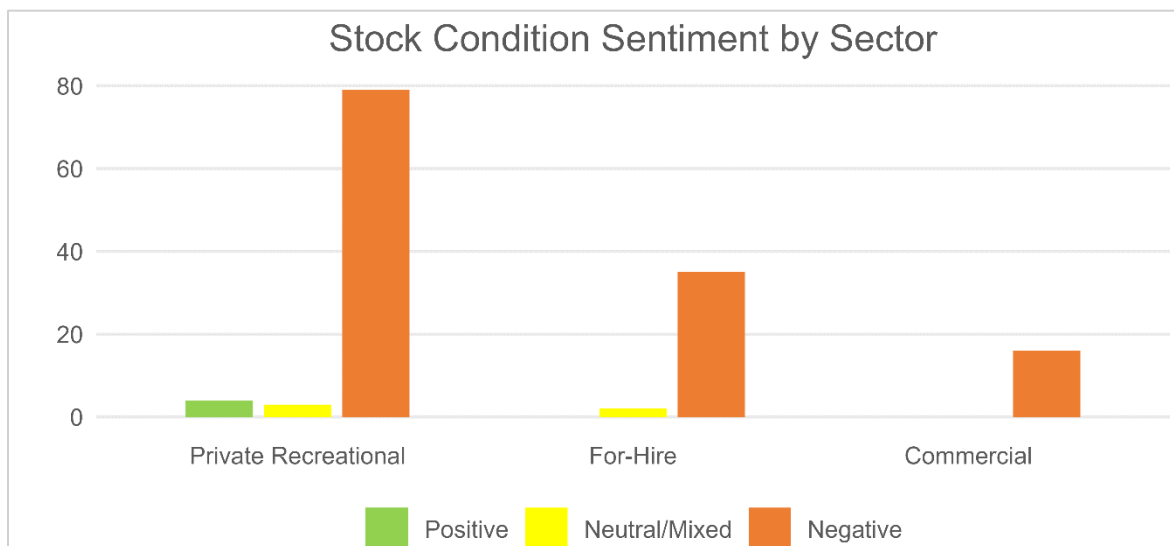
**Figure 6:** Number of comments indicating positive, negative, or neutral/mixed sentiment regarding stock condition (n=117).

The sentiment of comments related to the condition, health, or abundance of the stock were also sorted by location (Figure 7). Negative indications of stock abundance were ubiquitous across the Gulf. The southern regions of Texas (Zones 19-21) exhibited the greatest positive sentiment in the Gulf yet were still dominated by negative sentiment. Over half of the regions throughout the Gulf (62%) exhibited only negative sentiment regarding stock condition.



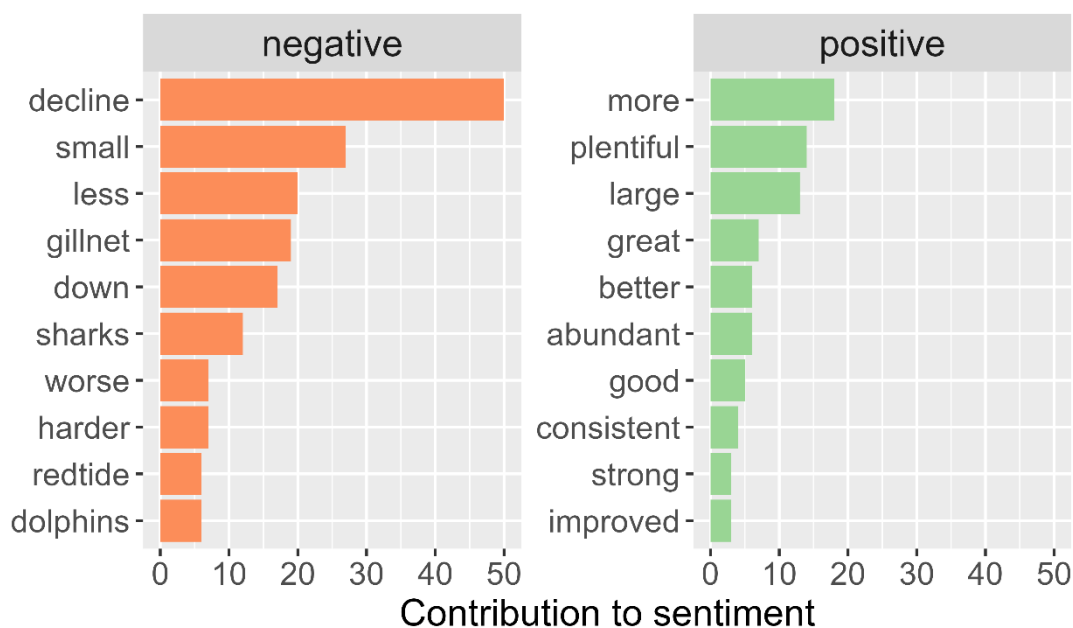
**Figure 7:** Sentiment analysis of the perception of stock condition by location. Each comment related to the health, condition, and/or abundance of the stock was characterized based on whether it indicated something positive, negative, or neutral/mixed about the stock ( $n = 117$ ). Each comment was 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 ( $n = 257$ ) exceeds the number of individual responses related to stock condition.

Results were also analyzed by sector (Figure 8). Respondents from all sectors expressed negative perceptions of the stock condition.



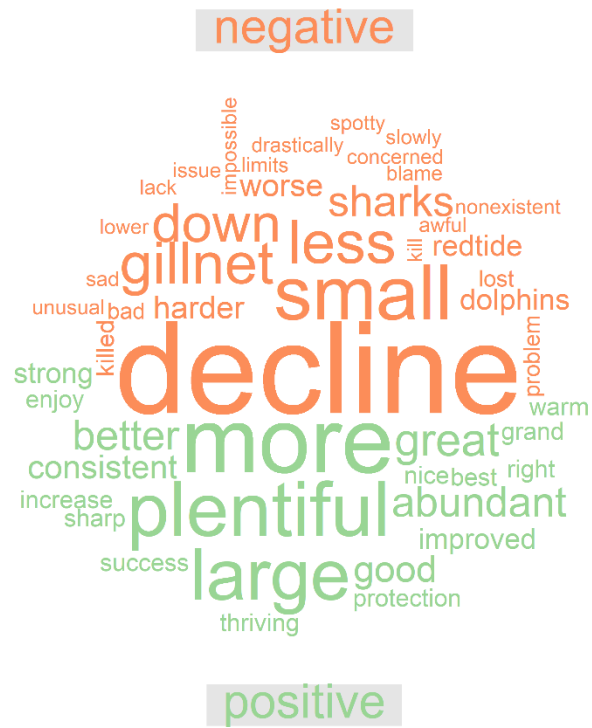
**Figure 8:** Number of responses related to stock condition ( $n = 139$ ) that indicate positive, negative, or neutral/mixed sentiment and sorted by commercial, private recreational, and federal for-hire fishing sector. Sector was self-selected by each respondent. Respondents were not limited to a single sector, so the total number of responses depicted in this figure exceeds the number of responses related to stock condition that were received ( $n = 117$ ). Comments that were not associated with the three primary fishing sectors were not analyzed.

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 were of negative sentiment, which were: decline, small, less, and gillnet. This seems to indicate that most of the negative sentiment expressed was based on a negative perception of the abundance and size of king mackerels. Additionally, it indicates that many respondents believe commercial gillnetting of king mackerel is to blame for the stock reduction. The words that occurred most frequently in comments with a positive sentiment were: more, plentiful, large, and great. This seems to indicate that most of the positive sentiment expressed was based on a positive perception of the abundance or condition of the stock. However, while positive sentiment was present, it was overshadowed by a much higher volume of words contributing to negative sentiment. The most frequent positive word (more) had a count contribution of less than 20, while the top four most frequently observed negative words (decline, small, less and gillnet) had count contribution of 20 or more.



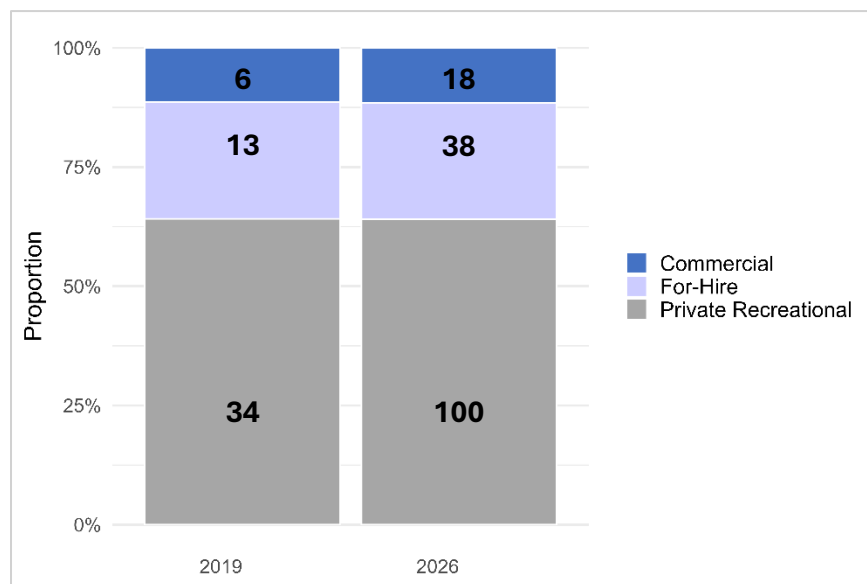
**Figure 9:** Most frequently used words contributing to comment sentiment identified using automated sentiment analysis.





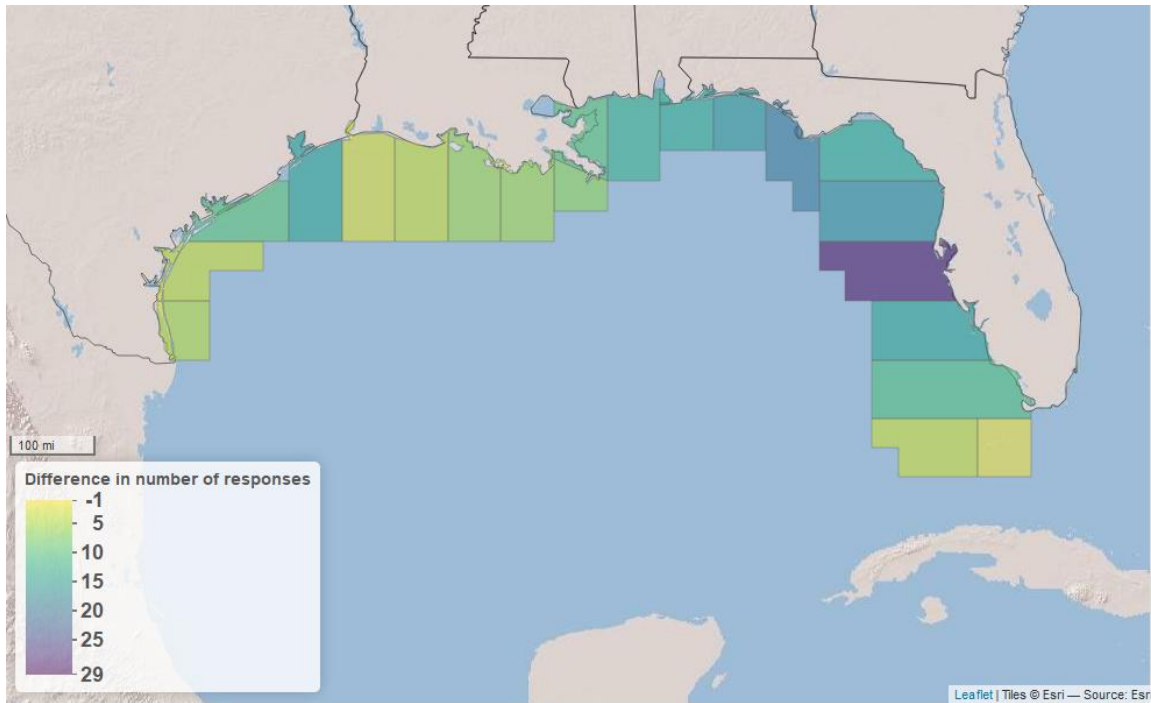
**Figure 10:** Most frequently used words contributing to comment sentiment identified using automated sentiment analysis.

The Gulf Council utilized its Fisherman Feedback Tool for [king mackerel in 2019](#) and again in 2026 and generated summary reports for each. This section of the report compares the responses from both efforts. There were 87 more responses received in 2026 than 2019 (n=134 and 47, respectively). The proportions of sector participation did not change substantially from 2019 to 2026, with the majority of respondents (>60%) associating with the private recreational sector (Figure 11).



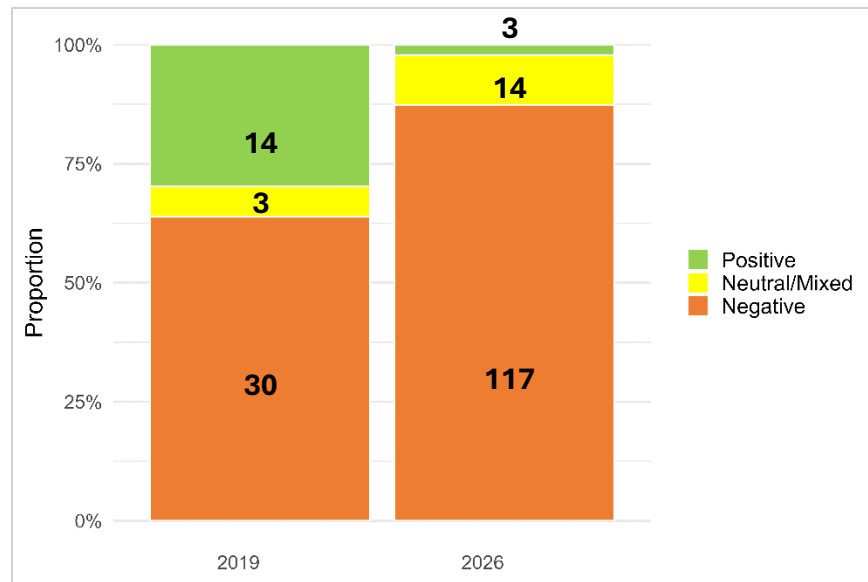
**Figure 11:** Results collected from the tool asking individuals to self-identify their fishing sector association. While 47 individuals answered the survey question in 2019 and 134 in 2026, they were not limited to a singular response and some identified with more than one sector of the fishery, resulting in a total of 53 and 156 responses, respectively.

Geographic differences in responses between surveys were calculated by subtracting the number of responses from each grid in 2019 from 2026 (Figure 12). Every region except the Florida Keys (Zone 1) and West Louisiana (Zone 17) had an increase in the number of respondents. The Florida Keys (Zone 1) was the only region that had a minor decrease, and West Louisiana (Zone 17) had the same number of respondents for both surveys. The Tampa Bay region showed the greatest increase in the number of respondents to the survey (Zone 5), followed by the Florida Panhandle (Zone 8) and north of Tampa Bay (Zone 6). The western Florida Panhandle through eastern Louisiana (Zones 9, 10, and 11, respectively) had the greatest number of responses in 2019. In 2026, The Tampa Bay region (Zone 5) had the greatest number of responses, followed by the Florida Panhandle through eastern Louisiana regions (Zones 8-11).



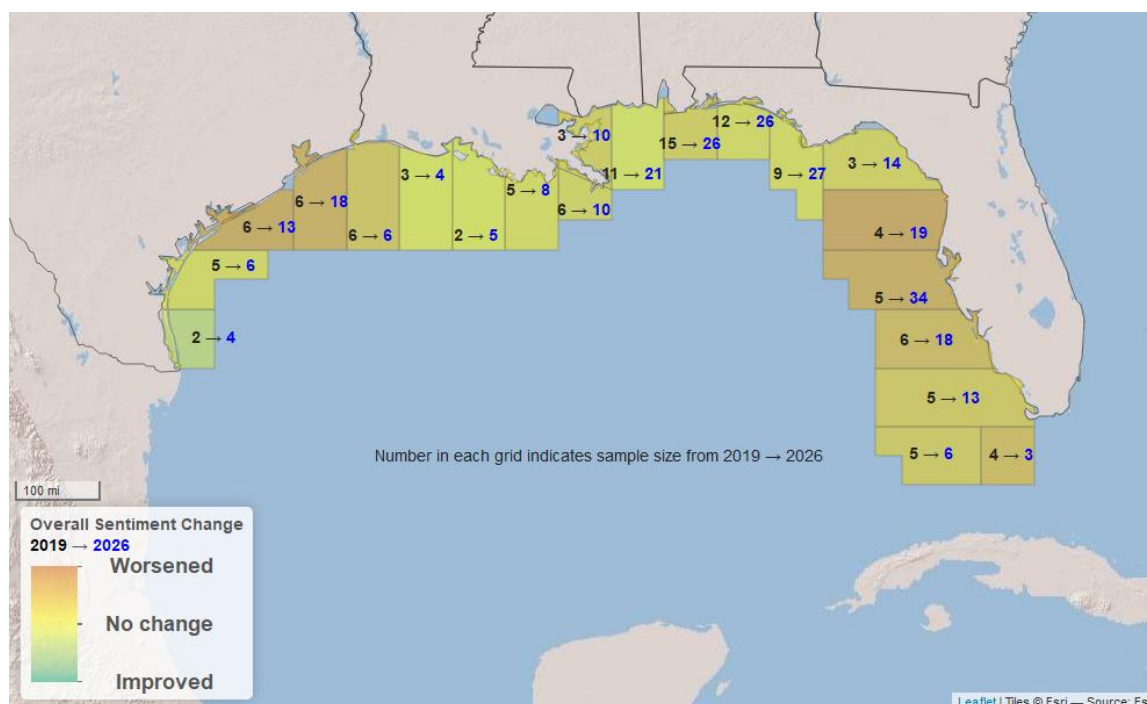
**Figure 12:** Difference in number of responses received in each of 21 areas in the Gulf from 2019 to 2026. Respondents could select more than one area, so the total number illustrated in the map ( $n=123$  and  $291$  respectively) exceeds the number of individual responses ( $n=47$  and  $134$  respectively).

There was a 23% increase in negative sentiment from 2019 to 2026 (Figure 13). Neutral/mixed sentiment proportions also increased between surveys by 4%, and the proportion of positive responses decreased by 28%. In fact, positive sentiment only accounted for 2% of all responses, while negative sentiment accounted for 87% in 2026. The increase in the number of negative responses received for the more recent survey suggests stakeholders are not currently satisfied with the status of king mackerel and feel it is a topic of concern.



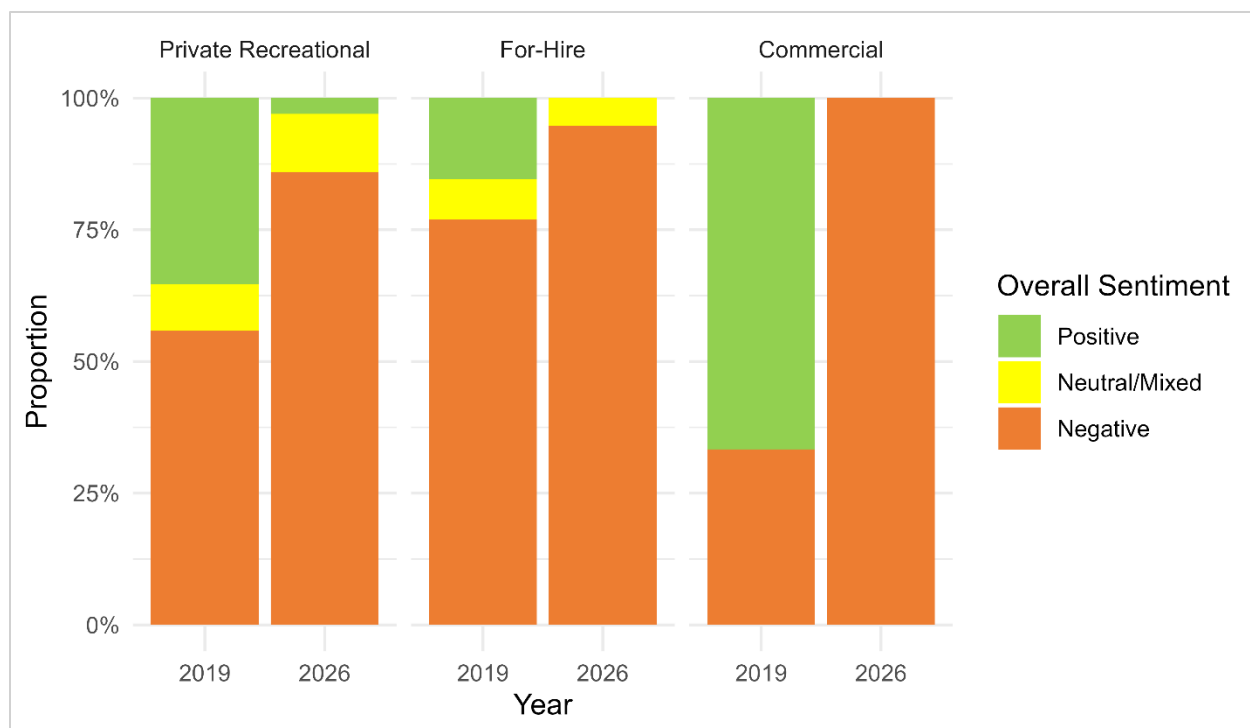
**Figure 13:** Proportion of responses in 2019 and 2026 indicating positive, negative, or neutral/mixed overall sentiment (n=47 and 134 respectively) classified by manual analysis.

Geographically, average overall sentiment, or the mean of the numeric sentiment scores (i.e., -1 = Negative, 0 = Neutral/Mixed, 1 = Positive), changed in every grid (Figure 14) except for Southern Louisiana (Zones 15 and 16). In 2019, every grid exhibited negative average sentiment except for the central Texas region (Zone 19), which exhibited neutral/mixed average overall sentiment. However, in 2026, every region exhibited negative average overall sentiment. The region just above Tampa Bay (Zone 6), showed the greatest change in average overall sentiment, where half of the responses in 2019 were negative, but responses in 2026 were almost exclusively negative. Only two regions (Zones 11 and 21) showed slight improvements in responses. The Alabama/Mississippi region (Zone 11) improvement was so minor there were no positive responses in this region for either survey, but there was a 1% increase in neutral/mixed sentiment from 2019 to 2026 (n=2 and 4, respectively), while >80% of responses in this region were negative for both surveys. South Texas (Zone 21) had small sample sizes for each survey (n=2 and 4, respectively), where sentiment was evenly split between negative and neutral/mixed in 2019 (n=1 and 1, respectively). However, in 2026, two responses were negative, one was neutral/mixed, and one was positive for this region.



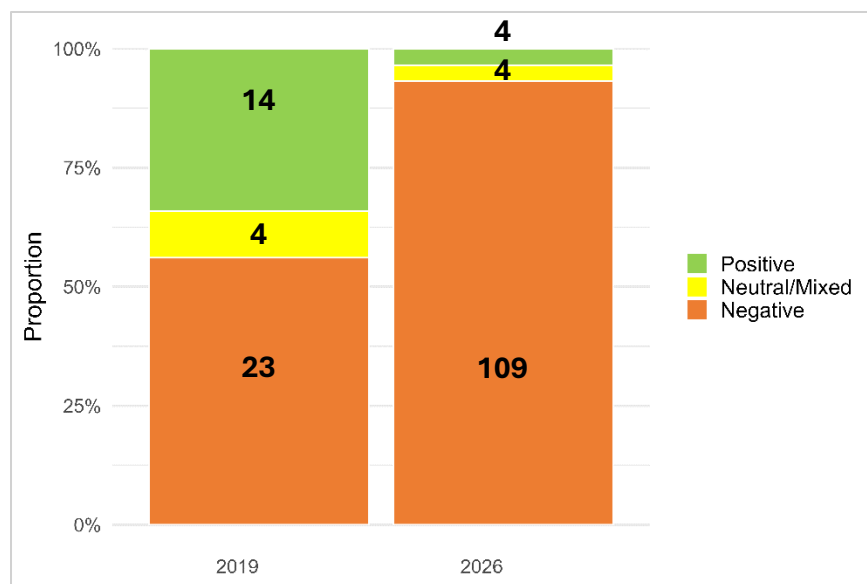
**Figure 14:** Change in average sentiment analysis for each area from 2019 to 2026. Numbers in each grid represent sample size from each year, color coded accordingly. Each comment ( $n=47$  and  $134$ , respectively) was characterized as positive, negative, or neutral/mixed based on independent review 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 ( $n=123$  and  $291$ , respectively) exceeds the number of individual responses.

Overall sentiment for each survey was also categorized by fishing sector (Figure 15). The proportion of negative sentiment across all sectors increased substantially. The greatest change in sentiment came from the commercial sector, where 67% of commercial responses were positive ( $n=4$ ) and 33% were negative ( $n=2$ ) in 2019, yet all commercial responses were negative in 2026 ( $n=18$ ). The private recreational sector had the second greatest change in overall sentiment, where 35% of responses were positive in 2019 ( $n=12$ ), but only 3% were positive in 2026 ( $n=3$ ). Neutral/mixed sentiment in private recreational responses increased from 9% ( $n=3$ ) in 2019 to 11% ( $n=11$ ) in 2026. Negative sentiment in private recreational responses also increased from 56% ( $n=19$ ) in 2019 to 86% ( $n=86$ ) in 2026. The for-hire fleet had the smallest change in sentiment of each sector and primarily responded with negative sentiment for both surveys. In 2019, 15% ( $n=2$ ) of for-hire responses were positive, 8% ( $n=1$ ) were neutral/mixed, and 77% ( $n=10$ ) were negative. Meanwhile in 2026, there were no positive for-hire responses, 5% ( $n=2$ ) that were neutral/mixed, and the remaining 95% ( $n=36$ ) were negative.



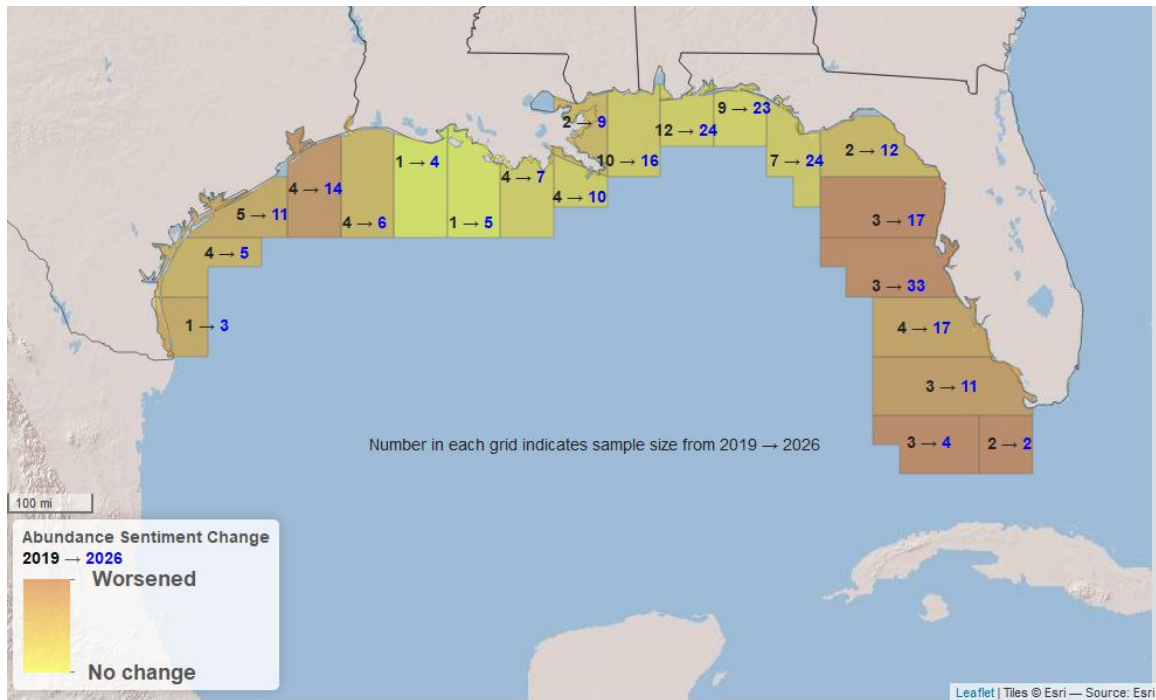
**Figure 15:** Proportion of responses indicating positive, negative, or neutral/mixed sentiment sorted by commercial, private recreational, and federal for-hire fishing sector for 2019 and 2026. Sentiment was classified by manual analysis and sector was self-selected by each respondent. Respondents were not limited to a singular sector declaration in their response ( $n=53$  and  $156$ , respectively). Comments that were not associated with the three primary fishing sectors were not analyzed.

In 2019, 41 responses directly inferred something about the condition of the king mackerel stock in the Gulf. In 2026, 117 comments were applicable to stock condition. These comments were classified based on whether they indicated that the stock was in positive, negative, or neutral condition (Figure 16). The majority of responses in 2026 (93%) indicated negative sentiment regarding the health of the king mackerel stock. This is a substantial increase compared to the responses received in 2019, where 56% of respondents indicated negative sentiment regarding the health of the stock. This likely indicates that the stock is not as robust as it was in 2019 and that is compounded by the perception that it wasn't robust even then. Additionally, the increase in the number of responses received suggests there is genuine concern regarding the stock health.



**Figure 16:** Proportion of comments in 2019 and 2026 indicating positive, negative, or neutral/mixed sentiment regarding stock condition (n=41 and 117, respectively).

Changes in average sentiment of comments from 2019 and 2026 related to the condition, health, or abundance of the stock were also sorted by location (Figure 17). Almost every region in the Gulf indicated worsened average sentiment regarding stock condition of king mackerel. Almost half of the regions (10 regions) indicated positive average sentiment regarding the stock condition in 2019, meanwhile every region indicated negative average sentiment regarding the stock in 2026. The two regions (Zones 15 and 16) that did not indicate worsened stock condition sentiment had low sample sizes (n=6 and 5 for both surveys combined, respectively), and all indicated negative sentiment regarding the stock condition, so there was no change. The greatest change in sentiment regarding stock condition came from The Florida Keys (Zones 1 and 2), and northern Tampa Bay (Zone 6). In 2019, these regions indicated only positive sentiment regarding the stock, but were all negative in 2026.



**Figure 17:** Change in sentiment analysis of the perception of stock condition by location from 2019 to 2026. Numbers in each grid represent sample size from each year, color coded accordingly. 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 ( $n=41$  and  $117$ , respectively). 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 ( $n=88$  and  $257$ , respectively) exceeds the number of individual responses related to stock condition.

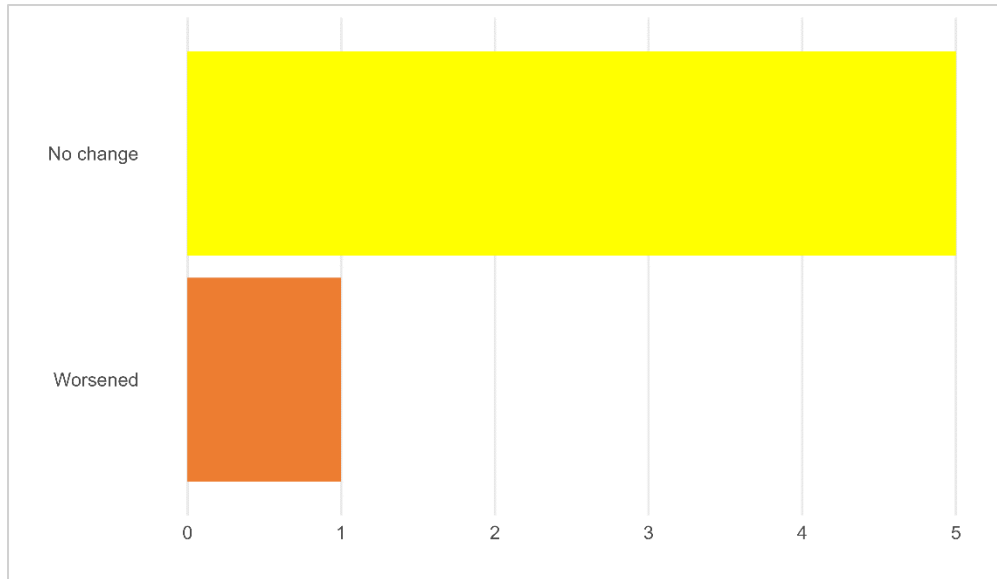
Stock condition sentiment was also compared across sectors (Figure 18). All sectors exhibited either a decline in positive perceptions or an increase in negative perception across the two efforts. In 2019, 47% of private recreational respondents indicated negative sentiment regarding the stock, and 92% indicated negative stock sentiment in 2026. For-hire respondents primarily had negative sentiment regarding the stock in both surveys, but 17% had positive sentiment in 2019, whereas 2026 had zero for-hire respondents with positive sentiment. Responses from the commercial sector regarding the stock condition were low in 2019 ( $n=4$ ), yet 50% of them indicated positive stock condition sentiment. However, in 2026, there were also zero positive responses from the commercial sector regarding the stock condition, despite an increase in responses ( $n=16$ ).





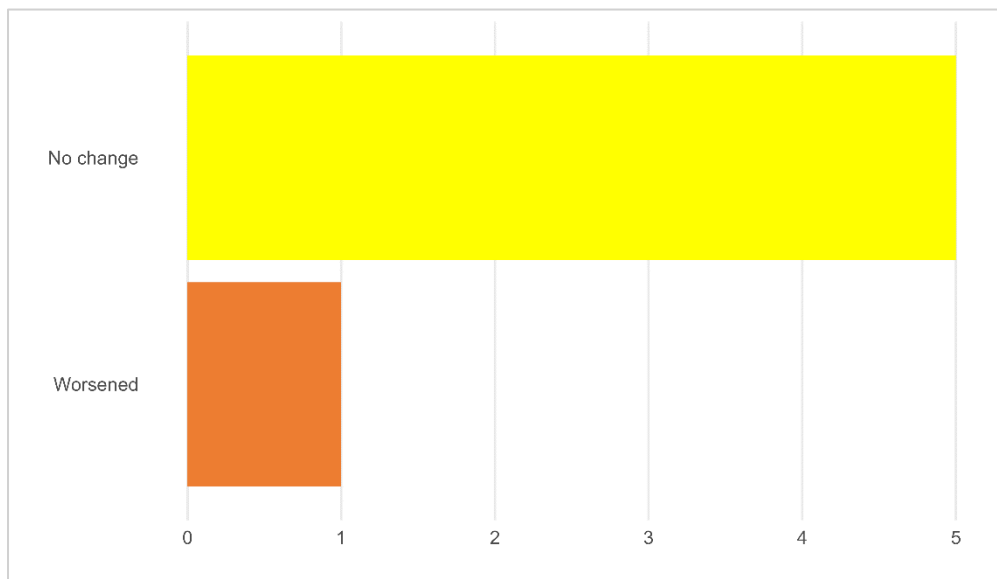
**Figure 18:** Proportion of responses in 2019 and 2026 related to stock condition ( $n=46$  and  $139$ , respectively) that indicate positive, negative, or neutral/mixed sentiment and sorted by commercial, private recreational, and federal for-hire fishing sector. Sector was self-selected by each respondent. 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 ( $n=41$  and  $117$ , respectively). Comments that were not associated with the three primary fishing sectors were not analyzed.

Between 2019 and 2026, six respondents completed both surveys. Respondents who completed both surveys fished in every region as far east as the Big Bend in Florida (Zone 7) to as far west as western Louisiana (Zone 17). The changes in overall sentiment for these respondents were compared between each survey (Figure 19). All but one of the respondents maintained the same sentiment between the two surveys, who had worsened sentiment. The five respondents who maintained the same sentiment exhibited negative sentiment in both surveys, and the other had neutral/mixed sentiment in 2019 and negative sentiment in 2026. There were no improvements in overall sentiment from 2019 to 2026.



**Figure 19:** Overall sentiment comparison between respondents who completed both the 2019 and 2026 surveys (n=6). Responses were manually scored by whether they indicated positive, negative, or neutral/mixed sentiment.

All six respondents who completed both surveys indicated something about the health of the king mackerel stock. The changes in sentiment regarding stock health for these respondents were compared between each survey (Figure 20). Similar to Figure 19, all but one of the respondents maintained the same sentiment between the two surveys, who had worsened sentiment regarding stock condition. The five respondents who maintained the same sentiment exhibited negative sentiment in both surveys, and the other had neutral/mixed sentiment in 2019 and negative sentiment in 2026. There were no improvements in stock condition sentiments between surveys.



**Figure 20:** Stock sentiment comparison between respondents who completed both the 2019 and 2026 surveys and indicated something about the health of the stock (n=35). Responses were manually scored by whether they indicated positive, negative, or neutral/mixed sentiment.

The results of Fisherman Feedback for King mackerel will be submitted to the NOAA Southeast Fisheries Science Center and shared with the Council and its Scientific and Statistical Committee as SEDAR 99: Gulf Migratory Group King Mackerel 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 and that may be unique to the stock. 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.

For the comparison of 2019 and 2026 efforts, manual sentiment analysis characterized overall sentiment of each comment as positive, neutral/mixed, or negative and determined whether comments were related to the condition, health, or abundance of the stock. Abundance related comments were analyzed and classified based on stock health indication by one reader as this was not done initially. Shifts in overall and abundance sentiment were characterized as improved, no change, or worsened.