



**NOAA
FISHERIES**

In April 2020, NOAA Fisheries prepared its first national report on the regional impacts of COVID-19 on the commercial, recreational and aquaculture sectors. This report updates that initial assessment, capturing economic changes experienced by the fishing industry as the country began its phased reopening along with infusion of Federal funding through the CARES Act. NOAA Fisheries will continue to use this information to identify economic hardship where it exists and identify pathways for enhancing the resilience of the U.S. seafood and fisheries industries.

Alaska Snapshot, January-August 2020



Alaska Fisheries Impacts from COVID-19

Overview

This report is intended to supplement the prior Alaska Fisheries Impacts from COVID-19 documents, which include a more thorough review of COVID-19 actions taken by the state and local governments in Alaska and our finalized revenue trends from 2014-2018 (the most recent data currently finalized and completed). Herein, we provide a summary of the current harvest amounts and estimate projected revenues through August 2020.

Harvest volumes are down in Alaska approximately 15% compared with the baseline through August, and prices are generally expected to be lower in 2020 than prior years, which is confirmed by export data through June, and estimated revenues have dropped by over one third over the same period. Industry has reported that they have spent over \$50 million (McKinley Group September 2020)¹ to reduce the risk of COVID-19 transmission among harvesters, processors, and the local communities while still providing important seafood for the U.S. and international markets as well as providing food security for many Alaskans. The seafood industry has been fairly successful in Alaska at limiting virus spread, but they had to deal with a substantial reduction in transportation options in many Western Alaska and Aleutian Islands communities and limited ability to switch crews throughout the fishing seasons to date. NOAA Fisheries Alaska Regional Office has been instrumental in devising solutions with industry to allow the continuation of fishing operations and limit the need for fisheries closures which would otherwise lead to vessel downtime and higher crew turnover, increasing the risk of COVID-19 transmission.

Alaska remains the region of the United States with the largest export values over the baseline January-June period (about \$1 billion) but experienced a 7% decline in value in 2020 relative to 2019. There was also a large (48%) decline in imports to Alaska, but those only represent a very small amount (approximately \$5 million). China is the U.S.'s top export country for January-June seafood exports, and is a major importer of Alaska seafood. Exports to China (including cod, crab, and pollock) decreased from the \$515 million baseline average to \$386 million in 2020, a 25% decline. However, the U.S. dollar weakened from January to August 2020 against the Euro (-6%)² and Yen (-3%)³ which should have helped U.S. and Alaska seafood export competitiveness.

Commercial Fisheries Landings Trends and Impacts through August 2020

The figures below represent landings through August 2020 from in-season Alaska Department of Fish and Game (ADF&G) fish tickets (which are still considered preliminary). Revenues in 2020 are estimated using in-season ADF&G fish ticket prices for groundfish and the at-sea prices are estimated as their shoreside equivalents or imputed based on best available data. ADF&G in-season prices and historic Commercial Fisheries Entry Commission (CFEC) prices are used to estimate salmon and herring revenues for 2020. All values are deflated to \$2019 using the GDP deflator.

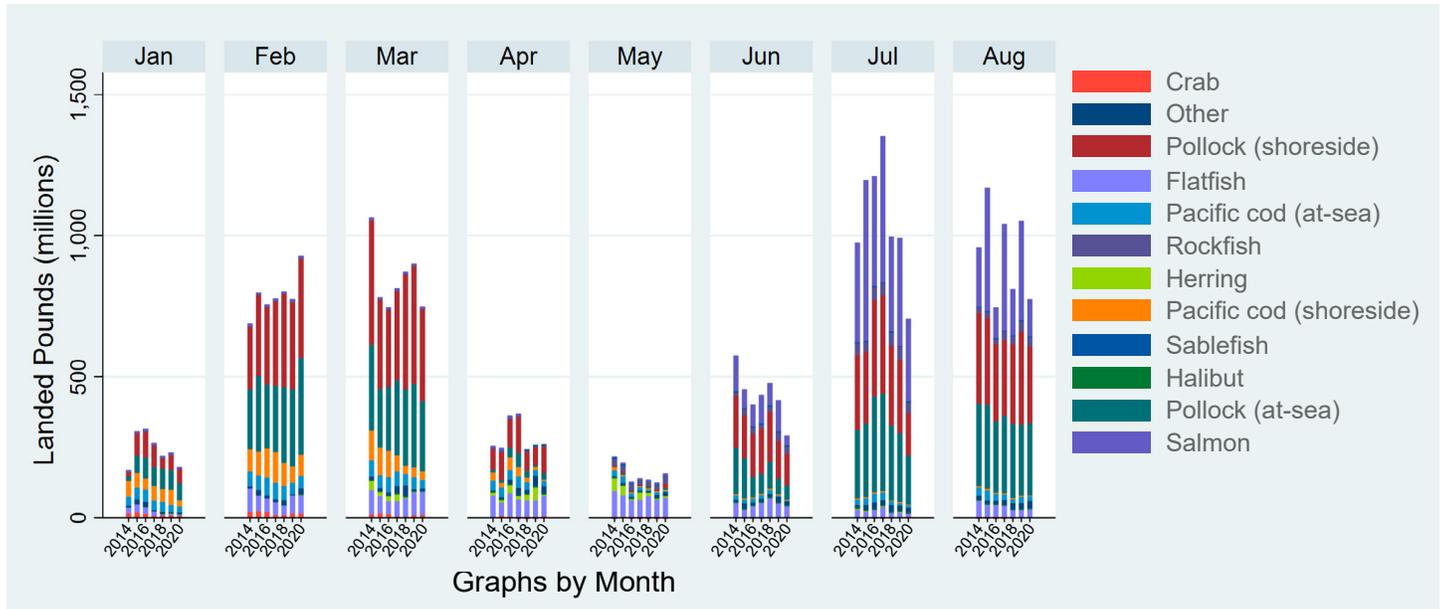


Figure 1. Landings by month and year from January-August.

Total landings from January through August 2020 are 15% below 2019 levels (Figure 1), a reduction of 695 million pounds from 4.74 billion pounds to 4.03 billion pounds (Figure 2). These trends are largely due to a 71% and 45% decline in harvest volume for herring and salmon, respectively, and a decline of 18% for halibut, 16% for Pacific cod at-sea and 13% for Pacific cod shoreside compared with 2019 levels. Landings in 2020 fell by 17% or 815 million pounds compared to the 2015-2019 baseline period as a result of a 74%, 44%, 36%, 39%, and 17% reduction in herring, salmon, Pacific cod at-sea, Pacific cod shoreside, and halibut landings, respectively.⁴ In contrast, crab, flatfish and rockfish harvests are up 3%, 4%, and 11%, respectively, compared with the 2015-2019 period.

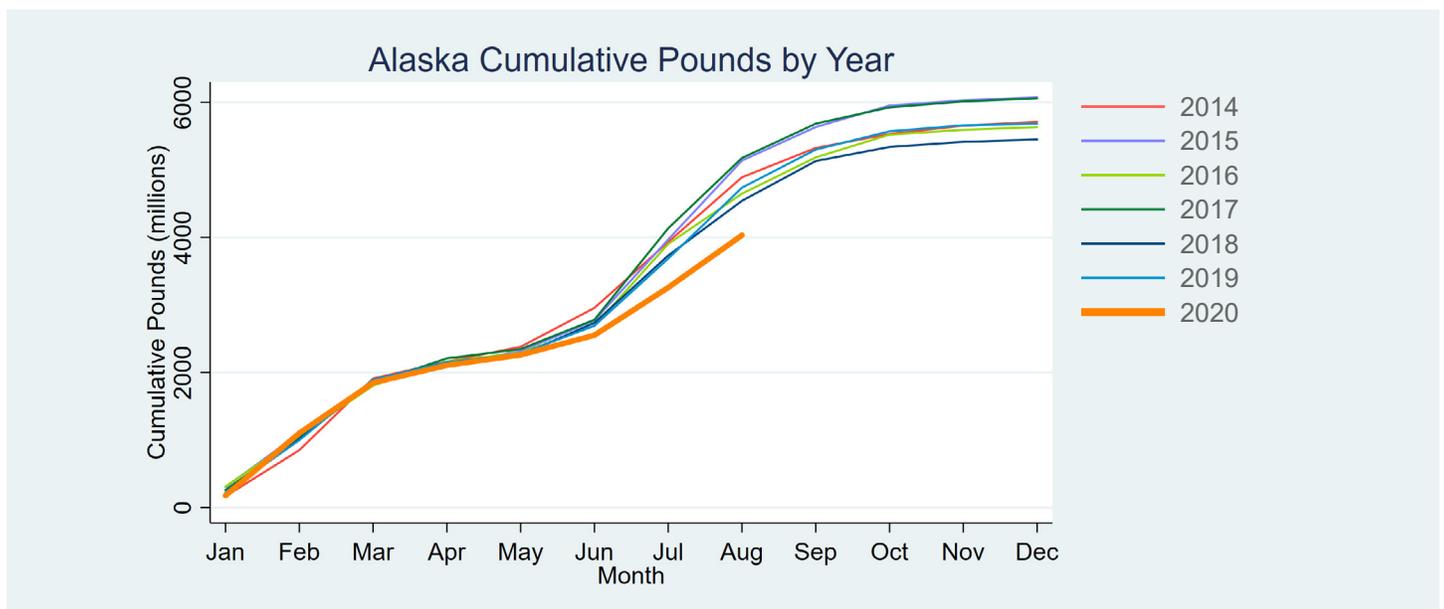


Figure 2. Alaska cumulative landed weight by month and year.

Estimated landings revenue from January through August 2020 are 30% below 2019 levels (a decline of \$436 million from \$1.48 billion to \$1.04 billion) and 35% below the 2015-2019 baseline period (a decline of \$549 million from \$1.59 billion; Figures 3 and 4). This is a result of the combination of lower volumes and lower prices across many species. The largest components of the decrease in value over this period include a 67% decline in the harvest value for herring, a 61% reduction in salmon, a 37% reduction in halibut revenues, a 30% decline in shoreside Pacific cod, and a 17% decrease in the value of flatfish compared with 2019 levels. Compared with the 2015-2019 baseline, salmon revenues are estimated to have declined by 58%, herring revenues decreased by 55%, halibut revenues dropped 48%, Pacific cod at-sea was reduced by 45%, shoreside Pacific cod decreased by 41%, sablefish declined by 26%, while pollock at-sea and shoreside fell 16% and 15%, respectively, and flatfish declined by 4%. The two bright spots compared with the baseline were a 17% increase in crab revenues and a 6% increase in rockfish revenues.

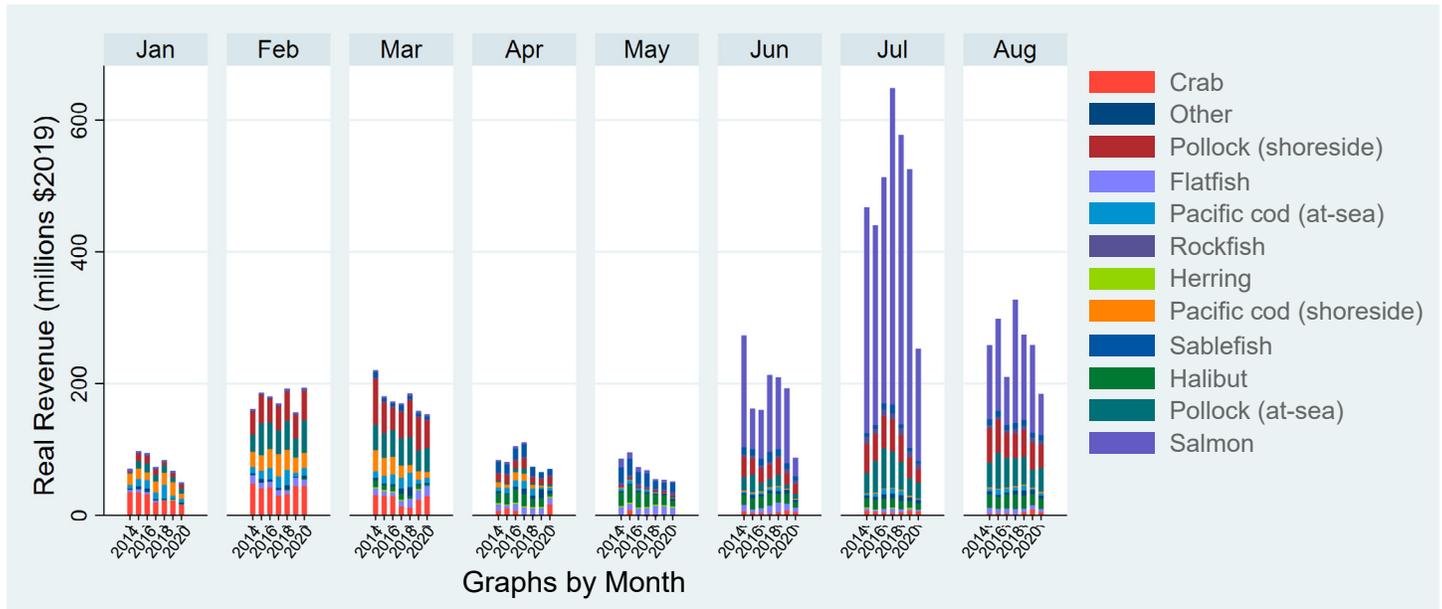


Figure 3. Estimated landings revenue (\$2019) by month and year from January-August.

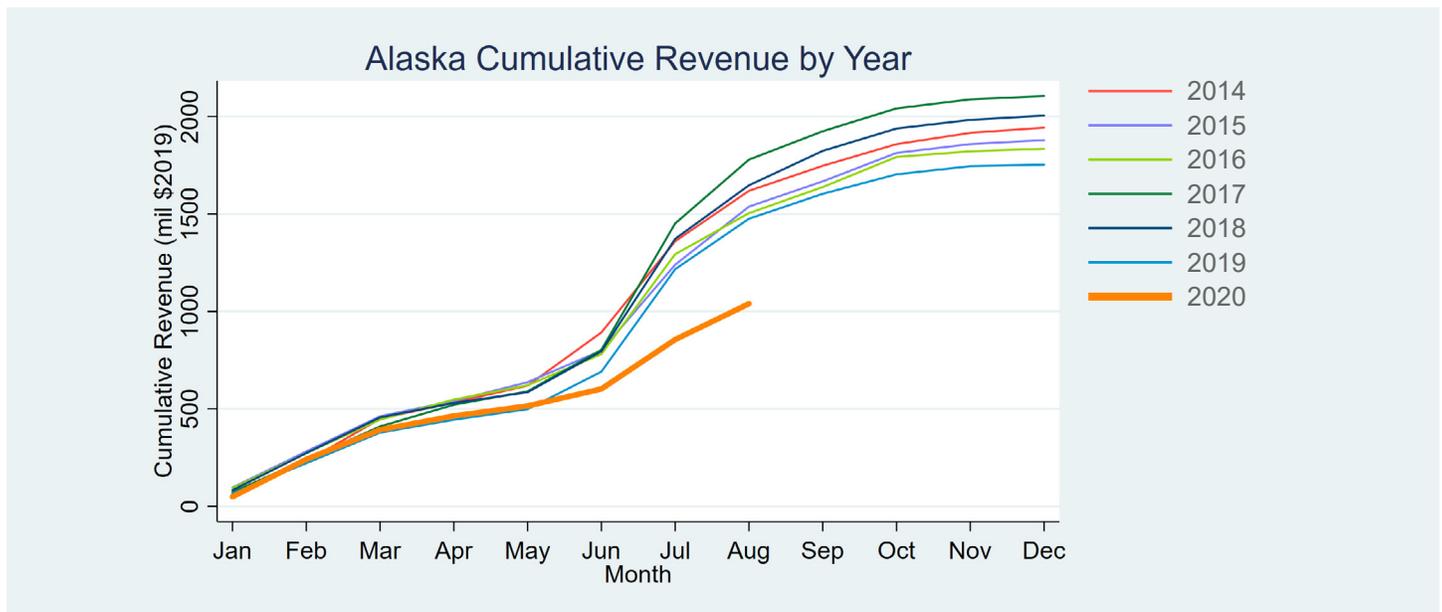


Figure 4. Total cumulative revenue by month and year.

While the novel coronavirus initially stoked fears of closing portions of the Alaska salmon fishery over the summer, the fisheries were prosecuted but with limited processing capacity, resulting in less value-added products and ultimately substantially lower ex-vessel prices. This is seen in Figure 4 as a further deviation from the recent past in cumulative revenues throughout the year, as the salmon fishery typically starts in late June and runs through August.

Figure 5 presents cumulative revenues by month and year for several major species groupings in Alaska in 2020 (the thick orange line) compared with each of the years 2014-2019 (line colors correspond to the legend in Figures 2 and 4). The following section provides a brief summary of cumulative harvest and revenue trends of several key species in Alaska from January through August.

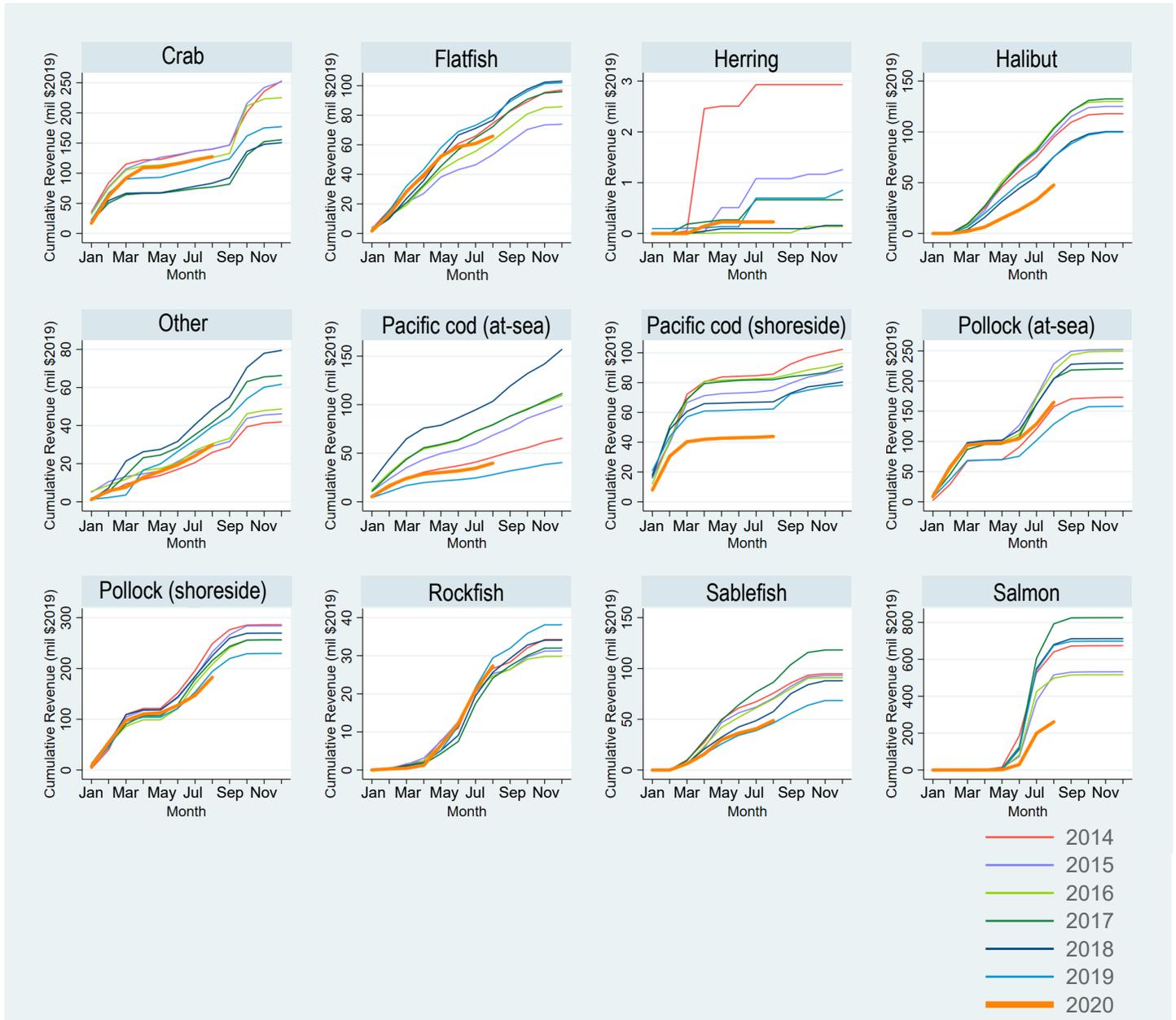


Figure 5. Cumulative revenue by fishery, month, and year.

CRAB

There was nearly full (99-100%) utilization of the total allowable catch (TAC) for all opened Bering Sea and Aleutian Islands (BSAI) crab fisheries: Bristol Bay red king crab, Bering Sea snow crab, and Aleutian Islands golden king crab. The TAC in the 2019-2020 Bristol Bay king crab fishery was a historic low, while the TAC for Bering Sea snow crab increased for the third straight season, but remains at historically low levels. For all crab species in Alaska, total landings from January-August of 2020 were 18% above the same period in 2019 but only 3% above the 2015-2019 average. There continues to be some indications of strong demand for crab throughout the COVID-19 pandemic, as crab revenues are up 9% through August of 2020 relative to the same period in 2019 and 17% compared with the 2015-2019 period (Figure 5).

FLATFISH

January to August flatfish catch in 2020 is up 1% from the 2019 level and is 4% higher than the 2015-2019 average by volume, but revenues are down 17% compared with 2019 and 4% compared with 2015-2019 (Figure 5).

HALIBUT

Prices have gone up for halibut relative to the beginning of the season but are still down over last year (estimated 10-15% for fresh and 25% for frozen). Many fishermen switched over to salmon during the summer and anticipate harvesting their remaining halibut quota in the fall. January to August 2020 has seen a large reduction in halibut landings of approximately 18% from the 2019 level and 2015-2019 average. Combined with lower prices, this has resulted in a decline in revenues of 37% in January to August 2020 relative to the same period in 2019 and a 48% decline relative to the average from January to August from 2015-2019 (Figure 5). However, many still expect that the full TAC will be harvested given the flexibility in leasing individual fishing quotas (IFQs) recently provided for by emergency transfer provisions instituted by the North Pacific Fishery Management Council (NPFMC) in response to the pandemic.

PACIFIC COD

Ex-vessel prices in 2020 have decreased slightly from 2019 but remain above 2014-2018 levels. Consistent with TAC declines in Pacific cod in the BSAI and Gulf of Alaska (GOA), shoreside catch of Pacific cod have declined by approximately 14% from January to August of 2020 relative to the same period in 2019, while shoreside catches are actually down 39% from the average from January to August during the 2015-2019 period. In combination with a slight decrease in ex-vessel prices in 2020, this has resulted in a reduction in shoreside Pacific cod revenue from January to August of approximately 30% compared with 2019 and 41% for the first half of 2020 relative to the average of the first half of the year from 2015-2019 (Figure 5).

For the at-sea sector, fishing conditions were mixed this past summer after a good A season. Prices in 2019 and 2020 are down relative to 2018 but are within 2014-2017 levels. Prices were okay this past winter but have softened as we approach the fall. There is a lot of inventory and many people are holding, hoping that prices will rebound. There is a lot of Russian cod on the market that is lowering prices in Japan and Europe. Consistent with TAC declines in Pacific cod in the BSAI and GOA, at-sea catch of Pacific cod have declined by approximately 16% from January to August 2020 relative to the same period in 2019, while at-sea catches are actually down 36% from the average January to August from 2015-2019. In combination with a slight increase in ex-vessel prices in 2020, this has resulted in a reduction in at-sea Pacific cod revenue of approximately 45% for the first half of 2020 relative to the average of first half of the year from 2015-2019, but a surprising 42% increase relative to the historically low revenue over this period in 2019 (Figure 5).

POLLOCK

For the shoreside sector, fishing was not very good (especially in the south where the shoreside sector predominantly harvests) this

past summer and therefore some vessels are waiting to fish later in the season; 2020 shoreside pollock harvests through August are down 12% compared with 2019 and the 2015-2019 average (Figure 5). Shoreside pollock prices are relatively stable in both GOA and BSAI relative to 2019 and are within historical range. Shoreside revenues are 6% lower than 2019 at this point in the year and over 15% below the average over 2015-2019.

For the at-sea sector, prices are down slightly now from the expectations for B Season. Pollock surimi exports to Japan are down significantly through May. However, surimi exports to the

European Union (EU) remain strong. Pollock fillet exports in March and April (the peak following A season) were below typical levels. 2020 at-sea pollock harvests are slightly below recent periods (7% less than the 2015-2019 average and 3% lower than 2019), but the revenues through August are lower than the 2015-2019 average by approximately 16% while the at-sea pollock revenues are up nearly 28% in 2020 compared with the same period in 2019, which was the lowest revenue year over this period for this sector (Figure 5).

ROCKFISH

Rockfish ex-vessel prices are within 2014-2019 norms. Rockfish harvests through August 2020 are down 4% from 2019 levels but are 11% higher than the average January to August period of 2015-2019. Similarly, revenues through August of 2020 are down 7% from the same period in 2019 but increased by 6% over the 2015-2019 period (Figure 5).

SABLEFISH

Fleet is reporting sablefish prices to be down by 55% compared to last year. This has a lot to do with the size of the fish, which are still on the smaller side, and the size-based pricing structure for sablefish. However, the large amount of small fish and market changes are bringing prices down across the board. There is an expectation that not all of the TAC is going to be landed for sablefish as a result. This was also true in 2019. Additionally, only 40% of the sablefish quota from the GOA Rockfish Program (secondary species) has been taken compared to 76% at this time last year, due to the very low price they are receiving for trawl caught sablefish.

Some are also reporting a shift in rents away from the permit holder and toward vessel operators as many individuals intend to take advantage of the special COVID-19 leasing provisions enacted by the NPFMC and International Pacific Halibut Commission (IPHC). Those transfers did not start clearing NOAA Fisheries Restricted Access Management (RAM) until early July, and may partially explain the large amount of IFQ remaining to catch this fall. Additionally, a number of individuals are also leaving their 10% rollover in the water hoping for better prices next year. Sablefish landings through August 2020 were 5% below 2019 levels but 4% above the 2015-2019 average, however revenue is down 26% and 2020 revenue is only 5% above the lowest revenue over this period, experienced in 2019 (Figure 5).

SALMON

Earlier in the year, it was unclear to what extent the wild Alaska salmon fisheries would be prosecuted this year, but the salmon fisheries were operating at slightly lower capacity on the harvesting and processing side as COVID-19 precautions are limiting

dense aggregations of individuals. Additionally, several runs did not meet their projected size outside of Bristol Bay. The somewhat compressed season and lack of processing throughput capacity has also led to a decrease in the amount of value-added products created in the Bristol Bay fishery, likely leading to substantially lower prices compared with previous years. For all salmon species in Alaska, total landings from January-August of 2020 were 46% below the same period in 2019 and 44% below the 2015-2019 average. In combination with a decrease in ex-vessel prices in 2020, this has resulted in an estimated reduction in salmon revenue of 61% through August of 2020 relative 2019 and a 59% decrease relative to the average the same period from 2015-2019 (Figure 5).

Charter Sector Impacts

In response to COVID-19, the NPFMC and IPHC relaxed some halibut-related charter fishing restrictions for the remainder of the season effective June 15, which relaxed size limits in Areas 2C and 3A, and a relaxed annual limit and no day of the week restrictions for charter halibut fishing in Area 3A. However, reports from the field suggest that charter fishing is still well below normal levels for this time of year throughout Alaska, with some in industry estimating between 30-50% losses for the season. A more representative industry poll (May 2020) with n=66 respondents suggested “68% [of charter businesses] have indicated up to a 50% drop in bookings from this time last year.” There is another industry poll planned for October.

Historically, 31.5% of total trips take place in May (7.1%) and June (24.4%) for a first half total of approximately 32% of total annual trips, while nearly all of the remaining trips take place from July-September. There is some evidence of a marginal increase in fishing activity in July, as Pacific halibut (a primary target species on charter trips) harvest through July picked up relative to May and June, but remains lower than previous years. Preliminary estimates of Pacific halibut harvest in IPHC Area 2C (Southeast Alaska) through July is slightly less than half of the harvest at the same time in 2019. In IPHC Area 3A (Southcentral Alaska), the other main area for charter fishing in Alaska, Pacific halibut harvest through July was at about 71% of the harvest for the same time in 2019. The harvest trends likely do not correspond in a one-to-one fashion with numbers of trips, and updated trip information is unfortunately not available at this time.

Endnotes

- 1 <https://www.alaskaseafood.org/covid-19-impact-reports/>
- 2 <https://www.x-rates.com/average/?from=USD&to=EUR&amount=1&year=2020> (accessed October 9, 2020).
- 3 <https://www.x-rates.com/average/?from=USD&to=JPY&amount=1&year=2020> (accessed October 9, 2020).
- 4 Note that the federal Gulf of Alaska Pacific cod fishery is closed in 2020 and the federal Bering Sea and Aleutian Islands total allowable catch (TAC) was reduced by 15% in 2020 relative to 2019.



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West Coast Snapshot, March-July 2020



West Coast Fisheries Impacts from COVID-19

Commercial Fisheries Landings Trends and Impacts¹ through July 2020

In 2019, approximately 3,300 non-tribal commercial fishing vessels operated in the West Coast fisheries and landed products valued at \$526 million (including aquaculture shellfish, where available). The top commercial fisheries by landings revenue in 2019 were crab, groundfish (including whiting), and shrimp. Many of the participants in West Coast commercial fisheries are active year-round, shifting from one fishery to another as seasons open and close. Broadly speaking, West Coast fishermen were initially affected by the cessation of exports caused by the closure of Asian seafood markets beginning in January 2020. Losses were compounded by the sharp decrease in demand for seafood, both domestically and globally, as countries imposed social distancing restrictions that closed restaurants where the majority of seafood is consumed. Some in the industry are concerned about whether markets will fully recover.

To assess potential effects of the pandemic on West Coast fisheries, we calculate the five-year median of landings (2015-2019) for each species group and region to provide a baseline comparison to 2020 landings. A five-year baseline is chosen because it corresponds to the time-frame used for fishery disaster declarations. Data for these comparisons are available from January through (and including) July 2020. Year-to-date comparisons include all landings from January through July. Comparisons restricted to March through July are also provided to emphasize impacts likely related to COVID-19, since the period coincides with the introduction of stay-at-home orders and restaurant closures on the West Coast. Ex-vessel revenue is adjusted for inflation. In order to protect confidentiality, data with too few observations are suppressed in the figures below.

Year-to-date, total West Coast shoreside commercial ex-vessel revenue was 9% lower than the baseline period. From March-July 2020, total ex-vessel revenue was 31% lower than the 2015-2019 baseline. At the start of the year, coast-wide ex-vessel revenue was higher than the baseline period, largely due to Dungeness crab landings, but fell below the baseline starting in March and continuing through July, which coincides with the start of stay-at-home orders and restaurant closures on the West Coast. Figure 1 illustrates ex-vessel revenue by species group generated during the months of March through July each year between 2015 and 2020. Total commercial fishing revenue in 2020 during these months was lower than any of the previous five years. The same is true of specific

fisheries including tuna, Individual Fishing Quota (IFQ) trawl, and fixed gear non-whiting groundfish. Revenue from market squid has been higher in 2020 thus far, and is reported to be experiencing an abundant season, particularly relative to last year.

Comparisons of 2020 landings to the baseline period vary across states. In California, the fisheries that contributed most to year-to-date ex-vessel revenue were crab, market squid, and salmon. Total ex-vessel revenue was 2% lower than the baseline period for the year-to-date and 16% lower from March through July. In Oregon, the fisheries that contributed most to year-to-date ex-vessel revenue were crab, shrimp, and shoreside Pacific whiting. Total ex-vessel revenue was 2% higher than the baseline period, and 21% lower from March through July. In Washington, the fisheries that contributed most to year-to-date ex-vessel revenue were crab and shrimp. Total ex-vessel revenue in Washington was 24% lower than the baseline period, and 40% lower from March through July.

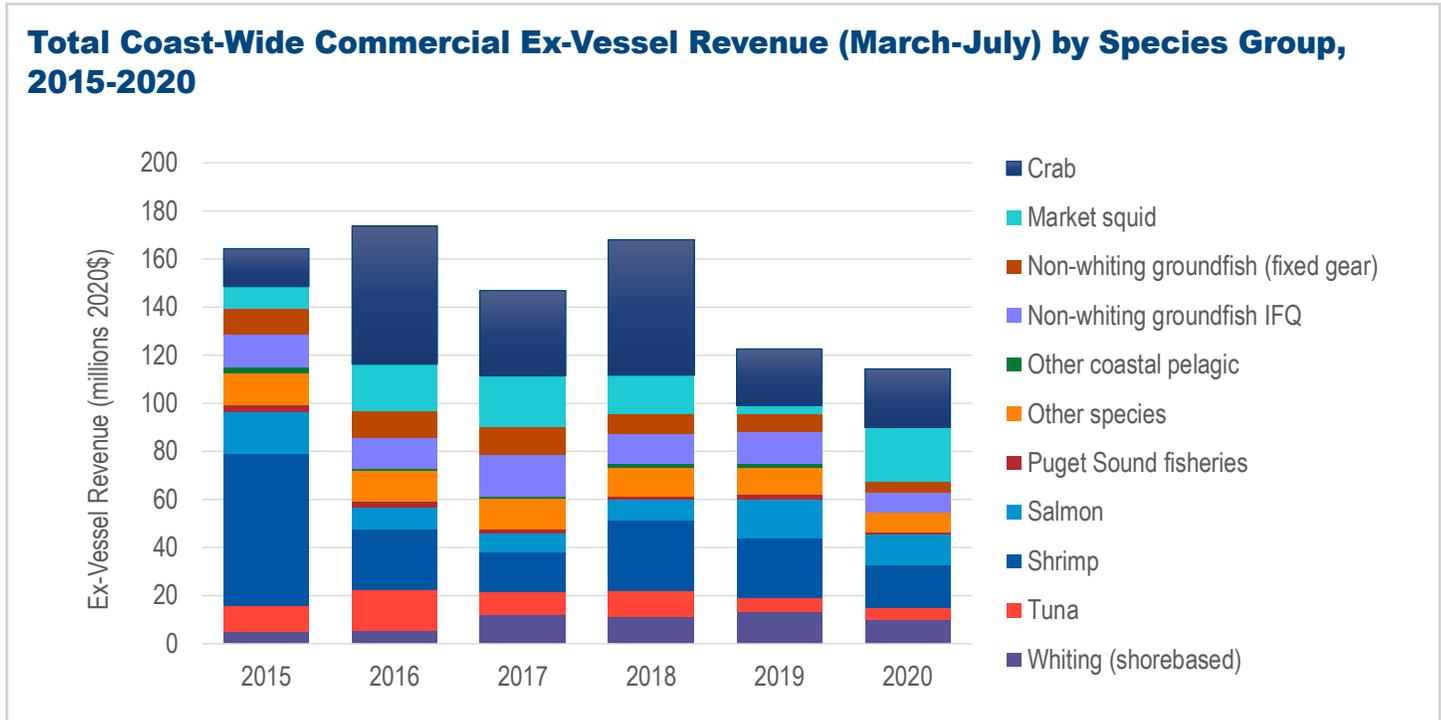


Figure 1. Total coast-wide commercial ex-vessel revenue generated during the months of March through July each year between 2015 and 2020 by species group.

NON-WHITING GROUND FISH FISHERY

From 2015-2019, the non-whiting groundfish fisheries contributed to about 11% of coast-wide shoreside ex-vessel revenue and approximately 970 commercial fishing vessels participated annually. Vessels target multiple species, including sablefish (also called black cod), rockfish, petrale sole, and Dover sole, and primarily use trawl nets and fixed gear (e.g., longlines, pots). Year-to-date, 2020 ex-vessel revenue was 44% lower than the baseline (2015-2019 median), and landed weight was 21% lower.

The non-whiting IFQ bottom trawl fishery operates year-round and accounts for approximately half of the non-whiting groundfish fishery ex-vessel revenue in 2020 thus far. Year-to-date, this fishery has experienced a 51% decrease in ex-vessel revenue and a 31% decrease in landed volume relative to the 5-year median. The

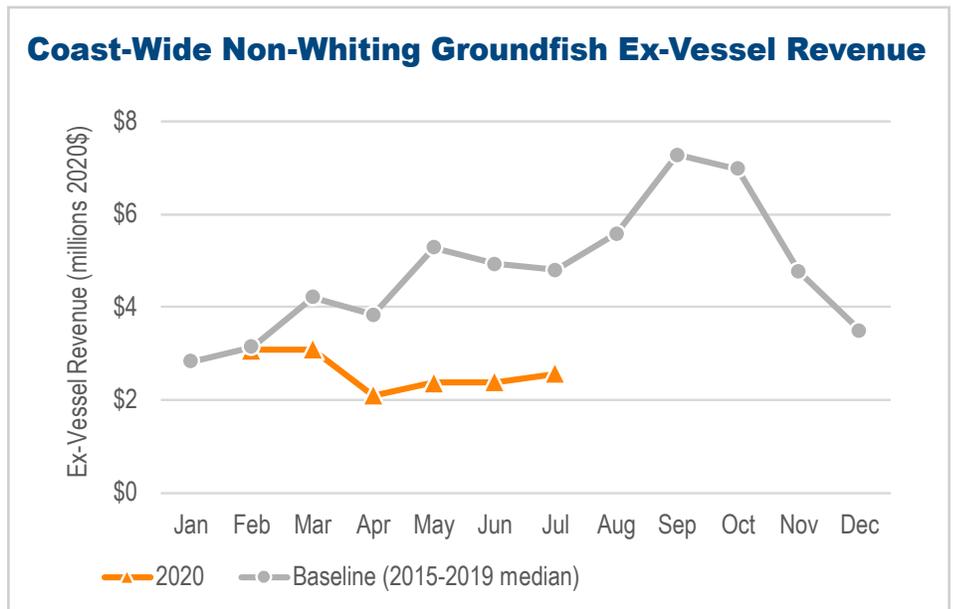


Figure 2. Coast-wide non-whiting groundfish ex-vessel revenue (millions of 2020 dollars).

fixed gear sablefish fishery is primarily executed between April and October. From March-July, ex-vessel revenue was 65% lower and volume landed was 50% lower than the 5-year median.

The non-whiting groundfish fisheries are reportedly experiencing challenging market situations for select species. For example, sablefish, a high-valued species typically exported or sold to restaurants, has been impacted by both the decline in export in Asian markets as well as the decline in domestic demand due to restaurant closures. The weighted average sablefish ex-vessel price between March and July 2020 was \$1.22 per pound, down from \$1.80 per pound in 2019.

SALMON FISHERY

The commercial, ocean troll salmon fishery on the West Coast typically contributes 3-4 percent of fisheries revenue with over 600 participating vessels. Participants target multiple, mixed stocks and the season typically runs from April through September with rotating open periods throughout. Year-to-date, total ex-vessel revenue and landed weight in the salmon fishery were higher than the 5-year median (2015-2019) by 39% and 76% respectively. These increases over the baseline period are due to conditions in California, which experienced average to above-average landings and ex-vessel prices. By contrast, landings were down considerably in Oregon and Washington.

Salmon volume and revenue in California from May, the first month the fishery was open, to July were substantially higher than the 5-year (2015-2019) median. Landed weight was 249% higher and revenue was 173% higher than the median value. This is likely because of a low baseline value due to poor stock conditions in previous years, average to above-average ex-vessel prices this year, and reasonably good stock conditions this year. Salmon fishermen in California report average to above-average prices this summer (approximately \$9 per pound). Demand for salmon has been surprisingly strong, as buyers have made up some of the lost revenue from sales to restaurants by increasing sales to grocery stores. Much higher sales to direct-to-consumer channels, though still a relatively small proportion of demand, and sales to markets in the Midwest and East Coast have helped support prices.

In Oregon, March-July ex-vessel revenue was 59% lower and volume landed was 58% lower than the 5-year median. Demand for Oregon salmon has been hurt by sharply reduced restaurant demand, which typically accounts for most of the market. Prices for salmon in Oregon have remained at or near historical levels, however, supported by increased direct-to-market sales, some increased demand from supermarkets, and very low landings. In Washington, March-July, ex-vessel revenue was 82% lower and volume landed was 80% lower than the 5-year median.

Portions of unused early season catch limits have been rolled over into late summer seasons in ocean troll fisheries in Washington and Oregon. The salmon fishery in Washington and northern Oregon in May and June caught only 15% of its early season allowable catch (2,141 out of 13,820 fish north of Cape Falcon; all of the unused portion was re-allocated to the July-September season). Late season reports indicate that it is unlikely that harvesters will take all of the quota. The southern Oregon ocean troll fishery harvested 24% of the June quota (165 out of 700 Chinook salmon), with a portion of the uncaught quota re-allocated to late summer (330 out of 535 uncaught fish). The full portion was not rolled over because the July and August fishery has a relatively high impact on the Klamath River fall-run Chinook stock, which is in poor condition.

SHRIMP FISHERY

From 2015-2019, the shrimp fisheries contributed to about 9% of coast-wide shoreside ex-vessel revenue and around 180 commercial fishing vessels participated annually. Shrimp revenue is largely comprised of the pink shrimp fishery, which runs from April through October, as well as spot prawns. Year-to-date, 2020 ex-vessel revenue was 28% lower than the baseline period, while landed weight was similar, indicating that the price per pound decreased. The weighted average pink shrimp ex-vessel price in 2020 thus far was \$0.50 per pound, down from \$0.72 per pound in 2019, and the spot prawn price in 2020 was \$12.36 per pound, down from \$12.90 per pound in 2019.

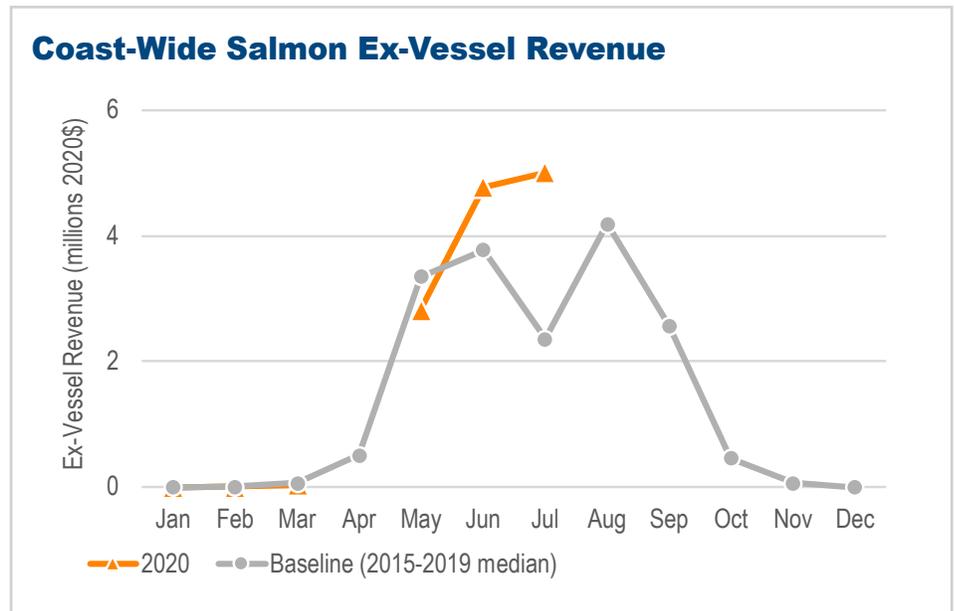


Figure 3. Coast-wide salmon ex-vessel revenue (millions of 2020 dollars).

Shrimp landings in 2020 thus far for Oregon and Washington were primarily composed of pink shrimp. In Oregon, landed weight was 5% lower and ex-vessel revenue was 38% lower than the baseline period. In Washington, landed weight was 23% higher than the baseline, while ex-vessel revenue was 6% lower. In California, ex-vessel revenue from shrimp landings since the start of the year was largely composed of prawn. Year-to-date, landed weight was 58% lower and ex-vessel revenue was 25% lower than the baseline. From March-July, landed weight was 63% lower and ex-vessel revenue was 30% lower. Industry feedback indicated that demand from restaurants for live products declined for shrimp in particular, due to their perishability and poor transportability once cooked, and they were endeavoring to expand direct-to-consumer sales.

WHITING FISHERY

Data that are available indicate that whiting harvest volume is higher than the baseline period but revenues are lower due to lower prices. The at-sea and shoreside Pacific whiting seasons open on May 15 each year, and whiting vessels in the at-sea sector typically depart the fishery to fish for Pollock in Alaska from July through September. Thus, the data available only reflect the first two and a half months of the at-sea season. Through July of 2020, volume was 34% higher than the 5-year median in the at-sea catcher-processor sector and 3% lower in the at-sea mothership sector. In the shoreside sector, landed weight was 5% higher than the 5-year median while ex-vessel revenue was 11% lower, indicating a lower average ex-vessel price. From May through July, ex-vessel prices in the shoreside sector were 25% lower than the baseline.

Vessels active in the at-sea whiting fishery have experienced a number of publicized outbreaks, which has likely increased the cost of operating in the fishery. Three Pacific whiting catcher-processor vessels (American Dynasty, American Triumph, and Northern Jaeger) experienced outbreaks of COVID-19 onboard, which required a 14-day quarantine before resuming fishing. One mothership processor decided to limit their activities to Alaska to mitigate the risk associated with COVID-19, which

Coast-Wide Shrimp Ex-Vessel Revenue

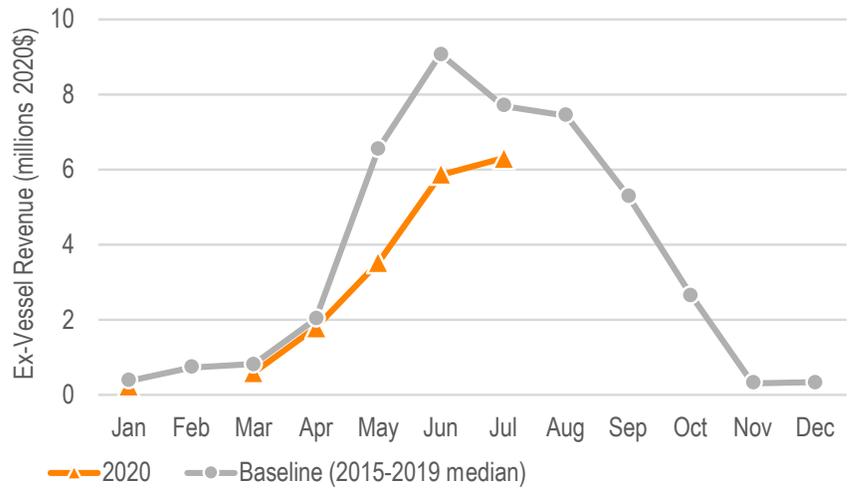
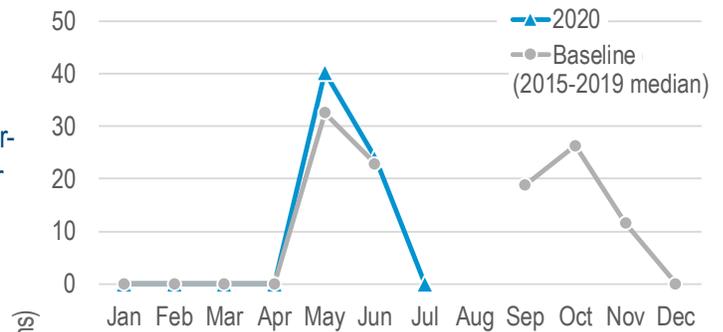
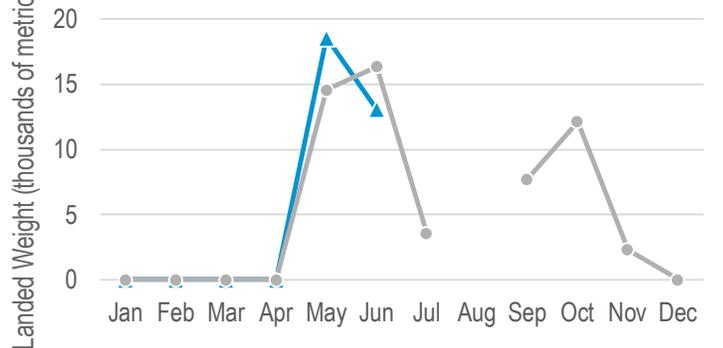


Figure 4. Coast-wide shrimp ex-vessel revenue (millions of 2020 dollars).

Pacific Whiting Volume landed in catcher-processor sector



Pacific Whiting Volume landed in mothership sector



Pacific Whiting Volume landed in shoreside sector

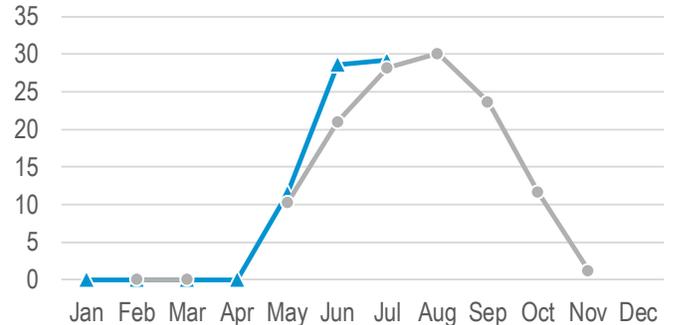


Figure 5. Total volume landed (metric tons) in at-sea and shoreside Pacific whiting fisheries.

left some catcher vessels without a processing platform. To provide operational flexibility, NOAA Fisheries issued an emergency rule to allow eligible mothership and catcher-processor vessels to operate as either type of processing platform during the 2020 Pacific whiting season.²

CRAB FISHERY

The Dungeness crab fishery, which comprises the majority of the West Coast crab landings revenue, was well into the 2019/2020 fishing season when COVID-19 began to affect markets for crab. Dungeness crab fisheries generally open in early December with most landings (approximately 80% of landed weight in the baseline) occurring between December and February. While much of the fishing season was over, there is some indication in the landings statistics that markets for crab experienced some weakness near the end of the fishing season. Industry feedback indicated that demand from Asian nations that import crab was down early in the year, and the high-value live crab market was effectively cancelled for the fishing season. This is exhibited in U.S. trade data, which indicates that all crab exports are down 25% from the baseline average. Trade data indicate that falling prices near the end of the fishing season potentially exhibit some market weakness: January-February prices were 8% higher than the baseline period, but March-July was 17% lower.

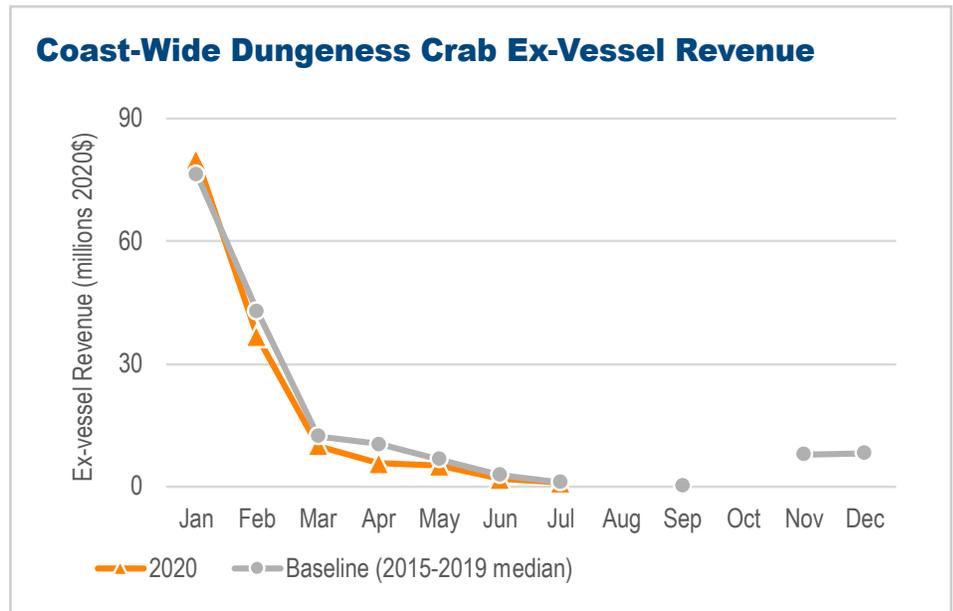


Figure 6. Coast-wide Dungeness crab ex-vessel revenue (millions of 2020 dollars).

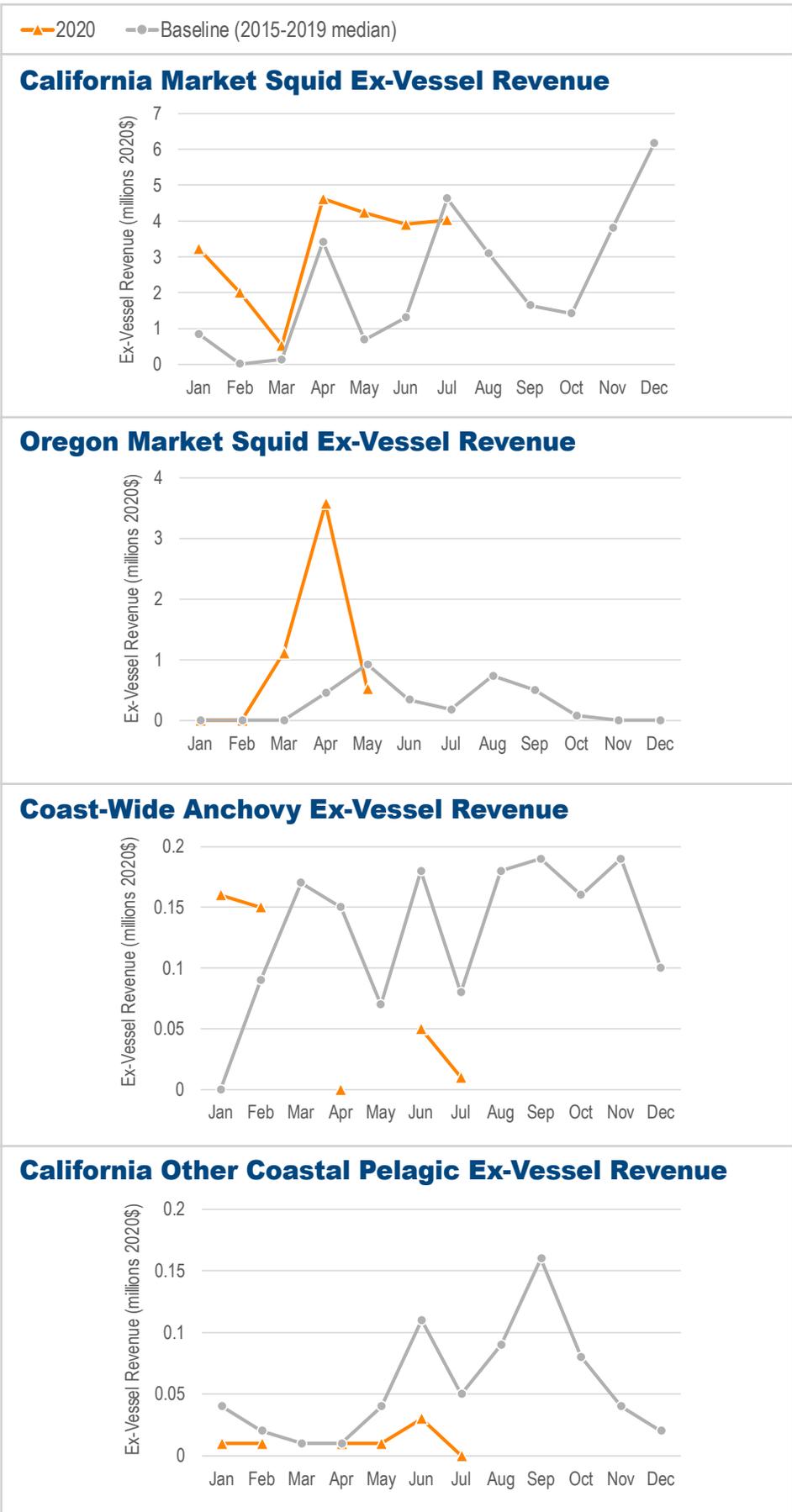
Region-wide, year-to-date ex-vessel revenue and landed weight in the Dungeness crab fisheries were lower than the 5-year median (2015-2019), and declines from the March-July time frame were greater, particularly for Washington and California.³ Region-wide year-to-date revenue was down 4% and weight was down 12%. From March-July, ex-vessel revenue was 32% lower and volume landed was 26% lower than the 5-year median. In Oregon year-to-date, Dungeness crab total volume and ex-vessel revenue were slightly higher than the 5-year median (2015-2019), by 4% and 6% respectively; and from March-July, ex-vessel revenue was similar to the 5-year median and volume landed was 9% higher. In California year-to-date, Dungeness crab total volume and ex-vessel revenue were 18% and 15% lower than the 5-year median; and from March-July, ex-vessel revenue was 59% lower and landed weight was 52% lower. In Washington year-to-date, Dungeness crab total volume and ex-vessel revenue were both 16% lower than the 5-year median (2015-2019); and from March-July, ex-vessel revenue was 29% lower and landed weight was 22% lower.

Concerns have been expressed that both quantity demanded and prices of crab will be depressed in the upcoming crab season. Many crab buyers typically freeze 4-5 months of inventory to sell it over the summer months, when the fishery is closed. Restaurant closures have nearly eliminated retail sales this summer and as a result, buyers report a large inventory of frozen crab still on hand.

COASTAL PELAGIC FISHERIES

The Coastal Pelagic Species (CPS) fishery targets the following: anchovy, market squid, sardine, and other coastal pelagics (which include mackerel). During the 2015 through 2018 period, over 94% of total CPS landings and revenues occurred in California. The share of revenues from the Pacific Northwest were higher earlier in the decade but declined due to the closure of the West Coast major directed commercial Pacific sardine fishery in 2015 (over 70% of Pacific sardine revenues occurred in the Pacific Northwest in the 2009-2015 period). The primary directed fishery for Pacific sardine has been closed since 2015. Beginning in 2018, there has been a major increase in market squid landings and revenues in the state of Oregon.

Coast-wide, the year-to-date total ex-vessel revenue and landed weight in coastal pelagic fisheries were higher than the 5-year median (2015-2019) by 36% and 5% respectively. From March-July, ex-vessel revenue was 28% higher and volume landed was 17% lower than the 5-year median. In California year-to-date, total ex-vessel revenue in coastal pelagic fisheries was higher than the 5-year median (2015-2019) by 20%, while landed weight was similar. From March-July, ex-vessel revenue was 20% higher and volume landed was 27% lower than the 5-year median. In Oregon, the year-to-date total ex-vessel revenue and landed weight in coastal pelagic fisheries were higher than the 5-year median (2015-2019) by 224% and 54% respectively.



For market squid, the year-to-date total ex-vessel revenue and landed weight were higher than the 5-year median (2015-2019) by 41% and 25% respectively. From March-July, ex-vessel revenue was 39% higher and volume landed was 13% higher than the 5-year median. In California, the year-to-date total ex-vessel revenue and landed weight in the market squid fisheries were higher than the 5-year median (2015-2019) by 22% and 9% respectively. From March-July, ex-vessel revenue was 32% higher and volume landed was 6% lower than the 5-year median. In Oregon, the year-to-date total ex-vessel revenue and landed weight in the market squid fisheries were higher than the 5-year median (2015-2019) by 228% and 201% respectively.

For anchovy, the year-to-date total ex-vessel revenue and landed weight were lower than the 5-year median (2015-2019) by 56% and 42% respectively. From March-July, ex-vessel revenue was 80% lower and volume landed was 71% lower than the 5-year median. A majority of the anchovy landings occurred in California.

Landing revenues for Pacific and other mackerel fisheries are captured in the other coastal pelagic fishery category. As can be seen by Figure 7, landing revenues for this species grouping are significantly down relative to the prior 5-year median.

HIGHLY MIGRATORY SPECIES FISHERIES

Year-to-date, total ex-vessel revenue and landed weight in the tuna fisheries were lower than the 5-year median (2015-2019) by 52% and 55%, respectively. From March-July, ex-vessel revenue was 56% lower and volume landed was 57% lower than the 5-year median. In Oregon, year-to-date, total ex-vessel revenue and landed weight in the tuna fisheries were lower than the 5-year median (2015-2019) by 77% and 80%, respectively. In California, year-to-date, total ex-vessel revenue and landed weight in the tuna fisheries were lower than the 5-year median (2015-2019) by 8% and 33%, respectively. From March-July, ex-vessel revenue was 16% lower and volume landed was 41% lower than the 5-year median. For Washington, year-to-date, total ex-vessel revenue and landed weight in the tuna fisheries were lower than the 5-year median (2015-2019) by 51% and 39%, respectively.

Figure 7. Coastal Pelagic Species ex-vessel revenue by type and location (millions of 2020 dollars).

Preliminary data suggest that August revenues for 2020 West Coast tuna are approaching the 5-year median (Figure 8). Anecdotally, these data are thought to be 85-90% complete, suggesting August 2020 revenues production may be comparable to levels of recent years.

Commercial albacore fishing industry members have reported extra costs due to protective measures such as grocery delivery services to vessels coming into port, to avoid requiring crew to leave the boat and face risk of contracting or spreading COVID-19. It is not clear to what degree these added costs are reducing profitability.

U.S. tropical tuna purse seine vessels in both the Eastern and the Western and Central Pacific Oceans face declining catch. Crew are not allowed to leave vessels to fly home, there are no observers, and drydocking is not possible. Vessel operators face increasing difficulties in obtaining parts and supplies. Landings prices are down, and profits are adversely impacted.

Coast-Wide Tuna Ex-Vessel Revenue

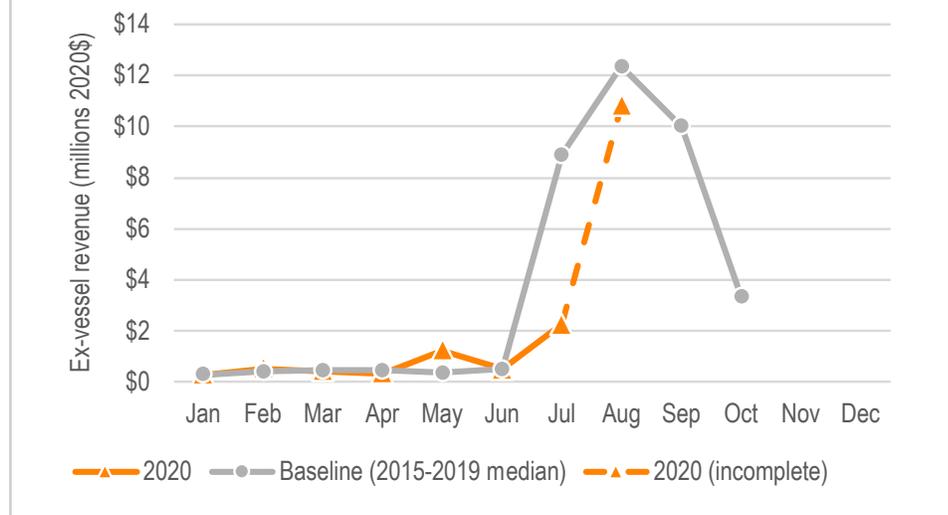


Figure 8. Coast-wide tuna ex-vessel revenue (millions of 2020 dollars). Dotted line indicates incomplete data.

Seafood Processors

Approximately 1,000 buyers purchased seafood from harvesters and producers in the West Coast Region in 2019. In 2020, these processors have faced increased costs and reduced demand coastwide, and there are compounding effects of wildfires and a water supply emergency in Newport, OR that halted processing operations. There have been a number of reported COVID-19 outbreaks at facilities. News sources indicate that some processing plants temporarily closed due to outbreaks at facilities in locations including Astoria/Warrenton, OR and Newport, OR. Closures reportedly ranged from several days to two weeks. In the last few months, there were several reports of employees testing positive for the virus; however, facilities did not close.

On the demand side, interviews with seafood processors conducted early during the COVID-19 outbreak indicate that the fresh seafood market was greatly affected by restaurant closures. There are reports that industry (at various levels of the supply chain) shifted towards other markets, including direct-to-consumer and community-supported fishery (CSF) sales. While some inroads have been made, there is still a substantial learning curve to make it successful. Interviews with large tuna processing companies in September indicate consumer retail demand for shelf-stable products remains strong but institutional demand for frozen products remains adversely impacted. Interviews with highly migratory seafood processors indicate that retail is strong but wholesale is moving smaller volumes than normal, but with a slight increase as restaurants reopen or expand operations. General uncertainty continues to negatively impact wholesale prices.

Processors are facing cost increases on several fronts. In addition to the cost of closures due to outbreaks, state agencies reportedly have been working on changes to infectious disease protocols, which, while not in place yet, has involved effort to ensure compliance. There have been changes to requirements for workers on processing lines. Distancing, installation of plexiglass shields between positions, and hiring on-site medical personnel are actions that some processors have taken.

Cold storage shortage is an issue that will likely continue to affect prices in the months ahead. Restaurant closures have pushed much seafood into cold storage, and most available freezer space is full. The U.S. Department of Agriculture (USDA) has tried to work with processors to find other outlets for currently frozen products in institutions such as prisons and schools. However, that program has been largely unsuccessful on the West Coast as the products in cold storage tend to be higher priced, luxury products such as Dungeness crab.

Recreational Fishing — For-Hire Sector

All modes of recreational fishing are now open after closures. In most jurisdictions, the relaxation of restrictions started with the opening of boat launches for private boats, followed by opening of public beaches, then for-hire operations. The majority of for-hire operations began operating as local guidelines allowed — with many operations starting in mid to late-May. Vessel launch and trip booking websites outline protocols in place for social distancing. A small number of charter vessels located on Indian reservations remain shut down as the reservations remain closed to the public. Vessels are carrying fewer passengers per trip, with some operations increasing ticket prices to make up for fewer passengers.

Retail tackle shops have reopened after the lifting of state and local mandated closures to non-essential business. Closures and openings varied significantly by jurisdiction. Some fishing tackle shops with online infrastructure were able to continue selling and shipping goods; others were able to take orders over the phone for pick up by appointment. Shops without an online presence were likely more impacted by a longer period of closure and/or no sales.

Many fishing trade shows were cancelled, or postponed only to be later cancelled, due to limits on public gatherings, closure of host locations, and logistics needed to change locations and dates of such large events. At least one fishing show for 2021 has already been cancelled. Fishing tournaments were also cancelled due to stay at home orders. As restrictions have been lifted, some tournaments have resumed.

For-hire effort update from RecFIN data

Across the West Coast, for-hire angler trips were considerably lower in 2020 relative to the 5-year median. However, in recent months, effort has returned to levels near the historical median. The availability of current data is a limiting factor in making a comparison in California due to COVID-related closure of the sampling program. For-hire effort data are available from January through July in both Washington and Oregon. In California, estimating effort relies on sampling that was not done from April through June, due to COVID-19 restrictions, so these data might remain missing. Based on all months for which RecFIN data were available for 2020, year-to-date reductions for the for-hire recreational fishing sector were as follows: 62% for Washington, 32% for Oregon, and 32% for California. Focusing on March through July only, reductions for for-hire trips were as follows: 62% for Washington, 31% for Oregon, and 36% for California.

Washington For-Hire Trips

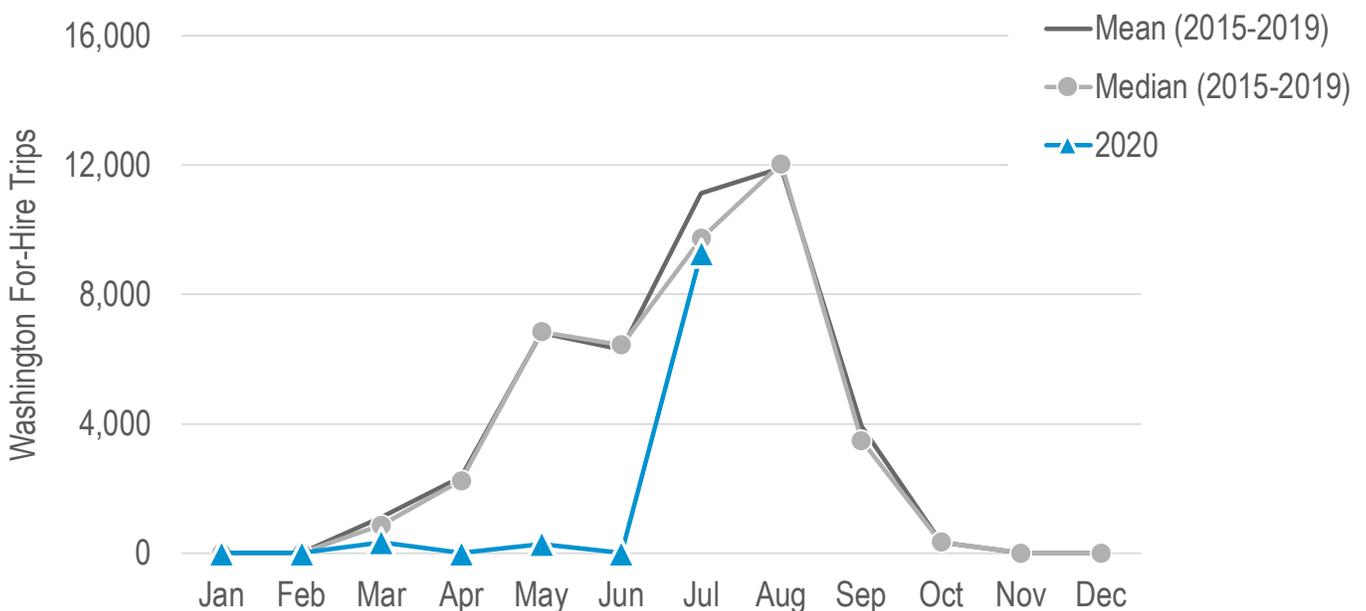


Figure 9. For-hire trips in Washington.

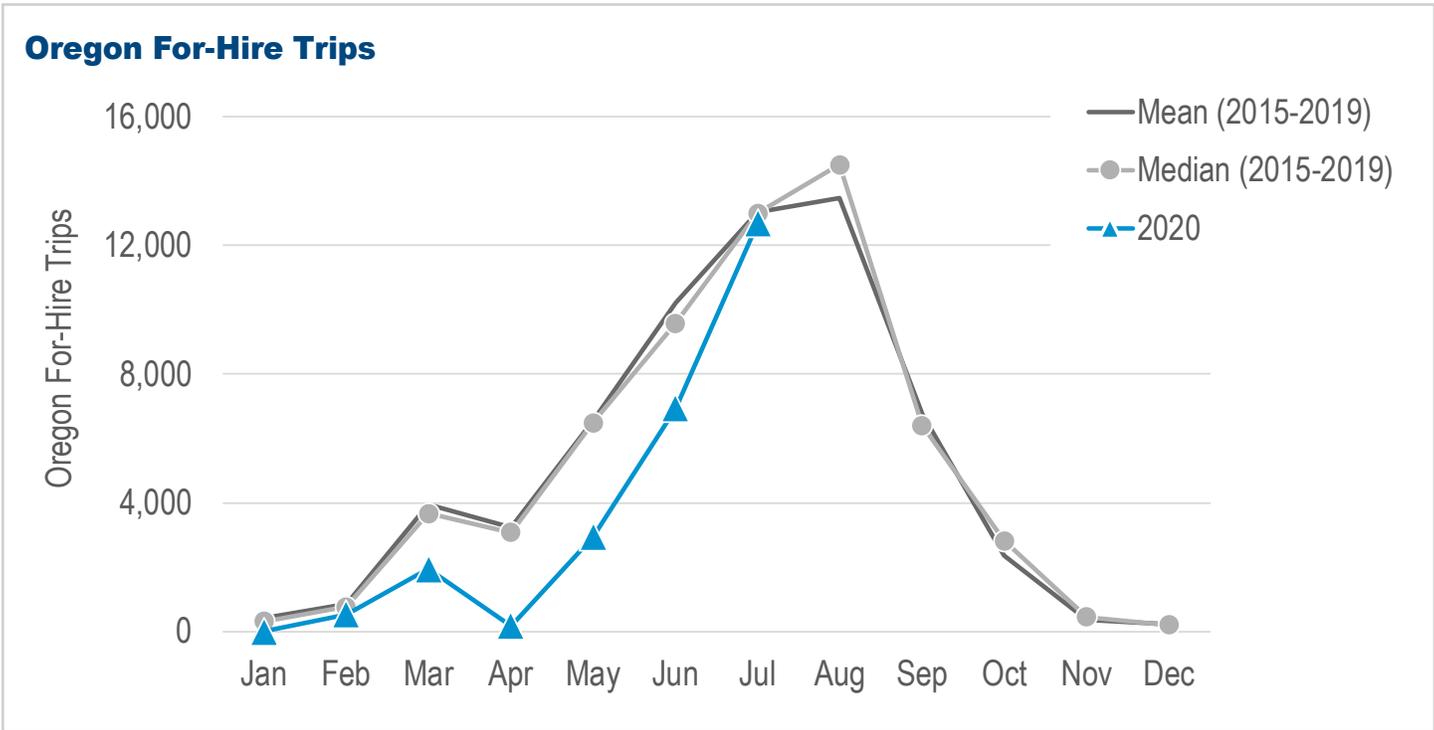


Figure 10. For-hire trips in Oregon.

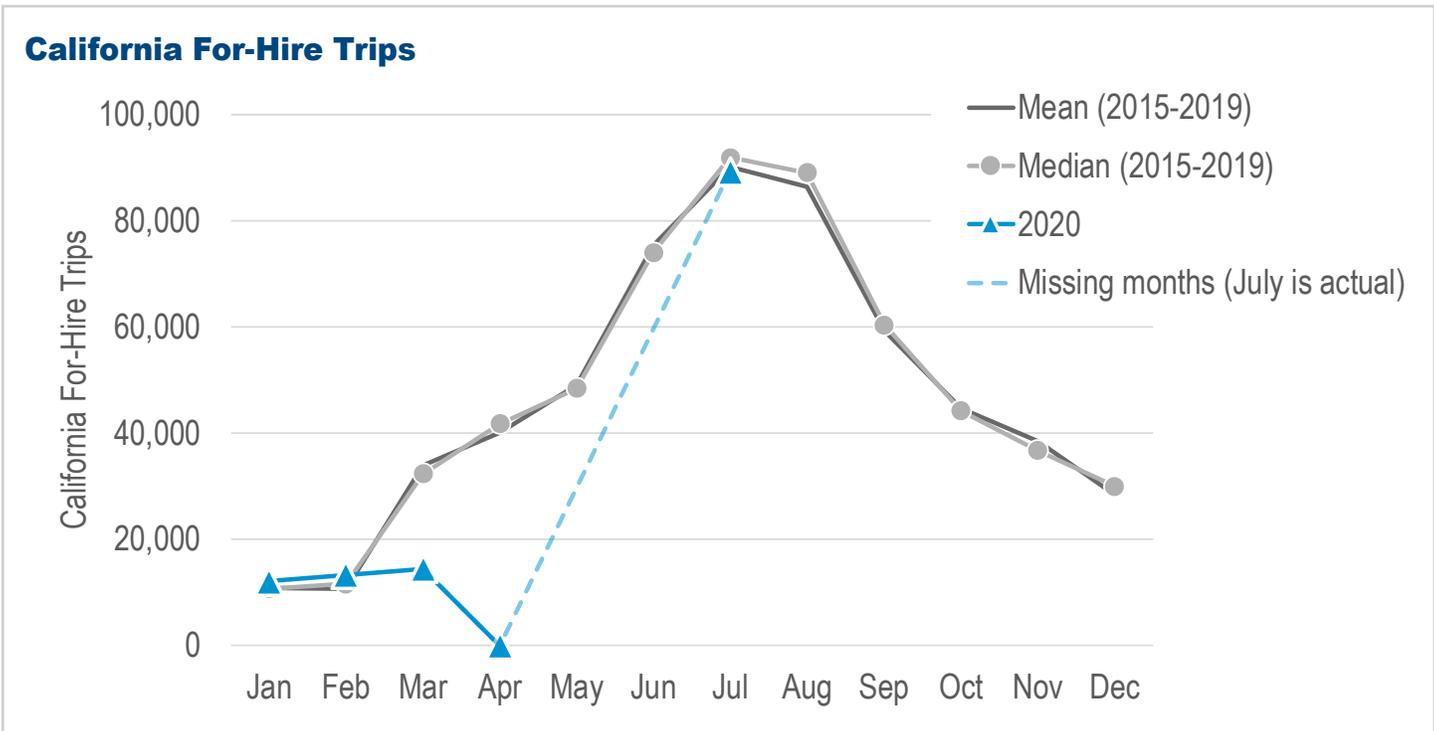


Figure 11. For-hire trips in California.

Endnotes

- 1 Data source: https://dataexplorer.northwestscience.fisheries.noaa.gov/fisheye/landings_tracker/
- 2 USOFR. 2020. 50 CFR Part 660: Fisheries Off West Coast States; Emergency Action To Temporarily Remove Seasonal Processing Limitations for Pacific Whiting Motherships and Catcher-Processors (RIN 0648-BJ83). Federal Register 85:119(19 June 2020):37027–37030.
- 3 For the Dungeness crab fishery, we remove 2015 and 2016 from this calculation because the fishery received a Federal fishery disaster designation in both years. Removing the disaster years puts the median within 4% of the average from 2011 to 2019.



U.S. Secretary of Commerce

Wilbur Ross

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NOAA
FISHERIES

In April 2020, NOAA Fisheries prepared its first national report on the regional impacts of COVID-19 on the commercial, recreational and aquaculture sectors. This report updates that initial assessment, capturing economic changes experienced by the fishing industry as the country began its phased reopening along with infusion of Federal funding through the CARES Act. NOAA Fisheries will continue to use this information to identify economic hardship where it exists and identify pathways for enhancing the resilience of the U.S. seafood and fisheries industries.

Pacific Islands Snapshot, March-July 2020



Pacific Islands Fisheries Impacts from COVID-19

Hawai'i

The State of Hawai'i implemented numerous protective measures to prevent the spread of the novel coronavirus beginning in mid-March, including social distancing (March 13) and cancellation of public gatherings (March 15), a state-wide stay-at-home work-at-home order (March 25), and all persons entering the State of Hawai'i (visitors and returning residents) were required to self-quarantine for 14 days or for the duration of their stay in Hawai'i, whichever is shorter (March 26).¹

Along with many other states, these restrictions were slowly relaxed between the months of May and July, as the islands staged an incremental reopening strategy. However, surges in domestic cases in June and July precluded the State of Hawai'i from relaxing travel quarantine restrictions. Initial efforts to roll out a program that would allow for travelers with pre-travel negative test results to bypass quarantine was planned to take effect on August 1, but this has since been pushed back to September 1, later to October 1, and is currently proposed to launch in mid-October.² While outside the time period for this analysis, it should be noted that local case counts spiked during August and September, and the islands returned to a strict lockdown with renewed state-wide stay-at-home orders for a period of 4 weeks (August 27-September 23).³

Hawai'i's largest industry, tourism, which provides high demand for Hawai'i seafood products, remains shuttered, creating significant economic hardship statewide. Cumulative visitor counts for the months of April-July 2020 (53 thousand visitors) are down 98.5% from this same April-July period in 2019 (3.6 million visitors).⁴ Unfortunately, the forecast is bleak with the State of Hawai'i Department of Business, Economic Development, and Tourism (DBEDT) predicting annual visitor counts in 2020 to be down 72% from 2019, with visitor spending to be approximately 68% less than 2019.⁵ While seasonally-adjusted unemployment rates for the State of Hawai'i have improved from 23.8% (April) to 13.1% (July), these levels have consistently exceeded national unemployment rates of 14.4% and 10.5% for the months of April and July, respectively. While fishing and seafood markets are classified as an "Essential Business", the Hawai'i fishing and seafood industry has experienced significant economic impacts as a result of global COVID-19 spread.

The Hawai'i fishing and seafood industry is an integrated food production and supply system that links fishermen to our nation's only fresh tuna auction, the fish auction buyers (mainly wholesalers), and ultimately retailers and restaurants in Hawai'i and across the United States. The COVID-19 pandemic has virtually eliminated market demand for Hawai'i seafood in local restaurants, which are heavily dependent on tourism, and severely restricted the mainland US retail market. What has

remained is the local retail market in Hawai‘i. This significant reduction in market demand has cascaded through market channels to the fishing sector, which has faced significant reductions in fish prices, and the market has struggled to balance supply with reduced demand. The economic viability of fishermen, the fish auction, and fish processors continue to be threatened by the economic effects associated with pandemic restrictions and shifts in demand.

Despite these challenges the fishing community (commercial fishers, non-commercial fishers, seafood distributors) in the Pacific Islands Region plays a vital role in supporting local food systems, nutrition, food security, and social cohesion.⁶ This importance is amplified in the face of natural disasters and human health crises, and fishing communities across the Pacific Islands Region have adapted to continue these crucial functions in the face of this unprecedented disruption.

Commercial Fisheries Landings Trends and Impacts through July 2020

In 2018, Honolulu was the nation’s #6 port in seafood value (\$106 million).⁷ On average, the Hawai‘i longline fishery comprises approximately 97% of Honolulu fishery revenues and over 85% of fishery revenues for the State of Hawai‘i. Other important commercial fisheries in Hawai‘i include small boat fishers targeting tunas and other highly-migratory species, as well as bottomfish, nearshore, and reef fish species. State of Hawai‘i commercial fisheries are year-round fisheries, with revenues peaking in the months from March through June, with a second seasonal peak during the holiday months of December and January. During 2018, there were 121 active seafood dealers, over 2,500 licensed fishers with commercial sales, and a world-renowned charter/for-hire industry.

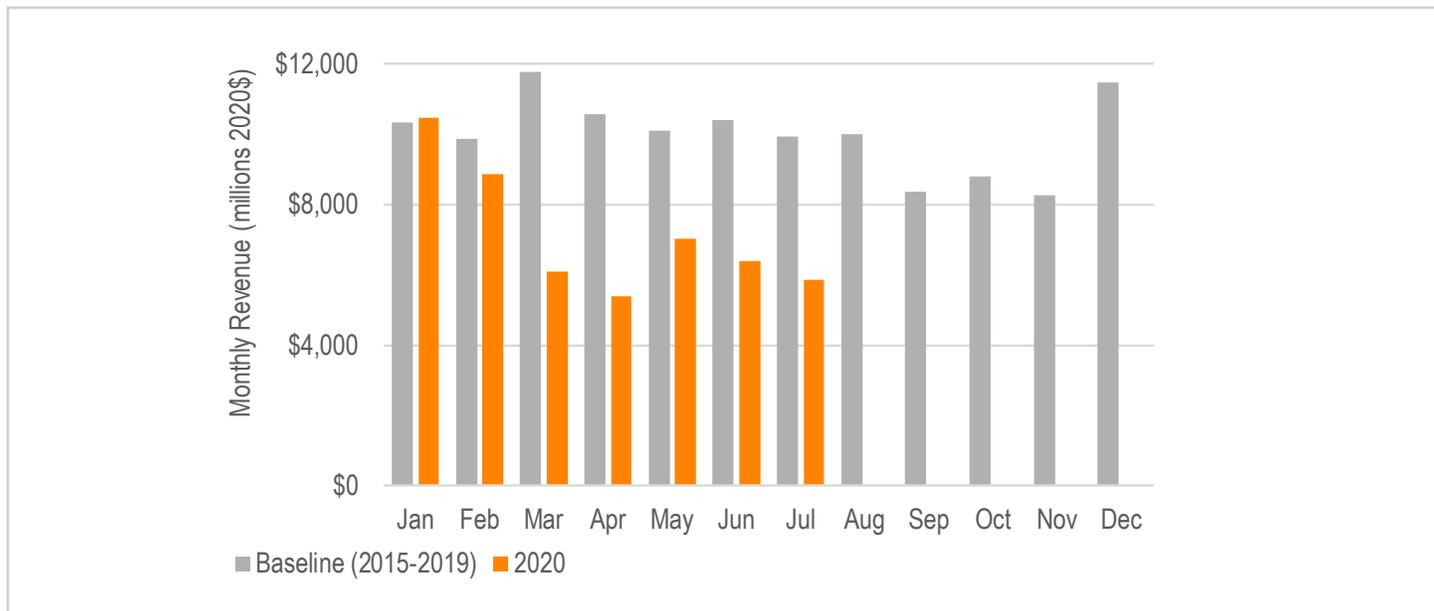


Figure 1. Monthly Hawai‘i commercial landings revenue, 2020 relative to 2015-2019 (Inflation-adjusted, 2020 dollars).

Average monthly State of Hawai‘i commercial fishing inflation-adjusted revenues over the baseline period of 2015-2019 was approximately \$10 million (adjusted to January 2020 dollars, using Bureau of Labor Statistics Hawai‘i all-urban consumer price index). Preliminary monthly revenue estimates for 2020 show clear impacts from COVID-19. Market price declines of just under 75% that hit in mid-March⁸ and held over the last two weeks of the month, coupled with industry-imposed landing limits, resulted in industry revenue declines of approximately 48% for the month of March relative to baseline monthly averages. The expectation, at the time, of sustained industry struggles has been realized.

Throughout this report, where possible, 2020 data are presented. These data are preliminary and subject to change.

Hawai‘i commercial fishery revenues (March-July 2020) have experienced an approximate 42% decline relative to the 5-year baseline (2015-2019) for the months of March-July. Cumulative preliminary 2020 commercial fishery revenues (March-July 2020) are approximately \$22 million below the 5-year baseline for this period (March-July 2015-2019). Similarly there have been reductions in active fishers and seafood dealers, on account of COVID-19 impacts and restrictions.

Table 1. Hawai'i Commercial Fisheries Performance: Percentage Change, 2020 compared to Baseline (2015-2019).*

Month	Revenues	Landings	Prices	Fishers**	Dealers**
March	-48.4	-24.3	-31.8	-28.6	-16.7
April	-49.1	-29.4	-27.8	-38.8	-36.7
May	-30.4	-25.0	-7.2	-36.7	-28.2
June	-38.7	-43.4	+8.3	-32.4	-33.1
July	-41.1	-34.4	-10.3	-37.4	-33.9
Average (March-July)	-41.5	-31.3	-13.8	-34.8	-29.7

* Source: State of Hawai'i Division of Aquatic Resources, 2020 data are preliminary (as of 9/11/20).

** Number of unique fishers submitting commercial reports, number of unique dealers submitting dealer reports.

Commercial Fishing Impacts

LOGLINE FISHERY

During 2019, there were 150 active longline fishing vessels, landing approximately 26.5 million pounds, valued at nearly \$95 million. Due to the recent sharp decline in landed fish prices, beginning on March 14, longline fishing operations have seen significant revenue losses. The Hawai'i longline fishery has taken nearly the full impact (approximately 94%) of cumulative preliminary 2020 Hawai'i commercial fishery revenue declines between March and July 2020 relative to the 5-year baseline for this period (March-July). Preliminary Hawai'i Longline commercial fishery revenues (March-July 2020) have experienced an approximate 45% (or \$20.7 million) decline relative to the 5-year baseline (2015-2019) for the months of March-July.

Between March 14 and July 31, the average weekly price at the United Fishing Agency (UFA) auction for the two primary target species (bigeye tuna and swordfish) were down approximately 20% compared to pre-COVID 2020 prices (January 4 – March 13). Price improvements were seen during mid-May through June. However, this was largely due to a nearly 50% reduction in landings levels as the market worked to balance supply with local demand (industry-imposed vessel-level and daily landings restrictions have been maintained since mid-March). It should be noted, during May and June there also was improved access to mainland markets as states began to open up, coupled with the relaxing of local restrictions which helped pick up prices for these key target species. However, as restrictions heightened in many states during July to match rising case counts, the industry saw these price gains disappear, highlighting the direct impacts of COVID-19 restrictions on the Hawai'i seafood market.

Counter to fishery target species, the average weekly price at the UFA auction for combined mix/whitefish species,⁹ primarily marketed to the foodservice sector were down approximately 54% compared to pre-COVID 2020 prices. These species have seen little to no rebound in recent months and comprise a large portion of fishery landings, significantly dampening industry revenues.

Table 2. Hawai'i Longline Fishery Performance: Percentage change, 2020 compared to Baseline (2015-2019).*

Month	Revenues	Landings	Prices	Fishers**
March	-48.9	-21.3	-35.0	-2.2
April	-51.5	-31.3	-29.4	-16.2
May	-33.6	-28.0	-7.7	-8.8
June	-47.5	-52.0	+9.4	-19.6
July	-45.3	-38.2	-11.4	-6.1
Average (March-July)	-45.3	-34.2	-14.8	-10.6

* Source: State of Hawai'i Division of Aquatic Resources, 2020 data are preliminary (as of 9/11/20).

** Number of unique fishers submitting commercial reports.

To support the local community and alleviate challenges in matching supply and demand, the Hawai'i seafood industry has established new partnerships with community organizations. In late April, the Hawai'i seafood industry donated approximately 2,000 pounds of fresh fish to the Hawai'i Foodbank, and through this partnership Hawai'i Foodbank purchased \$50,000 worth of seafood landed by Hawai'i longline vessels.¹⁰ In early July, the City of Honolulu has committed \$2.6 million in federal coronavirus relief funds to help the

fishing industry via a “fish-to-dish” program¹¹ which will work in partnership between the Hawai‘i Foodbank and the Hawai‘i Longline Association, the United Fishing Agency, which runs the fish auction, and the Hawai‘i Seafood Council to distribute fish to people in need in the community. An estimated 350,000 servings of fresh fish are expected to be distributed to the community over the next five months through the Hawai‘i Foodbank and its partner agencies. The long-term financial outlook for the Hawai‘i longline fishery remains highly uncertain and depends on both local and national recovery efforts.

The top COVID-19 related factors affecting business for the Hawai‘i longline fishing sector continue to be:

- Reduction of market prices and landed value (particularly for mix/whitefish species).
- Reduced market demand from foodservice sector.
- Market competition with cheaper foreign imported frozen products.
- Reduced opportunities for credit offered by supply companies (e.g. fuel).

OTHER COMMERCIAL FISHERIES

Other important commercial fisheries in Hawai‘i include small boat, spear, and nearshore fishers targeting tunas and other highly-migratory species, as well as bottomfish, nearshore, and reef fish species. During 2018, there were just under 1,700 commercially-licensed fishers in the State of Hawai‘i, landing nearly 5 million pounds valued at approximately \$16 million. These fishers have faced similar negative pricing impacts as the longline fishery on account of COVID-19 as they market their fish through the UFA auction, dealers/processors, restaurants, retail storefronts, and within their community. Historically low prices and state-wide stay-at-home orders severely limited commercial small boat fishing effort during March. However, as local restrictions relaxed, while there were fewer active fishers, difficult economic conditions likely drove increased fishing activity (preliminary 2020 revenues in June exceeded baseline revenues). Many commercial small boat fishers have been forced to and/or chose to shift to marketing their fish via social media, within community networks, and developing value-added products (e.g., smoking) with their catch. Pursuing these marketing channels, coupled with significant reductions in longline fishery landings, likely helped prices during this time period.

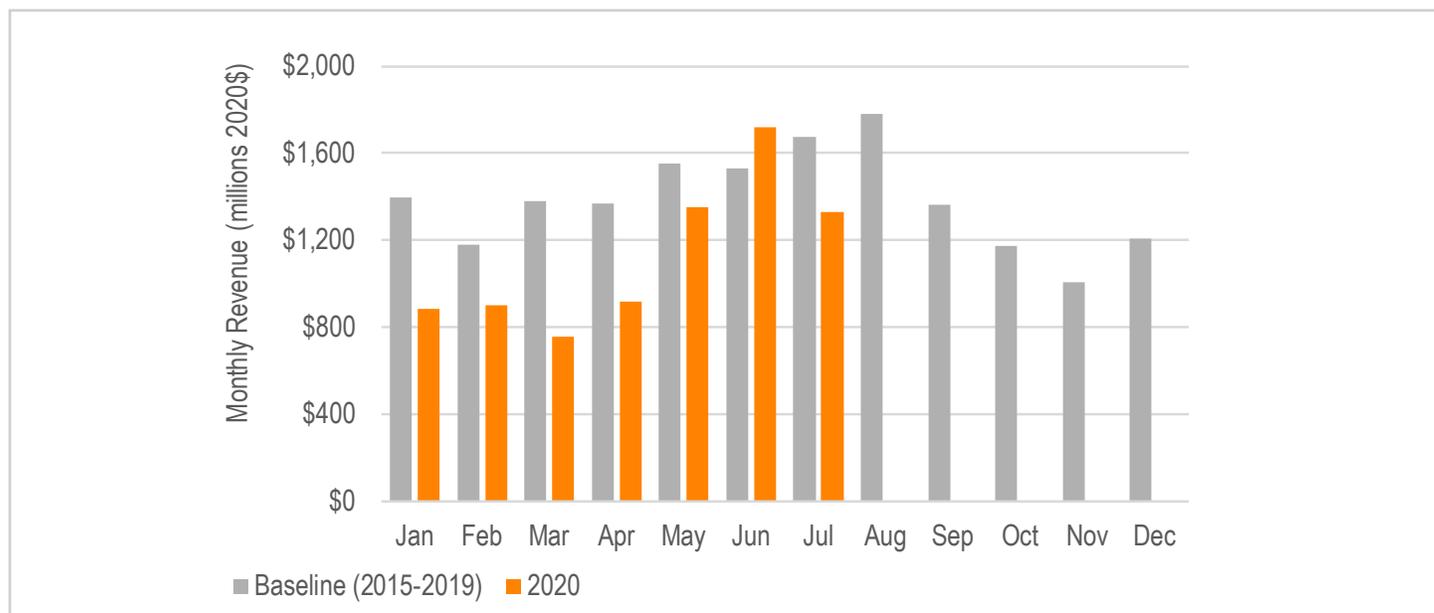


Figure 2. Monthly Hawai‘i other (non-longline) commercial fisheries landings revenue, 2020 relative to 2015-2019 (Inflation-adjusted, 2020 dollars).

Preliminary Hawai‘i other (non-longline) commercial fishery revenues (March-July 2020) experienced an approximate 20% decline relative to the 5-year baseline (2015-2019) for the months of March-July. Preliminary cumulative 2020 fishery revenues March through

July 2020 are approximately \$1.4 million below the 5-year baseline for this period (March-July). There have been notable reductions in active fishers and seafood dealers, on account of COVID-19 impacts and restrictions.

Table 3. Hawai'i Other (Non-Longline) Commercial Fisheries Performance: Percentage Change, 2020 compared to Baseline (2015-2019).*

Month	Revenues	Landings	Prices	Fishers**	Dealers**
March	-45.0	-46.0	+2.0	-33.4	-16.9
April	-32.8	-16.8	-19.2	-42.7	-37.4
May	-12.9	-6.8	-6.5	-41.0	-28.7
June	+12.3	+2.9	+9.2	-34.2	-33.6
July	-20.5	-17.3	-3.9	-41.9	-34.7
Average (March-July)	-19.7	-16.8	-3.7	-38.7	-30.2

* Source: State of Hawai'i Division of Aquatic Resources, 2020 data are preliminary (as of 9/11/20).

** Number of unique fishers submitting commercial reports, number of unique dealers submitting dealer reports.

These fishers (along with thousands of non-commercial fishers) play vital roles in supporting local food systems, nutrition, food security, and community social cohesion.¹² This importance is amplified in the face of natural disasters and human health crises. A public Facebook group *Hawai'i Fishers Feeding Families* was established in mid-April to promote fisher contributions to local food security. As of July, over 1,200 individual fishers have posted a cumulative estimate of over 10,500 pounds of fish that have helped to feed over 11,500 people across the State of Hawai'i.

Seafood Dealers/Processors

The Hawai'i longline fishery supplies ice-chilled, high quality fresh fish that seafood dealers and processors distribute to Hawai'i and U.S. mainland foodservice and retail markets. The Hawai'i seafood industry produces over 80% of U.S. domestic landings of bigeye and yellowfin tuna and 55% of the Nation's domestic supply of swordfish. There are around 1,000 workers in the State of Hawai'i (directly) employed in wholesale seafood and supply businesses and thousands (indirectly) employed in local restaurants supplied by Hawai'i commercial fisheries. As shown in previous tables, between March and July 2020 there were approximately 30% fewer active dealers in the State of Hawai'i relative to the 5-year baseline (2015-2019) for the months of March-July.

The Hawai'i seafood market was hit extremely hard beginning in mid-March.¹³ Beginning March 15, vessel landing limits and daily target total volume restrictions have been imposed by the Hawai'i Longline Association (HLA) and the United Fishing Agency (UFA) auction, and these restrictions hold to date. The Hawai'i longline fishery is Hawai'i's largest food producing industry and severely reduced supply has important food security considerations.

Current challenges for the industry are similar to those outlined in the early days of the COVID-19 shock and involve matching fishery supply with local consumer retail demand as fresh air freight for all seafood products is limited, reducing US mainland market access. In an effort to mitigate low prices, more than one processor has begun direct marketing in an effort to generate cash flow and move product. An additional concern is competition with cheaper frozen import product inventories, and with no disruption

to ocean shipping channels, this poses a significant short term challenge due to price competition in local retail markets, as local communities endure harsh economic conditions and dramatic increases in statewide unemployment stressing food budgets.

The Western Pacific Fishery Management Council (WPFMC) undertook communications¹⁴ with Hawai'i seafood dealers and processors during the months of May and June. Approximately 28 businesses engaged in these communications. A majority (86%) experienced negative revenue impacts in the first quarter of 2020, ranging from -5% to -95%, with an average of -43%. Over 72% of businesses reduced their workforce in the past year, with an average of 35% staff reduction (47 workers, with a minimum of two and maximum of 140). A combined 80% indicated that the COVID-19 pandemic has been somewhat, substantially, or completely responsible for these losses. Seafood businesses whose most important customers were restaurants experienced the greatest average loss of employees, followed by businesses whose most important customers were retail establishments, and then businesses whose most important customers were distributors. A majority expect negative impacts for the remaining quarters of 2020, in the -25% to -75% range.

As stated by one representative, "COVID 19, combined with the effects of the Hawai'i travel quarantine, has almost destroyed our business, it's been extremely impactful and making it hard for all of us [in the seafood industry] to survive."

The top COVID-19 related factors affecting business for seafood dealers/processors continue to be:

- Reduced demand across all markets (mainland and Hawai'i; retail and particularly restaurants).
- Managing inventory (decreasing storage capacity for fresh local product).
- Shipping/distribution constraints - reduction in air cargo capacity as airlines have limited flights.

Charter/For-Hire Impacts

As the only state in the U.S. where marlin and other trophy billfish can be reliably caught year-round, Hawai'i is well known among serious anglers as a destination for big game fishing trips. Although Kailua-Kona (Big Island) draws in many return and regular patrons with its world renowned tournaments, historical harbor and promises of trophy fish, for the most part, Hawai'i's charter operations host first-time patrons visiting the state. The Hawai'i charter/for-hire industry has been effectively closed for business as of mid-March on account of social distancing mandates, stay-at-home orders, drastic reduction in visitor numbers,¹⁵ visitor quarantine mandates, and suspension of harbor operations and commercial ocean activities, including tournaments.¹⁶ Charter/for-hire permit restrictions were relaxed in late-May/early June, but social distancing and tourism restrictions have precluded any industry rebound to date.

Preliminary estimates of reported charter fishing trips for the month of March were down 66% relative to the baseline of 2015-2019. Approximately 39 charter/for-hire fishing trips were reported statewide between April and July 2020, a 99.3% decline from the cumulative average of 3,200 trips taken during this time period, using the baseline of 2015-2019. The 2020 Hawai'i International Billfish Tournament (HIBT) was cancelled due to COVID-19, and several local tournaments scheduled between March and July were also cancelled. The 2020 Hawai'i Marlin Tournament series has been held as scheduled (it began in early July), but with significant reductions in participation from previous years (about one-third of traditional participation levels).¹⁷

To date, COVID-19 and the restrictions in place to mitigate spread have imposed catastrophic financial burden on charter operators in Hawai'i and deprive the state of significant economic contributions through supporting industries,¹⁸ the scientific community of valuable tagging data, and many operators indicate the viability of the operations in the near future is highly uncertain.

American Samoa

American Samoa implemented strict protective measures to prevent the spread of the novel coronavirus including social distancing and cancellation of public gatherings associated with a public emergency declaration (March 18), and island-wide stay-at-home work-at-home order (March 24). Businesses have been subject to a curfew, and restaurants, bars and nightclubs, which are primary destinations for island seafood can serve only 10 or fewer customers, leading many to shut down entirely, unable to cover payroll, rent, utilities, and other fixed costs. Perhaps most significantly, on March 30, all flights between Hawai'i and American Samoa were suspended for 30 days,¹⁹ and these flight restrictions have been extended and broadened, resulting in no commercial flights, so the island is effectively closed. As of July, there are no reported positive cases of COVID-19 in American Samoa.

The American Samoa Government imposed a 15-day quarantine on foreign vessels that have visited other ports, met up with another vessel, or fueled via a tanker. These vessels supply the StarKist Samoa cannery. Cannery staff and stevedores are allowed onboard to offload product, but the crew are not allowed to depart vessels. The Department of Health has maintained diligence to ensure crew are safe and limiting exposure to local populations. Given ongoing travel restrictions many skippers and crews have not been able to return home for over 6 months.

Commercial Fishing Impacts

PURSE SEINE FISHERY

In 2020, there have been 24 active purse seine fishing vessels delivering product to the StarKist Samoa cannery in American Samoa. Due to ongoing travel restrictions, these operations are under continued strain maintaining morale for skippers and crew facing long onboard confinement. While observer requirements continue to be waived on a case-by-case basis, a significant operational cost borne by industry was the repatriation of fishery observers. Concerns expressed in March by Bill Gibbons-Fly, executive director of the American Tunaboat Association (ATA) which represents the U.S. Pacific tuna purse-seine fleet, continue to date, "The increasing travel constraints throughout the Pacific are complicating efforts to get crew, repair parts, technicians and supplies to boats in a timely fashion". Operational difficulties associated with COVID-19 restrictions such as limited at-sea transshipment, inability to change

crews and conduct routine maintenance, quarantine periods associated with port calls, on top of other factors (low prices [particularly March-June]²⁰ and fully utilized high seas allocation) will likely negatively impact fishery effort and performance.

LONGLINE FISHERY

The American Samoa longline fishery operates out of Pago Pago, American Samoa. In 2019, there were 17 active vessels that took approximately 100 trips, landing approximately 3 million pounds valued at about \$4 million. The primary target is albacore tuna and the fishery delivers primarily to StarKist Samoa.

The months of May through July are typically the most productive season for this fishery. The fishery has faced significant economic struggles in recent years,²¹ but preliminary 2020 estimates would suggest that despite some reductions in the number of active vessels in 2020, fishery performance appears to mirror 2019. However, local fisheries experts observed that the longline fleet has struggled to recruit fishing crew. Many of the fishing crew originate from Apia in Western Samoa, and travel restrictions have prevented international workers from returning to American Samoa. Some longline boats have adapted by sharing crew members.

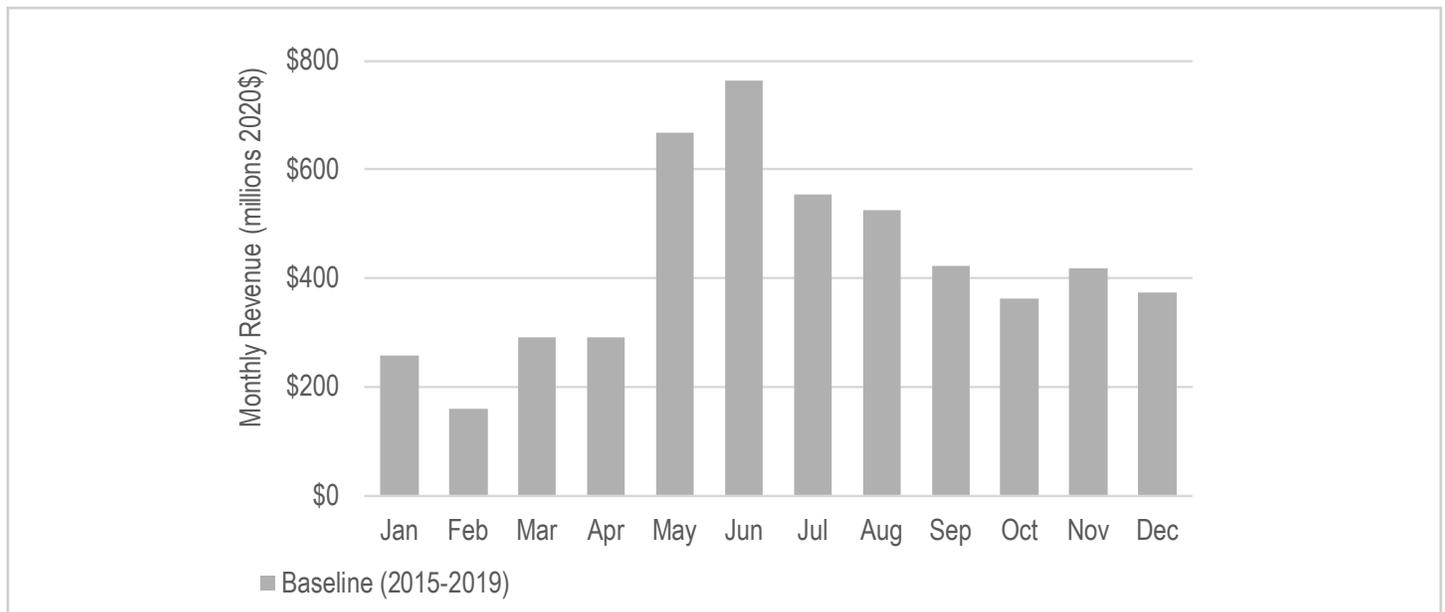


Figure 3. American Samoa longline average monthly fishery revenues: 2015 - 2019 (Inflation adjusted to 2018 dollars).

OTHER COMMERCIAL FISHERIES

American Samoa alia and small boat fisheries are a mix of subsistence, cultural, recreational, and quasi-commercial fishers. Fish and fishing are an integral part of the culture and important component of the social fabric in American Samoa. In addition to social importance, most fishers consider the fish they catch to be an important source of food for their families. Fishing is critically important in terms of building and maintaining social and community networks, perpetuating fishing traditions, and providing fish to local communities as a source of food security. During the baseline period of 2015-2019, average annual commercial fishery revenues for American Samoa other commercial fisheries was approximately \$339 thousand.²²

A group of local fishing experts reported that, in spite of COVID-19, part-time alia and small boat fishing has continued as normal, including sports fishing events. They also confirmed that strong cultural traditions of sharing and resource distribution as a source of community resilience have mitigated any effects of private sector job loss.

Seafood Dealers/Processors

StarKist Samoa, the largest local private employer on island with about 2,000 workers, has received exempt status from the American Samoa Governor's emergency declarations, allowing it to maintain operations, given it operates evening and sometimes weekend shifts.²³ While fish supply has remained steady, given contributions from U.S. and foreign purse seine vessels, and the plant has been operating at full capacity, keeping up with demand has been challenging and the cannery has faced numerous challenges due to COVID-19 restrictions. Flight restrictions to and from American Samoa have increased the cost of airfreight for the cannery. Additionally, flight restrictions have hampered plant maintenance projects, constrained professional service contracts, and disrupted new recruitment for cannery workers. Despite these challenges, StarKist Samoa continues to play a vital role in the U.S. food supply chain with average annual canned tuna exports to the United States of approximately \$400 million per year, in recent years.²⁴ The risk of COVID-19

to cannery operations cannot be overstated as any positive cases in American Samoa would likely put cannery operations at significant risk, jeopardizing the American Samoa economy and U.S. seafood supply chain.

Commonwealth of the Northern Mariana Islands

The Commonwealth of the Northern Mariana Islands (CNMI) implemented strict protective measures to prevent the spread of the novel coronavirus including, social distancing and cancellation of public gatherings associated with a public emergency declaration coupled with a stay-at-home work-at-home order (March 17),²⁵ and all inbound travelers, including returning residents are required to undergo a 14-day quarantine (March 23).²⁶

Tourism is by far the largest industry in the CNMI and COVID-19 impacts began in February, with 11 major hotels collectively reporting the lowest occupancy rates ever recorded at less than 20%. Hotels started the planning stage of laying off employees, closing entire wings, closing restaurants, and suspending contracts for outsourced services.²⁷ March 2020 visitor arrivals were down 85% from last year and tourism was effectively shut down in recent months due to flight suspensions for all non-residents. This loss of livelihood, coupled with federal immigration work visa policies, has led to significant out-migration of international workers from the Philippines, the Marshall Islands, and the Federated States of Micronesia (FSM). As of July 1, the Marianas Visitors Authority has outlined procedures²⁸ that would allow non-resident visitors to avoid a 14-day quarantine, a first step to rebuilding tourism in the islands.

A recent survey conducted by the Saipan Chamber of Commerce²⁹ found that 55% of responding businesses have either made large operational reductions or are temporarily closed; 72% have either reduced staff or decreased hours; 40% have had to reduce over a quarter of their total staff; 79% have seen a reduction in revenue for more than four weeks; and 47% have potentially lost more than \$100,000 in revenue due to COVID-19 and the economic downturn.

In response to this drastic and dramatic decline in tourists, the CNMI government implemented austerity measures to balance projected budget shortfalls, which among other measures include 16-hour cuts (shift to a 64 hour bi-weekly work schedule) for government employees.³⁰ The first two confirmed positive cases for COVID-19 in the CNMI occurred on March 29. Since then there have been 59 COVID-19 cases, half of which were detected in people arriving from outside CNMI.

CNMI small boat fisheries are a mix of subsistence, cultural, recreational, and quasi-commercial fishers. Fish and fishing are an integral part of the culture and important component of the social fabric in the CNMI. In addition to social importance, most fishers consider the fish they catch to be an important source of food for their families. Fishing is critically important in terms of building and maintaining social and community networks, perpetuating fishing traditions, and providing fish to local communities as a source of food security.³¹ During the baseline period of 2015-2019, average annual commercial fishery revenues for CNMI fisheries were approximately \$686 thousand.³²

In considering COVID-19 impacts to the CNMI fishing community, the Saipan Fishermen's Association cancelled their annual Mahimahi Fishing Derby scheduled for March 28. In response to the first two positive cases, one of which had travelled to Tinian, on March 30 the Tinian government implemented a "sunset-to-sunrise" curfew and closed the harbor to recreational and commercial fishing.³³ This restriction was also enforced in Saipan and effectively shut down night-time spear and bottom fishing. The following day, fishing outside the reef was also banned, and all but one boat ramp was closed so that fishing activities could be closely monitored. This shut down the small boat pelagic fisheries. This also effectively shut down the fresh fish market. The community petitioned to relax the restrictions on fishing, and in April and May changes were made to the curfew, and boat ramp access which has allowed for fishing again.

COVID-19 regulations have had a sudden and severe impact on fishing in CNMI. While access to fishing has returned, the market for fresh fish, which relied heavily on a tourism economy, has been greatly reduced with low demand. The majority of fresh fish available to the population now come from people who fish for themselves or their family.

Guam

Guam implemented strict protective measures to prevent the spread of the novel coronavirus, including social distancing, cancellation of public gatherings, public emergency declaration (March 14), an island-wide stay-at-home work-at-home order, and closure of non-essential businesses (March 19).³⁴ Tourism impacts began in February, with major hotels experiencing roughly 30% reductions in occupancy rates.³⁵ March arrivals were down nearly 77% relative to 2019, creating significant economic hardships. Reopening of travel to Guam from the countries of Japan, South Korea, and Taiwan (originally scheduled for July 1) has been postponed until further notice. Military personnel movement and patronage of restaurants and bars has also been restricted intermittently.³⁶

Guam small boat fisheries are a mix of subsistence, cultural, recreational, and quasi-commercial fishers. Fish and fishing are an integral part of the culture and important component of the social fabric on Guam. In addition to social importance, most fishers consider the fish they catch to be an important source of food for their families. Fishing is critically important in terms of building and

maintaining social and community networks, perpetuating fishing traditions, and providing fish to local communities as a source of food security.³⁷ During the baseline period of 2015-2019, average annual commercial fishery revenues for Guam were approximately \$550 thousand.³⁸

The Guam Fishermen's Cooperative Association (GFCA) is a central component of Guam's contemporary fishing industry that continues to pursue and broaden its original mission of providing marketing services, fuel, and ice for its small-boat fishermen members. Organized in 1976, GFCA's influence has become pervasive, providing a variety of benefits not just to its members, but for fisheries conservation, marine education, and the greater Guam community.³⁹ Amid coronavirus concerns, the GFCA remains open to support fishers and provide seafood to the local community, whose restaurant options for fresh fish have dwindled. Stay-at-home measures, however, have had negative impacts on GFCA operations due to a limited customer base.

The GFCA has reported a 70-80% decline in sales due to declines in tourism, tough economic conditions, and a shift in local consumers' preferences away from fresh product toward emergency supplies. Additionally, the timing of Guam's SCUBA spearfishing ban coincided with the start of COVID-19 impacts, limiting reef fish availability for the GFCA until the start of the bottomfish season. The GFCA is currently selling more non-traditional products, including tilapia and shrimp. Concerns about NOAA's discontinued bio-sampling and commercial receipt data collection arose during discussions with the GFCA, given their provision of key insights into COVID-19 impacts to Guam's fisheries and fishing community.

Discussions with members of the local fishing community indicate that the charter fishing industry has been mostly shut down since March. However, charter businesses and their employees have maintained their credentials and boat basin infrastructure at personal expense (e.g. drug tests, licenses, registration, harbor slips).

Observations from local fishers and business owners indicate that older fishers' (50-60+ years old) participation has declined during the pandemic given health concerns. This has implications for local seafood supply, given this age group's association with the regular provision of fresh seafood to Guam and more frequent fishing trips. Discussions suggest that younger fishers have sustained participation better than their older counterparts, but tend to fish less frequently. Logistical considerations for fishing activity have also shifted given COVID-19 concerns. One fisher described creating a "bubble" with 1-2 consistent fishing partners, gathering fishing supplies on fewer, more intentional trips to local shops, and embarking on fewer fishing trips lasting all day to maximize catch.

Overall, however, discussants from Guam's fisheries described an increase in fishing participation, given that many other activities have been classified non-essential. One discussant described inconsistencies between local government and enforcement officers' understanding of the essential classification of subsistence fishing. Given gathering restrictions and health concerns, the sharing of seafood has become less tied to community socializing. Instead, discussants described fishers prioritizing the food security of close family and friends, with remaining catch used for bartering or sale, for example, at the GFCA. Fishing has thus provided a mechanism for resilience during the pandemic.

A discussion with a Hagåtña restaurant owner revealed challenges in acquiring local fresh fish as quasi-commercial fishers prioritize fish for their close family and friends, and commercial fishers seek alternative sources of income. The discussant noted high hotel vacancy rates and closing restaurants which have made it difficult for commercial fishers to sell their catch. The discussant described her restaurant's revenues declining by 50-75%, with less than half of the original restaurant staff still actively working. The type of fish available has also changed. Where before tuna, mahimahi, marlin, and wahoo were commonly purchased from local fishers, now many fishers are focusing on bottomfish, perhaps for their high comparative market value. The restaurant owner estimated that fishing revenues are at an all-time low, despite that fishing activity has increased overall.

Social Impacts

In addition to the concern facing the rest of the United States over the strain COVID-19 will bring to the health care system, the Pacific Islands Region experiences a number of unique concerns. Residents tend to live in large, crowded, multi-generational households⁴⁰ with a higher proportion of older residents than most other states,⁴¹ placing the population in the region at higher risk. In addition, extended families are often spread throughout the region, which includes many remote island-based communities where medical facilities are limited. In American Samoa, arriving passengers from one flight on 3/26/2020 filled the capacity of their health care center and resulted in a halt on passenger travel between Honolulu and Pago Pago.⁴² Airlines have significantly limited flights across the Pacific Islands Region. As time progresses, increasing travel restrictions are forcing individuals into indefinite periods of separation from loved ones causing significant added anxiety. The fishing communities (both commercial and non-commercial) in the Pacific Islands Region play a vital role in supporting local food systems, nutrition, food security, and supporting community social cohesion. This importance is amplified in the face of natural disasters and human health crises, and fishing communities are adapting their operations to be able to continue these crucial functions in the face of unprecedented disruptions and increasing isolation.

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U.S. Secretary of Commerce
Wilbur Ross

Acting Under Secretary of Commerce
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January 2021

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NOAA Fisheries Coronavirus (COVID-19) Update

For more information, visit:

<https://www.fisheries.noaa.gov/national/noaa-fisheries-coronavirus-covid-19-update>



NOAA
FISHERIES

In April 2020, NOAA Fisheries prepared its first national report on the regional impacts of COVID-19 on the commercial, recreational and aquaculture sectors. This report updates that initial assessment, capturing economic changes experienced by the fishing industry as the country began its phased reopening along with infusion of Federal funding through the CARES Act. NOAA Fisheries will continue to use this information to identify economic hardship where it exists and identify pathways for enhancing the resilience of the U.S. seafood and fisheries industries.

Northeast Snapshot, January-June 2020



Northeast Fisheries Impacts from COVID-19

Commercial Fisheries Landings Trends and Impacts through June 2020

From 2015 to 2019 an average of approximately 13,500 commercial fishing vessels operated in the Northeast region, accounting for an average of \$1.82 billion in ex-vessel revenue. Of these vessels, about 3,400 held permits issued by the Greater Atlantic Regional Fisheries Office (GARFO), which accounted for 69% of region-wide harvest revenue while the remaining 31% of regional fishing revenue was landed by 10,100 vessels that either fished in state waters or fished in the EEZ for species that are not regulated by a Federal Fishery Management Plan (FMP) or held federal permits for Highly Migratory Species (HMS) (e.g. tunas, swordfish, and sharks) that are not issued by GARFO. The Northeast has a variety of commercial fisheries, with lobsters and scallops alone averaging just over \$1 billion (64%) of total landings revenue from 2015 to 2019 (see Figure 1). Important fisheries for blue crab, squids, groundfish, menhaden, surfclams, ocean quahogs, summer flounder, black sea bass, scup, monkfish, and Jonah crab accounted for an additional \$392 million. These fisheries combined with lobster and scallops accounted for an average of 86% of landings revenue.

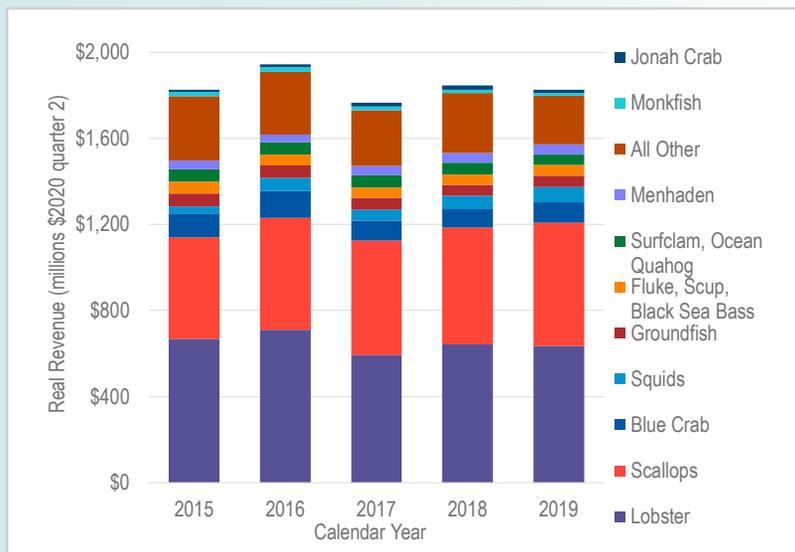
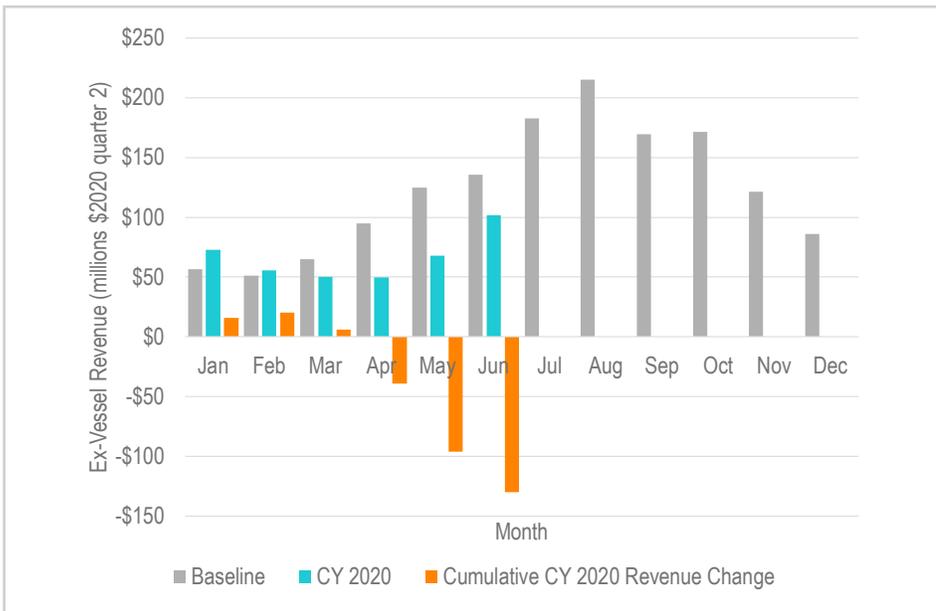


Figure 1. Inflation adjusted ex-vessel revenue for the top 10 Northeast region fisheries.

Although most Northeast fisheries are prosecuted year-round, there are seasonal differences among fisheries that have implications for the timing and magnitude of potential market disruptions resulting from COVID-19. For many fisheries, 40 to 60% of annual revenue is earned during the months from January to June. Figure 2 plots the 2015-2019 January-Dec baseline monthly average revenue from lobster and species that are regulated by the Regional Councils (New England and Mid-Atlantic) and 2020 Jan-Jun revenues.¹ Calendar year 2020 revenues exceeded baseline revenue during January and February but have been below baseline March to June for a cumulative difference of -\$126 million. The majority of the cumulative reduction in 2020 revenues occurred in April and May (70%) of which \$79 million was associated with reduced revenue from American lobster (\$21 million) and sea scallops (\$58 million) (see Figure 3). The reduction in sea scallop revenue was partly due to a 17% reduction in the scallop quota from 2019 levels that took effect at the start of the scallop fishing year on April 1, 2020. Based on 2015-2019 average share of landings for April (10.7%) and May (15.4%) expected 2020 landings for a 51.6 million pound quota would be 5.5 and 7.9 million pounds in April and May respectively. Actual landings were 4.4 million pounds in April and 5.3 million pounds in May for an aggregate reduction of 3.7 million pounds. Note that June scallop landings were 7.3 million pounds, which is nearly equal to what would be expected based on 14% of a 51.6 million pound quota and is similar to the baseline average landings for June. However, June scallop prices were nearly 13% below the 2015-2019 average resulting in 2020 June revenues \$8.7 million below baseline. In fact, lower prices have been a general trend for many species throughout the Northeast region.



Across nearly all species, month over month prices have been well below baseline 2015-2019 prices (see Figure 4) even as landings have been down. For example, lobster prices were initially 13% above baseline average prices in January but declined by 39.6% to \$4.82 per pound in March, 2020 compared to an average of \$7.99 per pound during March, 2015-2019. In June 2020 the average price per pound fell to \$3.82 from a 2015-2019 June price of \$5.29 per pound. Surfclam and ocean quahog prices per bushel were one of the few species where 2020 prices have remained at or slightly above 2015-2019 baseline prices.

Figure 2. Ex-vessel monthly revenue for the baseline (2015-2019), CY2020, and the cumulative CY2020 revenue change.

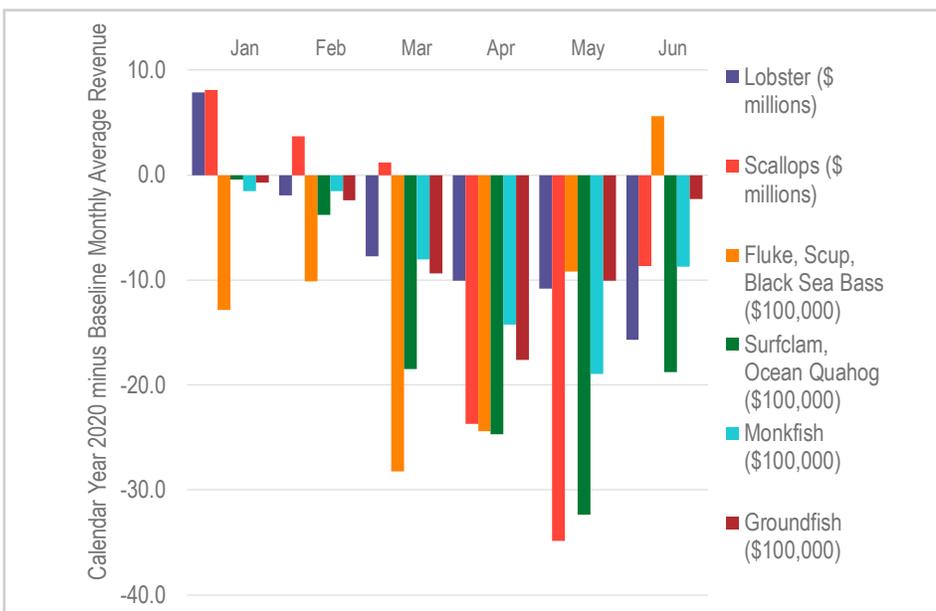


Figure 3. CY2020 monthly revenue minus the baseline monthly average monthly revenue.

The general decline in landings and prices, hence revenues has affected the number of federally permitted vessels that have landed fish with a federally permitted dealer in the Northeast region. During 2015-2019, the number of vessels was at its lowest during February (1,314) then increased through July to 2,657 vessels before tapering off throughout the rest of the year. The number of vessels reporting sales through a Northeast region dealer was above the 2015-2019 baseline average in both January and February but began to fall to 15.3% below the baseline in March and continued to run about 25% below the baseline in both April and May (see Figure 5). A survey was conducted to ascertain how commercial harvesters may have been affected by COVID-19. Key findings from that survey are as follows:

83% OF COMMERCIAL HARVESTERS WERE AFFECTED BY THE COVID-19 PANDEMIC

- Fishing was the primary source of income for 63% of commercial harvesters. On average responding commercial harvester operators had owned a vessel for 32 years.
- Compared to business operations from January to June of 2019:
 - 17% had reduced the number of trips.
 - 14% had difficulty finding supplies.
 - 60% experienced lack of markets; low prices; limited access to marinas.
- 78% of commercial harvest operators stopped fishing for some period of time.
 - 21% stopped fishing for less than 1 month.
 - 48% stopped fishing for 1 to 3 months.
 - 11% stopped fishing for more than 3 months.
 - 15% had stopped fishing indefinitely with plans to resume.
 - Less than 1% had gone out of business.
- On average, responding commercial harvester operators are operating at 50% of trips compared to June/July of 2019.
- 76% of responding commercial harvester operators had not reduced the number of employees.
- 91% of responding commercial harvester operators had reduced revenue, 3% had increased revenue.
 - Average reduction in revenue was 51%.
 - Average increase in revenue was 73%.

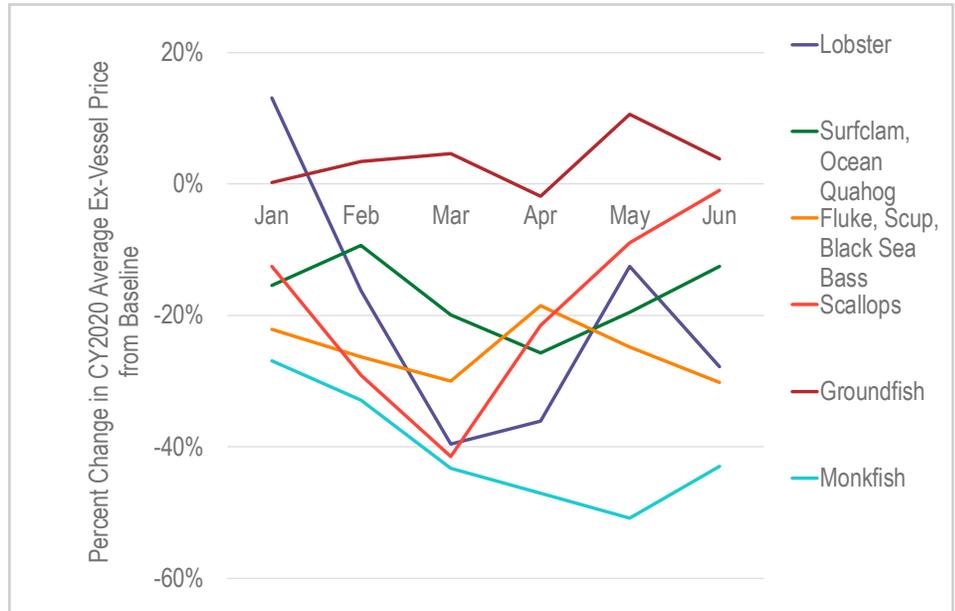


Figure 4. Percent change in CY2020 average ex-vessel price from baseline (2015-2019).

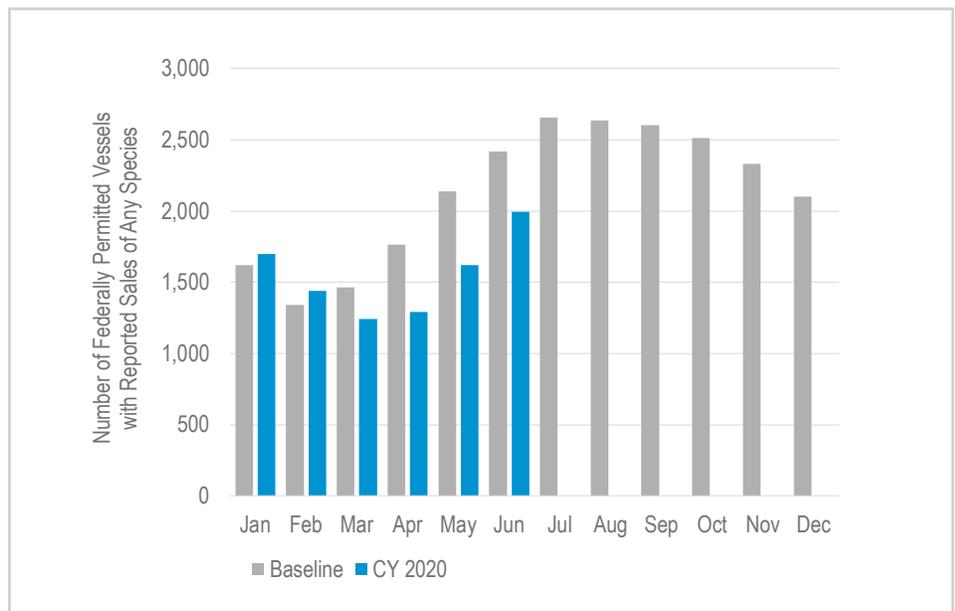


Figure 5. Number of federally permitted vessels with reported sales of any species.

The top three COVID-19 pandemic factors having the largest impact on the business were:

- Instructed not to fish by dealer/processor (30%).
- Low prices for fish (30%).
- Lack of markets or buyers (8%).

Seafood Dealers/Processors

During 2015-2019 an average 640 federally permitted seafood dealers reported purchase of fish and/or shellfish from a fishing vessel in the Northeast Region. Although some seafood products that are primarily exported have a high volume of exports (e.g., lobster and monkfish), much of the Northeast region's seafood product is consumed domestically. There are a mix of species that are primarily sold fresh to restaurants with limited processing, and these had sizable price and revenue declines due to closures of restaurants. Changes in seafood consumption habits have shifted to frozen shelf-stable products and value added processing to meet increased demand for preparation at home, which has been noted as a significant change in seafood consumption from away-from-home to at-home consumption. The changes in seafood wholesale and retail markets have resulted in a decline in the number of federally permitted dealers that have purchased seafood by a month-over-month average of nearly 11% from January to June 2020 compared to 2015-2019 baseline January to June monthly average (see Figure 6).

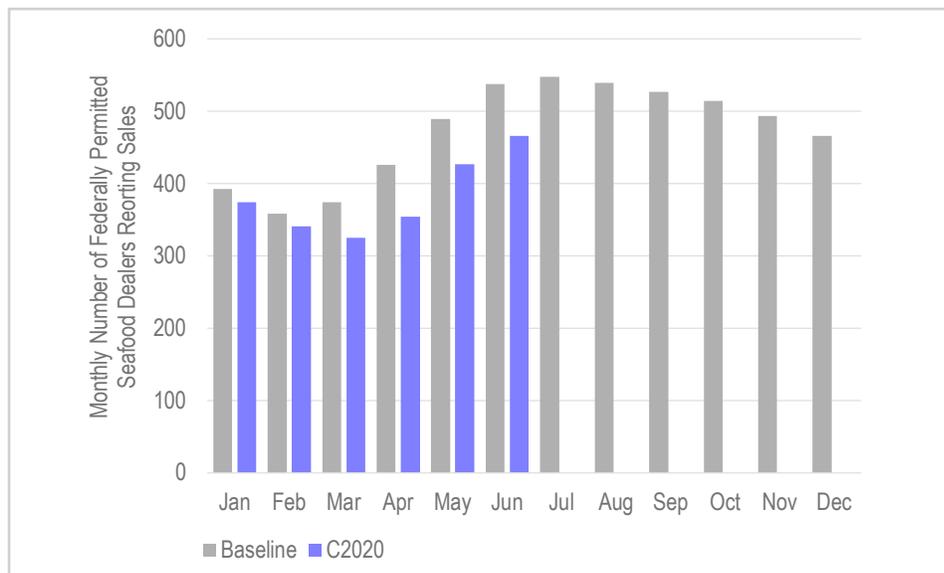


Figure 6. Monthly number of federally permitted seafood dealers reporting sales for January to June 2020, as compared to baseline monthly averages (2015-2019).

NOAA Fisheries conducted a survey of seafood dealers to ascertain the impacts of the COVID-19 pandemic on business operations over the January to June, 2020 period. Key findings from that survey are as follows:

SEAFOOD DEALER/PROCESSORS — 91% OF RESPONDENTS WERE IMPACTED

- Most common impacts were:
 - Reduced operations or business hours (35%).
 - Reduced sales to restaurants, retail, or grocery stores (35%).
- 35% of dealer/processors closed their business operations for some period of time.
 - 29% were closed for less than 1 month.
 - 48% were closed for 1 to 3 months.
 - 6% were closed for more than 3 months.
 - 16% have closed indefinitely with plans to reopen.
- On average, responding dealer/processors were operating at 58% of business activity compared to June/July of 2019.
- Average number of on-site employees was 15. 37% of businesses had reduced the number of on-site employees by an average of 3 people. By contrast, 10% of businesses increased the number of employees by an average of 10 people.
- 85% of dealer/processors reported reduced sales since January 2020 while 8% reported increased sales.
 - Of those having increased sales, revenues increased an average of 15%.
 - Of those with reduced sales, revenues decreased by an average of 44%.

The top three COVID-19 pandemic factors having the largest impact on the business were:

- Dealer/processors listed low seafood prices (29%).
- Loss of markets or buyers (19%).
- Loss of employees (12%).

Recreational Fishing — For-Hire

The recreational for-hire sector in the Northeast region includes a range of services from trips that carry six or fewer passengers that may focus on large game (e.g., tunas or sharks) or small game (e.g., bluefish or striped bass), to operations that carry a large number of anglers that focus on bottom fishing for species such as groundfish, black sea bass, scup, and summer flounder. During 2015 to 2019 for-hire operators in the New England and Mid-Atlantic regions combined collected passenger fees averaging \$123.5 million (2020 \$) providing recreational fishing services on an average of 1.2 million angler trips. Of these angler trips 888 thousand (73%) were taken in Mid-Atlantic states from NY to VA and 315 thousand angler trips were taken in the New England region.² Demand for party/charter services is seasonal with the majority of trips taken from May to August in both New England (84%) and Mid-Atlantic MRIP regions (74%) although the season is longer in the Mid-Atlantic (see Figure 7).

Given the close proximity within which for-hire recreational fishing occurs and guidance for social distancing had a large effect on angler trips as restrictions on gathering and closures of non-essential business were implemented in New England and Mid-Atlantic states particularly during March and lasting through much of May and into June for some states. The timing and relative severity of the restrictions on gatherings is measured as an index rating from 0 to 4 where 0 is no restrictions at all and 4 would be limitations of 5 to 10 or fewer (see Figure 8).³ With the exception of VA with an index value of 3, all other states were at a 2; allowing gatherings ranging from 50 to 250. By the end of March Maine

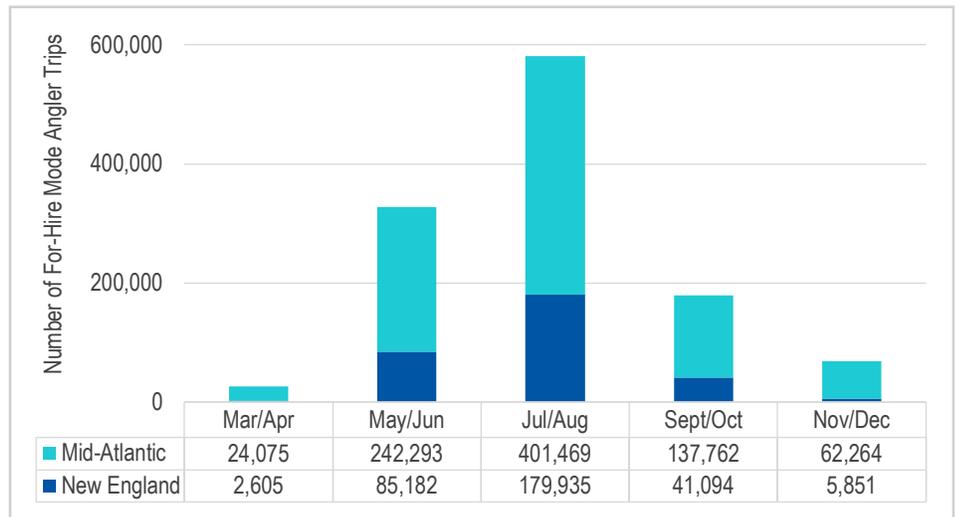


Figure 7. Average number of for-hire angler trips by wave for New England and Mid-Atlantic MRIP regions for a 2015 to 2019 baseline.

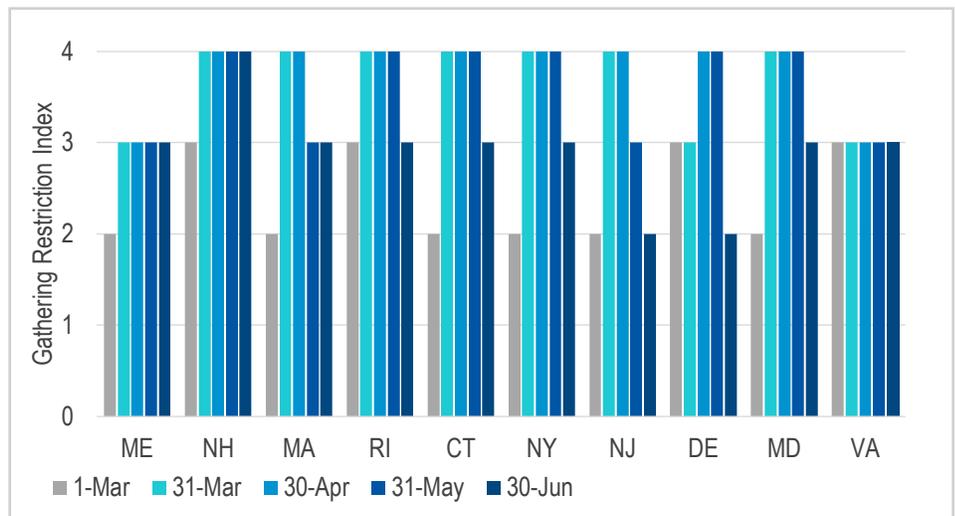


Figure 8. Gathering Restriction Index for March 1, 2020 and Index Value on the last day of the month for March to June, 2020.³

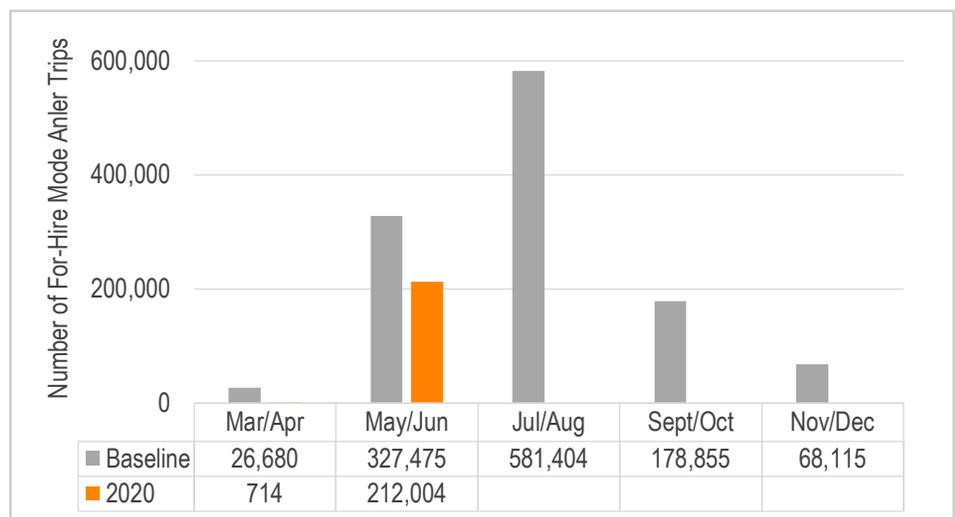


Figure 9. Number of for-hire angler trips taken during 2020 wave 2 and wave 3 compared to the baseline average (2015-2019).

and Virginia were at a 3 but all other states had implemented much more restrictive limits on gathering. In most states these limits remained in place during April and May with easing of restrictions in many states by the end of June.

Even though statewide restrictions may not necessarily apply to for-hire businesses specifically they may have a dampening impact on the demand for party/charter fishing trips. During wave 2 (March and April) when limits on gatherings were most restrictive the number of for-hire angler trips in the New England and Mid-Atlantic regions combined fell from a 2015-2019 baseline average of about 26.7 thousand to 714. (see Figure 9). With some easing of the restrictions on gatherings the number of for-hire angler trips during wave 3 (May and June) increased to 212 thousand but was still 35% lower than the baseline average of 327.5 thousand angler trips.

To obtain more information on impacts on the for-hire sector NOAA Fisheries conducted a survey of for-hire operators in the New England and Mid-Atlantic regions to get their perspectives on the impact of the response to COVID-19 has had on their business over the January to June, 2020 period compared to their business over the same period from 2019. Key for-hire interview findings include:

91% OF PARTY/CHARTER OPERATORS WERE AFFECTED BY THE COVID-19 PANDEMIC

- For 35% of responding fishing was their primary source of income.
- Compared to business operations from January to June of 2019:
 - 45% had reduced the number of trips.

13% had difficulty finding supplies.

- 6% had difficulty obtaining bait.
- 87% of responding party/charter operators stopped fishing for some period of time.
 - 9% stopped fishing for less than 1 month.
 - 63% stopped fishing for 1 to 3 months.
 - 11% stopped fishing for more than 3 months.
 - 16% had stopped fishing indefinitely with plans to resume.
 - 2% went out of business.
- On average party/charter operators are operating at 42% compared to June/July of 2019.
- 75% of responding party/charter operators had not reduced the number of employees.
- 87% of responding party/charter operators had reduced revenue.
 - Average reduction in revenue was 58%.

The top three COVID-19 pandemic factors having the largest impact on the business were:

- Restrictions by state and local governments (56%).
- Lack of passengers (7%).
- Loss of crew (6%).

Endnotes

- 1 Fisheries that take place exclusively in State waters, or nearly so, were excluded from Figure 2 because available data were incomplete.
- 2 All for-hire data were based on Marine Recreational Information Program (MRIP) regions, which includes North Carolina in the South Atlantic region. For this reason, trends and impacts on the for-hire sector in North Carolina are reported in the Southeast Region section of this report.
- 3 Source: Oxford Corona Virus Government Response Tracker (<https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker>).



U.S. Secretary of Commerce
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**NOAA
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In April 2020, NOAA Fisheries prepared its first national report on the regional impacts of COVID-19 on the commercial, recreational and aquaculture sectors. This report updates that initial assessment, capturing economic changes experienced by the fishing industry as the country began its phased reopening along with infusion of Federal funding through the CARES Act. NOAA Fisheries will continue to use this information to identify economic hardship where it exists and identify pathways for enhancing the resilience of the U.S. seafood and fisheries industries.

Atlantic Highly Migratory Species Fisheries Impacts from COVID-19

The Atlantic Highly Migratory Species (HMS) fishery is a high-value fishery comprised of seven key species and species groups: bluefin tuna, BAYS tunas (bigeye, albacore, yellowfin, and skipjack), swordfish and sharks. All of the HMS species/species groups are harvested year-round (within open seasons) but most species typically have lower average monthly landings revenue (\$1.8 million per month) from February through April as compared to other months (\$3.2 million per month) throughout the year. All high-end products, particularly bluefin, bigeye and yellowfin tunas, that are typically sold to restaurants suffered major price declines in March and April as restaurant restrictions were implemented domestically and air travel restrictions slowed global shipping of exports.

Commercial Fisheries Landings Trends and Impacts through July 2020

Overall, Atlantic HMS ex-vessel revenue was 11.4% lower in the first half of 2020 as compared to 2019. COVID-19 impacted landings starting in the second half of March and resulted in second quarter landings decreasing 36.3% as compared to 2019. To date, April experienced the steepest monthly decline in Atlantic HMS landings value with a 66% decrease as compared to April of 2019. Since the April low of \$439,000 in ex-vessel landings of Atlantic HMS, commercial landings have improved significantly. July landings exceeded \$3.1 million, but they were still 25% lower than landings for July of 2019.



Figure 1. Atlantic HMS commercial landings (ex-vessel value).

In terms of species, bluefin tuna landings have been most impacted. April landings value declined by 69.2%, May landings value declined by 87.5%, June landings value declined by 49.1%, and July landings value declined by 57.4% as compared to the same months in 2019. This decline is primarily due to a decrease in demand for high end sushi and a decrease in the availability of shipping to the international market. The average ex-vessel price per pound dressed weight for bluefin tuna declined by 19.5% (\$5.30/lb compared to \$6.58/lb in 2019) in the second quarter of 2020 as compared to the second quarter of 2019. The average ex-vessel price per pound dressed weight for yellowfin tuna declined by 24.8% (\$3.17/lb compared to \$4.22/lb in 2019) in the second quarter of 2020 as compared to the second quarter of 2019. The average ex-vessel price per pound dressed weight for bigeye tuna declined by 2.8% (\$5.80/lb compared to \$5.96/lb in 2019) in the second quarter of 2020 as compared to the second quarter of 2019. However, the average ex-vessel price per pound dressed weight for swordfish increased by 20.2% (\$5.31/lb compared to \$4.41/lb in 2019) in the second quarter of 2020 as compared to the second quarter of 2019. There have been some indications that there has been an increase in demand for swordfish by the domestic retail market and some decreases in swordfish imports, which could have contributed to the price increase. Regardless of the price increase, the overall value of swordfish landings decreased 65.9% in April, 36.9% in May, and 12.0% in June as compared to those months in 2019. In July, the value of swordfish landings recovered substantially and far exceeded the weak July 2019 harvest.

Atlantic HMS Commercial Fleet

One high frequency indicator of fleet activity available to NOAA Fisheries is the number of hail outs reported by Vessel Monitoring Systems (VMS). VMS is required by vessels equipped with pelagic longline onboard; bottom longline vessels fishing off South Carolina, North Carolina, and Virginia from January through July 31st; gillnet vessels issued a directed shark limited access permit operating near the Southeast U.S. Monitoring Area from December to March 31; and purse seine vessels. The number of trips taken by the Atlantic HMS vessels equipped with VMS decreased by 54% in April. However, by May, vessels resumed taking trips that were comparable to 2019 levels and continued doing so for the remainder of the summer. However, the distance, length, and level of fishing effort were likely reduced as a result of the market shifts associated with COVID-19.

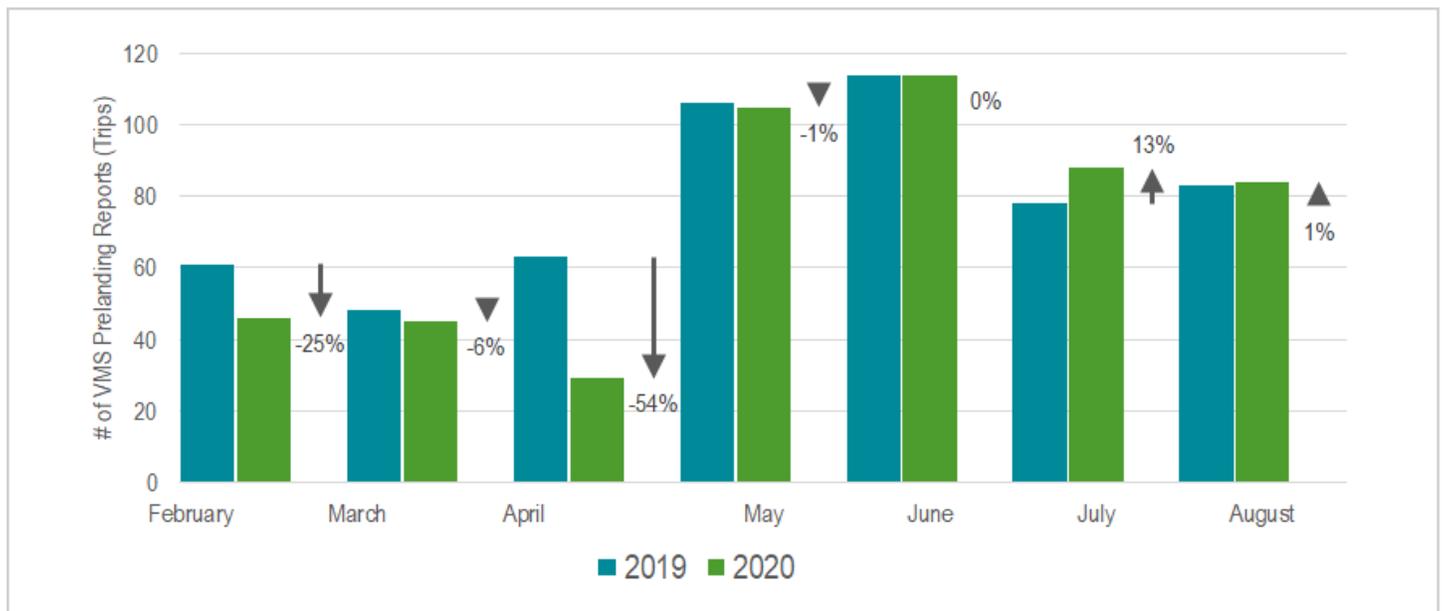


Figure 2. HMS commercial vessel activity (trips).*
 *Based on VMS hail outs for Atlantic HMS vessels.

Atlantic Pelagic Longline Fleet

Pelagic longline vessels are also required to report on each gear set via their VMS unit. That data can be used to measure the fishing effort of this fleet in real time. Effort in the Atlantic pelagic longline fleet decreased by 20% in March and by 63% in April as compared to the same months in 2019. By June, effort had recovered substantially and actually exceeded June 2019 effort by 4%. July effort was just 5% below 2019 and August was just 5% below 2019 effort levels.

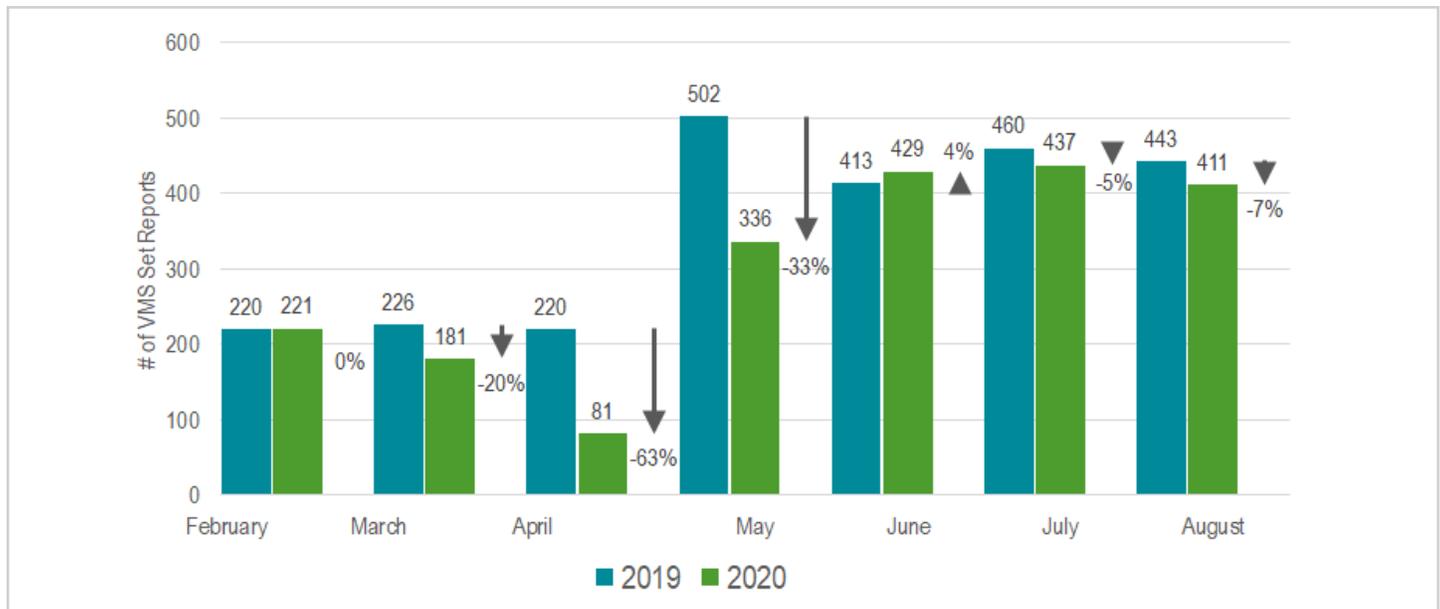


Figure 3. Pelagic longline fleet effort for 2020.

Seafood Dealers

While there were 153 seafood dealers that handled Atlantic HMS product in 2019, to date in 2020, there have been 150 dealers that handled Atlantic HMS product. There have only been two or three Atlantic HMS dealers that contacted the agency stating that they shut down due to COVID-19.

Recreational Fishing

CHARTER SECTOR

During the spring months when the COVID-19 pandemic first arose, the active HMS for-hire fishery was relegated to the South Atlantic and Gulf of Mexico, as is typical for that time of the year. The primary targets of the HMS for-hire fishery at this time of year include tuna and sailfish. Atlantic HMS staff contacted 24 HMS charter/headboat permit holders in the South Atlantic (n = 13) and Gulf of Mexico (n = 11) states in the month of April. Of those contacted, 100 percent reported that their business had been impacted by the COVID-19 pandemic and the associated closures and social-distancing measures put in place by their states, with 19 vessels reporting that all of their April bookings had been cancelled. On average, vessel captains reported that 97 percent of their April bookings had been cancelled. Most captains reported additional cancellations extending into May with four reporting cancellations into June. NOAA Port Agents also canvassed the Southeast for-hire industry in late March, and reported reductions in effort ranging from 80-100 percent by state. Approximately 63 percent of those captains interviewed reported having to lay off or reduce the hours of their staff, with reductions in hours averaging 95 percent. (Most employees of for-hire operations are fishing mates that are technically classified as 1099 employees or independent contractors.) Those captains that did not report laying off staff either did not have any, or kept what little staff they had on to assist with boat maintenance projects. For-hire operators cited hotel and restaurant closures as among the primary factors impacting their business.

TOURNAMENTS

A 2016 study conducted by NOAA Fisheries estimated that HMS tournaments conducted in the Atlantic, Gulf of Mexico, and the Caribbean contributed approximately \$129 million in annual economic impacts to the United States economy. Since 2009, an average of 259 HMS tournaments have registered with NOAA Fisheries each year. Atlantic HMS tournament registrations were almost unchanged in the first quarter of 2020 (24 versus 23 in 2019). Second quarter HMS tournament registrations were down 39.8% compared to 2019 (56 versus 93 in 2019). Overall, there are 24.9% fewer registered tournaments occurring through August 2020 compared to 2019 (151 versus 201). These numbers reflect the adjustments made for 8 tournaments that registered in 2020 but later reported cancelling their events and 5 postponements; however, it is likely additional events in the second quarter made such changes without reporting them to NOAA Fisheries. Compared to 2019, 50 fewer tournaments have been registered in 2020 through the month of August.

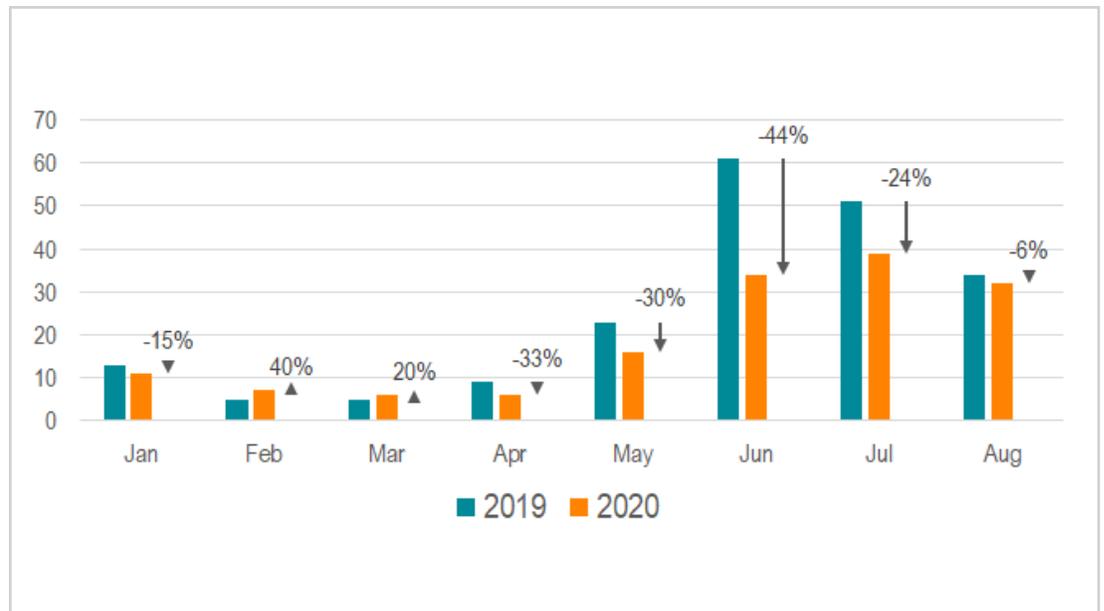


Figure 4. Number of Atlantic HMS tournament registrations.



U.S. Secretary of Commerce

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Southeast Snapshot, January-June 2020



Southeast Fisheries Impacts from COVID-19

Commercial Fisheries Landings Trends and Impacts through June 2020

From 2014 to 2018, approximately 10,000 commercial fishing vessels operated in the Southeast fisheries and landed products valued on average at \$1.1 billion annually. The top three commercial fisheries by landings revenue in the Gulf of Mexico are shrimp, oysters, and menhaden; the top fisheries by landings revenue in the South Atlantic Region are blue crab, shrimp, and snapper-grouper. Many of the participants in Southeast commercial fisheries are active year-round, reflecting the seasonality of these fisheries (see Figure 1). For the period March to May, which corresponds to the period in 2020 during which social distancing measures were first implemented and most restrictive, the shrimp fishery is somewhat less active than it is during other parts of the year, with 16% of annual shrimp landings revenue earned during this 3-month period. In contrast, 25% to 30% of black sea bass, blue crab, Eastern oysters, Gulf of Mexico reef fish and South Atlantic snapper-grouper landings revenue is earned during this period while 33% and 66% of deep-sea golden crab and dolphinfish-wahoo, respectively, is earned during this period.

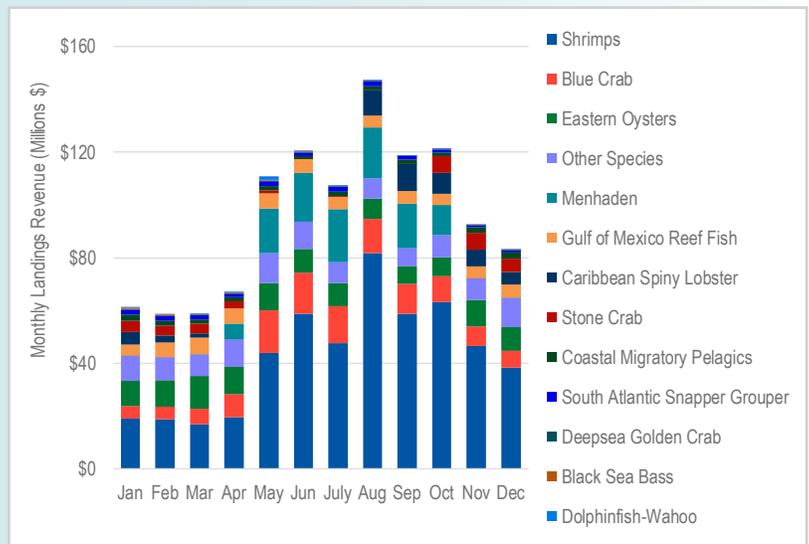


Figure 1. Southeast Average Monthly Landings Revenue for Species, 2014 to 2018.

To assess the effects of COVID-19 on Southeast commercial fisheries, 2019 and 2020 data were obtained from the SEFSC Commercial Landings Monitoring System. Note that these data are preliminary and representative of only selected federally-managed species. Due to incomplete data, some large Southeast fisheries, such as Eastern oysters, blue crab, shrimp, and menhaden, as well as landings reported to states are excluded from this analysis. In addition, a multitude of minor species are harvested by commercial operations in southeast waters which are not regulated by federal quotas and are also not included in this analysis.

Overall, the analysis of monthly landings revenue data for selected federally-managed species (excludes shrimp and menhaden) for January to June 2020 compared with 2019 for the same period indicates that landings revenue is down 23% for the first six months of 2020 relative to the same time period in 2019 (Figure 2). Landings revenue declined 11% in January and February relative to 2019 but then dropped sharply (36%) in March through May, with April experiencing the largest monthly decline (-48%) (Figure 3).

Table 1 summarizes impacts to ex-vessel landings revenues and average ex-vessel prices for the selected components of southeast commercial fisheries included in Figures 2 and 3 above. In the Gulf of Mexico, landings revenue of king mackerel increased by 12% in the first six months of 2020 relative to 2019 while landings revenue of king mackerel in the South Atlantic decreased 13%. Landings revenue of Spanish mackerel decreased significantly in both regions during March and April while average prices increased by 32% in the Gulf of Mexico and 15% in the South Atlantic. While landings of Spanish mackerel have not recovered in the Gulf, landings revenue in the South Atlantic sector increased by 50% in May and June 2020 relative to 2019, signaling that this sector is improving.

Some fisheries, however, incurred significant reductions in landings revenue in 2020. Historically, most landings of dolphinfish in the South Atlantic are recorded in May and June. Landings revenue of dolphinfish declined by 53% in May and June 2020 relative to 2019. It is not clear whether the fleet will be able to make up this shortfall in the remaining six months of 2020. In the South Atlantic Region, landings revenue in the black sea bass fishery and deep-sea golden crab fishery declined by 65% and 55%, respectively. Landings revenue in the commercially important yellowtail snapper fishery declined by 43% in the South Atlantic Region and 55% in the Gulf of Mexico. Landings revenue also significantly declined for several important Gulf of Mexico reef fish species not managed under an individual fishing quota (IFQ) program, such as greater amberjack (42%) and vermilion snapper (34%).

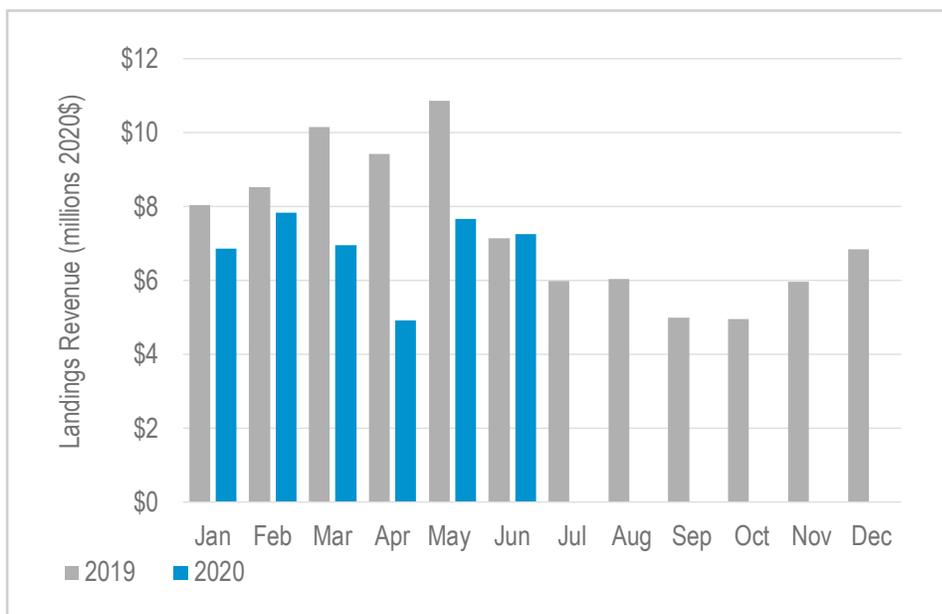


Figure 2. Southeast monthly landings revenue in 2019 and 2020.

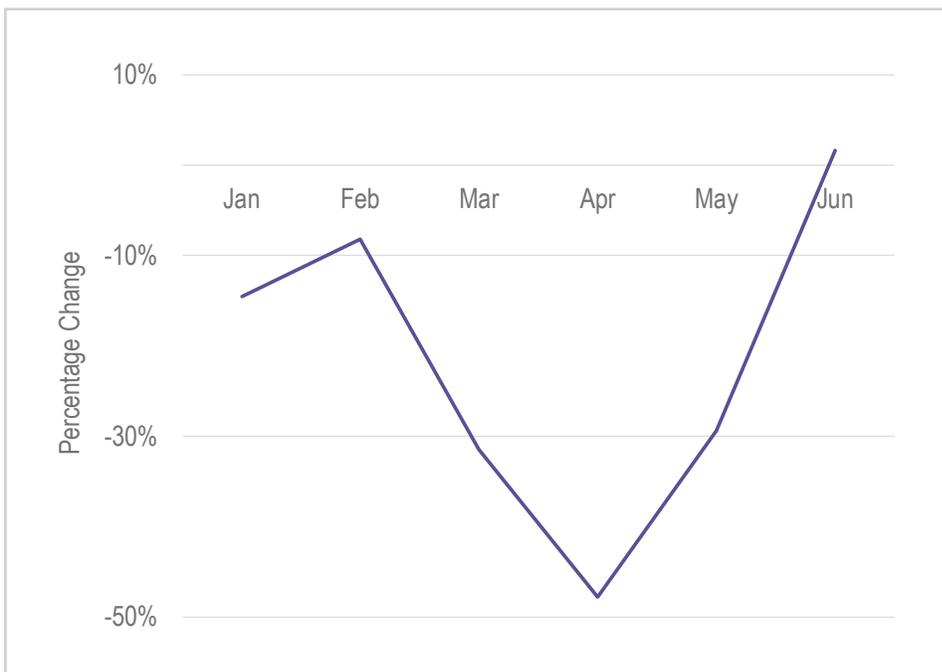


Figure 3. Percentage change in 2020 Southeast monthly landings revenue relative to 2019 monthly landings revenue.

Table 1. Percentage changes in ex-vessel landings revenues and average ex-vessel prices for major southeast commercial finfish fisheries for January-June 2020 relative to January-June 2019.

Aggregate Fishery	Key Species Sectors	Percent Change in Ex-Vessel Landings Revenue	Percent Change in Average Ex-Vessel Price
Gulf of Mexico Coastal Migratory Pelagics	Gulf of Mexico Coastal Migratory Pelagics (all sectors)	-9%	-26%
	King mackerel	12%	0%
	Spanish mackerel	-73%	32%
Gulf of Mexico Reef Fish	Gulf of Mexico Reef Fish (all sectors)	-20%	-2%
	IFQ species*	-17%	N/A
	Greater amberjack	-42%	8%
	Vermilion snapper	-34%	-2%
	Yellowtail snapper	-55%	-8%
South Atlantic Black Sea Bass	South Atlantic Black Sea Bass (all sectors)	-65%	21%
South Atlantic Coastal Migratory Pelagics	South Atlantic Coastal Migratory Pelagics (all sectors)	-12%	7%
	King mackerel	-13%	-1%
	Spanish mackerel	-9%	15%
South Atlantic Deepsea Golden Crab	South Atlantic Deepsea Golden Crab (all sectors)	-55%	19%
South Atlantic Dolphin-Wahoo	South Atlantic Dolphin-Wahoo (all sectors)	-54%	3%
	Dolphinfish	-53%	4%
South Atlantic Snapper Grouper	South Atlantic Snapper Grouper (all sectors)	-35%	-5%
	Deep water complex	-18%	-4%
	Gray triggerfish	-52%	-40%
	Greater amberjack	-32%	2%
	Vermilion snapper	-37%	0%
	Yellowtail snapper	-43%	-9%

*The Red Snapper IFQ program was implemented in 2007. The Grouper-Tilefish IFQ program was established in 2010 and is comprised of five share categories (gag, red grouper, shallow water groupers, deep water groupers and tilefishes). Due to multiple species categories, an aggregate average IFQ species price is not available.

Several commercially important reef fish species are managed under the Gulf of Mexico Red Snapper and Grouper-Tilefish individual fishing quota (IFQ) programs. IFQ programs are management regulations that set species-specific total allowable catch (i.e. quota) for a fishing season and distribute shares of a dedicated portion of the quota through shares to individual accounts. These shares result in annual allocations of the yearly dedicated quota which are transferable among approved entities and also enable shareholders to postpone harvesting their quota if market conditions are unfavorable, as occurred this past spring as social distancing

measures implemented to reduce the spread of COVID-19 closed restaurants both domestically and globally.

Figure 4 reveals underlying trends in the economics of the Gulf of Mexico IFQ fisheries. A steep decline in landings revenue from Gulf of Mexico IFQ species was reported in March and April 2020 but beginning in May, landings revenue started to rebound. Cumulative landings revenue of all IFQ species through June 2020 were 17% less than cumulative landings in the first six months of 2019. Furthermore, cumulative landings of IFQ species through

June 2020 represent 41% of the total annual quota compared to 44% during the same time period in 2019. However, this is higher than the average of 34% during the first six months of 2017-2019.

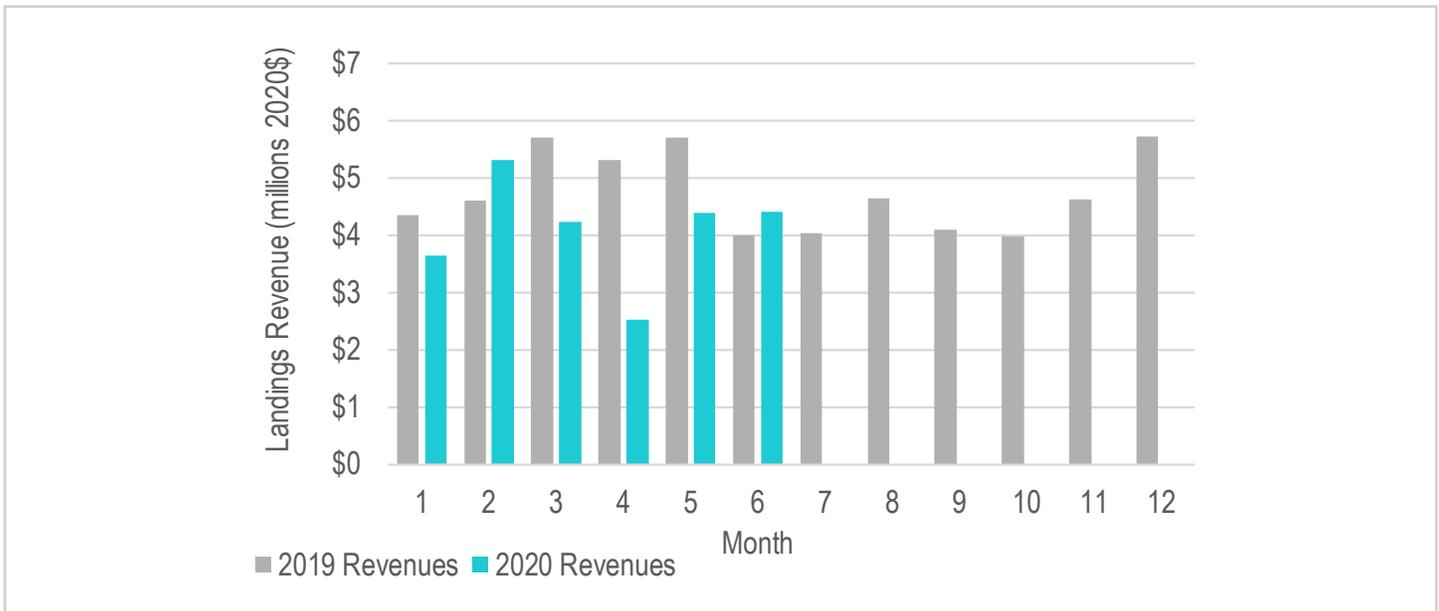


Figure 4. Landings revenues for Gulf of Mexico IFQ species by month for 2019 and 2020.

SPINY LOBSTER FISHERY

Data from the state of Florida shows that over the first 3 months of 2020 in comparison to 2019, spiny lobster landings declined by 42.5%, average price declined by 25.4% and dockside value declined by 57.1%. The lobster season is closed from April-August. With the available data we cannot clearly determine the cause of the decline. However, because the spiny lobster fishery relies heavily upon the Chinese market, the impact of tariffs and the closure of the Chinese market in January contributed significantly to the very steep declines the fishery experienced in the first quarter of 2020.

COMMERCIAL FISHING PERMIT HOLDER SURVEY

A total of 327 commercial fishing permit holders were contacted in the eight states in the Gulf of Mexico and South Atlantic Regions between July 5 and September 15, 2020 regarding the impacts of COVID-19 related factors on their businesses through the first half of the year (January - June/July 2020). Of those contacted, 88% reported that COVID-19 related factors had affected their businesses. For 80% of respondents affected by COVID-19 related factors, commercial fishing represented their primary source of income. Some 94% of affected commercial fishing permit holders reported reduced revenues in the first half of 2020 in comparison to the same period in 2019, with revenue declining on average 56%. Only 1% reported increased revenue in comparison to the same period in 2019. Twenty-eight percent (28%) of commercial permit holders reported a reduction of employees with an average decrease of 2 employees. Less than 1% of commercial permit holders reported an increase in numbers of employees.

Comparison of 2020 with first half of 2019

- 94% of commercial permit holders reported revenue losses.
- Commercial permit holders reported between <1% and 100% revenue losses, for an average 56% decrease in revenue among those reporting losses.
- 28% of commercial permit holders reported a reduction in employees. <1% reported an increase and 66% reported no change.
- On average, commercial fishing permit holders reported operating at 44% of normal fishing activity compared to the same period in 2019.

Top three COVID-19 related factors affecting commercial permit holders:

- Instructed not to fish by dealer/processor (36%).
- Low prices for seafood (22%).
- No crew available (9%).

Eighty-six percent (86%) of commercial permit holders that responded to the survey stopped fishing for some period of time in the first half of 2020. Of these, 12% stopped fishing for less than a month, 46% stopped fishing from 1 to 3 months, and 16% stopped fishing for more than three months. Ten percent (10%) had ceased operations indefinitely but had plans to eventually resume taking trips. Less than 1% of survey respondents reported permanently shutting down their commercial fishing operations. The most common ways that COVID-19 related factors impacted commercial fishing permit holders included reduced number of trips (21%) and difficulty obtaining supplies other than bait (19%), although 53% percent responded “Other” which includes a wide range of impacts.

Seafood Dealers

There were 3,240 seafood dealers operating in the Southeast Region in 2018. Notwithstanding a few seafood products that are exported (e.g., spiny lobster to China), much of the Southeast Region’s product is consumed domestically, with a high proportion dependent upon restaurant sales. King mackerel is a notable exception; it is sold primarily in grocery stores and there remains a strong market for this product, although especially in the Gulf of Mexico, it is a seasonal fishery with the majority of sales in January/February and April/May.

NOAA Fisheries interviewed 270 seafood dealers and processors between July 5 and September 15, 2020 regarding the impacts of COVID-19 related factors on their businesses through the first half of the year (through June/July 2020). Some 89% of seafood dealers/processors reported that they had been impacted by COVID-19 related factors in the first half of 2020. Of those affected, 89% reported reduced revenue in comparison to the same period in 2019, with revenue declining on average 55%. Only 6% of those affected reported sales improved in comparison to the same period in 2019 with an average 20% increase in revenue. Some 46% of affected businesses reported a reduction of on-site employees with an average decrease of 8 employees. Only 2.5% of affected businesses reported an increase in numbers of employees (average of 4 employees).

Comparison of 2020 with first half of 2019

- 89% of dealers reported revenue losses.
- Dealers reported between <1% and 100% revenue losses, for an average 55% decrease in revenue among those reporting losses.
- 46% of dealers reported a reduction in employees. 6% reported an increase and 47% reported no change.
- On average, dealer processors were operating at 48% of business activity compared to the same period in 2019.

Forty-eight percent (48%) of affected dealer/processors closed their business operations for some period of time in the first half of 2020. Of these, 23% were closed for less than a month, 40% were closed from 1 to 3 months, and 11% were closed for more than three months. Twenty-two percent (22%) were closed indefinitely but had plans to eventually reopen. Only 3% of survey respondents reported permanently shutting down their operations. The most common impacts of COVID-19 related factors on seafood dealer processors included reduced operations or business hours (43%), reduced sales to restaurants, retail or grocery stores (20%), and lack of local product (11%).

Top three COVID-19 related factors affecting seafood dealer/processors:

- Low seafood prices (33%).
- Implementing health safety measures (19%).
- Loss of employees (17%).

Recreational Fishing — For-Hire Sector

There were approximately 4,000 and 1,800 charter operations in the Gulf of Mexico and South Atlantic Regions, respectively, in 2019. There were also an estimated 63 headboat vessels in the South Atlantic and 69 in the Gulf of Mexico in 2019. From 2016 to 2019, anglers in the Southeast took an average of 1,523,770 charter trips annually.

In 2020, charter revenues from January through the end of June from North Carolina to Mississippi were \$141.7 million. This represented an overall 24% decrease in average revenues for this same time period for the years 2017 to 2019. The decrease in revenues is largely attributable to COVID-19 closures that took place in March to May 2020. For example, from January-February 2020, total charter trips and revenues in the southeast were up 13% and 14% respectively over the 2017-2019 average. In comparison, from March-April 2020, charter trips and revenue declined by 72% in comparison to the 2017-2019 period. Finally, from May-June 2020, trips and revenues were only down by 4.5% in comparison to the 2017-2019 average for those months. During this same period (May-June), South Carolina had a 29% increase in revenue and Alabama had a 10% increase in revenue; Georgia had the largest decline at 47%, but both East and West Florida showed minor declines of 2% and 5%, respectively.¹

Headboat revenue across the Southeast decreased by 34% overall across states in the Southeast (NC to TX) from January to June 2020 compared to the average revenues for the same time period between 2017 and 2019. For May and June, 2020 headboat revenues were \$10 million compared to the average \$13 million, representing a 21% decrease in comparison to the same time period in 2017-2019. Texas was the only state with an increase in headboat revenues in May/June (7%); Louisiana had the largest decrease in comparison to May/June of 2017-19 (56%).

FOR-HIRE OPERATORS SURVEY

A total of 486 for-hire businesses were contacted in the eight states in the Gulf of Mexico and South Atlantic Regions between July 5 and September 15, 2020 regarding the impacts of COVID-19 related factors on their businesses through the first half of the year (January through June/July 2020). Of those contacted, 95% reported that COVID-19 related factors had affected their businesses. For 69% of affected respondents, charter/for-hire fishing represented their primary source of income. Some 94% of affected for-hire operators reported reduced revenues in the first half of 2020 in comparison to the same period in 2019, with revenue declining on average 58%. Only 2% of those affected reported that sales improved in comparison to the same period in 2019, with an average 30% increase in revenue. Some 12% of affected for-hire businesses reported a reduction of employees with an



Figure 5. Southeast charter revenues for the baseline (2017-2019) and 2020.*
 *January-February excludes South Carolina and Georgia. Texas and Louisiana are not included in these figures due to lack of 2020 data for those states.

average decrease of 2 employees. Less than 1% of affected for-hire operations reported an increase in numbers of employees.

Comparison of 2020 with first half of 2019

- 94% of affected for-hire operators reported revenue losses.
- Affected for-hire businesses reported between 5% and 100% revenue losses, for an average 58% decrease in revenue among those reporting losses.
- 12% of affected for-hire operators reported a reduction in employees. <1% reported an increase and 85% reported no change.
- On average, affected for-hire operations were operating at 53% of normal fishing activity compared to the same period in 2019.

Top three COVID-19 related factors affecting the for-hire sector:

- Restrictions by state and local governments (57%).
- Lack of charter/party/for-hire clients (10%).
- Loss of crew (3%).

Eighty-eight percent (88%) of affected party/charter/for-hire businesses stopped taking fishing trips for some period of time in the first half of 2020. Of these, 5% stopped taking trips for less than a month, 64% stopped taking trips from 1 to 3 months, and 11% stopped taking trips for more than three months. Eight percent (8%) had ceased operations indefinitely but had plans to eventually resume taking trips. Only 1% of survey respondents reported permanently shutting down their charter operations. The most common ways that COVID-19 related factors affected charter/party/for-hire operations included reduced number of trips (49%) and difficulty obtaining supplies other than bait (22%).

Puerto Rico

Between 2013 and 2018, dockside revenues in Puerto Rico averaged about \$5 million for the first six months of the year (January-June). On March 15, 2020, the Governor instituted a two-week closure (curfew) for the majority of businesses on the island of Puerto Rico. However, commercial fishermen were exempted from the curfew and fish cooperatives (*villas pesqueras*) and fish stores could also sell seafood products.

COMMERCIAL FISHING SURVEY

A total of 318 small-scale commercial fishermen were contacted in Puerto Rico in July and August of 2020 regarding the impacts of COVID-19 related factors on their fishing operations through the first half of the year (January-June/July 2020). Of those contacted, 96% reported that COVID-19 related factors had affected their fishing operations. For 73% of the respondents affected by COVID-19 related factors, commercial fishing represented their primary source of income. Some 87% of affected commercial fishing permit holders reported reduced revenues in the first half of 2020 in comparison to the same period in 2019, with revenue declining on average 65%. Only one fisherman reported increased revenue in comparison to the same period in 2019. Twenty-five percent (25%) of commercial fishermen reported a reduction of employees/crew.

Puerto Rico: Comparison of 2020 with first half of 2019

- 87% of small-scale fishermen reported revenue losses.
- Commercial permit holders reported between <1% and 100% revenue losses, for an average 65% decrease in revenue among those reporting losses.
- 28% of commercial permit holders reported a reduction in employees. <1% reported an increase and 66% reported no change.
- On average, commercial fishing permit holders reported operating at 44% of normal fishing activity compared to the same period in 2019.

Top three COVID-19 related factors affecting Puerto Rican commercial harvesters:

- Lack of markets or buyers (79%).
- State and local government restrictions (71%).
- Implementing health safety measures (48%).

Ninety-four percent (94%) of commercial fishermen stopped fishing for some period of time in the first half of 2020. Of these, 13% stopped fishing for less than a month, 43% stopped fishing from 1 to 3 months, and 33% stopped fishing for more than three months. Nine percent (9%) had ceased operations indefinitely but had plans to eventually resume taking trips. Less than 1% of survey respondents went out of business. The most common ways that COVID-19 related factors impacted commercial fishing permit holders included reduced number of trips (83%), lack of markets (30%), and difficulty obtaining supplies other than bait (21%). Six percent (6%) of Puerto Rican fishermen reported switching to new fisheries.

SEAFOOD DEALER SURVEY

In Puerto Rico, there are approximately 70 active landing centers and independent dealers that market most of the production locally. Most of Puerto Rico's product is consumed domestically, with a high proportion of sales going to restaurants and hotels.

NOAA Fisheries surveyed 47 seafood dealers and processors in Puerto Rico in July/August 2020 regarding the impacts of COVID-19 related factors on their businesses through the first half of the year (through June/July 2020). 98% of seafood dealers/processors reported that they had been impacted by COVID-19 related factors. Of those affected, ninety-three percent (93%) reported reduced revenues, with an average decrease of 56%. Only 2% (one dealer) reported increased revenues. Some 43% of affected businesses reported a reduction of on-site employees, while 56% did not change the number of employees.

Puerto Rico: Comparison of 2020 with first half of 2019

- 93% of affected dealers reported reduction in sales.
- Dealers reported an average 56% decrease in revenue for those reporting losses.
- 43% of dealers reported a reduction in employees and 57% reported no change.
- On average, affected dealer processors were operating at 33% of business activity compared to the same period in 2019.

Top three COVID-19 related factors affecting seafood dealer/processors:

- State and local market restrictions (87%).
- Loss of markets or buyers (77%).
- Implementing health safety measures (70%).

Eighty-seven percent (87%) of affected dealer/processors closed their business operations for some period of time in the first half of 2020. Of these, 30% were closed for less than a month,

45% were closed from 1 to 3 months, and 15% were closed for more than three months. Ten percent (10%) were closed indefinitely but had plans to eventually reopen. No dealer/processors in Puerto Rico reported having gone out of business. The most common impacts of COVID-19 related factors on seafood dealer processors included reduced sales to restaurants, retail, or grocery stores (94%), lack of product (81%), and reduced operations or business hours (60%).

CHARTER OPERATORS SURVEY PUERTO RICO

There are currently around 30 charter operators in Puerto Rico, although the number can increase to 50 on a seasonal basis when demand is high through the addition of mostly informal, unlicensed operators. A total of 16 charter operators were contacted in Puerto Rico in July/August 2020 regarding the impacts of COVID-19 related factors on their businesses through the first half of the year (January-June/July 2020). Of those contacted, 100% reported that COVID-19 related factors had affected their businesses. For 88% of affected respondents, charter/for-hire fishing represented their primary source of income. Some 100% of charter operators reported reduced revenues in the first half of 2020 in comparison to the same period in 2019, with revenue declining on average 85%. Some 50% of affected for-hire businesses reported a reduction of employees.

Eighty-eight percent (88%) of affected party/charter/for-hire businesses stopped taking fishing trips for some period of time in the first half of 2020. Of these, 7% stopped taking trips for more than three months, 67% had ceased operations indefinitely with plans to resume, and 20% went out of business.

Comparison of 2020 with first half of 2019, Puerto Rico Charters

- 100% of affected for-hire operators reported revenue losses.
- Affected for-hire businesses reported an average 85% decrease in revenue.
- 50% of affected for-hire operators reported a reduction in employees and 44% reported no change in crew/employees.
- On average, affected for-hire operations were operating at 1.3% of normal fishing activity (most reported no activity).

Top three COVID-19 related factors affecting the charter sector in Puerto Rico:

- Lack of charter clients (94%).
- State and local government restrictions (94%).
- Implementing health safety measures (38%).

U.S. Virgin Islands (USVI)

In early 2020, many commercial and charter fishermen in USVI were still struggling to recover from the devastating impacts of hurricanes Irma and Maria in late 2017. Some commercial fishermen were fishing on others boats trying to accumulate funds for boat repairs and to purchase new gear. Charter fishermen were just starting to recover from the decline in tourism related to hotel closures and infrastructure damage related to the storms.

In mid-March 2020, the Governor announced the closure of USVI to all tourists after 17 individuals on the islands tested positive for COVID-19. The first closure lasted until mid-July. After a brief reopening to tourism, the USVI was once again closed down as the COVID-19 threshold was exceeded.

Between August 24 and September 9, 2020, NOAA contacted 87 commercial and charter fishermen on the islands of St. Thomas, St. Croix, and St. John by phone to administer a survey regarding the impacts of COVID-19 related factors on their fishing operations during the first half of the year (January-June 2020). Although there may be some differences between islands, the following sections cover all of USVI. Due to the lack of a significant dealer/processor sector in USVI (since most catch is sold directly to consumers either in the market or directly to restaurants or stores) this sector was not included in the survey.

COMMERCIAL FISHING SURVEY

A total of 63 small-scale commercial fishermen responded to the survey in USVI. Of those contacted, 86% reported that COVID-19 related factors had affected their fishing operations. For 63% of the respondents affected by COVID-19 related factors, commercial fishing represented their primary source of income. Some 87% of affected commercial fishing permit holders reported reduced revenues in the first half of 2020 in comparison to the same period in 2019, with revenue declining on average 53%. Thirty-one percent (31%) of commercial fishermen reported having experienced a reduction in employees/crew with an average of 1.3 fewer crew members; 69% had not reduced the number of crew.

USVI: Comparison of 2020 with first half of 2019

- 87% of USVI commercial fishermen reported revenue losses.
- Affected commercial fishermen reported an average decrease in revenue of 53%
- 31% of commercial fishermen reported a reduction in crew. 69% reported no change.
- On average, commercial fishermen reported operating at 48% of normal fishing activity compared to the same period in 2019.

Top three COVID-19 related factors affecting commercial harvesters in USVI:

- Implementing health safety measures (63%).
- State and local government restrictions (61%).
- Lack of markets or buyers (56%).

Eighty-one percent (81%) of commercial fishermen in USVI stopped fishing for some period of time in the first half of 2020. Of these, 30% stopped fishing for less than a month, 50% stopped fishing from 1 to 3 months, and 1% stopped fishing for more than three months. Two percent (2%) had ceased operations indefinitely but had plans to eventually resume fishing.

FOR-HIRE OPERATORS SURVEY

A total of 18 charter businesses responded to the survey in USVI. Of those contacted, 89% reported that COVID-19 related factors had affected their businesses. For 72% of affected respondents, charter/for-hire fishing represented their primary source of income. One hundred percent (100%) of affected for-hire operators reported reduced revenues in the first half of 2020 in comparison to the same period in 2019, with revenue declining on average 77%. Some 31% of affected for-hire businesses reported that they reduced their number of employees and another 67% did not change the number of employees

Comparison of 2020 with first half of 2019

- 100% of affected for-hire operators reported revenue losses.
- Affected for-hire businesses reported an average revenue decrease of 58%.
- 31% of affected for-hire operators reported a reduction in crew/employees.
- On average, affected for-hire operations were operating at 39% of normal fishing activity compared to the same period in 2019.

Top three COVID-19 related factors affecting the for-hire sector:

- Lack of charter/party/for-hire clients (79%).
- Restrictions by state and local governments (74%).
- Implementing health safety measures (42%).

Ninety-four percent (94%) of affected party/charter/for-hire businesses stopped taking fishing trips for some period of time in the first half of 2020. Of these, 20% stopped taking trips for less than a month, 27% stopped taking trips from 1 to 3 months, 33% stopped taking trips for more than three months, and 20% stopped fishing indefinitely with plans to resume. We received no reports of charters going out of business.

Endnotes

1 Revenues are in 2020 dollars. Texas and Louisiana are not included in these figures as we don't have monthly or wave estimates yet for 2020.



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