



NOAA Technical Memorandum NMFS-F/SPO-248



Fisheries Economics of the United States 2022

Economics and Sociocultural Status and Trends Series



April 2024

U.S. DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Office of Science and Technology
Economics and Social Analysis Division

Fisheries Economics of the United States 2022

April 2024

Suggested Citation

National Marine Fisheries Service. 2024. Fisheries Economics of the United States, 2022. U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-248, 28 p.



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Executive Summary

The Fisheries Economics of the United States 2022 report demonstrates the integral role fisheries play in our economy and the success of our fishery management programs. In 2022, U.S. commercial and recreational fisheries combined to generate \$321 billion in sales, a marginal increase of 0.4 percent in inflation-adjusted 2022 dollars from 2021, and support nearly 2.3 million jobs (a 13 percent increase from 2021) (Figure 1).

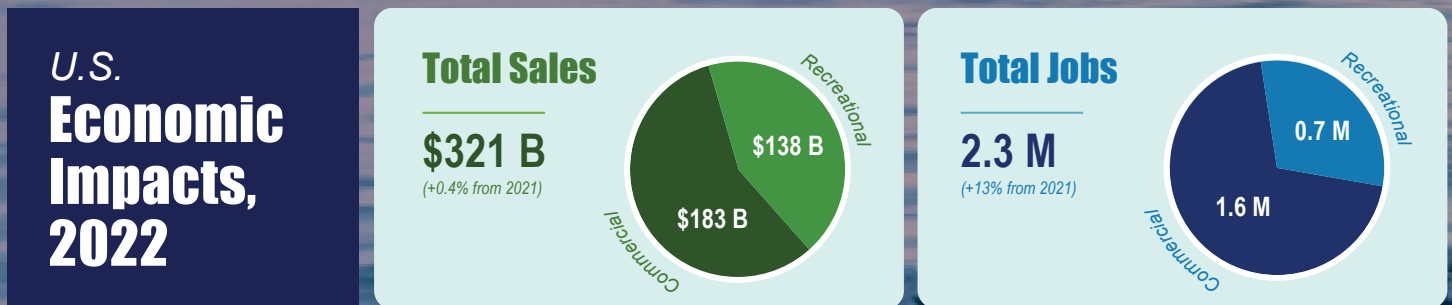


Figure 1. Economic impacts for U.S. commercial and recreational fisheries in 2022 (Data Tool).

The commercial fishing and seafood industry generated economic impacts of \$183 billion in sales, a decrease of 11 percent in inflation-adjusted (real) 2022 dollars from 2021, and supported 1.6 million jobs across the United States in 2022 (Table 1). Sales impacts were largest in the import sector due to the significant value of seafood imports, which comprised 52 percent of total impacts in 2022 (Table 2). Total commercial fishery landings revenues decreased 16 percent from 2021 to \$5.9 billion in real 2022 dollars. Landings volume declined 3 percent with decreases in some key species. Decreased revenues were primarily the result of falling prices, which reverted from their peak in 2021, and increased costs throughout the supply chain putting downward pressure on landings prices.

Recreational fishing generated \$138 billion in sales impacts, an increase of 22 percent (in inflation-adjusted (real) 2022 dollars) from 2021 and supported 692 thousand jobs across the United States in 2022. Expenditures for fishing trips and equipment in the United States totaled \$72 billion. Shore-based fishing trips had the greatest economic impact out of the three trip modes (shore, private boat, and for-hire), accounting for 8 percent of employment and 8 percent of sales. Impacts from equipment expenditures accounted for 80 percent of total job impacts and 81 percent of sales impacts. Across the United States, anglers took about 201 million saltwater fishing trips.

Dollar values and annual changes are reported as inflation-adjusted (real) 2022 dollars unless otherwise noted. See the [Glossary](#) for a full definition of real dollars.

A New Direction

The report format has evolved to focus on the information that users routinely seek. The data previously provided as PDF tables is available to explore through the NOAA Fisheries data portal, [Fisheries One Stop Shop](#). Some information previously included in the report has moved to the web. This report creates a foundation for Human Dimensions information by including NOAA Fisheries' Community Social Vulnerability Indicators. In addition, the report features rotating Spotlight topics. This year's report provides insight on NOAA Fisheries' Processed Products data and a Direct Seafood Marketing survey.

Report Overview

Fisheries Economics of the United States is an

annual report that highlights the contributions of U.S. fisheries to our national economy and supports one of NOAA Fisheries' core missions: to support productive and sustainable fisheries. This is the 17th volume in this annual series, and the first in this shorter format, and covers the years 2013 to 2022. It provides information on:

- Economic impacts of commercial and recreational fishing
- Commercial fisheries landings, revenue, and price trends
- Saltwater angler expenditures
- Recreational fishing catch, effort, and participation rates
- Regional management highlights and Spotlight topics

New Data Tool

Our new data tool is merged into Fisheries One Stop Shop (FOSS) and allows for custom queries.

[Data Tool](#)

Other Report Resources

Some information in previous reports has moved to the web.

- [Publications](#)
- [Methods](#)
- [Data Sources, Footnotes, and Reference Materials](#)
- [Resources](#)
- [Glossary](#)



Fishing is a vital part of our cultural heritage. U.S. fisheries support millions of jobs and bring in billions of dollars to the broader economy every year. Whether fishing is your livelihood or a favorite pastime, or seafood is your meal of choice, U.S. fisheries are an economic engine that support fishing communities nationwide.

NOAA Fisheries Annual Reports

This report is one of three produced each year on the status of national marine fisheries. The other two reports are:

- [Status of Stocks](#)
- [Fisheries of the United States](#)



Commercial Fisheries

Commercial fisheries, and the seafood industry, refer to fishermen who sell their catch for profit. The commercial fisheries section reports on economic impacts, landings revenue, landings, and landings (ex-vessel) prices of key species and species groups.



Key Commercial Species

- Alaska pollock
- American lobster
- Blue crab
- Menhaden
- Pacific halibut
- Pacific salmon
- Sablefish
- Sea scallop
- Shrimp
- Tunas

Commercial Fisheries Economic Impacts

In 2022, the U.S. commercial fisheries and seafood industry generated \$183.4 billion in sales, \$47.2 billion in income, and \$74.0 billion in value-added impacts, as well as supported 1.6 million full- and part-time jobs (Table 1; Figure 2).

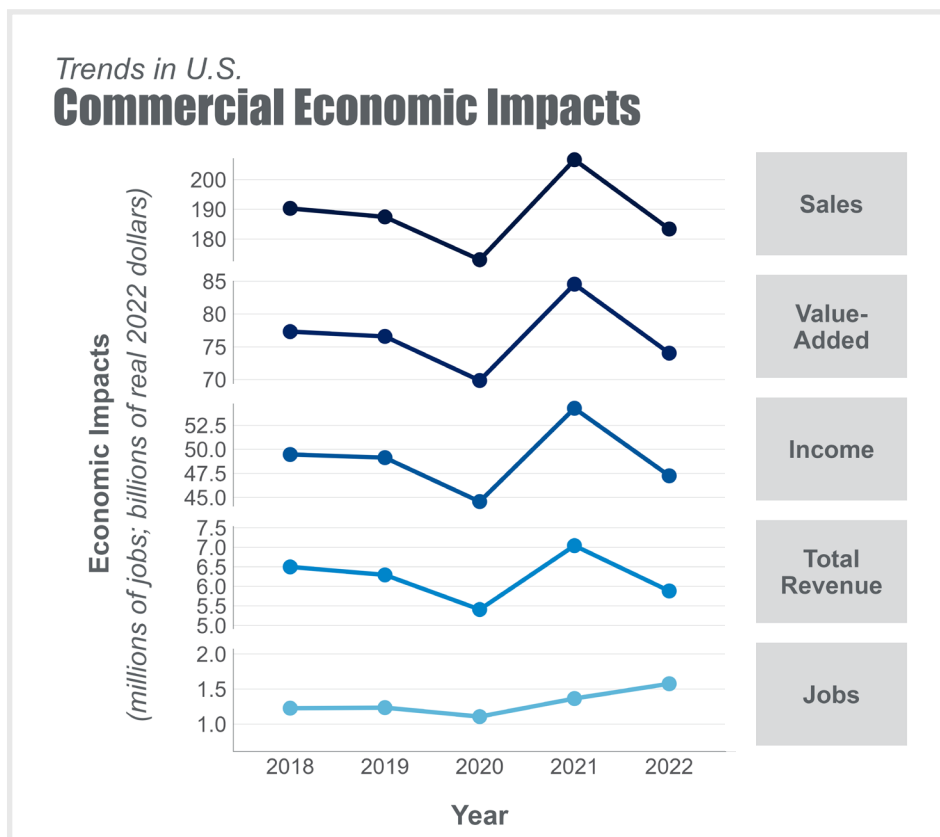


Figure 2. U.S. commercial economic impacts trends with imports for sales, value-added, income, total revenue, and jobs, 2018 to 2022 (Data Tool). Dollar values are in real 2022 dollars.

Importers generated the largest sales impacts (\$95.9 billion) and value-added impacts (\$29.2 billion), corresponding to the large volume of U.S. seafood imports. Imports share of total impacts grew slightly in 2022 from 2021, reflecting the relative strength of the import market and reduced domestic harvest value (Table 2). Seafood import value was stable at \$30.4 billion relative to 2021 with a 2 percent increase in import volume at 7.4 billion pounds and a 2 percent decrease in real 2022 import prices to an average of \$9.04 from 2021. The retail sector generated the largest share of the jobs and income impacts at 50 percent and 35 percent, respectively.

Table 1. U.S. seafood industry economic impacts trends with imports (thousands of jobs; millions of real 2022 dollars) (Data Tool).

| Category | 2018 | 2019 | 2020 | 2021 | 2022 |
|---------------|---------|---------|---------|---------|---------|
| Jobs | 1,226 | 1,234 | 1,106 | 1,364 | 1,575 |
| Sales | 190,322 | 187,443 | 173,014 | 206,710 | 183,365 |
| Income | 49,464 | 49,132 | 44,564 | 54,262 | 47,249 |
| Value-Added | 77,320 | 76,586 | 69,857 | 84,556 | 74,041 |
| Total Revenue | 6,499 | 6,295 | 5,408 | 7,044 | 5,883 |

Table 2. 2022 economic impacts by sector of the U.S. seafood industry (thousands of jobs; millions of dollars) (Data Tool).

| Sector | With Imports | | | | Without Imports | | | |
|--------------------------------------|--------------|---------|--------|-------------|-----------------|--------|--------|-------------|
| | Jobs | Sales | Income | Value-Added | Jobs | Sales | Income | Value-Added |
| Total Impacts | 1,575 | 183,365 | 47,249 | 74,041 | 832 | 54,949 | 20,224 | 28,635 |
| Commercial Harvesters | 200 | 14,656 | 4,984 | 7,685 | 200 | 14,656 | 4,984 | 7,685 |
| Seafood Processors and Dealers | 127 | 17,441 | 5,504 | 7,652 | 63 | 8,626 | 2,722 | 3,784 |
| Importers | 349 | 95,878 | 15,366 | 29,228 | NA | NA | NA | NA |
| Seafood Wholesalers and Distributors | 107 | 14,449 | 4,748 | 6,794 | 30 | 4,096 | 1,346 | 1,926 |
| Retail | 792 | 40,941 | 16,646 | 22,682 | 539 | 27,571 | 11,171 | 15,239 |

National Commercial Highlights

Total landings revenues in 2022 decreased 16 percent in real 2022 dollars to \$5.9 billion dollars from 2021. Decreased revenues were primarily the result of falling prices, which dropped 11 percent in real 2022 dollars, though landings volume declined a modest 3 percent to 8.3 billion pounds (**Figure 3**). Key species with decreased landings volume included Alaska pollock, American lobster, Pacific salmon, and sea scallops. Volumes increased for menhaden, sablefish, and tunas. The average landings price, which had increased substantially in 2021 (26 percent in real 2022 dollars) buoyed by inflationary pressure and stronger recovery in the wider economy, reverted back to roughly the average price level seen in the years leading up to the pandemic. The primary species contributing to the decline in aggregate landings price in 2022 were Alaska pollock, Gulf shrimp, American lobster, and sea scallops. Pacific cod and Pacific salmon prices increased. In addition to 2022 prices reverting following a

high in 2021, there were a number of structural factors throughout the supply chain that likely contributed to the decline in landings prices. Trucking and ocean containerized freight rates peaked in 2022, which affects seafood products since they are highly transported commodities.^{1,2} High inventories and difficulty in acquiring cold storage increased associated supply chain costs, potentially mitigating demand for some products.³ In addition, the seafood processing producer price index peaked in 2022.⁴ These increased costs throughout the supply chain can put upward pressure on consumer prices (e.g., retail) and downward pressure on landings prices. Retail seafood sales prices grew 1 percent in real 2022 dollars, and sales volumes were down 6 percent between 2021 and 2022.⁵ While the decrease in real revenues in 2022 was the result of decreasing prices, inflation-adjusted (real) prices in 2022 were slightly above the 30-year average. Lower than average aggregate revenues in 2022 relative to the long-run average are the result of below average aggregate catch levels that have persisted since 2020 (**Figure 3**).



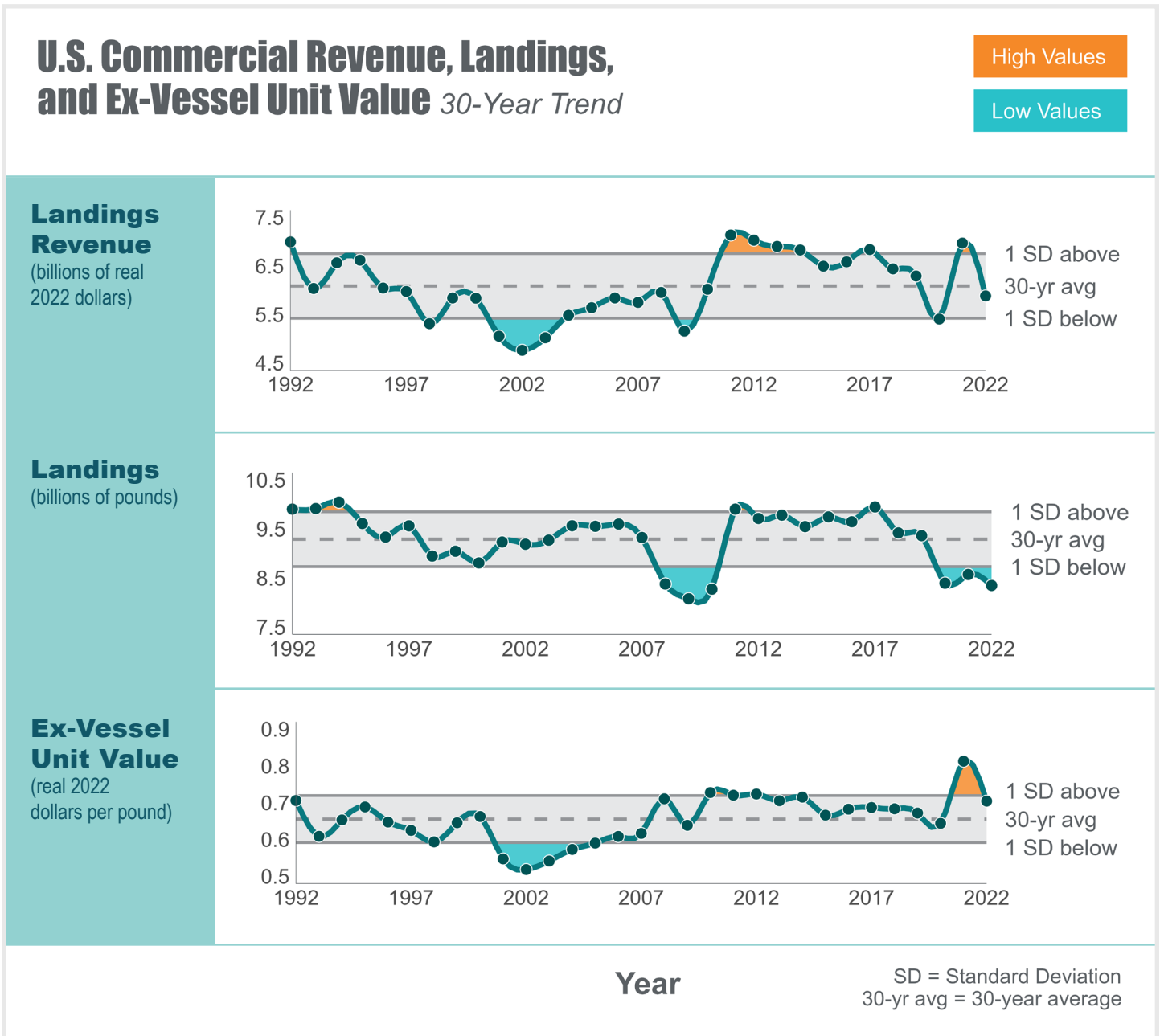


Figure 3. U.S. commercial landings revenue (top), landings (middle), and ex-vessel unit value (bottom) from 1992 to 2022. Dollar values are in real 2022 dollars. Shaded gray regions show plus or minus one standard deviation (solid gray lines) from the 30-year average (dashed gray line) ([Data Tool](#)).

Catch Share Programs

[Catch share programs](#) are a market-based management tool where a secure share of fish is dedicated to individual fishermen, cooperatives, fishing communities, and other entities for their exclusive use. They serve to reduce overcapitalization, increase the economic viability of fisheries, and promote individual accountability for harvest. Currently, there are 17 U.S. federal catch share programs that include individual fishing quota programs (IFQs), individual transferable quota programs (ITQs), fishing community development quota programs (CDQs), fishing cooperatives, and fishing sectors.

Regional Commercial Highlights

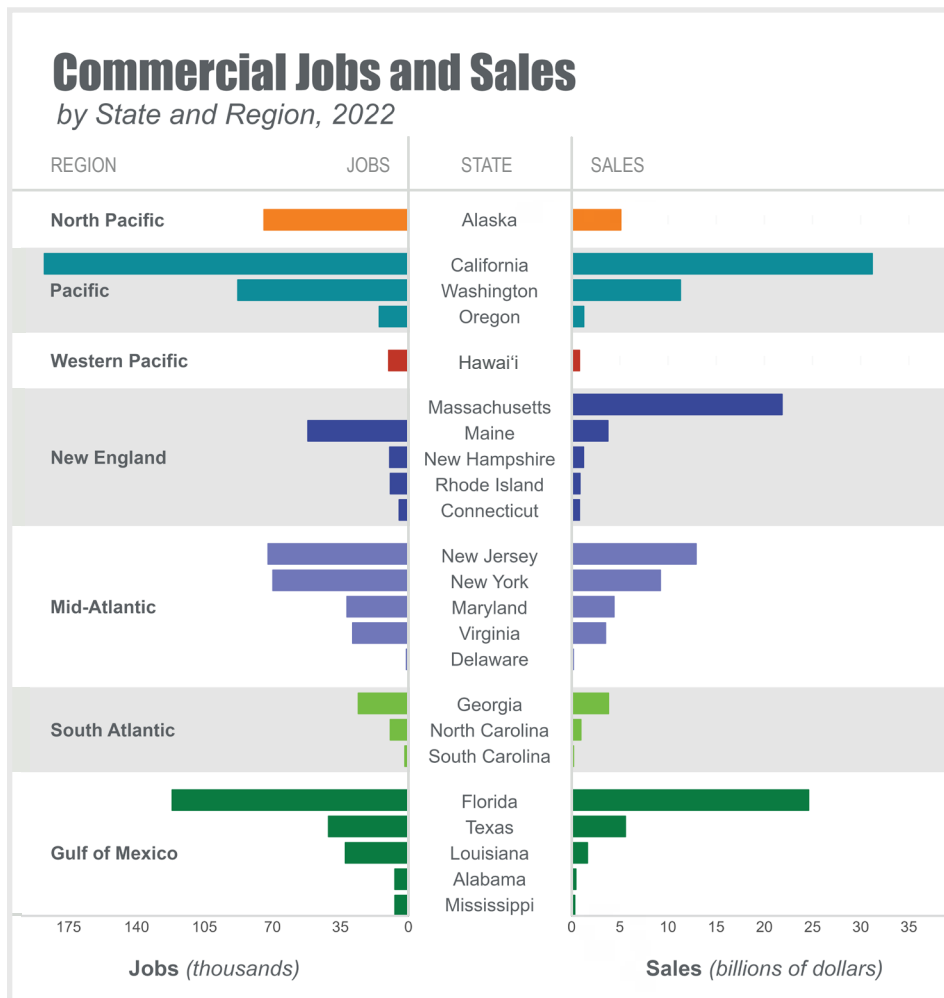
North Pacific: In 2022, Alaska’s commercial fishing and seafood industry supported 74,424 full- and part-time jobs and generated \$5.1 billion in sales (**Figure 4**), \$2.3 billion in income, and \$2.8 billion in value-added impacts in the North Pacific Region. Commercial harvesters generated the largest sales impacts (\$3.6 billion), value-added impacts (\$2 billion), income impacts (\$1.6 billion), and employment impacts (53,938 jobs).

Pacific: California generated the largest employment impacts in the Pacific Region with 187,519 full- and part-time jobs (**Figure 4**). California also generated the largest sales impacts (\$31.2 billion), value-added impacts (\$11.1 billion), and income impacts (\$6.6 billion) (**Table 3**).

Western Pacific: In 2022, Hawai’i’s commercial fishing and seafood industry supported 10,229 full- and part-time jobs and generated \$823.7 million in sales (**Figure 4**), \$249.6 million in income, and \$366.5 million in value-added impacts in the Western Pacific Region. Importers generated the largest sales impacts (\$317.2 million), value-added impacts (\$118.3 million), income impacts (\$82.4 million), and employment impacts (4,548 jobs).

New England: Massachusetts generated the largest employment impacts in the New England Region with 213,943 full- and part-time jobs (**Figure 4**). Massachusetts also generated the largest sales impacts (\$21.8 billion), value-added impacts (\$8.2 billion), and income impacts (\$5.2 billion) (**Table 3**).

Mid-Atlantic: New Jersey generated the largest employment impacts in the Mid-Atlantic Region with 72,349 full- and part-time jobs (**Figure 4**). New Jersey also generated the largest sales impacts (\$12.9 billion), value-added impacts (\$4.5 billion), and income impacts (\$2.6 billion) (**Table 3**).



South Atlantic: Georgia generated the largest employment impacts in the South Atlantic Region with 25,840 full- and part-time jobs (**Figure 4**). Georgia also generated the largest sales impacts (\$3.8 billion), value-added impacts (\$1.4 billion), and income impacts (\$826.3 million) (**Table 3**).

Gulf of Mexico: Florida* generated the largest employment impacts in the Gulf of Mexico Region with 121,710 full- and part-time jobs (**Figure 4**). Florida also generated the largest sales impacts (\$24.6 billion), value-added impacts (\$8.2 billion), and income impacts (\$4.6 billion) (**Table 3**).

Figure 4. Commercial jobs (thousands; left) and sales (billions of dollars; right) by state and region (Data Tool).*

* While East and West Florida are managed separately—by the South Atlantic and Gulf of Mexico Regions, respectively—information for Florida in this regional breakdown is generated for the entire state and included in the Gulf of Mexico.

Table 3. Jobs, sales, income, and value-added impacts generated by the U.S. seafood industry in 2022 (number of jobs; thousands of dollars) (Data Tool).

| Region | State | Jobs | Sales | Income | Value-Added |
|-----------------------------------|----------------|---------|------------|-----------|-------------|
| North Pacific | Alaska | 74,424 | 5,105,018 | 2,291,050 | 2,835,955 |
| Pacific | California | 187,519 | 31,204,270 | 6,637,768 | 11,062,743 |
| | Oregon | 15,059 | 1,262,839 | 382,799 | 559,624 |
| | Washington | 87,896 | 11,289,665 | 2,913,497 | 4,488,520 |
| Western Pacific | Hawai'i | 10,229 | 823,702 | 249,573 | 366,492 |
| New England | Connecticut | 4,771 | 818,518 | 167,299 | 282,070 |
| | Maine | 51,814 | 3,766,659 | 1,068,339 | 1,613,070 |
| | Massachusetts | 213,943 | 21,846,772 | 5,231,543 | 8,219,696 |
| | New Hampshire | 9,685 | 1,239,438 | 287,374 | 460,217 |
| | Rhode Island | 9,342 | 872,178 | 235,002 | 359,217 |
| Mid-Atlantic | Delaware | 1,085 | 176,054 | 33,781 | 57,654 |
| | Maryland | 31,689 | 4,405,062 | 992,102 | 1,598,009 |
| | New Jersey | 72,349 | 12,924,946 | 2,640,071 | 4,460,538 |
| | New York | 69,836 | 9,212,647 | 1,899,438 | 3,192,533 |
| | Virginia | 28,729 | 3,519,973 | 851,594 | 1,338,920 |
| South Atlantic | Georgia | 25,840 | 3,830,172 | 826,287 | 1,374,988 |
| | North Carolina | 9,356 | 965,472 | 242,931 | 377,226 |
| | South Carolina | 1,865 | 195,054 | 51,229 | 78,446 |
| South Atlantic and Gulf of Mexico | Florida* | 121,710 | 24,596,469 | 4,578,530 | 8,206,789 |
| Gulf of Mexico | Alabama | 6,971 | 442,927 | 139,904 | 195,934 |
| | Louisiana | 32,514 | 1,638,432 | 623,462 | 837,860 |
| | Mississippi | 6,954 | 329,349 | 126,921 | 165,074 |
| | Texas | 41,171 | 5,584,290 | 1,259,222 | 2,048,829 |

* While East and West Florida are managed separately—by the South Atlantic and Gulf of Mexico Regions, respectively—information for Florida in this table is generated for the entire state.

Commercial Landings and Revenue

U.S. landings totaled 8.3 billion pounds with a revenue of \$5.9 billion in 2022 (Table 4). This represented a 22 percent decrease from 2013 in real terms after adjusting for inflation and a 16 percent decrease from 2021 (Figure 3). The region with the highest volume and revenue was the North Pacific with 4.8 billion pounds landed and \$2.1 billion in revenue (Figure 5). Finfish landings accounted for 80 percent of all landed weight and 29 percent of all landings revenue (Figure 6). Menhaden had the highest landings volume, and shrimp had the highest landings revenue in 2022.

Table 4. U.S. commercial fisheries landings and revenue by region in 2022 (thousands of dollars; thousands of pounds) (Data Tool).

| Region | Revenue | Landings |
|-----------------|-----------|-----------|
| U.S. Total | 5,883,306 | 8,349,927 |
| North Pacific | 2,074,780 | 4,818,064 |
| Pacific | 711,067 | 1,041,235 |
| Western Pacific | 135,189 | 29,184 |
| New England | 1,432,039 | 447,155 |
| Mid-Atlantic | 443,956 | 538,747 |
| South Atlantic | 173,830 | 94,587 |
| Gulf of Mexico | 912,444 | 1,380,956 |

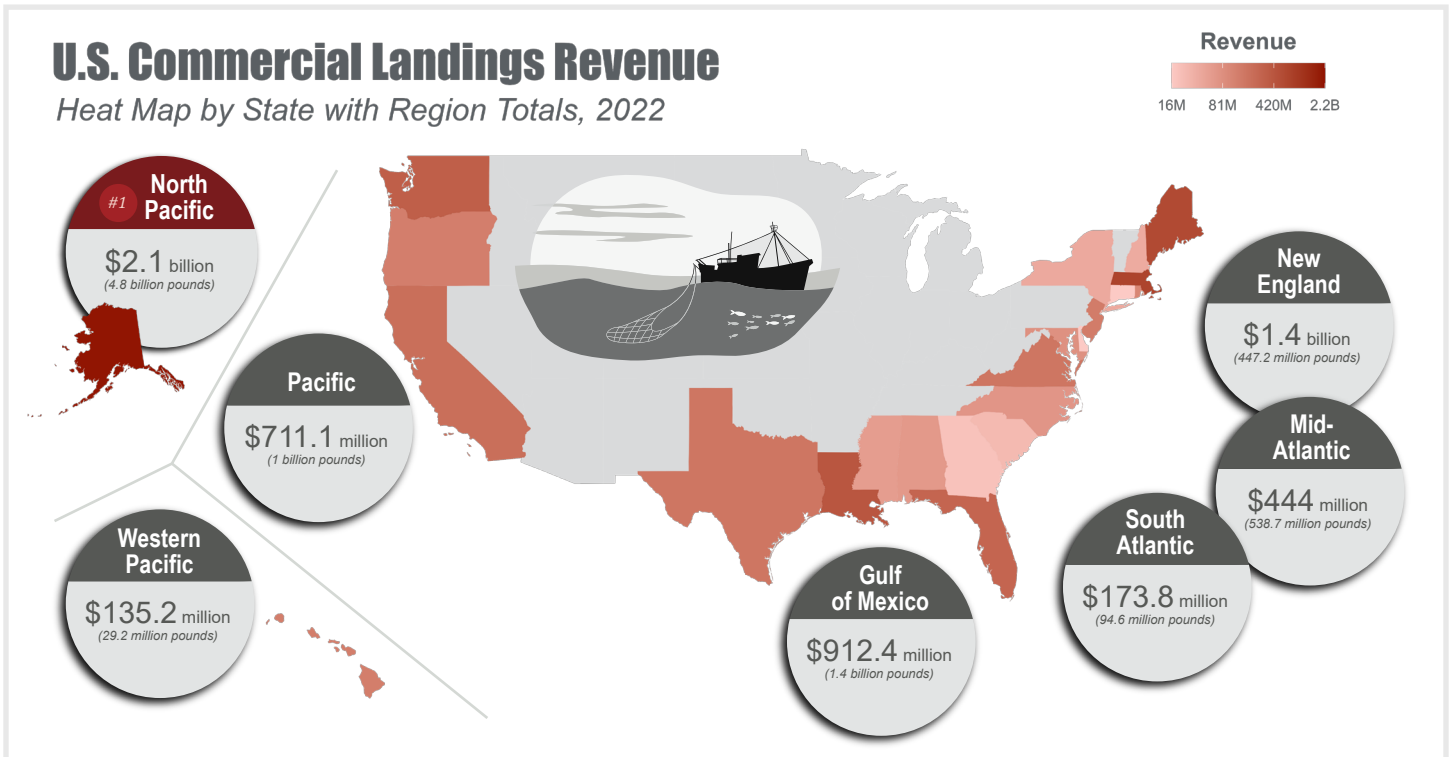


Figure 5. U.S. commercial landings revenue heat map by state with regional totals ([Data Tool](#)).

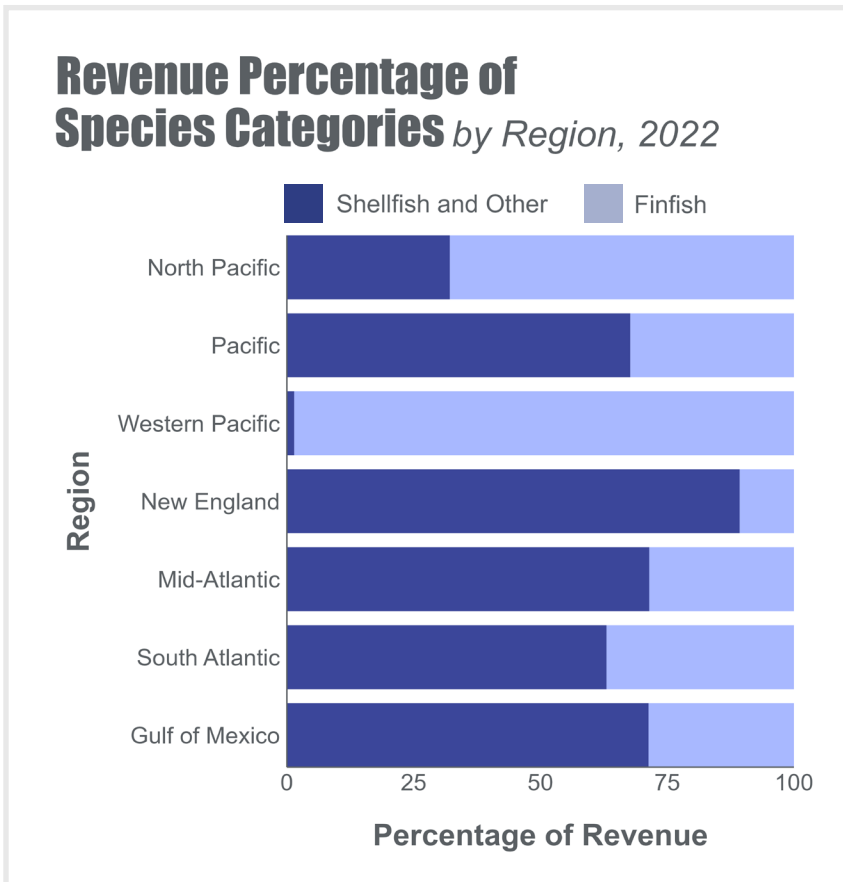


Figure 6. U.S. commercial revenue percentage breakdown of species categories by region ([Data Tool](#)).

Recreational Fisheries

Saltwater recreational fishing is among the nation's favorite pastimes, and it remains a key contributor to the national economy. Recreational fishing refers to fishing for leisure rather than to sell fish (commercial fishing) or for subsistence.



Key Recreational Species⁶

- *Dolphinfish (Atlantic, Gulf of Mexico, and Western Pacific)*
- *Pacific halibut (North Pacific)*
- *Pacific salmon (North Pacific and Pacific)⁷*
- *Red snapper (Atlantic and Gulf of Mexico)*
- *Rockfishes and scorpionfishes (Pacific and North Pacific)⁸*
- *Seatrout (Atlantic and Gulf of Mexico)⁹*
- *Striped bass (Atlantic and Gulf of Mexico)*
- *Summer flounder (Atlantic and Gulf of Mexico)*
- *Tunas (Atlantic and Gulf of Mexico)¹⁰*
- *Tunas (Pacific and Western Pacific)¹¹*

Recreational Economic Impacts

Economic impacts from recreational fishing activities supported 691,613 jobs across the United States in 2022, an increase of 8 percent relative to 2021 (**Table 5; Figure 7**). Recreational fishing also generated about \$138 billion in sales impacts (22 percent increase from 2021), \$45.1 billion in income impacts (18 percent increase from 2021), and \$74.9 billion in value-added impacts (18 percent increase from 2021) (**Table 5**).

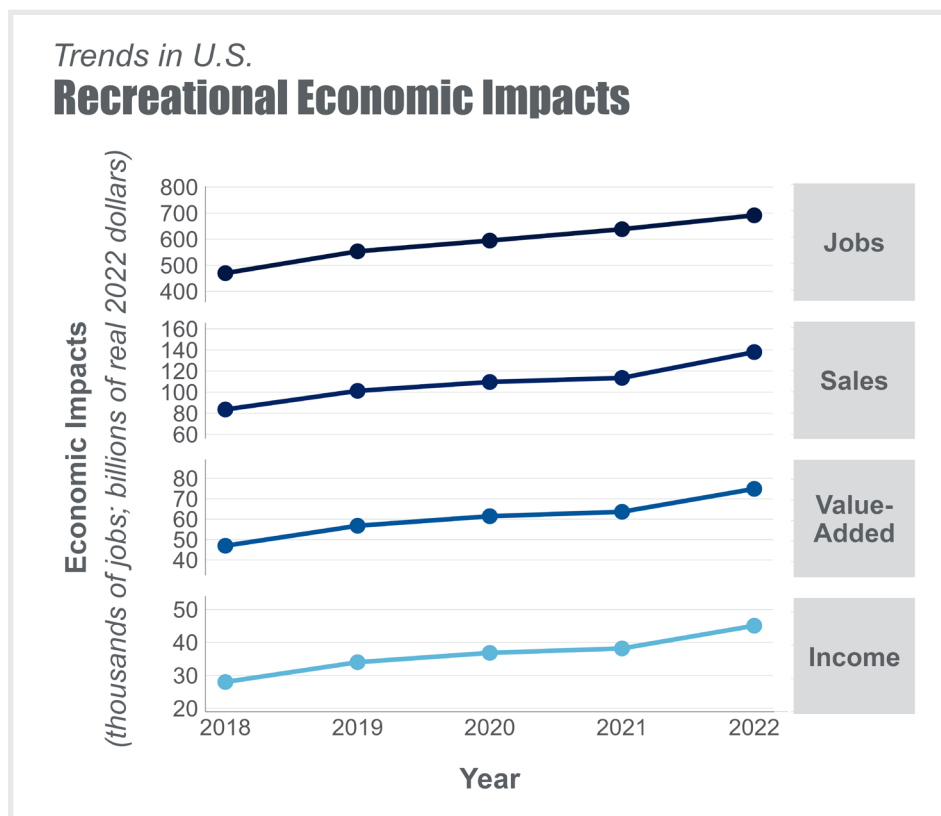


Figure 7. U.S. recreational economic impacts trends for jobs, sales, value added, and income, 2018 to 2022 (**Data Tool**). Dollar values are in real 2022 dollars.

The main reasons that explain the increases in economic impacts are: 1) updated 2022 estimates for total U.S. anglers (used to estimate durable good expenditures), 2) updated estimates of trip expenditures from a 2022 angler survey, 3) an increase in the number of trips nationwide, and 4) an updated U.S. economic impact model with more recent data (see **Methods** for details). Of the 3 modes (for-hire, private boat, and shore), shore-based fishing trips had the greatest economic impact, accounting for 8 percent of employment, 8 percent of sales, 7 percent of income, and 8 percent of value-added impacts.

Table 5. Recreational economic impacts trends for the United States (number of jobs; millions of real 2022 dollars) (Data Tool).¹²

| Category | 2018 | 2019 | 2020 | 2021 | 2022 |
|-------------|---------|---------|---------|---------|---------|
| Jobs | 469,848 | 553,499 | 594,734 | 638,426 | 691,613 |
| Sales | 83,551 | 101,196 | 109,607 | 113,486 | 137,963 |
| Income | 27,982 | 33,987 | 36,825 | 38,161 | 45,067 |
| Value-Added | 46,966 | 56,774 | 61,454 | 63,621 | 74,859 |

Across the United States, impacts from durable equipment expenditures (e.g., rods and reels, fishing-related equipment, boats, and vehicles) accounted for 80 percent of total job impacts, 81 percent of sales impacts, 83 percent of income impacts, and 81 percent of value added impacts (Table 6).

Table 6. 2022 economic impacts of expenditures on recreational fishing trips (by mode) and durable equipment purchases (number of jobs; millions of dollars) (Data Tool).¹³

| Category | Jobs | Sales | Income | Value-Added |
|-----------------------------|---------|---------|--------|-------------|
| For-Hire Expenditures | 39,962 | 4,840 | 1,906 | 2,866 |
| Private Boat Expenditures | 40,103 | 10,648 | 2,631 | 5,338 |
| Shore Expenditures | 55,632 | 10,871 | 3,286 | 5,989 |
| Durable Equipment Purchases | 555,916 | 111,604 | 37,244 | 60,666 |

In 2022, expenditures for fishing trips and durable goods equipment in the United States totaled \$72.3 billion. The region with the highest total trip expenditures was the Gulf of Mexico with \$5.1 billion (Figure 8; see Table 7 for a list of states in each region). Approximately \$13.5 billion of U.S. expenditures were related to trip expenses. Total trip expenditures were composed of expenses on trips in the shore (42.5 percent), private boat (42.3 percent), and for-hire (15.2 percent) sectors (Figure 9). Durable goods expenditures totaled \$58.8 billion in 2022, with the largest portion coming from Boat Expenses (\$43.3 billion).

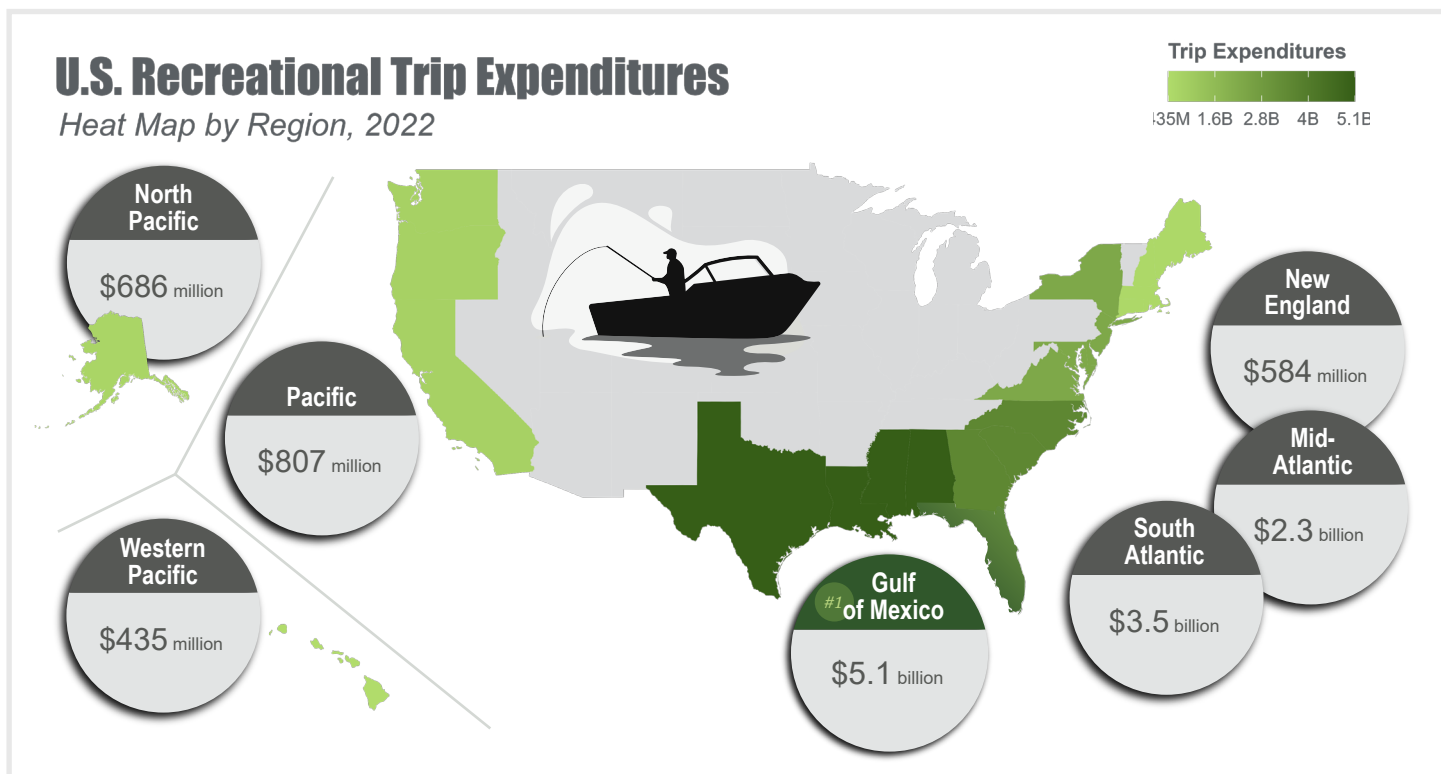


Figure 8. U.S. recreational trip expenditures heat map with regional totals. A logarithmic scale was used to scale expenditures to generate the heat map (Data Tool). Note: East Florida is included in the South Atlantic, and West Florida is included in the Gulf of Mexico.

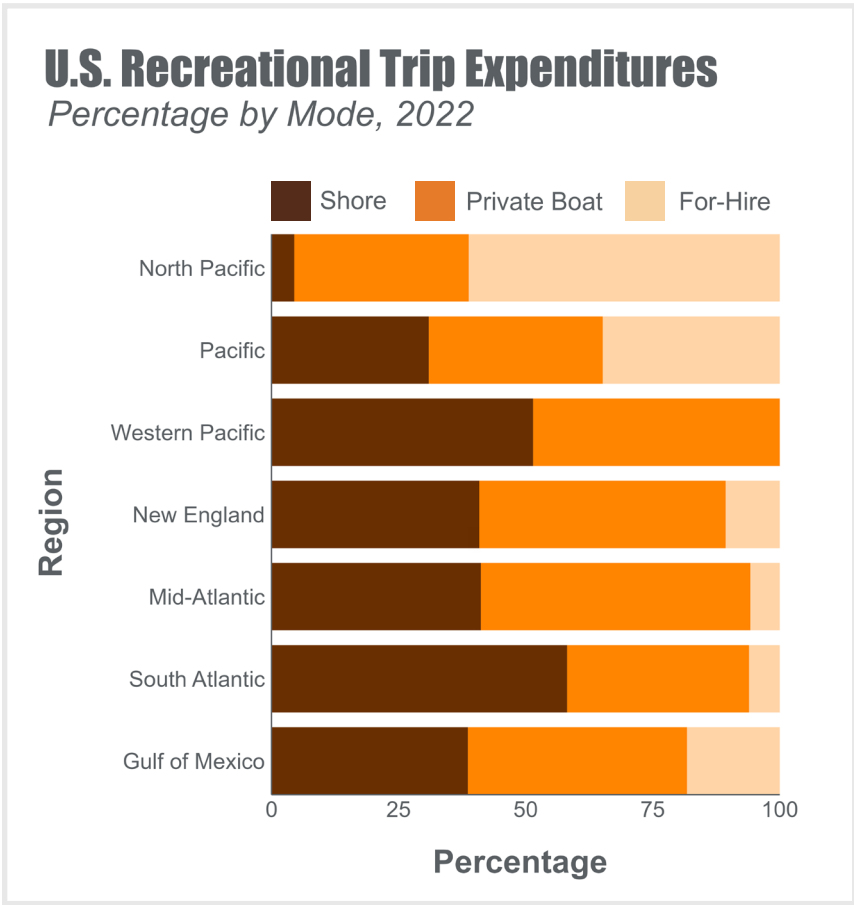
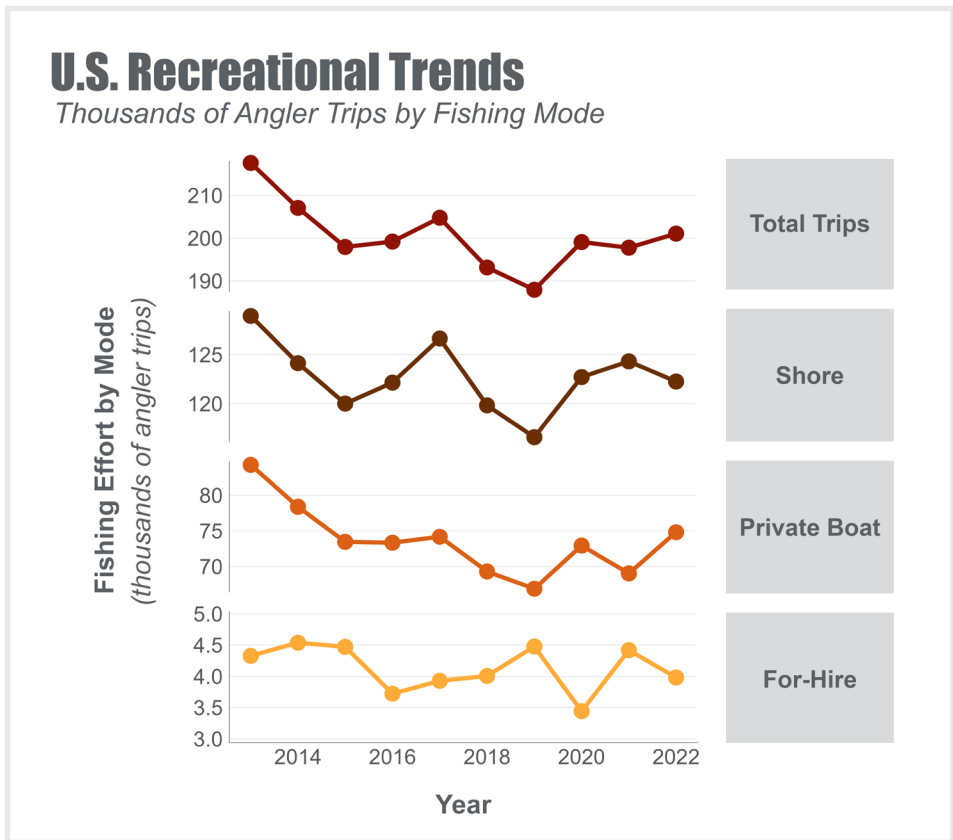


Figure 9. Trip expenditures (percentage by mode) for U.S. recreational fisheries by region for 2022 ([Data Tool](#)).

National Recreational Highlights

Nationwide, anglers took approximately 201.1 million saltwater fishing trips around the country (**Figure 10**). This number represented an 8 percent decrease from 2013 and a 2 percent increase from 2021 (**Figure 10**). Approximately 61 percent of fishing trips were taken via shore. West Florida anglers took the most fishing trips (40.3 million trips), followed by those in East Florida and North Carolina.

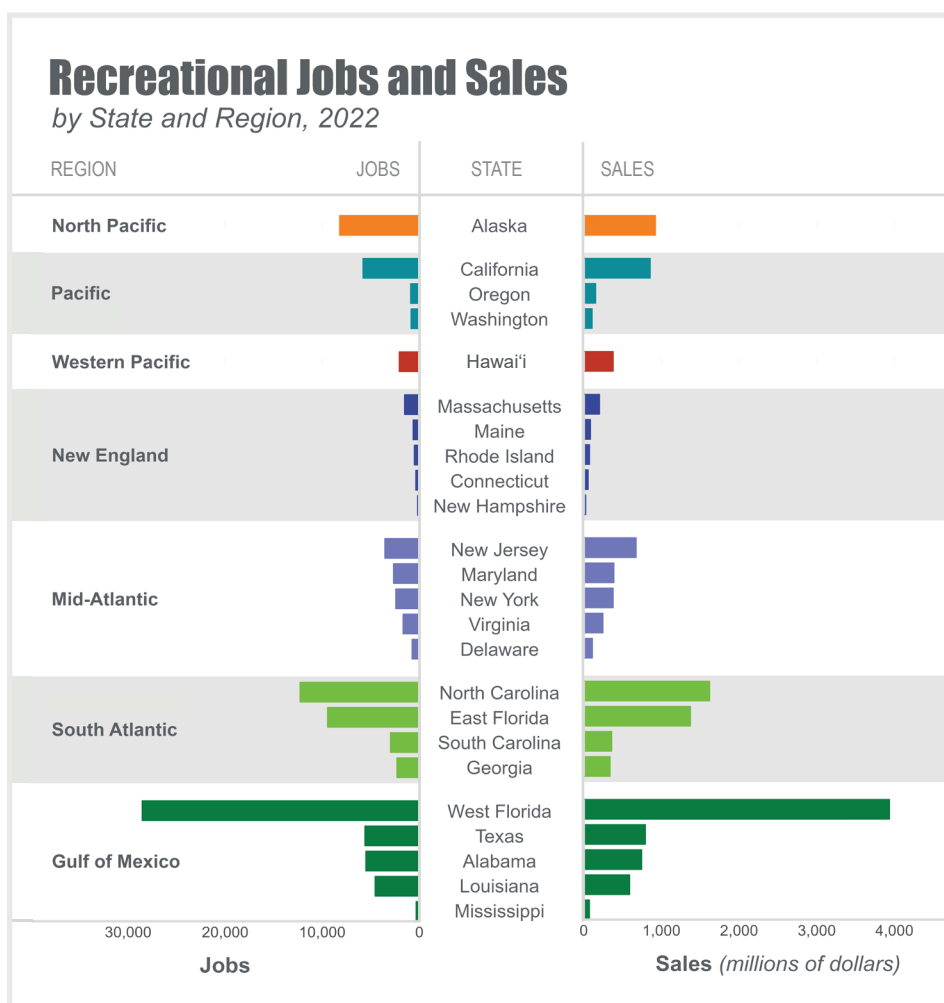
Figure 10. U.S. recreational trends in thousands of trips by fishing mode from 2013 to 2022 ([Data Tool](#)).



Regional Recreational Highlights

In 2022, recreational anglers in West Florida had the highest total expenditures on trips (\$3.4 billion) and took the most trips (40.3 million trips). East Florida anglers had the second highest expenditures on trips (\$1.6 billion) and took 35.3 million trips. The impacts from trip expenditures were highest in West Florida with 29 thousand jobs and \$3.9 billion in sales. North Carolina had the second-most jobs and sales (12 thousand and \$1.6 billion, respectively), followed by East Florida with 9 thousand jobs and \$1.4 billion in sales (**Figure 11**).

The Gulf of Mexico Region had the highest recreational trip expenditures in the United States, \$5.1 billion (**Figure 8**), and the most recreational trip activity, 55.2 million trips. The largest sales impacts from trip expenditures in this Region were West Florida (\$3.9 billion), followed by Texas (\$792.5 million) and Alabama (\$744.9 million) (**Figure 11**). The greatest value-added impacts were in West Florida (\$2.4 billion), followed by Texas (\$449.5 million) and Alabama (\$399.1 million) (**Table 7**). A large portion of the approximately \$5.1 billion in trip expenses came from trips in the private boat (43.1 percent) and shore (38.6 percent) sectors.



Bluefin tuna caught off of the U.S. Atlantic coast. Photo: Pelagic Strategies/Willy Goldsmith

Figure 11. Recreational jobs (left) and sales (millions of dollars; right) impacts of expenditures on recreational fishing trips by state and region ([Data Tool](#)).

Table 7. Job, sales, income, and value-added impacts of expenditures on recreational fishing trips in 2022 (number of jobs; millions of dollars) ([Data Tool](#)).

| Region | State | Jobs | Sales | Income | Value-Added |
|-----------------|----------------|--------|-------|--------|-------------|
| North Pacific | Alaska | 8,207 | 922 | 368 | 538 |
| Pacific | California | 5,799 | 855 | 333 | 510 |
| | Oregon | 890 | 106 | 41 | 66 |
| | Washington | 848 | 152 | 45 | 87 |
| Western Pacific | Hawai'i | 2,062 | 379 | 105 | 199 |
| New England | Connecticut | 361 | 55 | 20 | 34 |
| | Maine | 633 | 86 | 28 | 52 |
| | Massachusetts | 1,517 | 202 | 90 | 132 |
| | New Hampshire | 172 | 24 | 11 | 15 |
| | Rhode Island | 507 | 73 | 28 | 48 |
| Mid-Atlantic | Delaware | 746 | 110 | 32 | 54 |
| | Maryland | 2,651 | 387 | 132 | 237 |
| | New Jersey | 3,546 | 673 | 220 | 398 |
| | New York | 2,425 | 378 | 138 | 249 |
| | Virginia | 1,668 | 246 | 83 | 155 |
| South Atlantic | East Florida | 9,449 | 1,374 | 449 | 833 |
| | Georgia | 2,303 | 338 | 113 | 200 |
| | North Carolina | 12,275 | 1,621 | 586 | 960 |
| | South Carolina | 2,973 | 359 | 118 | 213 |
| Gulf of Mexico | Alabama | 5,506 | 745 | 217 | 399 |
| | Louisiana | 4,552 | 590 | 171 | 294 |
| | Mississippi | 324 | 72 | 13 | 30 |
| | Texas | 5,605 | 793 | 261 | 450 |
| | West Florida | 28,546 | 3,936 | 1,350 | 2,401 |

Recreational Harvest and Release Trends

In 2022, seatrout (Atlantic and Gulf of Mexico) (70.1 million fish), striped bass (Atlantic and Gulf of Mexico) (33.5 million fish), and summer flounder (Atlantic and Gulf of Mexico) (29 million fish) were the most frequently caught key species by recreational fishermen in the United States.

From 2013 to 2022, red snapper (Atlantic and Gulf of Mexico) (37%), striped bass (Atlantic and Gulf of Mexico) (4%), and tunas (Pacific and Western Pacific) (2%) had the largest increases, while dolphinfish (Atlantic, Gulf of Mexico, and Western Pacific) (-58%), Pacific salmon (North Pacific and Pacific) (-38%), and summer flounder (Atlantic and Gulf of Mexico) (-35%) had the largest decreases. From 2021 to 2022, red snapper (Atlantic and Gulf of Mexico) (32%), summer flounder (Atlantic and Gulf of Mexico) (28%), and seatrout (Atlantic and Gulf of Mexico) (14%) had the largest increases, while dolphinfish (Atlantic, Gulf of Mexico, and Western Pacific) (-29%), tunas (Pacific and Western Pacific) (-25%), and Pacific salmon (North Pacific and Pacific) (-17%) had the largest decreases.

New Jersey caught the most summer flounder (13.5 million fish) and striped bass (7.8 million fish), while West Florida caught the most seatrout (22.8 million fish) and red snapper (5.4 million fish). Alaska caught the most Pacific halibut (540,297 fish) and Pacific salmon (926,775 fish).

Spotlight Species

Summer flounder (*Paralichthys dentatus*) is a highly popular recreational species on the Atlantic Coast, with 29 million fish caught (harvested and released) in 2022. New Jersey anglers caught the most summer flounder, with 13.5 million fish caught. New York and Virginia anglers caught 10.5 million and 1.9 million fish, respectively. From 2013 to 2022, total Atlantic Coast harvest peaked in 2013, with 44.8 million fish, and then began to decline. From 2021 to 2022, harvest increased by 28 percent (**Figure 12**).

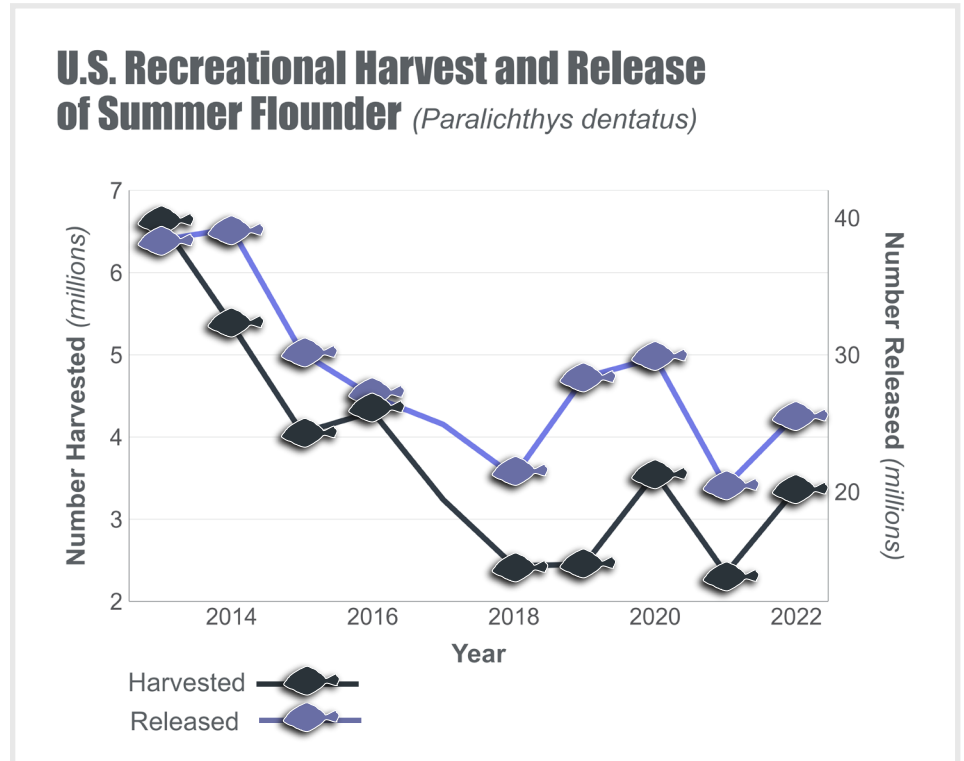
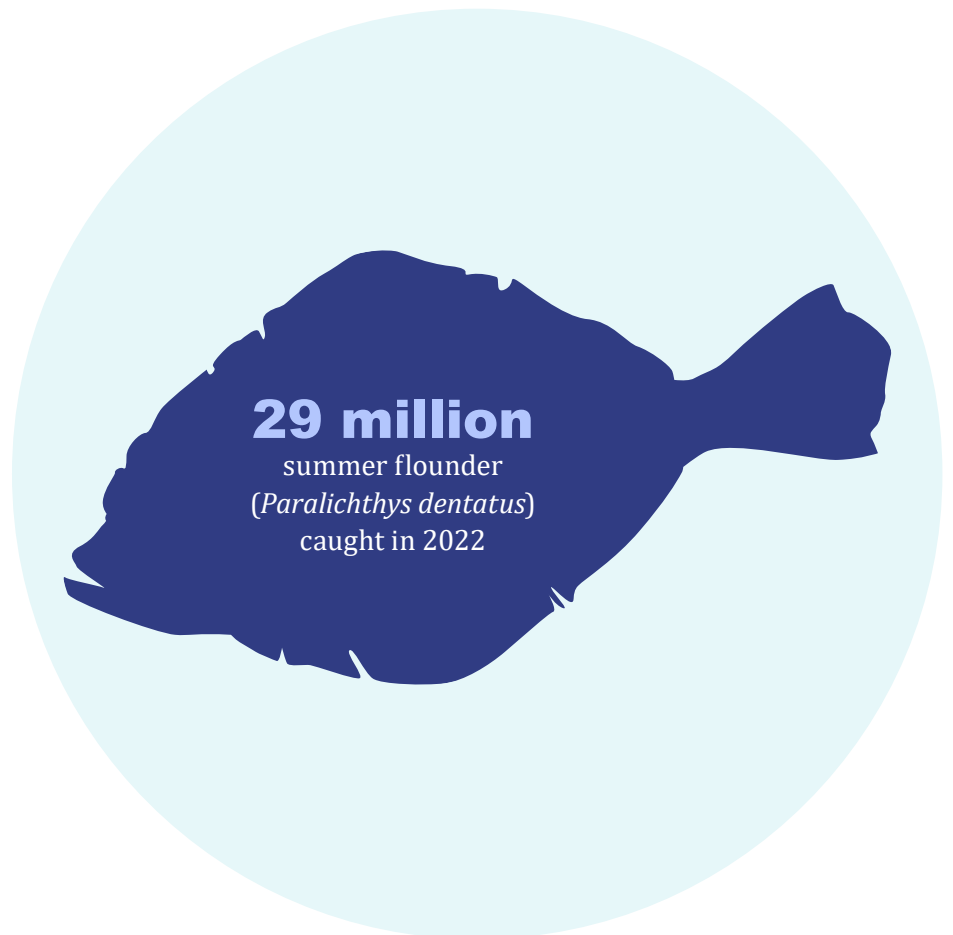


Figure 12. U.S. recreational harvest and release of summer flounder (*Paralichthys dentatus*) ([Data Tool](#)).



Five-Year Expenditure Survey Highlight

Every five years, NOAA Fisheries conducts a nationwide survey of marine recreational anglers for the purposes of estimating expenditures related to marine recreational fishing trips. The survey is conducted using in-person interviews and a mixed web/mail mode. Recreational fishers are asked general questions about their most recent fishing trip and their expenses. This data is then used to calculate average expenditures per angler-trip and total expenditures for all trips for each coastal state and mode of fishing (for-hire, private boat, and shore). In 2022, NOAA Fisheries conducted the fourth iteration of the National Marine Recreational Fishing Expenditure Survey and calculated updated estimates of average and total trip expenditures.

Guide fees, which encompass anglers' expenditures on for-hire vessels tickets (e.g., charter or party boats) and surcharges, consistently account for the highest share of expenditures in the for-hire mode. The average guide fees expenditures for each state generally increased between the 2017 expenditure survey and the 2022 expenditure survey. The highest average regional and state level guide expenditure was in the North Pacific (\$767), and the lowest state average was in New Hampshire (\$94). The Pacific regional average expenditure was \$330, the Gulf of Mexico regional average was \$281, the South Atlantic regional average was \$233, the Mid-Atlantic regional average was \$178, and the New England regional average was \$151 (Figure 13).

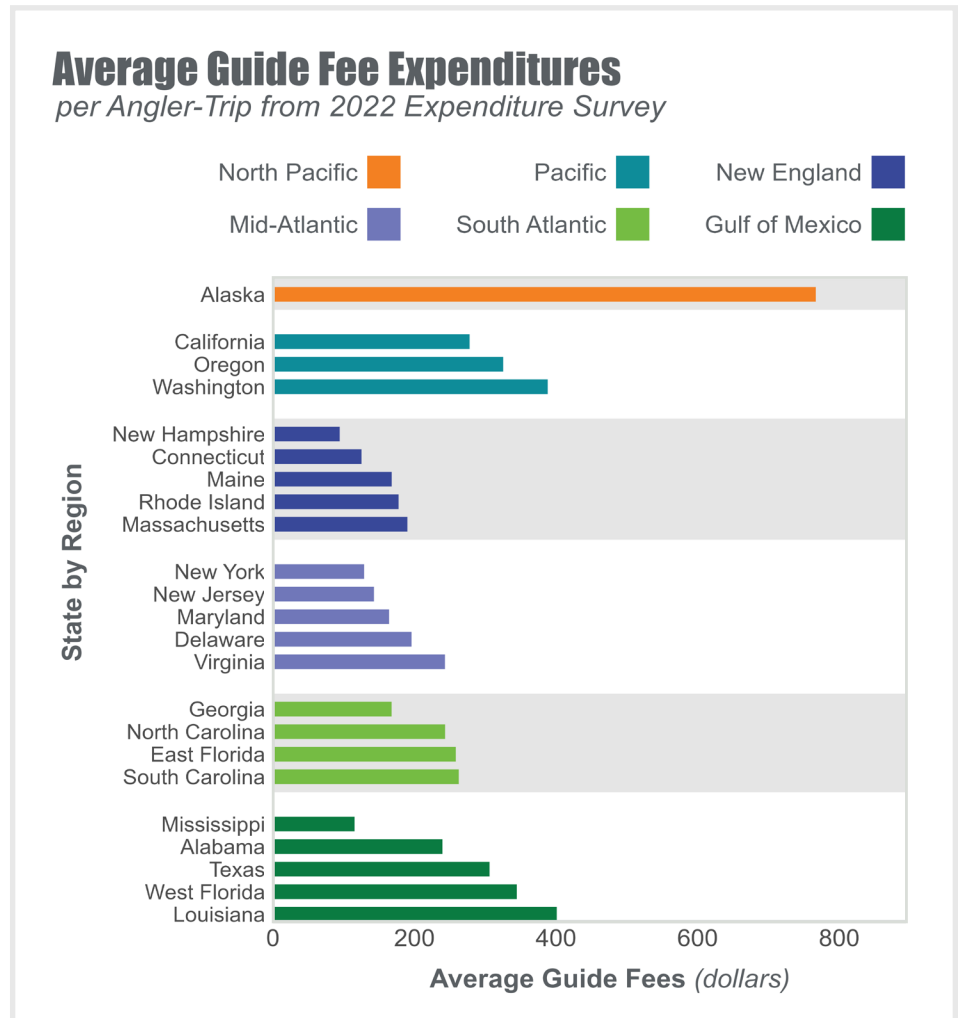


Figure 13. Average guide fee expenditures per angler-trip by state from the 2022 expenditure survey.



Human Dimensions

NOAA Fisheries' Community Social Vulnerability Indicators (CSVI) provide an assessment of fishing community engagement and reliance on commercial and recreational fisheries, as well as socio-cultural and socio-economic dynamics that are indicative of their health. The CSVI mapping and graphing tool allows users to assess coastal fishing community vulnerability and resilience.



Fishing Engagement and Reliance

Commercial Fishing Indicators

Commercial Fishery Engagement indicators measure fishing activity using the number of permits and dealers, and pounds and value landed in a community. The **Commercial Fishery Reliance** Indicator adjusts these measures of fishing activity to account for each community's population size. A community that is engaged or reliant on commercial fishing may be particularly susceptible to changes in the conditions of the commercial fisheries in which they participate. Of the 4,889 coastal communities assessed in 2020 by the Community Social Vulnerability Indicators, 144 were identified as commercial fishing communities that were significantly engaged and/or reliant on commercial fishing activity (**Table 8**).



Fishermen aboard Miss Sue, of Newport, Oregon, haul in their catch of rockfish off the West Coast. Credit: John Rae.

Recreational Fishing Indicators

Recreational Fishery Engagement indicators measure the level of recreational fishing activity using shore, private vessel, and for-hire fishing effort. The **Recreational Fishery Reliance** indicator adjusts these measures of fishing effort to account for each community's population level. A community that is both engaged and reliant on recreational fishing may be particularly susceptible to changes in the conditions of the recreational fishing opportunities in their region. A total of 321 were identified as recreational fishing communities that were significantly engaged and/or reliant on recreational fishing activity (**Table 8**).



Angler holds a red drum while sitting in a kayak on the water. Credit: Sandra Lewis.

Social Indicators and Community Well-Being

In addition to the engagement and reliance indicators, there are a suite of social indicators which can be used to characterize community well-being and resilience to forces of change (examples below).

Environmental Justice Indicators

Environmental Justice indicators include the personal disruptions index, the population composition index, and the poverty index. The personal disruptions index indicates circumstances that might affect a person's ability to find work and consists of statistics like rates of unemployment status, educational attainment, poverty, and marital status. The population composition index captures diversity in the demographic makeup of a given community in terms of race, marital status, age, and ability to speak English. The poverty index is an indicator of the prevalence of poverty within a community and is made up of variables like the number of families below the poverty income threshold or receiving public assistance.

Gentrification Indicators

Gentrification indicators capture challenges to the ability of a working waterfront to support fishing employment and infrastructure. The housing disruption index provides an overall depiction of how fast housing costs are increasing in a community. The retiree migration index comprises the number of households with inhabitants over 65 years, population receiving social security or retirement income, and level of participation in the workforce. This index is an indicator of gentrification pressures as retirees seek out the amenities of coastal living, which can potentially displace the local workforce. The urban sprawl index incorporates increasing population density, proximity to urban centers, home values, and the cost of living, which can be challenges to working waterfronts.

Socio-Economic Indicators

Socio-Economic indicators include the labor force structure index and the housing characteristics index. The labor force structure index is an indicator characterizing the strength and stability of the labor force and is composed of variables including females employed, population in the labor force, self-employment, and social security recipients. The housing characteristics index captures economic aspects of housing infrastructure and includes median rent and mortgage, number of rooms, and presence of mobile homes. These Socio-Economic indicators characterize the strength and stability of the workforce and housing stock in a community.

Coastal Fishing Communities

The Environmental Justice, Gentrification, and Socio-Economic indicators for commercial and recreational fishing communities that engagement and reliance indicators suggest may be susceptible to changes in fishing revenues (**Table 8**). High values for an index indicate an increased likelihood of vulnerability along that dimension. The table is color coded with darker colors for higher percentages. For both commercial and recreational fishing, the largest percentage of communities have Environmental Justice and Gentrification indicators values that indicate low levels of concern. However, there are still significant proportions of communities with high levels of concern. For example, over 23 percent of commercial fishing communities fall into the high range of the Environmental Justice indicators, signaling that these communities may be less resilient to shocks to the commercial fishing industry.

Community Social Vulnerability Indicators are categorical rankings ranging from high to low.¹⁴

Table 8. Social vulnerability indicator proportions for commercial and recreational fishing communities, 2020.

| Community Type | Concern Level | Environmental Justice | | | Gentrification Pressure | | | Socio-Economic | |
|----------------|---------------|-----------------------|------------------------------|---------------------------|--------------------------|-------------------------|--------------------|-------------------|-------------------------------|
| | | Poverty Index | Population Composition Index | Personal Disruption Index | Housing Disruption Index | Retiree Migration Index | Urban Sprawl Index | Labor Force Index | Housing Characteristics Index |
| Commercial | High | 28% | 27% | 23% | 31% | 27% | 19% | 22% | 48% |
| | Medium | 22% | 15% | 23% | 26% | 15% | 18% | 21% | 23% |
| | Low | 50% | 58% | 54% | 43% | 57% | 62% | 57% | 29% |
| Recreational | High | 18% | 19% | 15% | 37% | 34% | 19% | 32% | 37% |
| | Medium | 22% | 18% | 23% | 23% | 19% | 18% | 16% | 24% |
| | Low | 60% | 63% | 63% | 40% | 47% | 63% | 53% | 39% |



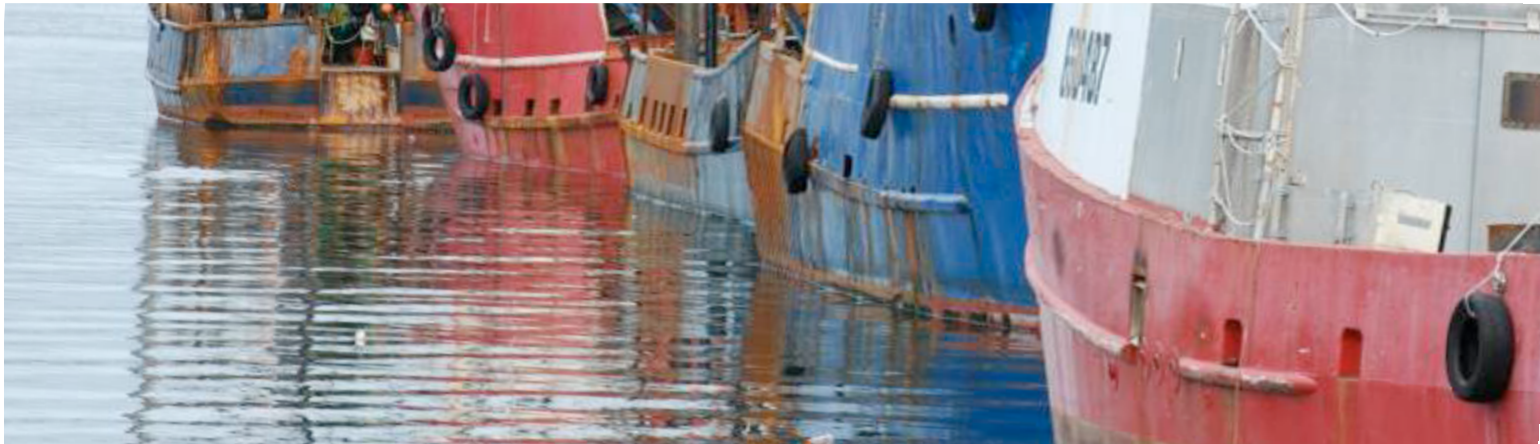


Figure 14 is a subset of social indicators selected for comparison between highly engaged and/or reliant commercial fishing communities and all other coastal communities. 2.9 percent of coastal fishing communities were highly engaged and/or reliant on commercial fishing. The percent of communities ranked as low, medium, and high vulnerability for each index are displayed. When compared to all other communities in coastal counties, commercial fishing communities show similar results for the labor force and population composition indicators with at least 42 percent showing medium to high vulnerability. In contrast, there are distinct differences between fishing communities and all other communities for the personal disruption, poverty, housing disruption, and housing characteristics indicators. The percent of communities that fell into the medium to high range was 8 percent to 17 percent higher than that for other coastal communities.

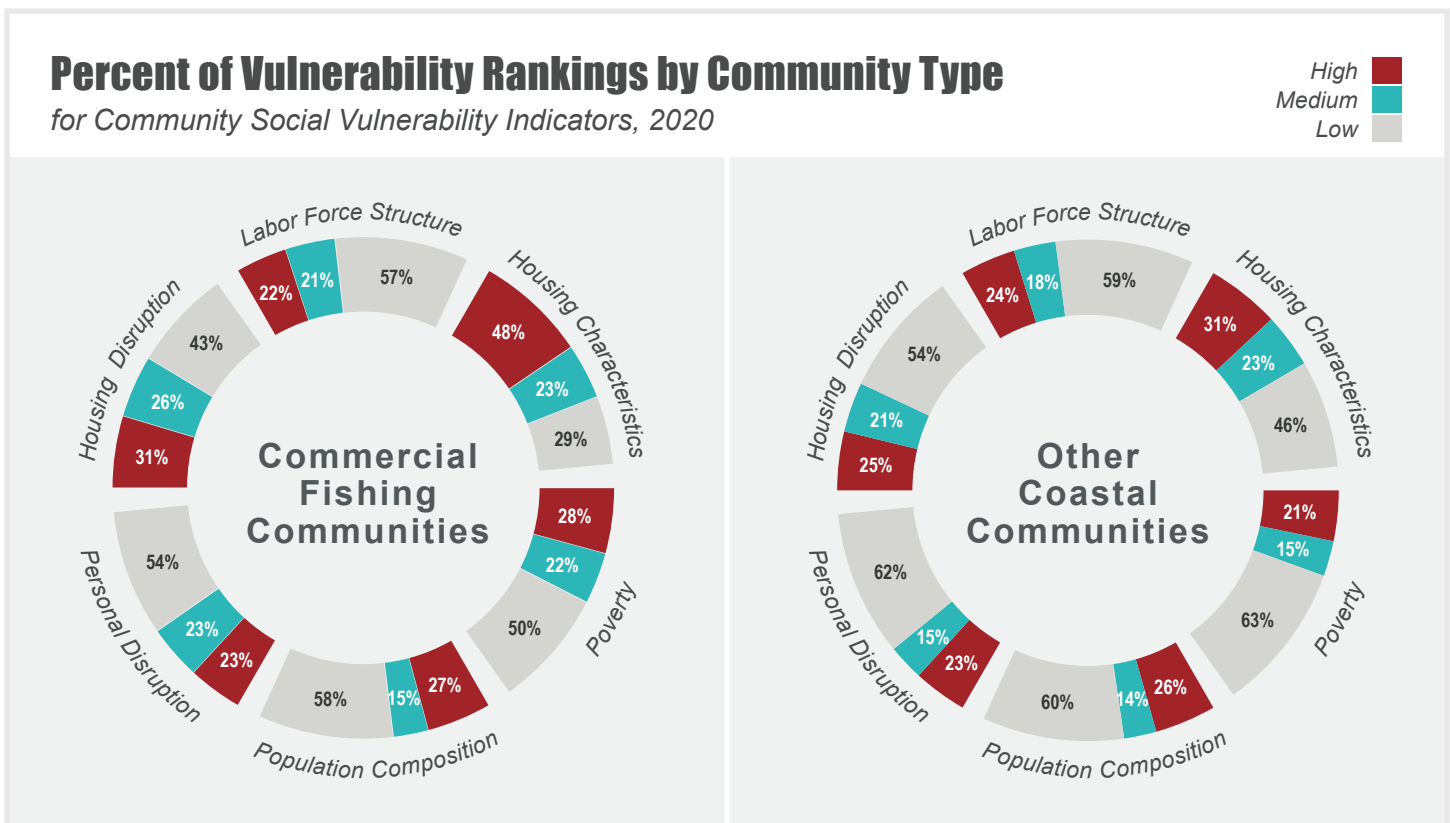


Figure 14. Comparison of key social vulnerability indicators by community type, 2020.

Spotlight Topics

This year’s report spotlights two topics. The first is the NOAA Fisheries’ Processed Seafood Products database, exploring how U.S. seafood processing is distributed across the nation. The second examines the results of a recent survey by NOAA Fisheries and partners that provides insights on Direct Seafood Marketing businesses and employment.

Spotlight Topic — Collection of Annual Data on Processed Seafood Products

The NOAA Fisheries, Office of Science and Technology, Statistics Division annually coordinates, administers, and collects the Processed Seafood Products Survey from processors around the nation. This survey provides information on quantity and value for processed seafood products, as well as employment data for processors. These data are collected through surveys focused on the domestic seafood processing industry. Because the survey is voluntary in some regions, the NOAA Seafood Inspection Program also includes estimated data from companies that have not reported but are included in the inspection program.

Processed products generated \$13 billion in revenue in 2022 in the United States. The North Pacific Region had the highest revenue (\$4.9 billion) followed by the Pacific Region (\$2.7 billion). Alaska generated more than two times the revenue of all of the other states (Figure 15). Connecticut (\$684 thousand) and South Carolina (\$5.5 million) had the least amount of revenue from processed products (Figure 15).

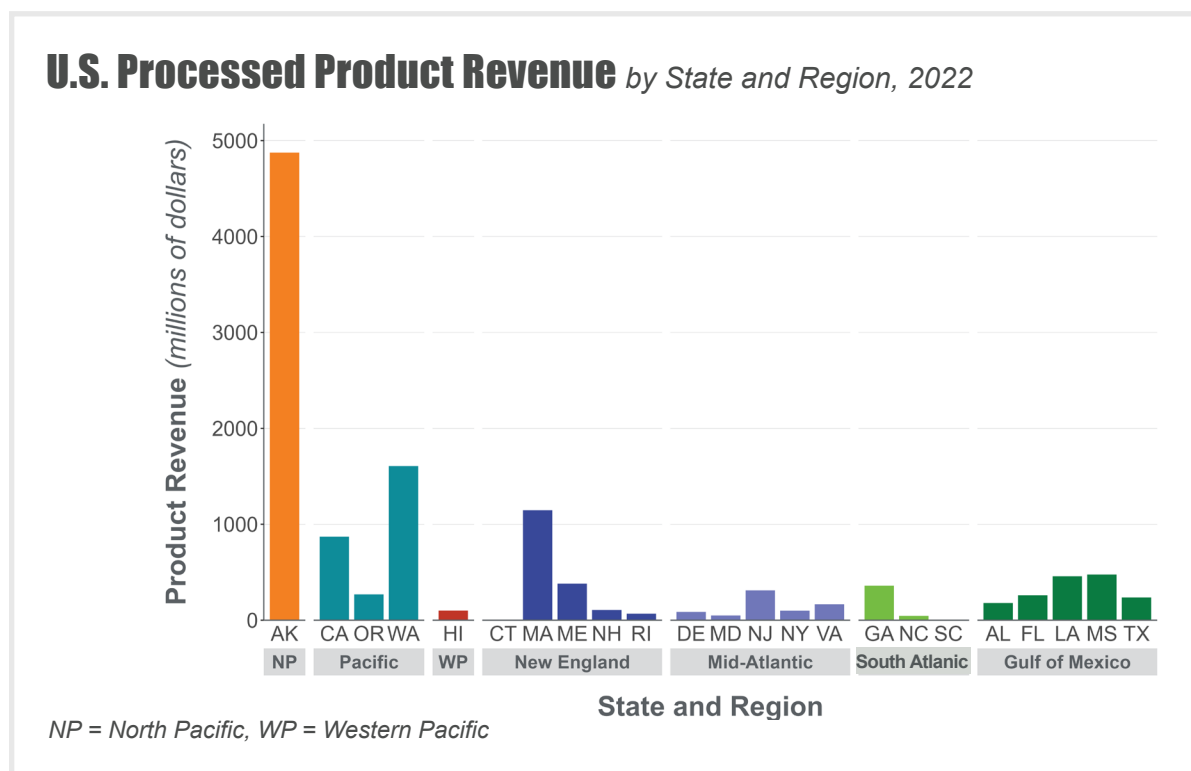


Figure 15. U.S. processed product revenue (millions of dollars) by state and region for 2022 (Data Tool).

In 2022, the seafood industry produced 4.8 billion pounds of U.S. processed products. In this report, there are 15 categories of processed seafood products. Of all product types, fillets generated the most revenue (\$3.1 billion), and dressed garnered the most volume (1.2 billion pounds). Fillets (23.6 percent), dressed (18.4 percent), and canned (11.1 percent) made up around 53 percent of the total value of all processed seafood product categories (**Figure 16**). Of 9 key U.S. species, Pacific salmon generated the most revenue (\$2.4 billion), Pacific pollock generated the most volume (1.1 billion pounds), and American lobster had the highest processed product price at \$20.64 per pound.

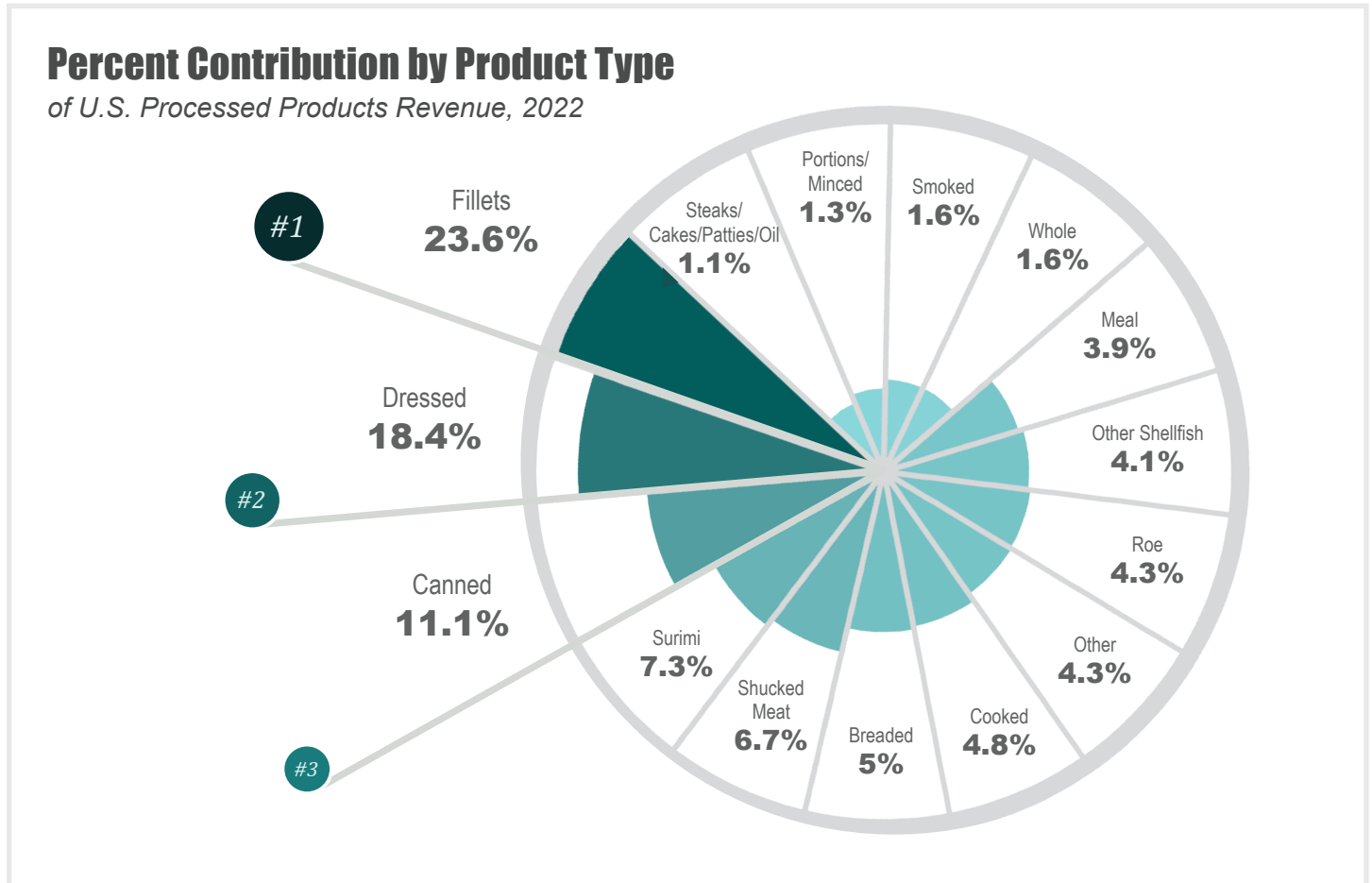


Figure 16. U.S. processed product value (dollars) percent contribution by product type in 2022 ([Data Tool](#)).



A simple correlation analysis test indicated a strong, slightly positive, relationship between ex-vessel price and processed product price over a 30-year period from 1992 to 2022 (see [Methods](#) for more information).¹⁵ The same test evaluated the relationship between the two prices for 9 key U.S. species. The two prices appeared to have the strongest relationship over the 30-year time span for pacific salmon, sablefish, sea scallops, and snow crab (**Figure 17**). In general, and as expected, processed product prices were higher than ex-vessel prices due to the markup and value-added of processing (**Figure 17**).

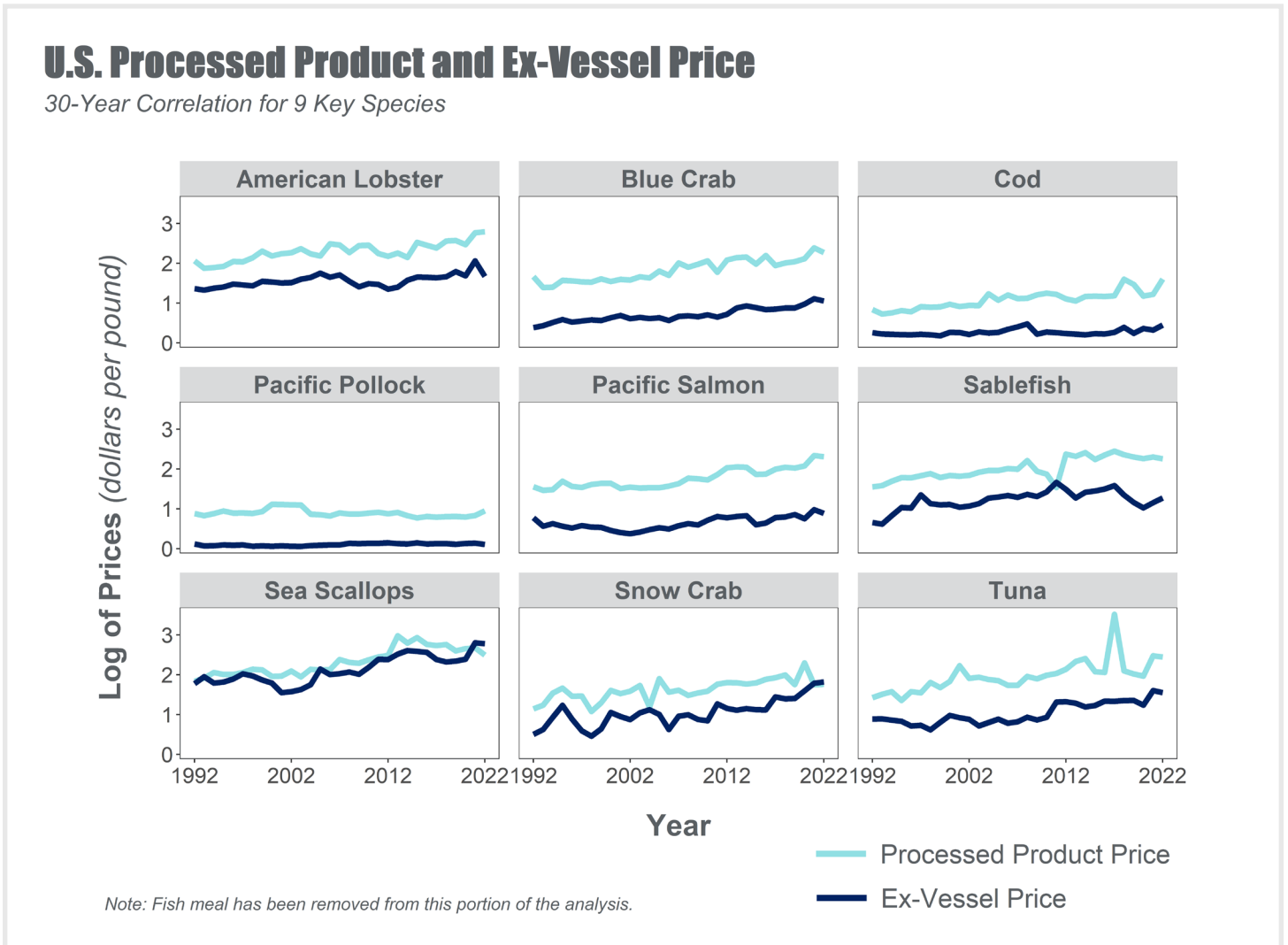


Figure 17. Relationship between average ex-vessel and processed product prices (dollars per pound) for U.S. key species from 1992 to 2022. A logarithmic scale was used to descale processed product and ex-vessel prices for the correlation ([Data Tool](#)).

Spotlight Topic — U.S. Direct Seafood Marketing Estimates

The [American Seafood Harvesters Marketing Practices Survey](#) (ASHMP), implemented in 2023, provides the first ever national assessment of scope and scale and types of direct seafood marketing pathways in the U.S. commercial fishing sector. This spotlight provides key highlights from preliminary findings. Over the past 3 years, NOAA has been working with the University of Maine and U.S. Department of Agriculture to examine the role of direct marketing of U.S. caught seafood.

Direct Seafood Marketing

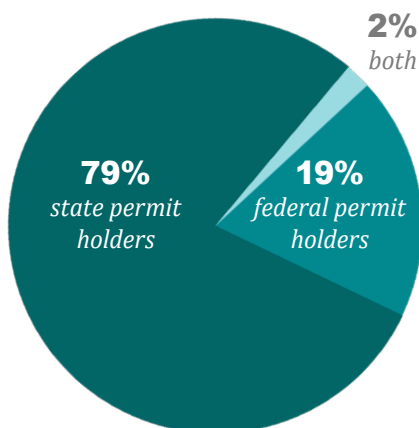
When individuals or businesses sell their product directly to the consumer.

Fish and other marine resources are a critical part of our food systems and food ways. How, where, and by whom marine resources are caught, processed, and sold can determine what our U.S.-caught marine resources are used for and how those benefits are distributed. A portion of U.S. seafood harvesters are family-owned operations that catch, market, and distribute their landings directly to end consumers—either locally, or through online platforms. These pathways are an integral part of ensuring quality seafood is available in the United States and also play a role in sustaining and strengthening coastal communities. Prior to the implementation of the ASHMP, we have not had the information to understand the scope and scale of these pathways. To learn more about the survey methods, see the [Methods](#) web page.

Key Findings

- **6,625** individuals or businesses were estimated to engage in direct seafood marketing in 2019.
- **11.8** percent of U.S. commercial seafood harvesters were estimated to participate in direct seafood marketing.
- **Direct to consumer sales** were the most common type of direct marketing.
- **40** percent of the direct seafood workforce were part-time or unpaid labor.
- **19** percent of the direct seafood workforce were female.

56,149 U.S. Commercial Harvesters with Permits, 2019



The percentage of U.S. commercial fishers who engage in direct seafood marketing by state is listed in **Table 9**. Overall, 11.8 percent of all U.S. harvesters are estimated to engage in some type of direct marketing. In Hawai'i, 29.6 percent of seafood harvesters engage in direct marketing, the highest of any state, followed by New Hampshire (26.1 percent), Washington (25.9 percent), and Alaska (20.4 percent).

The percentage of permitted commercial fishers in each state engaged in each of the direct marketing pathways is provided in **Table 10**.

Employment characteristics of the respondents in the direct seafood sector, including the number of employees, their full- or part-time status and sex breakdown are displayed in **Figure 18**. More than 60 percent of the reported direct seafood workforce were full-time employees, with the rest being part-time or unpaid labor. Nineteen percent of the reported direct seafood workforce were female, with the majority working part-time. Florida and Washington state had the largest direct seafood workforce among the U.S. states.

Direct Seafood Marketing Channels

Direct Sales to Consumers

Products usually minimally processed and sales conducted by close family members or facilitated by other businesses, with ownership of seafood products not changing hands until sales to consumers. Examples include off-the-boat/dock sales, farmer's markets, community supported fisheries (CSFs), and seafood buying clubs.



Direct marketing at Tuna Harbor Dockside Market in San Diego, California. Credit: Ron Batcher.

Direct Sales to Retail

Products typically processed by retailers. Ownership of a product changes hands. For example, fishmongers, independent grocery stores, and fishermen's co-ops.



Direct Sales to Foodservices

Seafood sales to businesses that prepare food. For example, restaurants, fast food outlets, seafood shacks, and food trucks.



Direct Sales to Institutions

Seafood sales to organizations that do not primarily prepare food. For example, schools, prisons, universities, hospitals, and foodbanks.



Direct Sales to Source Identified Distributors

Businesses not owned by the harvester or immediate family. Seafood sold through this channel differs from "conventionally marketed" seafood, in that it is accompanied by information of the vessel or seafood harvester who caught it, resulting in additional benefit to the harvester.



Table 9. Percentage of commercial fishing businesses engaged in direct marketing in 2019.

| Geography | Estimated% of Businesses |
|----------------|--------------------------|
| U.S. Total | 11.8 (6,625 total) |
| Hawai'i | 29.6 |
| New Hampshire | 26.1 |
| Washington | 25.9 |
| Alaska | 20.4 |
| Connecticut | 15.5 |
| Florida | 14.9 |
| New York | 14.8 |
| Oregon | 13.2 |
| South Carolina | 12.3 |
| Texas | 12.1 |
| California | 11.7 |
| New Jersey | 11.5 |
| Georgia | 11.1 |
| North Carolina | 10.8 |
| Virginia | 10.8 |
| Maryland | 10.4 |
| Delaware | 9.8 |
| Maine | 9.4 |
| Alabama | 8.6 |
| Louisiana | 8.3 |
| Mississippi | 7.5 |
| Massachusetts | 6.5 |
| Rhode Island | 4.4 |

Source: American Seafood Harvesters Marketing Practices Survey. 2023. Available at: <https://umaine.edu/marine/seafood-marketing-survey/>. **Note:** Data for states with less than 4 percent direct seafood marketers not displayed.

Table 10. Percentage of regional direct seafood market channel engagement (derived from 2023 survey responses).

| Region | Direct to Consumer | Direct to Retail | Direct to Food Services | Direct to Institutions | Direct to Source Identified Distributor |
|-----------------|--------------------|------------------|-------------------------|------------------------|-----------------------------------------|
| U.S. Total | 68.8 | 53.2 | 34.8 | 5.1 | 55.1 |
| North Pacific | 77.8 | 47.6 | 39.7 | 9.5 | 44.4 |
| Pacific | 77.1 | 66.1 | 52.3 | 8.3 | 56.9 |
| Western Pacific | 90.7 | 63.0 | 46.3 | 1.9 | 51.9 |
| New England | 63.0 | 51.2 | 15.0 | 3.1 | 55.1 |
| Mid-Atlantic | 70.1 | 42.5 | 37.9 | 3.4 | 50.6 |
| South Atlantic | 54.7 | 58.9 | 38.9 | 8.4 | 60.0 |
| Gulf of Mexico | 55.7 | 36.1 | 18.0 | 0.0 | 63.9 |
| Great Lakes | 83.3 | 83.3 | 33.3 | 0.0 | 50.0 |

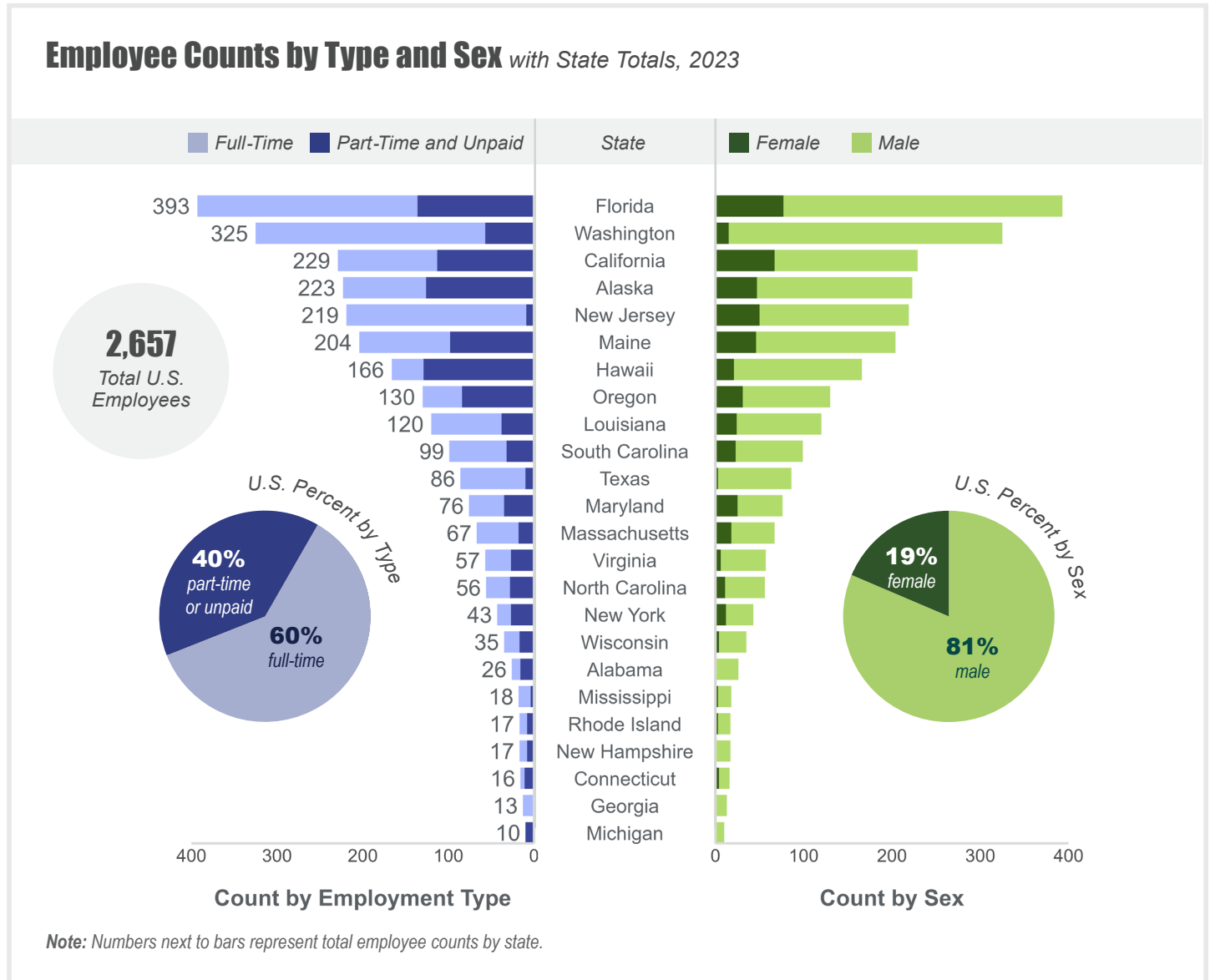


Figure 18. Employment characteristics of the direct seafood sector by state showing states with more than 10 employees (derived from 2023 survey responses).

Other Report Information

Acknowledgements

Office of Science and Technology Contributors

For this year's report, Ben Fissel, Sabrina Lovell, and Kelsey Martin were primary authors and analysts. Shelley Arenas, Jacqui Fenner, and Anudja Kunanayagam were primary editors. Lisa Colburn and Changhua Weng co-authored the Human Dimensions section. Patricia Pinto da Silva and Sarah Shoffler co-authored the Direct Seafood Marketing section of Spotlight Topics. Information and technical expertise was provided by Amy Djukanovich, Lauren Dolinger Few, and Michael Liddel. Michael Lewis and Sofia Rearden co-developed the new FEUS Tool, now integrated into FOSS. Communications expertise was provided by John Thibodeau and Avi Litwack. Web accessibility was done by Derrick Hill. Design and layout was done by Jacqui Fenner.

Rita Curtis, the creator of this report series, was the primary author from the report's inception through FEUS 2020. Throughout the years, many people have contributed to this series and added their unique value.

Other Contributors

Information and expertise was provided by Rob Ames and Jason Edwards (Pacific States Marine Fisheries Commission).

Data Sources

Report information came from many sources. Visit [Data Sources, Footnotes, and Reference Materials](#) for details.

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