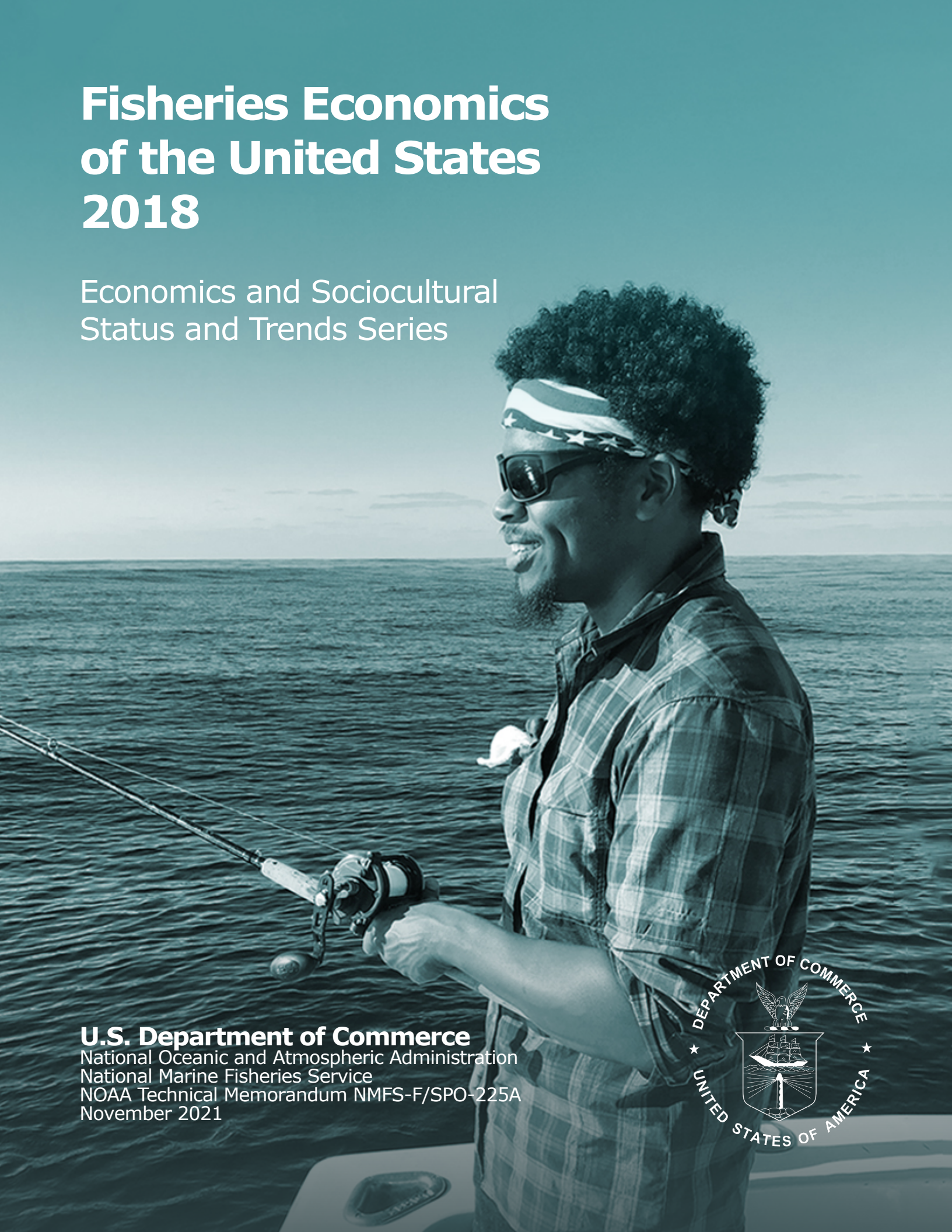
Fisheries Economics of the United States 2018

Economics and Sociocultural Status and Trends Series



U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
NOAA Technical Memorandum NMFS-F/SPO-225A
November 2021

Fisheries Economics of the United States 2018

Economics and Social Analysis Division
Office of Science and Technology
NOAA Fisheries (NMFS)
1315 East-West Highway, 12th floor
Silver Spring, MD 20910

NOAA TECHNICAL MEMORANDUM NMFS-F/SPO-225A
NOVEMBER 2021

U.S. Department of Commerce
Gina M. Raimondo, Secretary of Commerce

National Oceanic and Atmospheric Administration
Dr. Richard W. Spinrad, NOAA Administrator

National Marine Fisheries Service
Janet Coit, Assistant Administrator for Fisheries

NOAA Fisheries Publications

Each year NOAA Fisheries produces three annual reports covering different aspects of the status of United States marine fisheries.

Status of Stocks is an annual report to Congress on the status of U.S. fisheries and is required by the Magnuson-Stevens Fishery Conservation and Management Act. This report, which is published each spring, summarizes the number of stocks on the overfished, overfishing, and rebuilt lists for U.S. federally managed fish stocks and stock complexes. The report also shows trends over time, discusses the value and contributions of our partners, and highlights how management actions taken by NOAA Fisheries have improved the status of U.S. federally managed stocks. For example, the 2017 report shows that the number of stocks on the overfished list just reached a new all-time low.
https://www.fisheries.noaa.gov/national/population-assessments/fishery-stock-status-updates#2018-quarterly-updates

Fisheries of the United States, published each fall, has been produced in its various forms for more than 100 years. It is the NOAA Fisheries yearbook of fishery statistics for the United States. It provides a snapshot of data, primarily at the national level, on U.S. recreational catch and commercial fisheries landings and value. In addition, data are reported on U.S. aquaculture production, the U.S. fishery processing industry, imports and exports of fishery-related products, and domestic supply and per capita consumption of fishery products. The focus is not on economic analysis, although value of landings, processed products, and foreign trade are included.
https://www.fisheries.noaa.gov/national/commercial-fishing/fisheries-united-states

Fisheries Economics of the United States, published each fall, provides a detailed look at the economic performance of commercial and recreational fisheries and other marine-related sectors on a state, regional, and national basis. The economic impact of commercial and recreational fishing activities in the United States is also reported in terms of employment, sales and value-added impacts. The report provides management highlights for each region that include a summary of stock status, updates on catch share programs, and other selected management issues.
https://www.fisheries.noaa.gov/national/commercial-fishing/fisheries-economics-united-states

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An earlier version of this report, F/SPO-225, was published online in November 2021. This revised version includes updates to recreational harvest and release data for bluefin tuna in California; a new footnote has been added to the updated table.

A copy of this report may be obtained from:

Economics and Social Analysis Division
Office of Science and Technology
NOAA Fisheries (NMFS)
1315 East-West Highway, 12th floor
Silver Spring, MD 20910

Or online at:

https://www.fisheries.noaa.gov/national/sustainable-fisheries/fisheries-economics-united-states

Contents

Haddock being taken out at Fisherman's Wharf in Gloucester, MA.
Photo: New England Fishery Management Council

Preface

Fisheries Economics of the United States, 2018

Fisheries Economics of the United States, 2018, is the thirteenth volume in this annual series, which is intended to provide the public with easily accessible economic information about the nation's commercial and recreational fishing activities and fishing-related industries. Summary data is available online in the FEUS tool, available from https://www.st.nmfs.noaa.gov/data-and-tools/FEUS/explore-the-data.

This year's report covers the years 2009 to 2018 and provides descriptive statistics for the following categories: economic impacts of the commercial fishing and seafood industry; commercial fisheries landings, revenue, and price trends; saltwater angler expenditures and economic impacts of marine recreational fishing; recreational fishing catch, effort, and participation rates; and employer and non-employer establishments, payroll, employees, and annual receipt information for fishing-related industries.

The report also provides management highlights for each region that include a summary of stock status, updates on catch share programs, and other selected management issues. Economic performance indicators for catch share programs are reported.

Sources of Data

Information in this report came from many sources. Commercial landings, revenue, and price data, as well as recreational fishing effort and participation data, were primarily obtained from the Fisheries Statistics Division, Office of Science and Technology, NOAA Fisheries. Other data sources included the NOAA Alaska Fisheries Science Center; Alaska Department of Fish and Game; California Department of Fish and Game; Oregon Department of Fish and Wildlife; Washington Department of Fish and Wildlife; the Pacific Coast Fisheries Information Network (PacFIN); Texas Parks and Wildlife Department; and Western Pacific Fisheries Information Network (WPacFIN). Economic impacts from the commercial fishing and seafood industry and recreational fishing sectors are from two separate national IMPLAN models of the Economics and Sociocultural Analysis Division, Office of Science and Technology, NOAA Fisheries. Fishing-related industry information was obtained from the U.S. Census Bureau, Bureau of Economic Analysis, and the Bureau of Labor Statistics.

Acknowledgments

Many people participated in the production of this report. Shelley Arenas and Alex Richardson are the editors of this report series; Rita Curtis, Sabrina Lovell, and Alex Richardson were primary authors and analysts on this edition of Fisheries Economics of the United States. Key collaborators include Emily Markowitz, Molly Graham, Drew Kitts, Noelle Olsen, Lauren Dolinger Few, Michael Liddel, and Michael Lewis. Other colleagues who provided information and expertise included Mike Brown (California Department of Fish and Wildlife), and Jason Edwards and Rob Ames (Pacific States Marine Fisheries Commission). The report's design and layout was done by Avi Litwack and Jacqui Fenner.

Address all comments and questions to:
Kathryn Cuff | Kathryn.Cuff@noaa.gov

Economics and Social Analysis Division

Office of Science and Technology
NOAA Fisheries (NMFS)
1315 East-West Highway, 12th floor
Silver Spring, MD 20910-3282
Phone: 301-427-8121

Commercial Fisheries

What Does the Term Mean?

Commercial fisheries, in this report, refers to fishing operations that sell their catch for profit. It does not include saltwater anglers who fish for sport or subsistence fishermen. It also excludes the for-hire sector, which earns its revenue from selling recreational fishing trips to saltwater anglers. The commercial fisheries section reports on economic impacts, landings revenue, landings, and ex-vessel prices of key species and species groups.

Metrics Definitions[1]

Economic Impacts
The employment, personal income, and output generated by the commercial harvest sector and other major components of the U.S. seafood industry.

Landings Revenue
The price that fishermen are paid for their catch.

Landings
The poundage or number of fish unloaded by commercial fishermen or brought to shore.

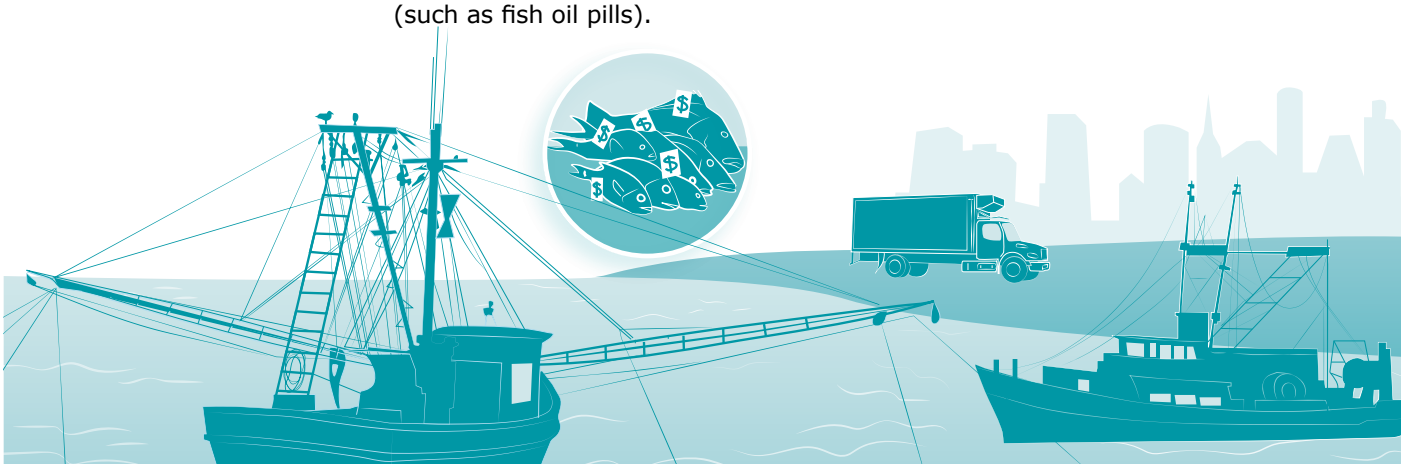
Ex-vessel Prices
The price received by a captain, at the point of landing, for the catch.

Frequently Asked Questions

What are fish caught with in commercial fishing?
Fish can be caught using a variety of gear, including potts and traps, trawls and seines, gillnets, dredges, and hooks and lines.

What happens to seafood caught by commercial fishermen?
Fish caught by commercial fishermen are first processed and packaged. Then they are sold to various establishments for consumption, such as restaurants and supermarkets. They can also be used as animal food and for medical purposes (such as fish oil pills).

Does the United States get seafood from anywhere else?
Not all fish are caught by U.S. commercial fishermen. A large percent of the seafood the U.S. receives is imported.



[1] For full definitions, see the Glossary at the back of this publication.

Recreational Fisheries

What Does the Term Mean?

Recreational fisheries, or recreational fishing, refer to fishing for pleasure rather than selling the fish for profit (i.e., commercial fishing) or for subsistence. The recreational fisheries section of Fisheries Economics of the U.S. reports on angler trips, participation, expenditures and economic impacts, and catch of key species and species groups. Only saltwater, or marine, recreational fishing is included in FEUS.

Metrics Definitions

Economic Impacts and Expenditures
The employment, sales, and personal income generated by expenditures on fishing trips and fishing-related durable goods (i.e. equipment used for recreational fishing).

Fishing Trips/ Effort
The number of fishing trips taken by recreational fishermen (anglers).

Participation
The number of anglers who fish in a given state or region. Anglers can be from in-state or out-of-state and from a coastal county or non-coastal county.

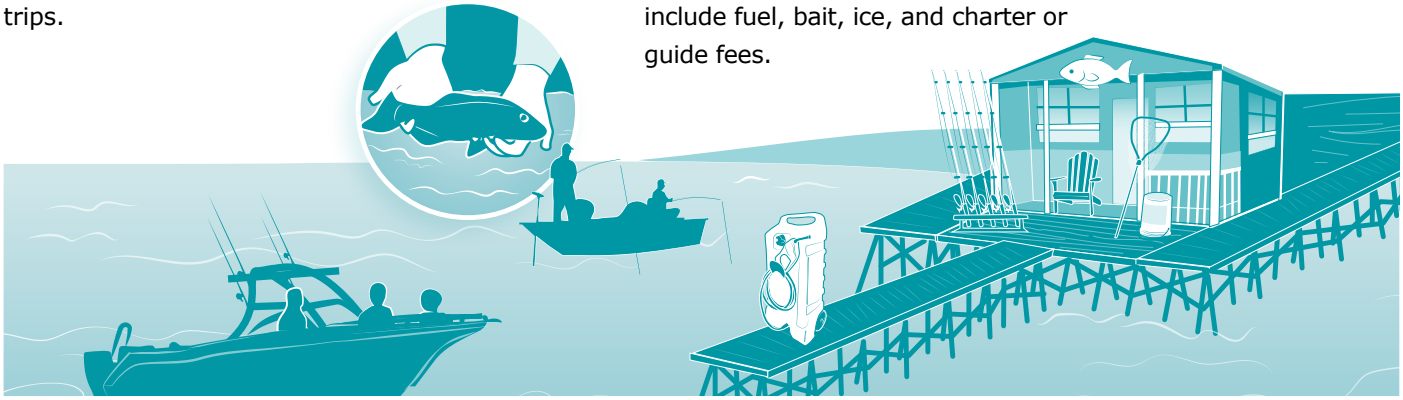
Harvest and Release
The total number or fish either: 1) caught and kept (**harvested**), or 2) caught and **released**, by recreational anglers from an area over a period of time. Total catch is the sum of the number of fish harvested and released.

Frequently Asked Questions

How do anglers affect the fishing economy?
When anglers participate in fishing activities, they support sales and employment in recreational fishing and other types of businesses. Anglers buy fishing equipment from bait and tackle shops, rent or buy boats, or pay to have others take them on charter boats to fish. They may also pay for food and drink at local restaurants, purchase gas for their boat, and stay in hotels for overnight fishing trips.

What do anglers spend their money on?
Durable goods, such as fishing tackle and boat, vehicle, and second home expenses. **Trips**, which can be taken in one of three modes: as for-hire (charter or party boat), private (or rental boat), and shore (fishing from shore). Some examples of trip expenditures include fuel, bait, ice, and charter or guide fees.

What do anglers do with their catch?
Some anglers catch fish to eat (i.e., harvest), while others practice catch and release. In recreational fishing, anglers do not sell the fish they catch for profit.



Marine Economy

What Does the Term Mean?

The "Marine Economy," in this report, refers to the economic activity generated by sectors of the economy that depend directly on oceans (or Great Lakes). We report on two industry sectors within the marine economy: 1) seafood sales and processing; and 2) transport, support, and marine operations. Information such as the number of establishments, number of employees, and annual payroll for these fishing and marine-related industries is used to determine their relative levels of economic activity in a state.

Metrics Definitions

Seafood Sales and Processing
These sectors are a direct representation of the Establishments, Employees, Sales, and Payroll for seafood processors, wholesalers, and retailers that buy fish from commercial fishermen and distribute to consumers.

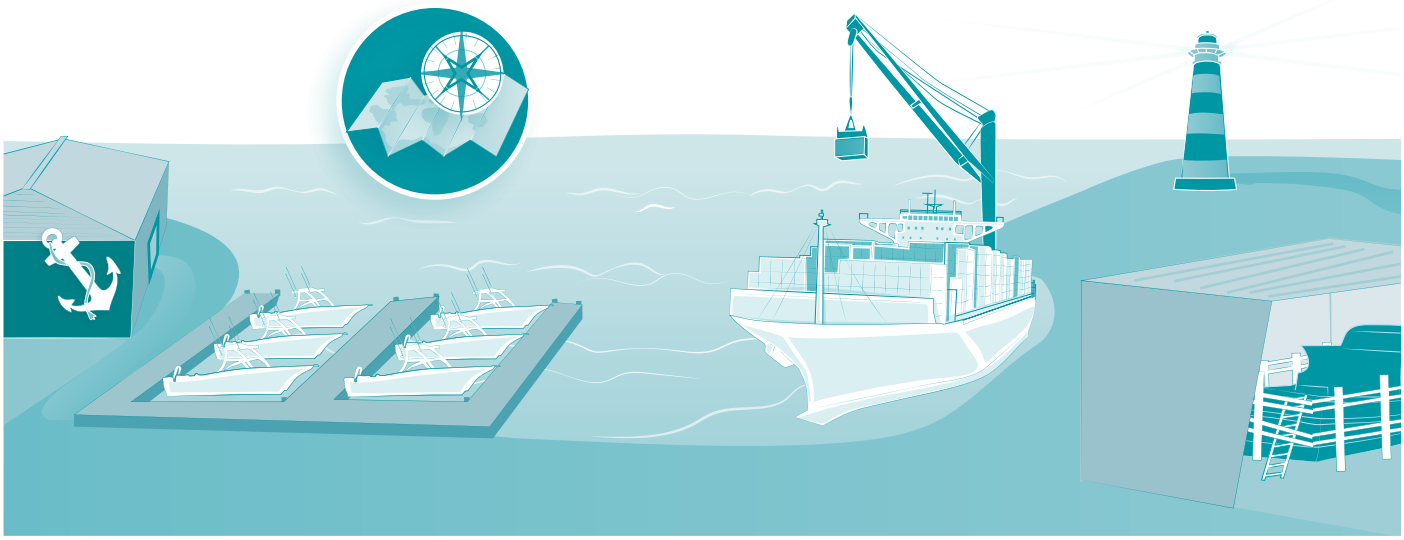
Transport, Support, and Marine Operations
The various sectors that contribute to the overall marine economy that may or may not support the fishing economy.

Frequently Asked Questions

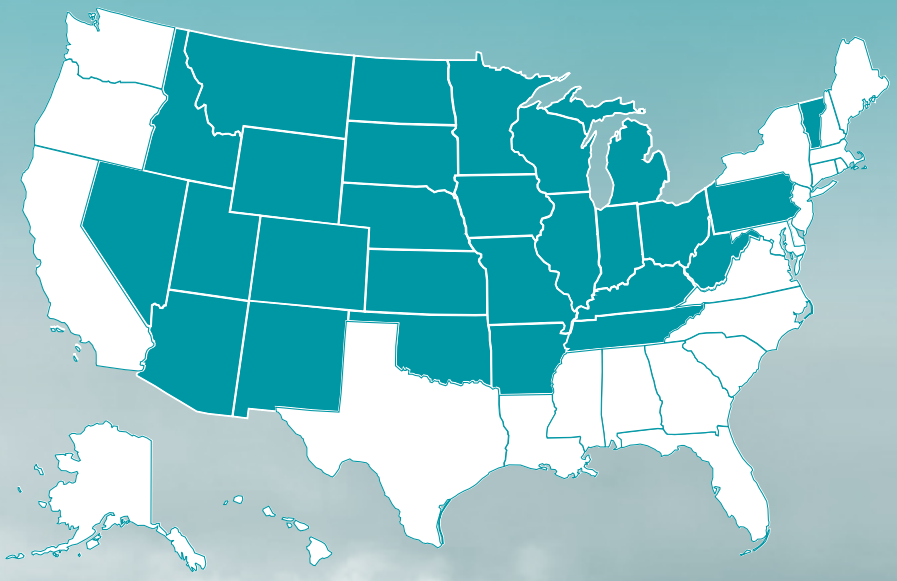
Does the marine economy include commercial and recreational fisheries?
Yes, commercial and recreational fisheries contribute to the overall marine economy.

What marine economy sectors, featured in the report, are related to commercial and recreational fisheries?
The seafood product preparation & packaging, wholesale, and retail seafood sales sectors are major parts of the commercial fishing industry. The Marinas, Navigational Services, Port & Harbor operations, and Ship & Boat Building sectors provide goods and services used in both commercial and recreational fisheries.

Why does the report include sectors that are independent of the fishing economy?
Information on sectors that are independent of the fishing economy, like freight transportation, provides context for how national and regional economies are affected by the use of ocean resources.



National Overview



A pollock catcher processor, *Arctic Fjord*, leaving Dutch Harbor, Alaska after an offload to go fishing for more pollock.
Photo: Arctic Storm Management Group/Sarah Nayani

MANAGEMENT CONTEXT

The authority to manage federal fisheries in the United States was granted to the Secretary of Commerce by the Magnuson-Stevens Fishery Conservation and Management Act (P.L. 94-265 as amended by P.L. 109-479). NOAA Fisheries is the federal agency with delegated authority from the Secretary of Commerce to oversee fishing activities in federal waters. Federal fisheries are generally defined as fishing activities that take place in the U.S. Exclusive Economic Zone (EEZ, between 3 and 200 nautical miles from the coastline). Generally, individual states retain management authority over fishing activities within three nautical miles of their coasts.

Regional Fishery Management Councils

- North Pacific
- Pacific
- Western Pacific
- New England
- Mid-Atlantic
- South Atlantic
- Gulf of Mexico
- Caribbean

Nationwide, 46 fishery management plans (FMPs) provide a framework for managing the harvest of 479 fish stocks and stock complexes.[1] These plans aim to manage the harvest of fish in U.S. and shared waters, using sound scientific research, to maximize fishing opportunity while ensuring the sustainability of fisheries and fishing communities. Regional Fishery Management Councils (FMCs) develop FMPs in eight regions nationwide: North Pacific, Pacific, Western Pacific, New England, Mid-Atlantic, South Atlantic, Gulf of Mexico, and Caribbean. After an FMP is developed, the Secretary of Commerce in consultation with NOAA Fisheries must approve it before it is implemented.

Fishery management plans must specify objective and measurable criteria to determine when a stock is overfished or subject to overfishing. Enough information exists to determine the overfishing status for 321 (or 67%) of the 479 stocks and stock complexes. Of these 321, 28 stocks are subject to overfishing (or 9% of stocks with known status). The overfished status of 244 (or 51%) of the 479 stocks and stock complexes is known. Of these 244 stocks, 43 (or 18% of stocks with known status) are categorized as overfished.[2]

Transboundary and International Fisheries

NOAA Fisheries is also actively involved in negotiating conservation and management measures, including total allowable catch levels, fishery allocations, and monitoring and control schemes, for internationally shared fisheries resources. Shared fisheries resources include those in areas where the EEZ of the U.S. overlaps with other nations (transboundary areas and in areas beyond the U.S. EEZ, i.e., international waters or the high seas. The Gulf of Alaska and the Gulf of Maine are examples of these transboundary areas. An area in the Bering Sea outside the EEZs of Canada, Japan, and Russia, called the Donut Hole, is an example of international waters. Loss of sea ice will create new transboundary areas and international waters in the Arctic.

Regional Fishery Management Organizations (RFMOs) are multinational organizations with interests in internationally shared fish stocks and associated fishing activities. Primary objectives of these RFMOs are to research, assess, and adopt measures for the conservation and coordinated management of target species, such as bigeye tuna. Some RFMOs also collect data and evaluate and adopt measures for the conservation and scientific assessment of non-target species, also known as bycatch. Non-target species include seabirds, marine mammals, sea turtles, and fish species caught incidentally while fishing for target species. The commitment to conserving and protecting all species associated with, or affected by, fishing activities is outlined in the Food and Agriculture Organization's (FAO) Code of Conduct for Responsible Fisheries established in 1995. NOAA Fisheries participates in various international and regional fisheries management organizations that promote international cooperation to achieve effective, responsible marine stewardship and ensure sustainable fisheries management. These entities are listed by ocean basin below.[3]

[1] Fishery management plans and fishery ecosystem plans for each region covered in this report are listed in their respective sections. The four FMPs developed by the Caribbean Fishery Management Council and the Atlantic Highly Migratory Species FMP developed by NOAA Fisheries are not included in this report.
[2] NOAA Fisheries. 2019. Status of Stocks 2018. Office of Sustainable Fisheries. [Available at https://www.fisheries.noaa.gov/feature-story/status-stocks-2018]
[3] See https://www.fisheries.noaa.gov/international-affairs/international-and-regional-fisheries-management-organizations (accessed September 29, 2021).

Pacific
- Pacific Salmon Commission
- International Pacific Halibut Commission
- Inter-American Tropical Tuna Commission
- Western and Central Pacific Fishery Commission

Atlantic
- International Commission for the Conservation of Atlantic Tunas
- North Atlantic Salmon Conservation Organization
- Northwest Atlantic Fisheries Organization

Antarctic
- Commission for the Conservation of Antarctic Marine Living Resources

An issue of particular concern for NOAA Fisheries is illegal, unreported, and unregulated (IUU) fishing activities. IUU fishing generally refers to fishing that violates national laws or internationally agreed conservation and management measures in effect in oceans around the world. IUU fishing can include fishing without a license or quota for certain species, unauthorized trans-shipments to cargo vessels, failing to report catches or making false reports, keeping undersized fish or fish that are otherwise protected by regulations, fishing in closed areas or during closed seasons, and using prohibited fishing gear.

NOAA Fisheries is actively collaborating with other federal agencies as part of the National Ocean Council Committee on IUU Fishing and Seafood Fraud. This network of agencies works together to implement measures outlined in an action plan developed by the Presidential Task Force on Combating IUU Fishing and Seafood Fraud. As part of this effort, in December 2016 NOAA Fisheries issued the final rule establishing the Seafood Import Monitoring Program to further combat IUU fishing practices and to identify misrepresented seafood imports before they enter the U.S. market. The data collected under this program allows certain priority species, identified as especially vulnerable to IUU fishing and seafood fraud, to be traced from the point of entry into U.S. commerce back to the point of harvest or production to verify whether it was lawfully harvested or produced. For 11 of the 13 species/species groups covered in the final rule, the rule went into effect January 1, 2018. On December 31, 2018, it became mandatory for foreign shrimp products to be accompanied by harvest and landing data and for importers to maintain chain of custody records for shrimp and abalone imports entering the U.S.[4] By not allowing IUU fish products into the U.S., the Seafood Import Monitoring Program helps level the playing field for commercial fishermen by reducing unfair competition in the marketplace.

Threatened and Endangered Species

NOAA Fisheries is also the lead agency for the conservation and protection of marine and anadromous species that fall within the purview of the Endangered Species Act (ESA). Currently, there are 165 threatened and endangered marine species under the ESA (see Table 1).

Table 1. Endangered and Threatened Species under NOAA Fisheries Jurisdiction[5]

Species Group	Number of Species/ Sub-species Populations
Whales	16
Dolphins and Porpoises	8
Seals and Sea Lions	12
Sea Turtles	25
Fish and Sharks	75
Corals and Marine Invertebrates	28
Plants	1
Total Threatened and Endangered Marine Species	165

In addition to threatened and endangered marine and anadromous species, NOAA Fisheries also helps identify candidate and proposed species. Candidate species are actively being considered for listing as endangered or threatened under the ESA. These species also include those for which NOAA Fisheries has initiated a status review that it has announced in the *Federal Register*. Proposed species are candidate species that were found to warrant listing as either threatened or endangered. These species were officially proposed as such in a *Federal Register* notice after the completion of a status review and consideration of other protective measures. Currently, 12 candidate species and no proposed species are under consideration for listing.

NOAA Fisheries is also responsible for protecting marine mammals under the Marine Mammal Protection Act.[6] In authorizing this act in 1972, Congress recognized that marine mammal species or stocks may be in danger of

[4] See https://www.iuufishing.noaa.gov/recommendationsandactions/recommendation1415/finalruletraceability.aspx (accessed September 29, 2021).
[5] NOAA Fisheries Office of Protected Resources Endangered Species Conservation website (https://www.fisheries.noaa.gov/topic/endangered-species-conservation#conservation-&-management) (accessed September 22, 2021). Note that on the web site, killer whales and false killer whales are listed under both the Whales and Dolphins and Porpoises categories. Here they are only enumerated under the Dolphins and Porpoises category.
[6] The U.S. Fish and Wildlife Service protects walrus, manatees, otters, and polar bears.

extinction or depletion as a result of human activities; marine mammal species or stocks should not be allowed to fall below their optimum sustainable population levels; measures should be taken to replenish marine mammal species or stocks; there is inadequate knowledge of the marine mammal ecology and population dynamics; and marine mammals have proven to be resources of great international significance. NOAA Fisheries engages in activities such as preventing the harassment, capture, or killing of marine mammals; preparing marine mammal stock assessments; and studying interactions between marine mammals and fisheries.

Essential Fish Habitats

Sustainable commercial and recreational fisheries depend on healthy habitats. These habitats include rivers, estuaries, coastal waters, and the open ocean where marine and anadromous species feed, grow, and reproduce. Consideration of these habitat areas is part of an ecosystem-based management approach for managing fisheries in a more sustainable and holistic manner. Since 1996, federal fishery management plans are required to identify and describe essential fish habitat (EFH) for all federally managed species. Habitat areas that are necessary for a fish species' growth, reproduction, and development are considered EFH. To the extent practicable, NOAA Fisheries and the FMCs must minimize adverse effects to EFH caused by fishing.

Though not required, Habitat Areas of Particular Concern (HAPC) can be identified to help focus EFH conservation efforts. The HAPC designation alone does not confer additional protection to or place restrictions on an area, but helps to focus EFH conservation, management, and research priorities. HAPC designation is a valuable way to acknowledge areas based on their ecological importance, rarity, and/or vulnerability, indicating a greater need for conservation and management. To date, approximately 299 HAPCs have been designated, including a combination of habitat types, discrete areas, and waterways. Some of these areas do overlap.

In order to help prioritize efforts related to EFH, NOAA Fisheries held an EFH Summit in 2016 and then published an updated Marine Fisheries Habitat Assessment Improvement Plan in 2018.[7] Both efforts focused on identifying habitats that are most essential for sustaining federally managed species and on supporting research to understand how these habitats directly contribute to fisheries productivity. A continued priority is refining EFH and HAPC designations for habitat-limited species and habitats that play a key role in offshore stock productivity.

Catch Share Programs

Market-based management tools are used by fishery managers to reduce overcapitalization, increase the economic viability of fisheries, and promote individual accountability for harvest and harvesting practices. Catch share programs are one of these tools and encompass a range of management strategies that share a common feature: A secure share of fish is dedicated to individual fishermen, cooperatives, fishing communities, and other entities for their exclusive use. In 2010, the NOAA catch share policy was released to encourage well-designed catch share programs to help maintain or rebuild fisheries.[8] The policy also aims to sustain fishermen, communities, and vibrant working waterfronts, including the cultural and resource-access traditions that have been part of this country since its founding.

Currently, there are 17 federal catch share programs nationwide. These programs include limited access privilege programs (LAPPs), individual fishing quota programs (IFQs), individual transferable quota programs (ITQs), fishing community development quota programs (CDQs), fishing cooperatives, and fishing sectors.[9] Implementation dates of these programs span three decades, with six programs established in the 1990s and six established since 2010 (see Table 2). Eleven programs manage a single species or, in some cases, two species but as separate management units; the other six programs manage multiple species. Seven of the programs operate in the North Pacific (Alaska) Region.

[7] The Habitat Assessment Improvement Plan Update is available at https://spo.nmfs.noaa.gov/sites/default/files/TMSPO181_0.pdf
[8] See https://www.fisheries.noaa.gov/national/laws-and-policies/catch-shares.
[9] See Section 303A of the Magnuson-Stevens Act for more information on LAPP requirements.

Table 2. Existing Catch Share Programs in Federal Fisheries[10,11]

Region	Program	Year Implemented
North Pacific	Western Alaska Community Development Quota (CDQ) Program	1992
	Alaska Halibut and Sablefish IFQ Program	1995
	American Fisheries Act (AFA) Pollock Cooperatives	1998
	Bering Sea and Aleutian Islands (BSAI) King and Tanner Crab Rationalization	2005
	Aleutian Islands Pollock Fishery	2005
	Bering Sea and Aleutian Islands (BSAI) Non-Pollock Trawl Catcher/Processor Groundfish Cooperatives (Amendment 80)	2008
	Central Gulf of Alaska (GOA) Rockfish Program (pilot implemented in 2007)	2011
Pacific	Pacific Coast Sablefish Permit Stacking Program	2001
	Pacific Groundfish Trawl Rationalization Program (whiting and non-whiting trawl)	2011
Northeast	Northeast Multispecies Sectors: Georges Bank Cod - Hook Gear (2004) and Georges Bank Cod - Fixed Gear (2007)	2010
	Northeast General Category Sea Scallop IFQ Program	2010
Mid-Atlantic	Mid-Atlantic Surfclam and Ocean Quahog IFQ Program	1990
	Mid-Atlantic Golden Tilefish IFQ Program	2009
Atlantic Highly Migratory Species	Atlantic Bluefin Tuna Individual Bluefin Quota Program	2015
South Atlantic	South Atlantic Wreckfish ITQ Program	1992
Gulf of Mexico	Red Snapper IFQ Program	2007
	Grouper and Tilefish IFQ Program	2010

In 2010, NOAA Fisheries initiated an effort to track catch share program performance.[12] Findings from the initial report show that existing catch share programs have ended the race to fish (in their respective fisheries), resulting in longer fishing seasons, safer working conditions, and improved management performance. The report also shows that existing catch share programs have resulted in reduced fishing capacity to better match stock size—a management objective in the majority of catch share programs evaluated. Economic performance for the vessels remaining in the program improved, as measured by such metrics as revenue per vessel and average price.

Updated information on selected performance indicators is provided in Table 3. Briefly, results show that inflation-adjusted 2017 revenue from catch share species increased in 7 of the 16 programs and/or sub-components of the programs relative to their respective baseline periods (note that two programs did not have baseline revenues). In addition, the number of active vessels decreased in all but one program (Central Gulf of Alaska (GOA) Rockfish program), while inflation-adjusted revenue per active vessel increased in all programs since their implementation. Further, results show that no program exceeded the annual catch limit (ACL) in 2017.

[10] From 1996 to 2002, there was a congressional moratorium on the establishment of new IFQ programs. There are no catch share programs in the Caribbean.
[11] In 2007, Congress reauthorized the Magnuson-Stevens Act, Section 303A with provisions for limited access privilege programs.
[12] See https://www.fisheries.noaa.gov/national/laws-and-policies/catch-shares

Table 3. Economic Performance Indicators for U.S. Federal Catch Share Programs (2018 dollars)[13]

Region	Program	ACL Exceeded		Number of Active Vessels		Total Revenue from Catch Share Species		Revenue per Active Vessel	
		Base-line	2017	Base-line	2017	Baseline	2017	Baseline	2017
North Pacific	Alaska Halibut IFQ Program	Y	N	3432	836	99,441,120	103,095,647	28,975	123,320
	Alaska Sablefish IFQ Program	Y	N	1139	293	99,861,274	99,100,168	382,323	1,084,194
	American Fisheries Act (AFA) Pollock Cooperatives	Y	N	147	100	268,918,277	355,237,695	1,829,376	3,552,377
	Bering Sea and Aleutian Islands (BSAI) King and Tanner Crab Rationalization	Y	N	264	70	189,480,402	164,441,082	2,349,158	2,349,158
	Bering Sea and Aleutian Islands (BSAI) Non-Pollock Trawl Catcher/Processor Groundfish Cooperatives (Amendment 80)	N	N	22	19	98,398,607	118,827,106	4,472,664	6,254,058
	Central Gulf of Alaska (GOA) Rockfish Program	Y	N	42	55	7,124,178	9,772,784	169,623	177,687
Pacific	Pacific Coast Sablefish Permit Stacking Program	-	N	135	85		11,011,557		129,548
	Pacific Groundfish Trawl Rationalization Program (Whiting and Non-Whiting trawl)	-	N	124	98		64,553,492		658,709
New England	Northeast Multispecies Sectors: Georges Bank Cod - Hook Gear (2004) and Georges Bank Cod - Fixed Gear (2007)	Y	N	417	188	93,737,137	46,270,221	224,789	246,118
	Northeast/Atlantic General Category Sea Scallop IFQ Program	-	-	271	146	30,853,462	29,629,034	113,850	202,939
Mid-Atlantic	Mid-Atlantic Ocean Quahog ITQ Program	N	N	67	22	31,891,805	29,446,172	475,997	1,338,462
	Mid-Atlantic Surfclam ITQ Program	N	N	137	40	42,973,537	30,097,799	313,675	752,445
	Mid-Atlantic Golden Tilefish IFQ Program	-	N	14	10	5,120,526	4,571,837	365,752	457,184
Atlantic Highly Migratory Species	Atlantic Bluefin Tuna Individual Bluefin Quota Program	-	-	116		1,058,904	834,663	9,128	9,485
Gulf of Mexico	Red Snapper IFQ Program	Y	N	482	449	15,175,473	30,216,264	31,484	67,297
	Grouper and Tilefish IFQ Program	Y	N	630	453	24,768,272	23,719,084	39,315	52,360

[13] The South Atlantic Wreckfish ITQ program and Aleutian Island Pollock Fishery are not included due to confidentiality restrictions. The Western Alaska CDQ program was excluded because CDQs are fundamentally different from the other programs. In addition, note that some programs did not have a catch quota prior to the catch share program. For these programs, "-" indicates that the question of whether the ACL was exceeded is not applicable. All values have been adjusted by the GDP deflator for 2018. BSAI Crab data for 2017/2018.

Other Market-Based Management Tools

Vessel or permit buyback programs are another market-based tool used by fishery managers. Under these programs, the government purchases fishing vessels or permits. Doing so permanently decreases the number of participants in the fishery and eases fishing-related pressure on marine resources. Recent buyback programs include BSAI Crab, Pacific Coast Groundfish, Longline Catcher Processor Non-Pollock Groundfish, Southeast Alaska Purse Seine Salmon, and American Fisheries Act Pollock.

Limited Access Privilege Programs, also known as limited entry programs, are another management tool available to fishery managers. In these programs, the number of fishing vessels allowed to harvest a specific fish stock or stock complex is limited to fishermen or vessels with permission to fish. LAPPs have been implemented in almost all federally managed commercial fisheries and in every region except the Caribbean.

Ecolabels are market-based tools offered by third-party entities. An ecolabeling program entitles a fishery product to bear a distinctive logo or statement that certifies the fishery resource was harvested in compliance with specified conservation and sustainability standards. It allows the buyer to potentially influence the sustainable harvest of fishery resources through the purchase of such ecolabeled seafood products at a price premium. The Marine Stewardship Council (MSC) has one of the most recognizable ecolabeling programs in the world. Currently, nearly 300 fisheries worldwide meet MSC sustainability standards, 22 of which are U.S. fisheries (see Table 4). Fisheries obtaining MSC certification for the first time in 2018 include the Gulf of Maine and Georges Bank haddock, pollock, and redfish trawl fishery and the Northeast squid bottom trawl fishery.

Table 4. U.S. Fisheries with MSC Certification[14]

Region	Fishery	Certified
North Pacific	Alaska salmon	2000
	Alaska pollock – Bering Sea and Aleutian Islands	2005
	Alaska pollock – Gulf of Alaska	2005
	Alaska North Pacific halibut	2006
	Alaska North Pacific sablefish	2006
	Alaska flatfish – Bering Sea and Aleutian Islands	2010
	Alaska flatfish – Gulf of Alaska	2010
	Alaska Pacific cod – Bering Sea and Aleutian Islands	2010
	Alaska Pacific cod – Gulf of Alaska	2010
	Annette Islands Reserve salmon	2011
Pacific	Oregon and Washington pink shrimp	2007
	Pacific hake mid-water trawl	2010
	U.S. West Coast limited entry groundfish trawl	2014
	American Albacore Fishing Association and the Western Fishboat Owners Association North Pacific albacore tuna	2018
Northeast	Atlantic spiny dogfish, winter skate and little skate	2012
	Atlantic sea scallop	2013
	North Atlantic swordfish, yellowfin, and albacore tuna	2013
	Acadian redfish, pollock and haddock otter trawl	2016
	Atlantic surfclam and ocean quahog	2016
	Gulf of Maine lobster fishery	2016
	Gulf of Maine and Georges Bank haddock, pollock, and redfish trawl	2018
	Northeast squid bottom trawl fishery	2018

COMMERCIAL FISHERIES — NATIONAL OVERVIEW

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. The term does not include subsistence fishermen or saltwater anglers who fish for sport. It also excludes the for-hire sector, which earns its revenue from selling recreational fishing trips to saltwater anglers. The commercial fisheries section reports on economic impacts, landings revenue, landings, and ex-vessel prices of key species/species groups.

Key U.S. Commercial Species

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

[14] Marine Stewardship Council Certifications as of September 29, 2021. For more information about these fisheries and the Marine Stewardship Council certification process, see https://www.msc.org/. Note that the Northeast Region's Gulf of Maine lobster fishery certification was suspended in 2020.

Regional Highlights

At the national level, this report includes landings revenue, landings, and prices for 10 key species or species groups, which were selected so that each region has at least one species in the top 10. Results show that commercial fishermen in Alaska caught the most salmon (556.8 million pounds) and earned $553.5 million for their catch in 2018. Tunas were caught in large numbers in Hawai'i (23.9 million pounds) and generated $94.2 million in landings revenue. Maine fishermen contributed the most to American lobster landings (121.2 million pounds) and earned $491.6 million for their catch in 2018. In Massachusetts, sea scallopers harvested 40.4 million pounds of scallop and earned $373.8 million for their catch. More blue crabs were caught in Louisiana (42.7 million pounds) than in any other state, earning more than $60.7 million. Louisiana accounted for the greatest quantity of menhaden landed in 2018, with fishermen landing 855.2 million pounds worth $90.3 million in dockside revenue. Sea scallop garnered the highest average ex-vessel price per pound ($9.41) among the key species and species groups in 2018, with state-specific prices ranging from $8.38 in Maryland to $13.19 in New Hampshire.

Economic Impacts

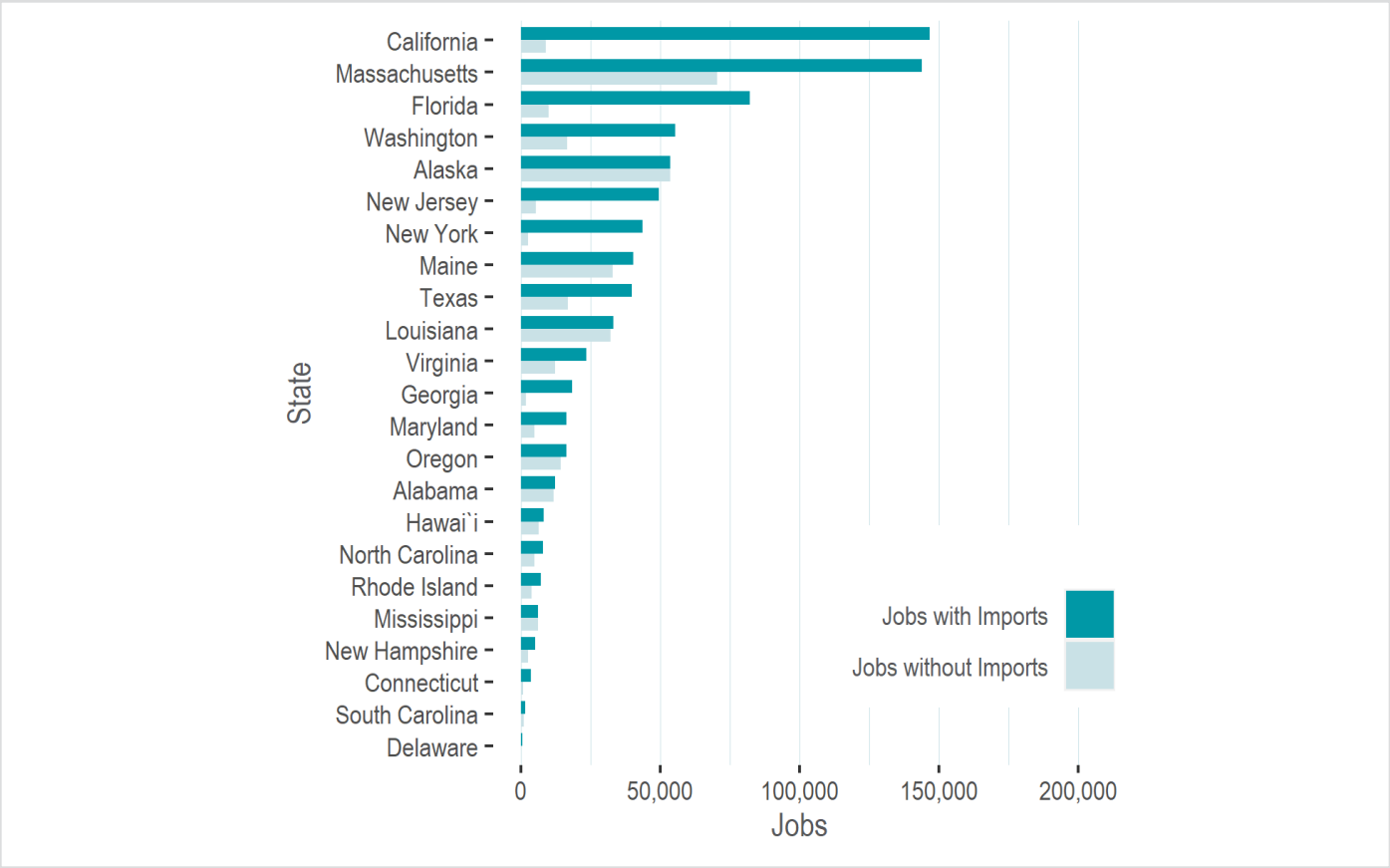
The premise behind economic impact modeling is that every dollar spent in a regional economy (direct impact) is either saved or re-spent on additional goods or services. If those dollars are re-spent on other goods and services in the regional economy, this spending generates additional economic activity in the region.[15]

Four different measures are commonly used to show how commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. The category includes both the direct sales of fish landed and sales made between businesses and households resulting from the original sale. Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the sales of seafood or purchases of inputs to commercial fishing. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in numbers of jobs. Note that these categories are not additive. The United States seafood industry is defined here as the commercial fishing sector, seafood processors and dealers, seafood wholesalers and distributors, importers, and seafood retailers.[16]

This report provides estimates of total economic impacts for the nation and for each of the 23 coastal states. Total economic impacts for each state and the nation represent the sum of direct impacts; indirect impacts (in this case, the impact from suppliers to the seafood industry); and induced impacts (spending by employees on personal and household expenditures, where employees of both the seafood industry and its full supply chain are included). That is, the total economic impact estimates reported here measure jobs, sales, value-added, and income impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

In 2018, the commercial fishing and seafood industry supported 1.2 million full- and part-time jobs and generated $165.1 billion in sales, $42.9 billion in income, and $67.1 billion in value-added impacts nationwide (Table 5). The importers sector generated the largest sales impacts ($84.1 billion) and value-added impacts ($25.6 billion). The retail sector generated the largest employment impacts (627,357 jobs) and income impacts ($15.5 billion).

[15] Summary data is available online in the FEUS webtool. [Available at: https://www.fisheries.noaa.gov/data-tools/fisheries-economics-united-states-interactive-tool.]
[16] The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates. [Available at: https://www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf.]



Graph 1. Jobs supported by the U.S. Seafood Industry (Jobs with and without Imports), 2018

Table 5. U.S. Seafood Industry Economic Impacts Trends (jobs, millions of dollars)

	2012	2013	2014	2015	2016	2017	2018
Jobs	1,270,141	1,350,627	1,394,833	1,179,848	1,190,092	1,246,366	1,225,826
Sales	$140,661	$142,249	$153,341	$144,194	$144,293	$170,314	$165,063
Income	$38,722	$39,747	$41,956	$39,744	$39,905	$44,595	$42,899
Value Added	$59,017	$60,309	$64,071	$60,566	$60,768	$69,177	$67,058
Total Revenue	$5,099	$5,547	$5,473	$5,184	$5,337	$5,409	$5,413

Table 6. Sales, Income and Value-Added Impacts Generated by the U.S. Seafood Industry, 2018 (thousands of dollars)

State	Sales	Income	Value Added
U.S. Total	$165,063,417	$42,899,203	$67,058,135
California	$29,081,406	$6,135,840	$10,259,928
Florida	$19,200,443	$3,591,245	$6,422,185
Massachusetts	$16,047,420	$3,940,967	$6,131,820
New Jersey	$10,266,150	$2,109,011	$3,555,401
Washington	$8,333,266	$2,153,320	$3,317,018
New York	$6,708,367	$1,388,413	$2,329,948
Texas	$5,393,461	$1,317,551	$2,083,863
Alaska	$4,386,922	$1,945,289	$2,412,608
Maine	$3,268,748	$952,033	$1,426,818
Virginia	$3,239,457	$799,762	$1,248,196
Georgia	$3,049,051	$668,751	$1,105,417
Maryland	$2,518,497	$581,825	$927,821
Louisiana	$2,039,601	$750,091	$1,020,285
Oregon	$1,335,925	$456,662	$644,824
Rhode Island	$951,999	$232,939	$367,585
North Carolina	$862,164	$232,277	$351,716
Hawai'i	$776,205	$233,373	$343,554
Connecticut	$720,408	$147,447	$248,453
New Hampshire	$655,022	$165,382	$256,404
Alabama	$610,479	$236,815	$312,035
Mississippi	$316,859	$124,857	$161,775
South Carolina	$174,821	$49,626	$73,865
Delaware	$83,705	$16,436	$27,626

Landings Revenue

Landings revenue in the United States totaled $5.4 billion in 2018 (Table 7). This represented a 43% increase in nominal value from 2009 levels (a 23% increase in real terms after adjusting for inflation) and, year-over-year, a 3% decrease from 2017 (Graph 2). Finfish landings revenue accounted for 45% of all landings revenue. American lobster had the highest landings revenue in 2018.

Table 7. Commercial Fisheries Landings Revenue by Region, 2018 (thousands of dollars)

Region	Revenue
U.S. Total	$5,413,339
North Pacific	$1,781,999
New England	$1,359,891
Gulf of Mexico	$890,279
Pacific	$635,622
Mid-Atlantic	$451,212
South Atlantic	$175,178
Western Pacific (Hawai'i)	$119,158

From 2009 to 2018, American lobster (105%, 76% in real terms), Alaska pollock (77%, 53% in real terms), and menhaden (62%, 40% in real terms) had the largest increases, while Pacific halibut (-36%, -45% in real terms) and sablefish (-9%, -22% in real terms) had the largest decreases. From 2017 to 2018, menhaden (41%), American lobster (11%), and sea scallops (4%) had the largest increases, while Pacific halibut (-28%), sablefish (-25%), and Pacific salmon (-24%) had the largest decreases.

Commercial Revenue: Largest Increases

From 2009:
- American lobster (105%, 76% in real terms)
- Alaska pollock (77%, 53% in real terms)
- Menhaden (62%, 40% in real terms)

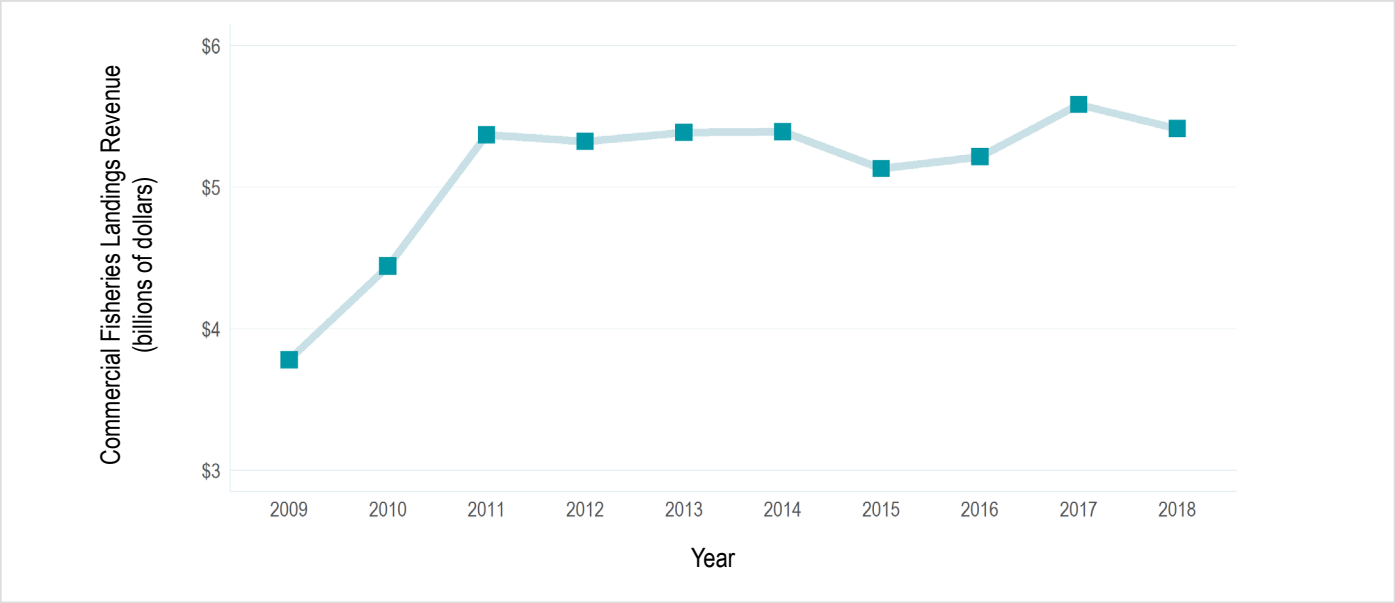
From 2017:
- Menhaden (41%)
- American lobster (11%)
- Sea Scallops (4%)

Commercial Revenue: Largest Decreases

From 2009:
- Pacific halibut (-36%, -45% in real terms)
- Sablefish (-9%, -22% in real terms)

From 2017:
- Pacific halibut (-28%)
- Sablefish (-25%)
- Pacific salmon (-24%)

Alaska earned the greatest share of landings revenue in 2018 ($1.8 billion), contributing 33% of the national total (Table 7). Massachusetts ($548 million, or 19% of U.S. shellfish revenue) and Maine ($528.6 million, or 18% of U.S. shellfish revenue) earned the most ex-vessel revenue from shellfish landings.



Graph 2. U.S. Commercial Fisheries Landings Revenue, 2009-2018 (nominal values, billions of dollars)

Landings

Landings volume in the United States totaled 9.2 billion pounds in 2018 (Table 8). This represented a 16% increase from 2009 levels and, year-over-year, a 6% decrease from 2017 (Graph 3). Finfish landings revenue accounted for 88% of all landed weight. Alaska pollock had the highest landings volume in 2018.

From 2009 to 2018, Alaska pollock (80%), American lobster (48%), and other (24%) had the largest increases, while Pacific halibut (-63%), blue crab (-21%), and Pacific salmon (-18%) had the largest decreases. From 2017 to 2018, other (68%), menhaden (12%), and sea scallop (12%) had the largest increases, while Pacific salmon (-43%), Pacific halibut (-16%), and blue crab (-5%) had the largest decreases.

Commercial Landings: Largest Increases

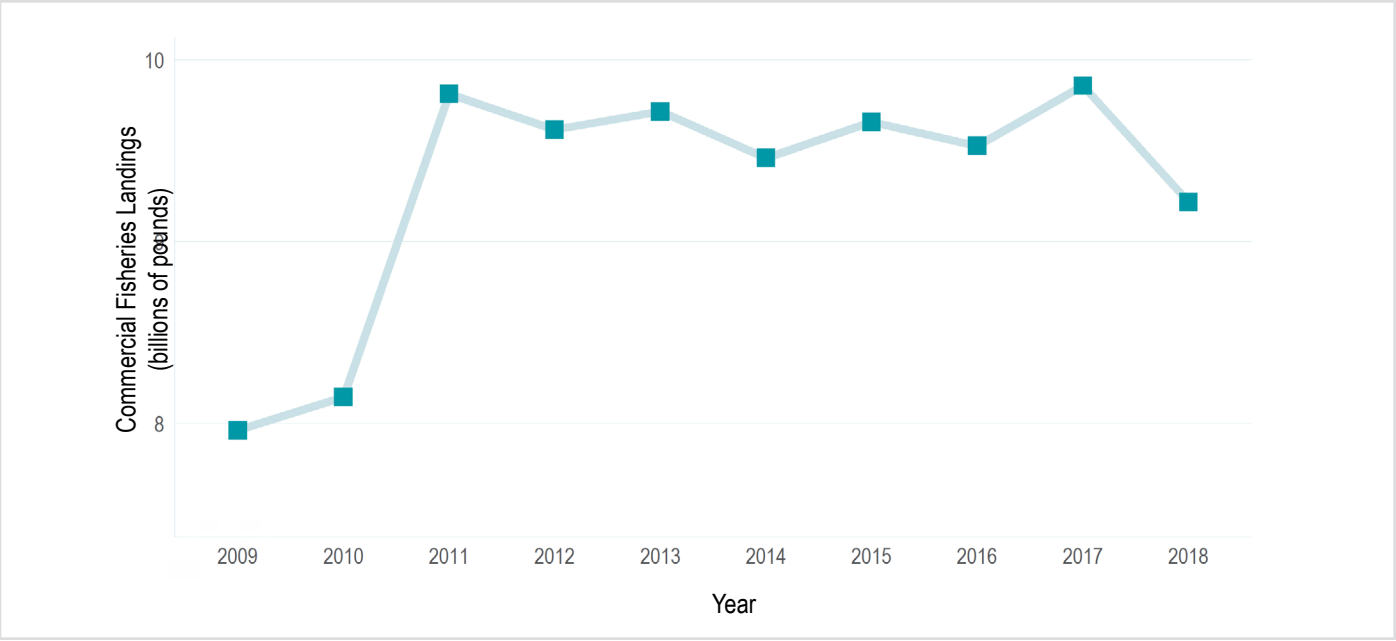
From 2009:
- Alaska pollock (80%)
- American lobster (48%)
- Tunas (6%)

From 2017:
- Menhaden (12%)
- Sea scallop (12%)
- American lobster (8%)

Commercial Landings: Largest Decreases

From 2009:
- Pacific halibut (-63%)
- Blue crab (-21%)
- Pacific salmon (-18%)

From 2017:
- Pacific salmon (-43%)
- Pacific halibut (-16%)
- Blue crab (-5%)



Graph 3. U.S. Commercial Fisheries Landings, 2009-2018 (billions of pounds)

The North Pacific Region (Alaska) accounted for 59% of U.S. landings in 2018, followed by the Gulf of Mexico Region (17%) and the Pacific Region (11%) (Table 8).

Table 8. Commercial Fisheries Landings by Region, 2018 (thousands of pounds)

Region	Landings Volume
U.S. Total	9,217,859
North Pacific	5,403,754
Gulf of Mexico	1,542,885
Pacific	976,724
Mid-Atlantic	602,051
New England	551,997
South Atlantic	104,952
Western Pacific (Hawai'i)	35,497

Prices

Of all key species or species groups, sea scallop ($9.20 per pound) had the highest national ex-vessel price. Menhaden ($0.10 per pound) had the lowest ex-vessel price of all key species nationally.

From 2009 to 2018, Pacific salmon (77%, 53% in real terms), Pacific halibut (74%, 49% in real terms), and menhaden (61%, 39% in real terms) had the largest increases, while Alaska pollock (-1%, -15% in real terms) had the largest decreases. From 2017 to 2018, Pacific salmon (33%), menhaden (26%), and blue crab (5%) had the largest increases, while sablefish (-27%), Pacific halibut (-14%), and shrimp (-9%) had the largest decreases.

RECREATIONAL FISHERIES — NATIONAL OVERVIEW

In this report, recreational fishing refers to fishing for leisure rather than to sell fish (commercial fishing) or for subsistence. The key species/species groups included in this report were chosen because they are caught in large numbers, highly prized by recreational anglers, associated with federal fishery management plans; or a combination of one or more of these factors. The recreational fisheries section reports on angler participation, trips, economic impacts and expenditures, and catch of key species/species groups.[17,18]

[17] Atlantic and Gulf recreational catch and effort estimates are based upon the MRIP estimates released in 2018.
[18] See data sources section for more information about where each region or state's data comes from.

Key U.S. Recreational Species [19]

- Dolphinfish (Western Pacific and Atlantic)
- Drum (Atlantic croaker and spot) (Atlantic regions)
- Drum (seatrouts) (Atlantic regions): sand seatrout, seatrout genus, silver seatrout, spotted seatrout, and weakfish
- Pacific halibut (North Pacific)
- Pacific salmon (Pacific and North Pacific): Chinook salmon, chum salmon, coho salmon, sockeye salmon, and pink salmon
- Rockfishes and scorpionfishes (Pacific and North Pacific): bank rockfish, black and yellow rockfish, black rockfish, blue rockfish, bocaccio, bronzespotted rockfish, brown rockfish, calico rockfish, California scorpionfish, canary rockfish, chilipepper, china rockfish, copper rockfish, cowcod, darkblotched rockfish, deacon rockfish, deacon/blue rockfish unknown, flag rockfish, freckled rockfish, gopher rockfish, grass rockfish, greenblotched rockfish, greenspotted rockfish, greenstriped rockfish, halfbanded rockfish, honeycomb rockfish, kelp rockfish, mexican rockfish, olive rockfish, Pacific ocean perch, pinkrose rockfish, quillback rockfish, redbanded rockfish, redstripe rockfish, rockfish genus, rockfish species, rosethorn rockfish, rosy rockfish, scorpionfish family, shortspine thornyhead, silvergray rockfish, speckled rockfish, squarespot rockfish, starry rockfish, stripetail rockfish, swordspine rockfish, tiger rockfish, treefish, vermilion rockfish, widow rockfish, yelloweye rockfish, yellowmouth rockfish, and yellowtail rockfish
- Striped bass (Atlantic regions)
- Summer flounder (Atlantic regions)
- Tunas (Atlantic regions): albacore, bigeye tuna, blackfin tuna, bluefin tuna, tuna genus, and yellowfin tuna
- Tunas (Pacific and Western Pacific regions): albacore, bigeye tuna, bluefin tuna, and yellowfin tuna

The economic contributions for both trip and durable expenditures from recreational fishing in 2018 were estimated using IMPLAN version 3, with base year data from 2017. Models for each state and for the nation were created in IMPLAN using trip expenditures (based on 2016/2017 survey data on average trip expenditures and total 2018 trips) and for durable expenditures (based on 2014 survey data on average durable expenditures and 2018 participants).

Regional Highlights

At the national level, the report includes fishing trips, participation, and the harvest and release numbers of 10 key species or species groups, which were selected so that each region has at least one species in the top 10. Results show that in 2018, recreational anglers in East Florida took the most trips (44 million trips) and West Florida spent the most on trips ($2 billion). East Florida spent the second most on trips ($1.4 billion). West Florida also had the most recreational anglers participate in fishing in their state, with 3.2 million anglers.

Virginia caught the most Atlantic croaker and spot (21.2 million fish), West Florida caught the most seatrouts (28 million fish), Maryland caught the most striped bass (8.5 million fish), and New Jersey caught the most summer flounder (11.4 million fish). Alaska caught the most Pacific halibut (536,312 fish) and Pacific salmon (718,106 fish).

Economic Impacts and Expenditures

The economic contributions or impacts of recreational fishing activities in the United States is based on spending by recreational anglers.[20] Total annual trip expenditures were estimated at the state level by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore) and adjusting by the CPI (consumer price index) to the current year. Total annual durable expenditures were estimated by multiplying mean durable expenditures by the estimated annual number of adult participants in the United States and adjusting by the CPI (consumer price index) to the current year.[21]

Four different measures are commonly used to show how angler expenditures affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as recreational fishing. It includes both the direct sales made by the angler and sales made between businesses and households resulting from that original sale by the angler.

[19] Atlantic Regions refer to those states within New England, Mid-Atlantic, South Atlantic, and the Gulf of Mexico.
[20] Trip expenditure estimates were generated from the 2016/2017 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2020). Durable goods expenditures were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2016). [For citations: Publications-Recreational Fisheries Economics Research.]
[21] Summary data is available online in the FEUS webtool. [Available at: https://www.fisheries.noaa.gov/data-tools/fisheries-economics-united-states-interactive-tool.]

Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the purchases made by anglers. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in numbers of jobs. Note that these categories are not additive. NOAA Fisheries uses a regional impact modeling software, called IMPLAN, to estimate these four types of impacts.

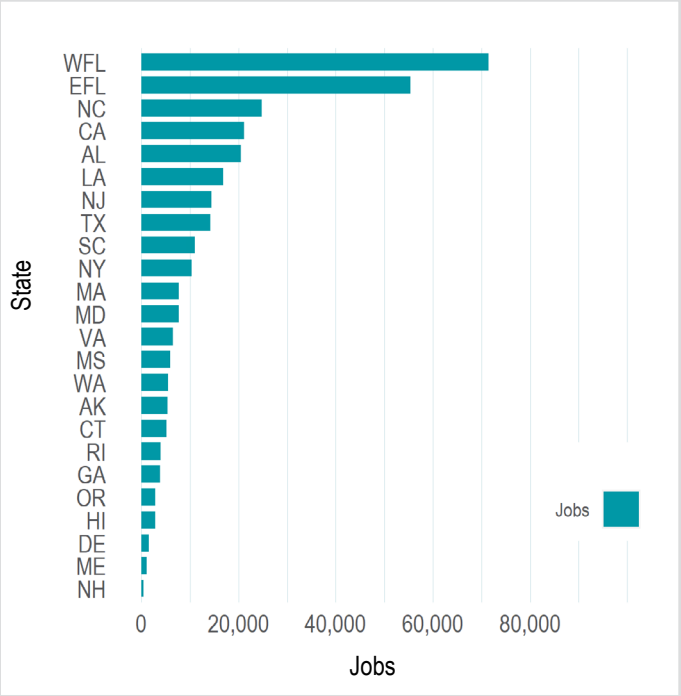
Economic impacts from recreational fishing activities supported 469,848 jobs across the United States in 2018 (Table 9). Recreational fishing also generated about $72.5 billion in sales impacts, $24.3 billion in income impacts, and $40.7 billion in value-added impacts.

Impacts from durable equipment expenditures (e.g., rods and reels, fishing-related equipment, boats, vehicles, and second homes) accounted for 67% of total job impacts, 68% of sales impacts, 69% of income impacts, and 67% of value added impacts. Of the three fishing trip modes, shore-boat-based fishing trips had the greatest economic impact, accounting for 16% of employment, 15% of sales, 15% of income impacts, and 16% of value-added impacts.

Table 9. Recreational Economic Impacts Trends for the United States (millions of dollars)[22]

	2016	2017	2018
#Jobs	486,164	487,024	469,848
Sales	$72,757	$73,752	$72,462
Income	$24,377	$24,684	$24,268
Value Added	$40,885	$41,474	$40,733

The greatest employment impacts from saltwater recreational fishing were generated in West Florida, followed by East Florida and North Carolina (Graph 4). The highest sales impacts were generated in West Florida, followed by East Florida and California (Table 10).



Graph 4. Jobs supported by the U.S. Recreational Fishing Industry, 2018

[22] Atlantic and Gulf recreational catch and effort estimates are based upon the MRIP estimates released in 2018.

Table 10. Sales, Income, and Value-Added Impacts Generated by the Recreational Fishing Industry, 2018 ($ millions)

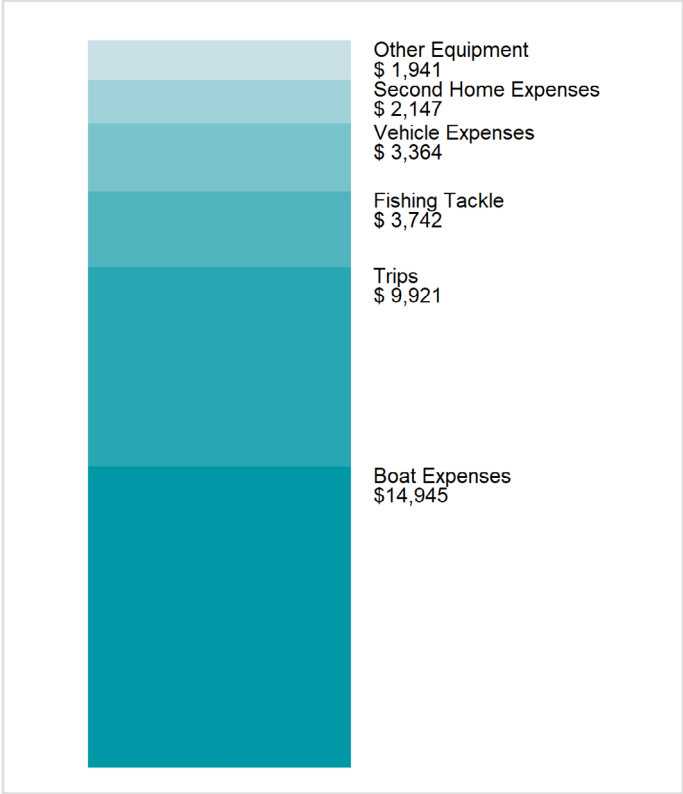
State	Jobs	Sales	Income	Value Added
U.S. Total	469,848	$72,462	$24,268	$40,733
West Florida	71,419	$8,347	$2,981	$5,063
East Florida	55,407	$6,476	$2,324	$3,967
North Carolina	24,795	$2,615	$947	$1,583
California	21,145	$2,781	$961	$1,543
Alabama	20,465	$1,947	$714	$1,274
Louisiana	16,819	$1,929	$635	$1,154
New Jersey	14,395	$1,900	$815	$1,272
Texas	14,226	$1,830	$681	$1,147
South Carolina	11,010	$1,042	$359	$643
New York	10,360	$1,124	$479	$817
Massachusetts	7,711	$931	$432	$637
Maryland	7,692	$839	$335	$556
Virginia	6,504	$712	$275	$465
Mississippi	5,955	$602	$204	$375
Washington	5,450	$692	$268	$444
Alaska	5,360	$558	$195	$326
Connecticut	5,118	$606	$263	$423
Rhode Island	3,963	$419	$179	$277
Georgia	3,811	$344	$122	$220
Oregon	2,903	$306	$134	$202
Hawai'i	2,900	$394	$122	$218
Delaware	1,534	$173	$63	$115
Maine	1,141	$117	$44	$71
New Hampshire	474	$49	$21	$33

In 2018, expenditures for fishing trips and durable goods equipment in the United States totaled $36.1 billion.

Approximately $9.9 billion of these expenditures were related to trip expenses. Total trip expenditures were composed of expenses on trips in the shore (47.5%), private boat (39.3%), and for-hire (13.2%) sectors. Durable goods expenditures totaled $26.1 billion in 2018, with the largest portion coming from Boat Expenses ($14.9 billion) (Graph 5).

Participation

Nationwide, 8.3 million recreational saltwater anglers fished in their home states in 2018. This number represented a 25% decrease from 2009 and a 9% decrease from 2017. Coastal county residents made up 86% of this total while non-coastal county residents made up 14%. West Florida had the highest participation of anglers (3.2 million), followed by East Florida and North Carolina.



Graph 5. Recreational Fishing Trip and Durable Goods Expenditures, 2018 ($ billions)

Fishing Trips

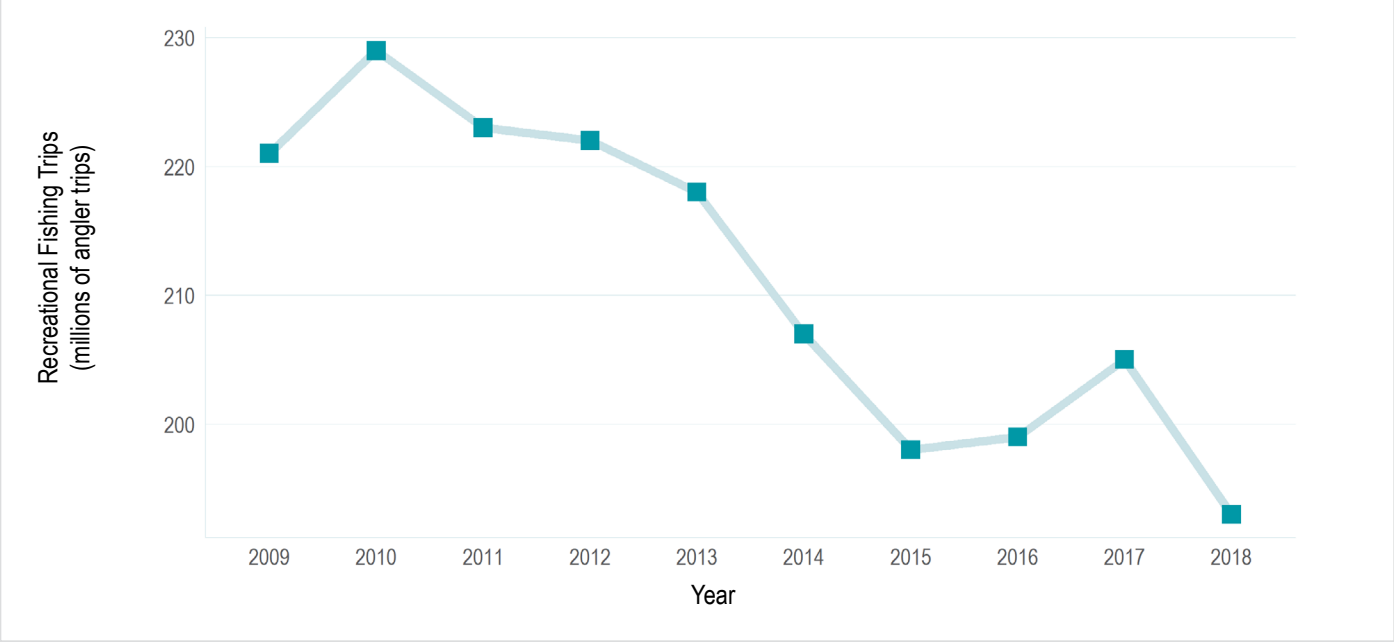
Nationwide, anglers took approximately 193.4 million saltwater fishing trips around the country (Table 11). This number represented a 12% decrease from 2009 and a 6% decrease from 2017 (Graph 6). Approximately 62% of fishing trips were taken via shore. East Florida anglers took the most fishing trips (44 million trips), followed by those in West Florida and North Carolina (Table 12).

Table 11. Recreational Fishing Trips by Region, 2018 (thousands of fishing trips)

Region	Trips
U.S. Total	193,357
South Atlantic	75,101
Gulf of Mexico	55,755
Mid-Atlantic	39,030
New England	15,104
Pacific	4,173
Western Pacific (Hawai'i)	3,421
North Pacific[23]	774

Table 12. Recreational Fishing Trips by State, 2018 (thousands of trips)

State	Trips
East Florida	43,987
West Florida	40,996
North Carolina	16,624
New Jersey	12,493
New York	11,242
South Carolina	9,897
Maryland	6,762
Massachusetts	6,705
Alabama	6,681
Virginia	6,386
Georgia	4,593
Mississippi	4,555
Connecticut	3,543
Hawai'i	3,421
California	3,405
Rhode Island	2,553
Louisiana	2,276
Delaware	2,147
Maine	1,626
Texas	1,247
Alaska	774
New Hampshire	676
Washington	558
Oregon	210



Graph 6. Recreational Fishing Trips, 2009-2018 (millions of angler trips)

Harvest and Release Trends

In 2018, drum (seatrouts) (Atlantic regions) (70.8 million fish), drum (Atlantic croaker and spot) (Atlantic regions) (62.2 million fish), and striped bass (Atlantic regions) (35.7 million fish), were most frequently caught by recreational fishermen in the United States. The text box below shows the species with the largest percentage increases and decreases in the past 10 years and in the past year.

[23] Alaska effort is measured in 'Days Fished,' not in 'Angler Trips.' Numbers before 2011 use estimates of the portion of days fished devoted to shellfish, which were excluded.

From 2009 to 2018, rockfishes and scorpionfishes (Pacific and North Pacific) (64%), tunas (Pacific and Western Pacific regions) (52%), and dolphinfish (Western Pacific and Atlantic) (46%) had the largest increases, while summer flounder (Atlantic regions) (-54%), Pacific salmon (Pacific and North Pacific) (-50%), and drum (Atlantic croaker and spot) (Atlantic regions) (-36%) had the largest decreases. From 2017 to 2018, dolphinfish (Western Pacific and Atlantic) (20%) and tunas (Atlantic regions) (14%) had the largest increases, while Pacific salmon (Pacific and North Pacific) (-29%), drum (Atlantic croaker and spot) (Atlantic regions) (-24%), and striped bass (Atlantic regions) (-20%) had the largest decreases.

Harvest and Release: Largest Increases

From 2009:

- Rockfishes and scorpionfishes (Pacific and North Pacific) (64%)
- Tunas (Pacific and Western Pacific regions) (52%)
- Dolphinfish (Western Pacific and Atlantic) (46%)

From 2017:

- Dolphinfish (Western Pacific and Atlantic) (20%)
- Tunas (Atlantic regions) (14%)

Harvest and Release: Largest Decreases

From 2009:

- Summer flounder (Atlantic regions) (-54%)
- Pacific salmon (Pacific and North Pacific) (-50%)
- Drum (Atlantic croaker and spot) (Atlantic regions) (-36%)

From 2017:

- Pacific salmon (Pacific and North Pacific) (-29%)
- Drum (Atlantic croaker and spot) (Atlantic regions) (-24%)
- Striped bass (Atlantic regions) (-20%)

MARINE ECONOMY — UNITED STATES

For this report, the marine economy refers to the fishing and marine-related industries in a coastal state. The national marine economy consists of two industry sectors: 1) seafood sales and processing (employer establishments and non-employer firms); and 2) transportation support and marine operations (employer establishments). These sectors include several different marine-related industries.[24]

The Commercial Fishing Location Quotient (CFLQ) measures the proportional size of this sector in a state's economy relative to the size of the commercial fishing sector in the national economy.[25] The CFLQ is calculated as the ratio of the percentage of regional employment in the commercial fishing sector relative to the percentage of national employment in the commercial fishing sector. The U.S. CFLQ is 1. If a state CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average.

In 2017, 7.9 million employer establishments operated throughout the United States (including marine and non-marine related establishments). These establishments employed 128.6 million workers and had a total annual payroll of $6.7 trillion. The nation's gross domestic product was approximately $19.6 trillion in 2017.[26]

Seafood Sales and Processing

S**eafood Product Preparation and Packaging:** In 2017, there were 2,242 non-employer firms in the seafood product preparation and packaging sector (a 61% increase from 2009). Annual receipts for these firms totaled $175.7 million. More of these non-employer firms were in Florida (280), California (202), New York (195), and Texas (131) than in any other state. There were 551 employer firms in the seafood product preparation and packaging sector (a 15% decrease from 2009). These establishments employed 31,801 workers (a 3% increase from 2009) and had a total annual payroll of $1.5 billion. The greatest number of employer and non-employer establishments in this sector was in Alaska (94), followed by Washington (73), and California (39).

Seafood Sales, Retail: In 2017, there were 2,428 non-employer firms in seafood retail sales (a 1% decrease from 2009). Annual receipts for these firms totaled $214.5 million. More of these non-employer firms were in

[24] Unless otherwise stated, data are from the U.S. Census Bureau (https://www.census.gov).
[25] U.S. Bureau of Labor Statistics, 'Location Quotient Calculator.' [For more information: https://www.bls.gov/cew/about-data/location-quotients-explained.htm.]
[26] U.S. Bureau of Economic Analysis. Gross Domestic Product by State, Fourth Quarter and Annual 2017. [Available at https://apps.bea.gov/regional/histdata/releases/0518gdpstate/.]

Florida (316) and California (230) than in any other state. There were 1,960 employer firms in the seafood retail sector (remains unchanged from 2009). These establishments employed 10,757 workers (a 14% increase from 2009) and had a total annual payroll of $279.8 million. The greatest number of employer and non-employer establishments in this sector was in New York (385), followed by Florida (176), and California (153).

Seafood Sales, Wholesale: Nationally, there were 1,998 employer firms in the seafood wholesale sector (a 5% decrease from 2009). These establishments employed 21,914 workers (a 14% increase from 2009) and had a total annual payroll of $1 billion. The greatest number of employer and non-employer establishments in this sector was in California (320), followed by New York (259), and Florida (230).

Transportation Support and Marine Operations

Coastal and Great Lakes Freight Transportation: There were 581 employer firms in the coastal and Great Lakes freight transportation sector. These establishments employed 17,799 workers and had a total annual payroll of $1.6 billion. Louisiana (94), Alaska (90), and New York (70) had the greatest number of these employer establishments.

Deep Sea Freight Transportation: There were 276 employer firms in the deep sea freight transportation sector. These establishments employed 6,515 workers and had a total annual payroll of $654.5 million. Florida (58), California (38), and Texas (32) had the greatest number of these employer establishments.

Deep Sea Passenger Transportation: There were 69 employer firms in the deep sea passenger transportation sector. These establishments employed 15,128 workers and had a total annual payroll of $1.3 billion. Florida (38), California (8), and Washington (4) had the greatest number of these employer establishments.

Marinas: There were 3,669 employer firms classified as marinas. These establishments employed 26,825 workers and had a total annual payroll of $1.1 billion. Florida (450), New York (402), and California (227) had the greatest number of these employer establishments.

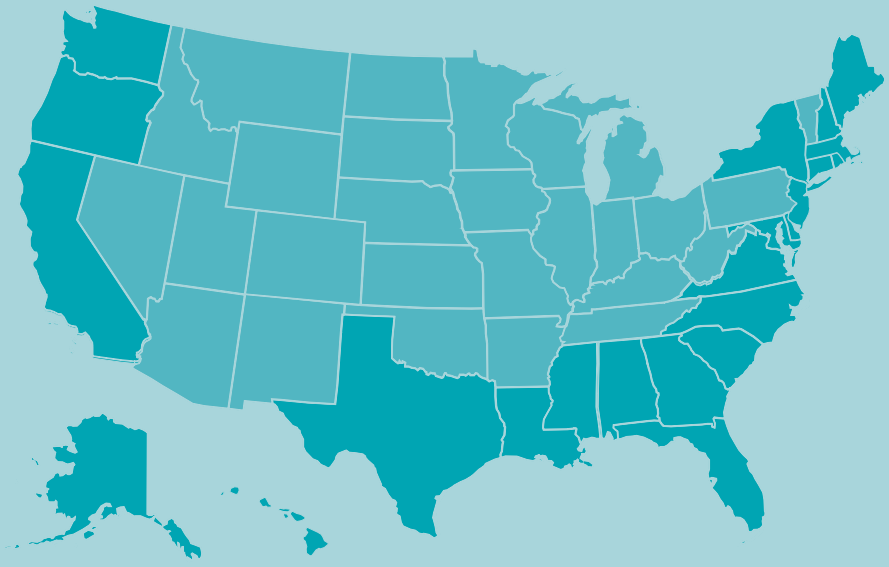
Marine Cargo Handling: There were 480 employer firms providing marine cargo handling services. These establishments employed 58,663 workers and had a total annual payroll of $4.5 billion. Florida (72), California (61), and Texas (56) had the greatest number of these employer establishments.

Navigational Services to Shipping: There were 1,032 employer firms providing navigational services to the shipping sector. These establishments employed 13,635 workers and had a total annual payroll of $1.1 billion. Florida (226), Louisiana (167), and Texas (81) had the greatest number of these employer establishments.

Port and Harbor Operations: There were 335 employer firms in the port and harbor operations sector. These establishments employed 9,005 workers and had a total annual payroll of $503.2 million. Florida (50), Texas (29), and Louisiana (24) had the greatest number of these employer establishments.

Ship and Boat Building: There were 1,463 employer firms in the ship and boat building sector. These establishments employed 137,300 workers and had a total annual payroll of $7.9 billion. Florida (269), Washington (135), and Louisiana (105) had the greatest number of these employer establishments.

Tables | National Overview



2018 Economic Impacts of the United States Seafood Industry (jobs, millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	1,225,826	165,063	42,899	67,058	672,438	52,457	19,201	27,242
Commercial Havesters	158,811	14,052	4,671	7,270	158,811	14,052	4,671	7,270
Seafood Processors and Dealers	99,177	15,970	5,040	7,006	51,171	8,240	2,600	3,615
Importers	259,793	84,075	13,475	25,630	0	0	0	0
Seafood Wholesalers and Distributors	80,688	12,874	4,231	6,053	23,790	3,796	1,247	1,785
Retail	627,357	38,093	15,483	21,099	438,666	26,369	10,682	14,573

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (millions of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	3,779	4,441	5,369	5,322	5,387	5,392	5,131	5,215	5,584	5,413
Finfish	1,801	2,153	2,627	2,595	2,572	2,380	2,351	2,230	2,676	2,459
Shellfish	1,952	2,254	2,702	2,684	2,771	2,971	2,744	2,945	2,869	2,912
Other	27	33	41	43	44	41	36	40	39	42
Key Species										
Alaska pollock	254	280	402	453	406	400	509	417	457	451
American lobster	308	404	423	432	461	567	622	670	567	630
Blue crab	164	205	185	193	186	216	217	211	197	196
Menhaden	99	107	144	128	125	127	180	179	114	161
Pacific halibut	136	203	209	148	115	110	115	122	121	87
Pacific salmon	414	572	665	581	756	617	502	421	788	599
Sablefish	122	134	185	148	102	111	115	117	147	111
Sea scallop	373	452	581	559	467	424	440	488	510	532
Shrimp	376	380	527	505	583	692	487	510	544	510
Tunas	95	108	136	164	146	134	138	157	153	149

Total Landings and Landings of Key Species/Species Groups (millions of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	7,960	8,145	9,812	9,615	9,716	9,461	9,657	9,527	9,858	9,218
Finfish	6,723	6,851	8,435	8,293	8,433	8,197	8,572	8,436	8,757	8,119
Shellfish	1,207	1,258	1,333	1,279	1,222	1,209	1,051	1,065	1,079	1,061
Other	31	36	44	43	61	55	34	26	23	38
Key Species										
Alaska pollock	1,869	1,948	2,811	2,872	3,003	3,146	3,263	3,355	3,389	3,364
American lobster	100	118	126	151	151	148	147	159	137	148
Blue crab	177	199	203	183	132	140	153	162	148	140
Menhaden	1,571	1,473	1,875	1,771	1,341	1,232	1,631	1,736	1,414	1,582
Pacific halibut	58	55	42	33	29	22	24	24	26	21
Pacific salmon	706	789	780	637	1,070	720	1,067	561	1,009	577
Sablefish	45	42	43	43	39	35	35	34	38	39
Sea scallop	58	57	59	57	41	34	36	41	52	58
Shrimp	307	245	319	313	291	327	333	292	299	308
Tunas	49	48	50	60	56	58	57	56	55	52

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Alaska pollock	0.14	0.14	0.14	0.16	0.14	0.13	0.16	0.12	0.13	0.13
American lobster	3.08	3.44	3.35	2.86	3.06	3.83	4.23	4.20	4.14	4.27
Blue crab	0.92	1.03	0.91	1.05	1.41	1.54	1.42	1.31	1.34	1.40
Menhaden	0.06	0.07	0.08	0.07	0.09	0.10	0.11	0.10	0.08	0.10
Pacific halibut	2.33	3.65	4.96	4.47	3.90	4.94	4.85	5.03	4.73	4.05
Pacific salmon	0.59	0.72	0.85	0.91	0.71	0.86	0.47	0.75	0.78	1.04
Sablefish	2.71	3.16	4.29	3.44	2.58	3.13	3.26	3.47	3.87	2.84
Sea scallop	6.48	7.90	9.89	9.83	11.40	12.55	12.32	12.00	9.85	9.20
Shrimp	1.23	1.55	1.65	1.61	2.00	2.12	1.46	1.75	1.82	1.65
Tunas	1.94	2.25	2.73	2.75	2.62	2.29	2.41	2.81	2.81	2.87

2018 Economic Impacts of Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	25,017	3,108,053	1,035,244	1,770,037
	Private Boat	54,018	8,966,815	2,813,556	5,090,187
	Shore	76,944	11,113,999	3,689,811	6,452,518
Total Durable Expenditures		313,869	49,272,950	16,729,277	27,420,331
Total Impacts		469,848	72,461,817	24,267,888	40,733,073

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	1,310,444
Private Boat	3,900,474
Shore	4,709,971
Total	9,920,888

Equipment	Durable Goods Expenditures
Fishing Tackle	3,742,314
Other Equipment	1,941,108
Boat Expenses	14,945,131
Vehicle Expenses	3,363,548
Second Home Expenses	2,147,395
Total Durable Expenditures	26,139,496

Total State Trip and Durable Goods Expenditures	36,060,384

Recreational Anglers by Residential Area (thousands of anglers)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	9,571	9,839	9,446	9,461	9,821	9,585	8,483	8,744	7,892	7,107
Non-Coastal	1,445	1,489	1,420	1,436	1,419	1,373	1,319	1,326	1,247	1,190
Total Anglers	11,016	11,328	10,866	10,896	11,240	10,958	9,801	10,070	9,139	8,296

Recreational Fishing Effort by Mode (thousands of angler trips)[2,3]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	3,612	2,939	3,585	3,760	4,330	4,540	4,500	3,729	3,946	4,019
Private	87,760	92,460	88,601	87,819	84,505	78,553	73,747	73,488	74,623	69,502
Shore	129,285	133,434	131,262	129,981	128,950	124,132	120,017	122,148	126,649	119,836
Total Trips	220,657	228,833	223,448	221,560	217,786	207,224	198,264	199,365	205,218	193,357

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[4,5]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Dolphinfish (Western Pacific and Atlantic)	H	2,424	1,851	3,080	2,509	2,460	2,586	4,080	1,963	2,546	3,165
	R	340	496	1,356	496	3,372	1,338	1,952	341	839	883
Drum (Atlantic croaker and spot) (Atlantic regions)	H	42,568	40,953	43,579	42,048	53,580	56,250	35,598	29,356	38,096	24,958
	R	53,837	47,751	56,743	63,520	81,918	56,454	41,335	41,899	43,216	37,192
Drum (seatrouts) (Atlantic regions)	H	40,051	37,342	43,229	45,404	36,529	17,051	19,386	25,143	27,304	18,312
	R	61,616	64,045	72,817	78,095	64,490	38,680	41,357	56,323	58,562	52,533
Pacific halibut (North Pacific)	H	440	398	394	388	454	408	420	400	352	352
	R	321	304	311	324	324	251	271	244	199	184
Pacific salmon (Pacific and North Pacific)	H	1,149	733	813	743	1,080	1,239	1,073	613	904	614
	R	771	390	508	392	634	486	559	326	446	340
Rockfishes and scorpionfish-es (Pacific and North Pacific)	H	2,393	2,402	3,071	3,633	4,131	4,349	4,171	3,809	3,898	3,753
	R	518	601	681	756	991	955	914	866	1,004	1,030
Striped bass (At-lantic regions)	H	4,746	5,430	5,049	4,077	5,217	4,055	3,141	3,528	3,011	2,456
	R	21,880	19,850	17,032	21,049	26,985	24,521	25,991	34,183	41,734	33,273
Summer flounder (Atlantic regions)	H	3,715	3,540	4,366	5,758	6,625	5,373	4,051	4,306	3,237	2,431
	R	47,039	55,389	51,722	38,969	38,362	39,214	30,141	26,951	24,911	21,141
Tunas (Atlantic regions)	H	247	225	302	386	383	209	224	280	312	340
	R	46	50	116	55	26	52	22	71	58	82
Tunas (Pacific and Western Pacific regions)	H	439	563	370	681	730	887	847	486	682	627
	R	88	47	98	30	37	213	147	122	263	173

[1] All anglers reported in this table are U.S. residents.
[2] Effort for 2014-2018 in Louisiana is estimated using data from a state creel survey and does not capture shore-based effort separately from private boat effort.
[3] Hawai'i trip estimates are not available for the for-hire mode. Oregon, Texas, and Washington trip estimates are not available for the shore mode
[4] Atlantic Regions refer to those states within New England, Mid-Atlantic, South Atlantic, and the Gulf of Mexico.
[5] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.

2017 United States Economy

#Non-Employer Firms (millions)	#Establishments (millions)	#Employees (millions)	Annual Payroll ($ trillions)	Employee Compensation ($ trillions)	Gross Domestic Product ($ trillions)	Commercial Location Quotient[1]
25.7	7.9	129	6.7	10.3	19.6	1

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. and packaging	Firms	1,395	1,617	1,757	1,766	1,812	1,947	2,108	2,208	2,242
	Receipts	95,219	104,990	110,745	115,167	128,927	146,626	163,625	176,593	175,735
Seafood sales, retail	Firms	2,455	2,513	2,514	2,657	2,497	2,557	2,471	2,392	2,428
	Receipts	207,139	199,810	212,679	217,702	205,555	203,459	206,676	207,428	214,481

Seafood Sales and Processing — Employer Establishments (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. and packaging	Establishments	645	638	620	589	604	640	618	586	551
	Employees	30,894	31,789	31,261	30,988	31,390	32,180	30,708	30,554	31,801
	Payroll	1,091,727	1,116,305	1,200,263	1,196,207	1,228,826	1,311,910	1,354,572	1,380,087	1,458,900
Seafood sales, wholesale	Establishments	2,099	2,183	2,287	1,954	2,098	2,100	2,132	2,176	1,998
	Employees	19,290	19,386	20,622	20,030	20,367	21,155	22,060	22,273	21,914
	Payroll	758,332	798,794	848,454	867,179	884,645	910,527	999,264	1,036,051	1,039,198
Seafood sales, retail	Establishments	1,967	1,982	1,972	1,957	1,995	2,015	2,059	2,067	1,960
	Employees	9,439	9,857	10,006	10,293	10,631	11,037	11,443	12,114	10,757
	Payroll	211,264	219,045	222,508	237,619	253,490	271,732	292,726	312,224	279,757

Transport, Support, and Marine Operations — Employer Establishments (thousands of dollars)[2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	1,615	1,540	1,497	1,560	1,514	1,524	1,541	1,508	1,463
	Employees	137,759	127,691	127,522	136,365	135,287	138,687	143,287	140,179	137,300
	Payroll	6,674,187	6,529,523	6,845,322	7,543,402	7,556,373	7,882,846	8,030,983	7,951,338	7,914,193
Deep Sea Freight Transportation	Establishments	376	372	378	375	305	332	350	313	276
	Employees	11,180	10,288	10,362	12,375	8,704	8,646	8,014	7,009	6,515
	Payroll	863,363	867,797	921,990	1,073,529	703,003	683,281	671,624	638,900	654,461
Deep Sea Passenger Transportation	Establishments	78	56	55	58	62	56	61	62	69
	Employees	ds	ds	ds	ds	ds	ds	15,157	14,596	15,128
	Payroll	ds	ds	ds	ds	ds	ds	1,246,384	1,155,308	1,299,990
Coastal and Great Lakes Freight Transportation	Establishments	513	547	549	496	497	598	593	603	581
	Employees	20,919	17,528	18,590	19,099	18,659	20,884	19,983	19,004	17,799
	Payroll	1,470,159	1,288,001	1,400,267	1,467,709	1,512,053	1,835,024	1,746,612	1,677,305	1,600,861
Port and Harbor Operations	Establishments	258	287	255	525	383	351	337	332	335
	Employees	5,100	4,844	4,933	25,396	7,000	6,769	7,855	8,003	9,005
	Payroll	250,358	290,467	306,882	1,345,857	420,664	399,502	434,209	424,370	503,197
Marine Cargo Handling	Establishments	541	507	545	343	458	482	492	492	480
	Employees	56,386	57,275	59,517	43,824	66,301	69,830	66,414	62,680	58,663
	Payroll	2,776,791	3,026,861	3,159,964	2,601,146	4,086,182	4,406,525	4,334,958	4,392,350	4,514,115
Navigational Services to Shipping	Establishments	846	847	836	850	847	881	889	877	1,032
	Employees	12,689	13,529	13,441	12,532	12,485	12,148	11,864	12,457	13,635
	Payroll	826,384	937,980	893,889	838,959	929,419	907,763	923,303	920,450	1,056,307
Marinas	Establishments	3,891	3,937	3,896	3,782	3,844	3,811	3,881	3,826	3,669
	Employees	26,643	26,657	26,557	25,764	26,373	26,709	26,999	27,471	26,825
	Payroll	905,488	927,499	953,497	913,140	951,123	995,248	1,036,253	1,081,496	1,050,970

[1] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[2] ds = Data are suppressed.

North Pacific Region

- Alaska

Charter boat in Kodiak, Alaska.
Photo: NOAA Fisheries/Noelle Olsen

MANAGEMENT CONTEXT

The North Pacific Region includes the fisheries in the Exclusive Economic Zone (EEZ) off the state of Alaska. Federal fisheries in this region are managed by the North Pacific Fishery Management Council (NPFMC) and NOAA Fisheries under six fishery management plans (FMPs).

North Pacific Region FMPs

- Bering Sea/ Aleutian Islands (BSAI) groundfish
- Gulf of Alaska (GOA) groundfish
- BSAI king and tanner crabs
- Alaska scallop
- Salmon in the EEZ
- Arctic

Of the stocks or stock complexes covered in these FMPs, only the blue king crab (Pribilof Islands stock and St. Matthew Island stock) are listed as overfished. No stocks were listed as subject to overfishing.

Catch Share Programs

The North Pacific Region has seven catch share programs, more than any other region. These are the: 1) Western Alaska Community Development Quota (CDQ) Program; 2) Alaska Halibut and Sablefish IFQ Program; 3) American Fisheries Act (AFA) Pollock Cooperatives; 4) Bering Sea and Aleutian Islands (BSAI) King and Tanner Crab Rationalization Program; 5) Aleutian Islands Pollock Fishery; 6) Bering Sea and Aleutian Islands (BSAI) Non-Pollock Trawl Catcher/Processor Groundfish Cooperatives (Amendment 80); and 7) Central Gulf of Alaska (GOA) Rockfish Program (pilot implemented in 2007). Excluding the Western Alaska CDQ and Aleutian Islands Pollock Fishery programs, the landings revenues for these programs totaled $950 million (in inflation-adjusted 2018 dollars) in 2017, exceeding the total landings revenue of any other state. The following are descriptions of these catch share programs and some key performance indicators.

Western Alaska Community Development Quota (CDQ) Program: The program was originally implemented in 1992 as part of a restructuring of the BSAI groundfish fishery. Under this program, a percentage of the total allowable catch for groundfish, prohibited species, halibut, and crab is apportioned to 65 eligible villages in Western Alaska that are organized into six CDQ groups. The program has the following goals: 1) Provide eligible Western Alaska villages with the opportunity to participate and invest in fisheries in the Bering Sea and Aleutian Islands Management Area; 2) Support economic development in Western Alaska; 3) Alleviate poverty and provide economic and social benefits to residents; and 4) Achieve a sustainable and diversified local economy.

Alaska Halibut and Sablefish IFQ Program: The program was implemented in 1995. The primary objectives of this IFQ program include the following: 1) Eliminate gear conflicts; 2) Address safety concerns; and 3) Improve product quality. The 2017 key performance indicators of the halibut program show that relative to the baseline period, quota, landings, and the number of active vessels decreased, while inflation-adjusted landings revenue and inflation-adjusted revenue per active vessel increased. The 2017 key performance indicators of the sablefish program show that relative to the baseline period, quota, landings, the number of active vessels, and inflation-adjusted landings revenue decreased, while inflation-adjusted revenue per vessel increased.

American Fisheries Act (AFA) Pollock Cooperatives: The program was established in 1999 and 2000 with the goals of settling allocation disputes between inshore (catcher vessels), offshore (catcher/processors), and mothership sectors, and ending the race for fish. The 2017 key performance indicators of the program show that relative to the baseline period, the number of active vessels decreased, while quota, landings, inflation-adjusted landings revenue, and inflation-adjusted revenue per active vessel increased.

Bering Sea and Aleutian Islands (BSAI) King and Tanner Crab Rationalization Program: The program was implemented for the 2005–2006 crab fishing season to address the race to harvest; high bycatch and discard mortality; and product quality issues. The program also aims to balance the interests of those who depend on crab fisheries. This program includes share allocations to harvesters and processors. Processor quota was incorporated to preserve the viability of processing facilities in dependent communities and, particularly, to maintain

competitive conditions in ex-vessel markets. The CDQ and Adak Community allocations, regional landings and processing requirements, and several community protection measures serve to protect community interests. The 2017/2018 key performance indicators of the program show that relative to the baseline period, quota, landings, the number of active vessels, and inflation-adjusted landings revenue decreased, while inflation-adjusted revenue per active vessel increased.

Aleutian Islands Pollock Fishery: In 2005, Amendment 82 to the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area established a framework for the management of the Aleutian Islands (AI) subarea directed pollock fishery. The FMP Amendment was proposed by the North Pacific Fishery Management Council to implement a provision of the Consolidated Appropriations Act of 2004 (Public Law 108–199, Sec. 803), which requires that the AI directed pollock fishery be allocated to the Aleut Corporation for the purpose of economic development in Adak, Alaska.

BSAI Non-Pollock Trawl Catcher/Processor Groundfish Cooperatives (Amendment 80): The program, commonly referred to as the Amendment 80 Program, was implemented in 2008 to create economic incentives that would improve retention of all fish caught. The cooperatives also seek to reduce bycatch by commercial fishing vessels using trawl gear in the non-pollock groundfish fisheries. The 2017 key performance indicators of the program show that relative to the baseline period, quota and the number of active vessels decreased, while landings, inflation-adjusted landings revenue, and inflation-adjusted revenue per active vessel increased.

Central Gulf of Alaska Rockfish Program: The program was initially established as a two-year (2007–2008) pilot program by the U.S. Congress and was later extended to five years. NOAA Fisheries implemented this catch share program in 2012. The objectives of this program are to reduce bycatch and discards, encourage conservation-minded practices, improve product quality and value, and provide stability to the processing labor force. The 2017 key performance indicators of the program show that relative to the baseline period, quota, landings, the number of active vessels, inflation-adjusted landings revenue, and inflation-adjusted revenue per active vessel all increased.

COMMERCIAL FISHERIES — NORTH PACIFIC REGION

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. The term does not include subsistence fishermen or saltwater anglers who fish for sport. It also excludes the for-hire sector, which earns its revenue from selling recreational fishing trips to saltwater anglers. The commercial fisheries section reports on economic impacts, landings revenue, landings, and ex-vessel prices of key species/species groups.

Key North Pacific Commercial Species

- Alaska pollock
- Atka mackerel
- Crab
- Flatfish
- Pacific cod
- Pacific halibut
- Pacific herring
- Rockfish
- Sablefish
- Salmon

The North Pacific groundfish fishery is different from most other United States fisheries in that a large portion of the fishery is processed at sea and, therefore, no landings revenues are reported. The landings revenue for the species landed and processed at sea is estimated by using prices obtained from the shore-side sector. These species include Atka mackerel, flatfish, Pacific cod, rockfish, sablefish, and Alaska pollock. When data from the shore-side sector are inadequate, historical information about the relationship between the ex-vessel price and the wholesale price of finished products is used to estimate ex-vessel prices and revenue for portions of the fishery mostly processed at sea.

Economic Impacts

The premise behind economic impact modeling is that every dollar spent in a regional economy (direct impact) is either saved or re-spent on additional goods or services. If those dollars are re-spent on other goods and services in the regional economy, this spending generates additional economic activity in the region.[1]

Four different measures are commonly used to show how

[1] Summary data is available online in the FEUS webtool. [Available at: https://www.fisheries.noaa.gov/data-tools/fisheries-economics-united-states-interactive-tool.]

commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. The category includes both the direct sales of fish landed and sales made between businesses and households resulting from the original sale. Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the sales of seafood or purchases of inputs to commercial fishing. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in numbers of jobs. Note that these categories are not additive. The United States seafood industry is defined here as the commercial fishing sector, seafood processors and dealers, seafood wholesalers and distributors, importers, and seafood retailers.[2]

This report provides estimates of total economic impacts for the nation and for each of the 23 coastal states. Total economic impacts for each state and the nation represent the sum of direct impacts; indirect impacts (in this case, the impact from suppliers to the seafood industry); and induced impacts (spending by employees on personal and household expenditures, where employees of both the seafood industry and its full supply chain are included). That is, the total economic impact estimates reported here measure jobs, sales, value-added, and income impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

In 2018, the commercial fishing and seafood industry supported 53,590 full- and part-time jobs and generated $4.4 billion in sales, $1.9 billion in income, and $2.4 billion in value-added impacts in the North Pacific Region. Commercial harvesters generated the largest sales impacts ($3.1 billion), value-added impacts ($1.7 billion), income impacts ($1.4 billion), and employment impacts (38,653 jobs).

Landings Revenue

In 2018, landings revenue in the North Pacific Region totaled $1.8 billion, a 37% increase from 2009 (an 18% increase in real terms after adjusting for inflation) and an 11% decrease from 2017.

Finfish landings revenue accounted for 90% of all landings revenue. In 2018, salmon ($553.5 million), Alaska pollock ($451.2 million), and Pacific cod ($238.9 million) had the highest landings revenue in this region. Together, these top three species accounted for 70% of total landings revenue.

From 2009 to 2018, Pacific cod (143%, 109% in real terms), rockfish (138%, 105% in real terms), and Atka mackerel (83%, 106% in real terms) had the largest increases, while Pacific herring (-72%, -76% in real terms), Pacific halibut (-39%, -47% in real terms), and flatfish (-20%, -31% in real terms) had the largest decreases. From 2017 to 2018, Pacific cod (23%), rockfish (12%) and Atka mackerel (8%) had the largest increases, while Pacific halibut (-29%), salmon (-26%), and sablefish (-25%) had the largest decreases.

Commercial Revenue: Largest Increases

From 2009:
- Pacific cod (143%, 109% in real terms)
- Rockfish (138%, 105% in real terms)
- Atka mackerel (83%, 106% in real terms)

From 2017:
- Pacific cod (23%)
- Rockfish (12%)
- Atka mackerel (8%)

Commercial Revenue: Largest Decreases

From 2009:
- Pacific herring (-72%, -76% in real terms)
- Pacific halibut (-39%, -47% in real terms)
- Flatfish (-20%, -31% in real terms)

From 2017:
- Pacific halibut (-29%)
- Salmon (-26%)
- Sablefish (-25%)

[2] The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates. [Available at: https://www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf.]

Landings

In 2018, North Pacific Region commercial fishermen landed over 5.4 billion pounds of finfish and shellfish. This represents a 33% increase from 2009 and a 10% decrease from 2017. Alaska pollock contributed the highest landings volume in the region, accounting for 62% of total landing weight.

From 2009 to 2018, rockfish (84%) and Alaska pollock (80%) had the largest increases, while Pacific halibut (-65%), crab (-56%), and Pacific herring (-47%) had the largest decreases. From 2017 to 2018, rockfish (12%), Atka mackerel (10%) and sablefish (4%) had the largest increases, while salmon (-44%), Pacific herring (-33%), and Pacific cod (-22%) had the largest decreases.

Commercial Landings: Largest Increases

From 2009:
- Rockfish (84%)
- Alaska pollock (80%)

From 2017:
- Rockfish (12%)
- Atka mackerel (10%)
- Sablefish (4%)

Commercial Landings: Largest Decreases

From 2009:
- Pacific halibut (-65%)
- Crab (-56%)
- Pacific herring (-47%)

From 2017:
- Salmon (-44%)
- Pacific herring (-33%)
- Pacific cod (-22%)

Prices

In 2018, Pacific halibut ($4.06 per pound) received the highest ex-vessel price in the region. Landings of Alaska pollock ($0.13 per pound) had the lowest ex-vessel price. From 2009 to 2018, Pacific cod (132%, 100% in real terms), crab (88%, 62% in real terms), and Atka mackerel (87%, 61% in real terms) had the largest increases, while Pacific herring (-47%, -54% in real terms), flatfish (-4%, -17% in real terms), and Alaska pollock (-1%, -15% in real terms) had the largest decreases. From 2017 to 2018, Pacific cod (58%), salmon (31%), and Pacific herring (24%) had the largest increases, while sablefish (-29%), Pacific halibut (-14%), and crab (-13%) had the largest decreases.

RECREATIONAL FISHERIES — NORTH PACIFIC REGION

In this report, recreational fishing refers to fishing for leisure rather than to sell fish (commercial fishing) or for subsistence. This recreational fisheries section reports on economic impacts and expenditures, angler participation, fishing trips, and catch of key species/species groups.[3]

Key North Pacific Recreational Species[4]

- Chinook salmon
- Chum salmon
- Coho salmon
- Lingcod
- Pacific cod
- Pacific halibut
- Pink salmon
- Rockfish species
- Sablefish/black cod
- Shark species
- Sockeye salmon

Economic Impacts and Expenditures

The economic contribution of recreational fishing activities in the North Pacific Region is based on spending by recreational anglers.[5] Total annual trip expenditures are estimated at the state level by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore) and adjusting by the CPI (consumer price index) to the current year. Total annual durable expenditures are estimated by multiplying mean durable expenditures in each state by the estimated annual number of adult participants for each state and adjusting by the CPI (consumer price index) to the current year.[6]

Four different measures are commonly used to show how angler expenditures affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as recreational fishing. The category includes both the direct sales made by the angler and sales made between businesses and households resulting from that

[3] Information reported in this table is from the Sport Fish Division of the Alaska Department of Fish and Game (ADF&G) for saltwater fishing activities.
[4] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[5] Trip expenditure estimates were generated from the 2016/2017 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2020). Durable goods expenditures were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2016). [For citations: Publications-Recreational Fisheries Economics Research.]
[6] Summary data is available online in the FEUS webtool. [Available at: https://www.fisheries.noaa.gov/data-tools/fisheries-economics-united-states-interactive-tool.]

original sale by the angler. Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the purchases made by anglers. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in number of jobs. Note that these categories are not additive. NOAA Fisheries uses a regional impact modeling software, called IMPLAN, to estimate these four types of impacts.

The economic contributions for both trip and durable expenditures from recreational fishing in 2018 were estimated using IMPLAN version 3, with base year data from 2017. Models for each state and for the nation were created in IMPLAN using trip expenditures (based on 2016/2017 survey data on average trip expenditures and total 2018 trips) and for durable expenditures (based on 2014 survey data on average durable expenditures and 2018 participants).

In 2018, economic impacts from recreational fishing activities in the North Pacific Region generated 5,360 jobs, $558.4 million in sales, $195 million in income, and $325.7 million in value-added impacts. Impacts from durable equipment expenditures (e.g., rods and reels, fishing-related equipment, boats, vehicles, and second homes) accounted for 28% of employment, 21% of sales, 24% of income, and 22% of value-added impacts.

Expenditures for fishing trips and durable equipment across the North Pacific Region in 2018 totaled $460 million. This total included $125.4 million in durable goods expenditures, with the largest portion coming from boat expenses ($55.5 million).

Participation

In 2018, there were 296,238 recreational anglers who fished in the North Pacific Region. This number represented a 4% increase from 2009 and remains unchanged from 2017. The anglers are categorized as either out-of-state anglers (63%) or residents of coastal/non-coastal county (37%).

Days Fished

The state of Alaska records recreational fishing effort in terms of the number of days fished, rather than the number of fishing trips. Anglers who fished in Alaska spent approximately 773,700 days fishing in 2018. This number represented a 7% decrease from the days spent fishing in 2009. From 2017 to 2018, there was a 5% decrease in the number of days fished.

Harvest and Release Trends

Of the North Pacific Region's key species and species groups, Pacific halibut (536,312 fish), rockfish species (459,603 fish), and coho salmon (341,932 fish), were most frequently caught by recreational fishermen. The text box below shows the species with the largest percentage increases and decreases in the past 10 years and in the past year.

From 2009 to 2018, sockeye salmon (3%) had the largest increases, while Pacific cod (-73%), chum salmon (-62%), and pink salmon (-49%) had the largest decreases. From 2017 to 2018, shark species (85%), lingcod (46%), and sablefish/black cod (21%) had the largest increases, while Pacific cod (-37%), pink salmon (-36%), and chum salmon (-32%) had the largest decreases.

Harvest and Release: Largest Increases

From 2009:
- Sockeye salmon (3%)

From 2017:
- Shark species (85%)
- Lingcod (46%)
- Sablefish/black cod (21%)

Harvest and Release: Largest Decreases

From 2009:
- Pacific cod (-73%)
- Chum salmon (-62%)
- Pink salmon (-49%)

From 2017:
- Pacific cod (-37%)
- Pink salmon (-36%)
- Chum salmon (-32%)

MARINE ECONOMY — NORTH PACIFIC REGION

For this report, the marine economy refers to the fishing and marine-related industries in a coastal state. The state marine economy consists of two industry sectors: 1) seafood sales and processing (employer establishments and non-employer firms); and 2) transportation support and marine operations (employer establishments). These sectors include several different marine-related industries.[7]

To measure the size of the commercial fishing sector in a state's economy relative to the size of the commercial fishing sector in the national economy, researchers use an index called the Commercial Fishing Location Quotient (CFLQ).[8] The CFLQ is calculated as the ratio of the percentage of regional employment in the commercial fishing sector relative to the percentage of national employment in the commercial fishing sector. The U.S. CFLQ is 1. If a state CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average.

The Bureau of Labor Statistics suppressed the CFLQ value for Alaska for 2017.

In 2017, 21,279 employer establishments operated in Alaska (including marine and non-marine related establishments). These establishments employed 262,075 workers and had a total annual payroll of $15 billion. The gross state product of Alaska was $54.4 billion in 2017.[9]

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2017, Alaska had 20 non-employer firms in the seafood product preparation and packaging sector (a 38% decrease from 2009). Annual receipts for these firms totaled $1.8 million. There were 94 employer firms in this sector (a 22% decrease from 2009). These establishments employed 8,553 workers (a 13% increase from 2009) and had a total annual payroll of $347.5 million.

Seafood Sales, Retail: In 2017, there were 20 non-employer firms in seafood retail sales in Alaska (a 25% increase from 2009). Annual receipts for these firms totaled $1.4 million. There were 14 employer firms in the seafood retail sector (a 40% increase from 2009). These establishments employed 53 workers (a 20% increase from 2009) and had a total annual payroll of $1.8 million.

Seafood Sales, Wholesale: There were 36 employer firms in the seafood wholesale sector in Alaska in 2017 (a 33% decrease from 2009). These establishments employed 277 workers and had a total annual payroll of $22.7 million.[10]

Transportation Support and Marine Operations

Data for the transportation support and marine operations sectors of Alaska's economy were largely suppressed for confidentiality reasons. It is clear, however, that these sectors play an important role in the regional economy. For example, in 2017, the coastal and Great Lakes freight transportation sector in Alaska accounted for $86.2 million in payroll.

[7] Unless otherwise stated, data are from the U.S. Census Bureau (https://www.census.gov).
[8] U.S. Bureau of Labor Statistics, 'Location Quotient Calculator.' [For more information: https://www.bls.gov/cew/about-data/location-quotients-explained.htm.]
[9] U.S. Bureau of Economic Analysis. Gross Domestic Product by State, Fourth Quarter and Annual 2017. [Available at https://apps.bea.gov/regional/histdata/releases/0518gdpstate/.]
[10] The Census Bureau suppressed data on number of employees for this sector in this region in either 2017 or 2009, and thus cannot be compared.

Tables | Alaska

2018 Economic Impacts of the Alaska Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	53,590	4,387	1,945	2,413	53,488	4,364	1,941	2,405
Commercial Harvesters	38,653	3,066	1,377	1,703	38,653	3,066	1,377	1,703
Seafood Processors & Dealers	11,706	1,106	483	598	11,689	1,105	482	598
Importers	59	19	3	6	0	0	0	0
Seafood Wholesalers & Distributors	358	44	15	20	348	43	15	19
Retail	2,814	152	67	86	2,798	151	67	86

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (millions of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	1,303	1,643	2,021	1,969	1,878	1,712	1,768	1,551	2,003	1,782
Finfish	1,103	1,404	1,712	1,639	1,632	1,459	1,474	1,315	1,812	1,610
Shellfish	196	236	303	322	240	248	288	230	184	162
Other	4	4	7	8	7	5	6	6	7	10
Key Species										
Alaska pollock	254	280	402	453	406	400	509	417	457	451
Atka mackerel	30	31	30	31	15	22	31	32	51	55
Crab	185	222	290	309	230	238	279	219	173	152
Flatfish	202	277	306	260	227	201	175	183	200	161
Pacific cod	99	146	163	171	156	153	174	171	194	239
Pacific halibut	135	200	205	145	111	107	111	117	116	83
Pacific herring	24	22	11	22	16	11	7	5	8	7
Rockfish	14	22	34	33	35	28	29	30	31	34
Sablefish	88	98	140	120	82	86	86	86	113	86
Salmon	388	521	612	533	680	546	455	381	745	553

Total Landings and Landings of Key Species/Species Groups (millions of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	4,071	4,349	5,355	5,346	5,792	5,671	6,014	5,586	6,006	5,404
Finfish	3,975	4,264	5,269	5,229	5,699	5,579	5,907	5,511	5,960	5,356
Shellfish	94	84	85	116	91	91	105	73	45	46
Other	2	1	1	2	2	1	2	2	2	2
Key Species										
Alaska pollock	1,869	1,948	2,811	2,872	3,003	3,146	3,263	3,355	3,389	3,364
Atka mackerel	157	145	113	104	51	70	118	121	143	157
Crab	90	80	80	112	87	85	97	69	39	39
Flatfish	544	595	633	631	641	637	494	511	488	453
Pacific cod	491	539	663	717	681	717	697	707	657	512
Pacific halibut	58	55	41	32	29	22	23	23	25	20
Pacific herring	87	108	99	75	85	97	68	52	68	46
Rockfish	84	100	106	115	123	133	142	146	138	155
Sablefish	29	27	29	31	30	26	24	22	26	27
Salmon	671	757	738	612	1,013	683	1,041	543	986	557

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Alaska pollock	0.14	0.14	0.14	0.16	0.14	0.13	0.16	0.12	0.13	0.13
Atka mackerel	0.19	0.21	0.27	0.29	0.30	0.32	0.26	0.26	0.36	0.35
Crab	2.06	2.79	3.61	2.76	2.64	2.79	2.87	3.19	4.46	3.88
Flatfish	0.37	0.47	0.48	0.41	0.35	0.31	0.35	0.36	0.41	0.36
Pacific cod	0.20	0.27	0.25	0.24	0.23	0.21	0.25	0.24	0.30	0.47
Pacific halibut	2.33	3.65	4.97	4.47	3.88	4.93	4.84	5.03	4.74	4.06
Pacific herring	0.27	0.20	0.11	0.29	0.19	0.12	0.10	0.10	0.12	0.15
Rockfish	0.17	0.22	0.32	0.29	0.28	0.21	0.21	0.21	0.22	0.22
Sablefish	3.01	3.60	4.84	3.82	2.72	3.37	3.62	3.93	4.43	3.15
Salmon	0.58	0.69	0.83	0.87	0.67	0.80	0.44	0.70	0.76	0.99

2018 Economic Impacts of Alaska Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	2,969	300,645	104,237	168,849
	Private Boat	837	130,145	39,937	79,194
	Shore	70	9,584	3,209	5,958
Total Durable Expenditures		1,484	118,017	47,658	71,739
Total State Economic Impacts		5,360	558,391	195,040	325,739

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)[1]

Fishing Mode	Trip Expenditures
For-Hire	208,790
Private Boat	117,431
Shore	8,384
Total	334,605

Equipment	Durable Goods Expenditures
Fishing Tackle	27,888
Other Equipment	37,437
Boat Expenses	55,484
Vehicle Expenses	4,608
Second Home Expenses	0
Total Durable Expenditures	125,417

Total State Trip and Durable Goods Expenditures	460,022

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal/Non-Coastal	127	122	124	118	129	122	128	115	117	110
Out-of-State	158	159	161	160	178	170	181	181	178	186
Total Anglers	284	281	286	278	307	292	309	296	295	296

Recreational Fishing Effort by Mode (thousands of angler fishing days)[2]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total Days Fished	831	738	737	735	897	876	890	782	812	774

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[3,4,5]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Chinook salmon	H	89	78	85	63	81	111	111	101	85	62
	R	96	66	95	62	120	94	116	87	106	74
Chum salmon	H	22	11	21	11	25	12	13	10	10	6
	R	34	19	38	20	39	19	25	22	22	16
Coho salmon	H	418	350	386	263	493	390	479	263	468	297
	R	94	74	88	50	122	60	99	41	71	45
Lingcod	H	32	32	33	33	34	32	28	26	22	29
	R	46	39	36	36	33	29	27	23	27	43
Pacific cod	H	36	37	48	42	38	61	58	44	20	15
	R	63	81	76	50	48	73	75	43	24	12
Pacific halibut	H	440	398	394	388	454	408	420	400	352	352
	R	321	304	311	324	324	251	271	244	199	184
Pink salmon	H	117	82	72	78	113	69	110	103	102	70
	R	224	121	135	141	203	118	204	126	170	104
Rockfish species	H	209	224	211	230	256	335	332	347	279	309
	R	149	151	122	121	121	148	143	157	129	150
Sablefish/ black cod	H	0	9	10	18	18	12	23	15	22	26
	R	0	7	8	9	6	6	13	4	6	8
Shark species	H	< 1	< 1	< 1	< 1	< 1	2	< 1	< 1	< 1	< 1
	R	33	29	14	13	11	28	20	16	10	17
Sockeye salmon	H	34	28	31	28	40	35	33	34	36	38
	R	10	6	10	8	13	12	9	7	10	7

[1] All data reported in this table are from saltwater fishing activities.
[2] Alaska effort is measured in 'Days Fished,' not in 'Angler Trips.' Numbers before 2011 use estimates of the portion of days fished devoted to shellfish, which were excluded.
[3] Information reported in this table is from the Sport Fish Division of the Alaska Department of Fish and Game (ADF&G) for saltwater fishing activities.
[4] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[5] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.

2017 Alaska State Economy (% of national total)[1]

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
56,796 (0.2%)	21,279 (0.3%)	262,075 (0.2%)	15.0 (0.2%)	26.8 (0.3%)	54.4	ds

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	32	28	26	25	35	31	30	22	20
	Receipts	1,693	2,482	2,882	2,708	3,268	2,472	4,091	1,743	1,792
Seafood sales, retail	Firms	16	23	15	15	11	17	11	13	20
	Receipts	1,350	1,595	903	1,626	1,458	1,539	761	1,483	1,384

Seafood Sales and Processing — Employer Establishments (thousands of dollars)[1]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	121	119	122	116	115	108	109	104	94
	Employees	7,572	8,074	8,578	8,289	8,638	9,115	8,472	8,654	8,553
	Payroll	255,403	268,208	296,851	297,284	308,961	337,171	356,855	355,129	347,495
Seafood sales, wholesale	Establishments	54	52	48	47	43	43	37	33	36
	Employees	ds	ds	159	143	102	120	94	79	277
	Payroll	8,445	9,141	9,985	10,943	7,205	7,024	7,306	6,037	22,658
Seafood sales, retail	Establishments	10	10	10	15	14	14	15	16	14
	Employees	44	ds	ds	ds	ds	ds	64	77	53
	Payroll	1,824	1,986	2,487	2,019	2,337	2,687	2,498	2,549	1,798

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[1]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	21	22	23	23	20	27	23	23	17
	Employees	ds	ds	ds	ds	ds	335	344	394	327
	Payroll	ds	ds	ds	ds	ds	15,845	17,748	18,762	14,505
Deep Sea Freight Transportation	Establishments	3	3	1	2	3	6	5	5	4
	Employees	ds	ds	ds	ds	ds	ds	ds	0	0
	Payroll	ds	ds	ds	ds	ds	ds	ds	0	0
Deep Sea Passenger Transportation	Establishments	1	NA	1	1	2	1	1	1	3
	Employees	ds	NA	ds	ds	ds	ds	ds	0	0
	Payroll	ds	NA	ds	ds	ds	ds	ds	0	0
Coastal and Great Lakes Freight Transportation	Establishments	50	55	63	47	53	72	74	79	90
	Employees	ds	ds	ds	ds	ds	ds	1,067	966	981
	Payroll	33,132	ds	ds	ds	82,692	89,020	89,281	86,849	86,178
Port and Harbor Operations	Establishments	8	9	8	18	13	12	11	11	9
	Employees	ds	ds	ds	582	ds	ds	ds	14	0
	Payroll	ds	ds	1,790	25,545	ds	ds	ds	904	0
Marine Cargo Handling	Establishments	13	13	14	8	9	9	9	8	7
	Employees	ds	ds	ds	334	ds	ds	437	410	436
	Payroll	ds	ds	ds	26,481	ds	ds	32,326	32,171	31,439
Navigational Services to Shipping	Establishments	23	25	22	21	22	25	24	23	28
	Employees	312	303	321	97	103	138	140	126	168
	Payroll	25,630	27,543	27,156	9,938	10,805	13,015	13,596	14,221	17,063
Marinas	Establishments	13	14	14	13	12	11	11	10	9
	Employees	56	ds	ds	ds	ds	ds	30	33	43
	Payroll	2,181	1,932	2,053	1,613	1,449	ds	1,423	1,568	1,818

[1] ds = Data are suppressed.
[2] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.

Pacific Region

- California
- Oregon
- Washington

A view of Newport, Oregon, home of the two largest fishing communities in Oregon.
Photo: Pacific Fishery Management Council/Jennifer Gilden

MANAGEMENT CONTEXT

The Pacific Region includes California, Oregon, and Washington. Federal fisheries in this region are managed by the Pacific Fishery Management Council (PFMC) and NOAA Fisheries under four fishery management plans (FMPs).

Pacific Region FMPs

- Coastal pelagic species
- Pacific coast salmon
- Pacific coast groundfish
- West Coast highly migratory species

Six of the stocks or stock complexes covered in these FMPs were listed as overfished in 2018: Chinook salmon (Sacramento River fall stock and Klamath River fall stock, both newly added to the list in 2018); coho salmon (Queets stock, Juan de Fuca stock, and Snohomish stock, all of which were newly added to the list in 2018); and Pacific bluefin tuna (Pacific stock). Four stocks/complexes were subject to overfishing in 2018: Chinook salmon (Upper Columbia River summer stock, newly added to the overfishing list in 2018); Pacific bluefin tuna (Pacific stock); swordfish (Eastern Pacific stock); and yellowfin tuna (Eastern Pacific stock; newly added to the overfishing list in 2018). Coho salmon (Puget Sound: Stillaguamish stock) was removed from the overfishing list in 2018.

Conservative management techniques are employed in the Pacific Region's fisheries. For example, groundfish and salmon fisheries are subject to "weak stock management" where access to the surplus of healthier stocks that can be harvested is often restricted to protect weaker stocks with which they commingle in the ocean. These weaker stocks have included 10 groundfish stocks that have been managed under rebuilding plans, salmon (listed under the Endangered Species Act), and other non-listed stocks that constrain the fishery. Currently, nine of the 10 groundfish stocks have been successfully rebuilt since the stocks were declared overfished or depleted in 1999;[1] only the yelloweye rockfish stock is currently managed under a rebuilding plan.[2]

Salmon management is further complicated by the need to ensure equal allocation of harvest among diverse user groups and coordination with other entities that have jurisdiction over various aspects of salmon management. Decades of habitat modification, hatchery practices, harvest and growing competition for water have affected the viability of salmon stocks and made them more vulnerable to adverse environmental conditions. These conditions include the prolonged drought and adverse ocean conditions experienced in recent years. Low returns of salmon to the Klamath River in 2006 and to the Sacramento River in 2008 and 2009, resulted in unprecedented closures of ocean and in-river fisheries, leading to federal disaster relief for affected entities.

Coastal pelagic species (CPS) are highly variable, environmentally sensitive stocks that provide food for marine mammals, birds, and fish. These species include Pacific sardine, northern anchovy, Pacific and jack mackerel, and market squid. Of these species, Pacific sardine is the most commonly targeted CPS finfish and is managed according to an innovative harvest control rule: Allowable harvest varies with sea surface temperature. Because the geographic range of sardine tends to expand with abundance, harvest allocation between the California and Pacific Northwest fisheries is an ongoing and dynamic issue. The annual guideline for sardine harvest is allocated coast-wide on a seasonal basis. Recent decreases in harvest guideline limits have contributed to the development of an intense derby fishery.

Catch limits for Pacific halibut, a transboundary fish stock, are set in January by the International Pacific Halibut Commission (IPHC). This bilateral commission between the United States and Canada determines total allowable catch levels (TACs) for Pacific halibut that will be caught in the United States and Canadian exclusive economic zones (EEZs). After catch levels are determined, the PFMC develops a catch-sharing plan for tribal and non-tribal (i.e., commercial and recreational) fisheries in the federal waters of California, Oregon, and Washington. Pacific halibut is targeted only with hook gear, but there are allocations to the trawl sector for bycatch, including individual bycatch quotas, in the Pacific groundfish trawl IFQ.

The Highly Migratory Species (HMS) FMP includes tunas, billfish, and pelagic sharks as managed species. The albacore surface hook-and-line fishery is by far the most economically important commercial HMS fishery, followed

[1] Pacific Fishery Management Council. 2021. Council news: Rigorous management practices have led to successful rebuilding of several West Coast groundfish stocks. [Available at https://www.pcouncil.org/council-news-rigorous-management-practices-have-led-to-successful-rebuilding-of-several-west-coast-groundfish-stocks/ (accessed September 29, 2021.]
[2] Pacific Fishery Management Council. 2021. Fact Sheet: Overfishing and Rebuilding. [Available at https://www.pcouncil.org/fact-sheet-overfishing-and-rebuilding/, accessed September 29, 2021.]

by the drift gillnet fishery for swordfish and thresher shark. This fisheryis also a very important component of the catch for the Pacific Region's commercial passenger fishing vessel fleet and the private recreational boat fleet.

Catch Share Programs

The Pacific Region has two catch share programs: 1) the Pacific Coast Sablefish Permit Stacking Program; and 2) the Pacific Groundfish Trawl Rationalization Program (whiting and non-whiting trawl). The landings revenues for these programs totaled $76 million (in inflation-adjusted 2018 dollars) in 2017. The following are descriptions of these catch share programs and their performance.

Pacific Coast Sablefish Permit Stacking Program: This program was implemented in 2001 and allows vessels to stack multiple vessel permits on a single vessel. The goal of this approach is to improve economic efficiency through rationalization of the fixed gear fleet, increase benefits for fishing communities, promote equity, lessen reallocation effects of previous harvest regulations, promote safety, and improve product quality and value. The 2017 key performance indicators of the program show that relative to the baseline period, landings and the number of active vessels decreased, while inflation-adjusted landings revenue and inflation-adjusted revenue per active vessel increased. There was no catch quota prior to the implementation of the catch share program so program performance could not be evaluated for this metric.

A recent study of this fleet demonstrated that after the catch share program was implemented, the probability of fishermen taking a fishing trip in high wind conditions decreased 82%. This provides evidence that institutional changes can significantly reduce risk taking behavior and result in safer fisheries.

Pacific Groundfish Trawl Rationalization Program (whiting and non-whiting trawl): This program was implemented by the PFMC in January 2011. This program involves individual fishing quotas (IFQs) for non-whiting groundfish and whiting trawlers delivering to shoreside plants and cooperatives for whiting mothership and catcher processor sectors. The objectives of this program are to provide a mechanism for total catch accounting; provide a viable, profitable, and efficient groundfish fishery; promote practices that reduce bycatch and discard mortality and minimize ecological impacts; increase operational flexibility; minimize adverse effects from the IFQ program on fishing communities and other fisheries; promote measurable economic and employment benefits through the seafood catching, processing, distribution, and support sectors of the industry; provide quality product for the consumer; and increase safety in the fishery.

The 2017 key performance indicators of the program show that relative to the baseline period the number of active vessels decreased, while landings, inflation-adjusted landings revenue, and inflation-adjusted revenue per active vessel increased. There was no catch quota prior to the implementation of the catch share program so program performance could not be evaluated for this metric.

Expanded observer coverage and dockside monitoring, which were implemented with the catch share program, coupled with long-term adherence to catch targets and improved stock assessment models, have to varying degrees also contributed to improved fishery performance. For example, in the first three years of catch shares, the total catch of rebuilding stocks (of which two — canary rockfish and petrale sole — are now declared rebuilt) was 50% lower than in the previous three years.

COMMERCIAL FISHERIES — PACIFIC REGION

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. The term does not include subsistence fishermen or saltwater anglers who fish for sport. It also excludes the for-hire sector, which earns its revenue from selling recreational fishing trips to saltwater anglers. The commercial fisheries section reports on economic impacts, landings revenue, landings, and ex-vessel prices of key species/species groups.

Key Pacific Region Commercial Species

- Albacore tuna
- Crab
- Flatfish
- Other shellfish
- Pacific hake (whiting)
- Rockfish
- Sablefish
- Salmon
- Shrimp
- Squid

Economic Impacts

The premise behind economic impact modeling is that every dollar spent in a regional economy (direct impact) is either saved or re-spent on additional goods or services. If those dollars are re-spent on other goods and services in the regional economy, this spending generates additional economic activity in the region.[3]

Four different measures are commonly used to show how commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. The category includes both the direct sales of fish landed and sales made between businesses and households resulting from the original sale. Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the sales of seafood or purchases of inputs to commercial fishing. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in numbers of jobs. Note that these categories are not additive. The United States seafood industry is defined here as the commercial fishing sector, seafood processors and dealers, seafood wholesalers and distributors, importers, and seafood retailers.[4]

This report provides estimates of total economic impacts for the nation and for each of the 23 coastal states. Total economic impacts for each state and the nation represent the sum of direct impacts; indirect impacts (in this case, the impact from suppliers to the seafood industry); and induced impacts (spending by employees on personal and household expenditures, where employees of both the seafood industry and its full supply chain are included). That is, the total economic impact estimates reported here measure jobs, sales, value-added, and income impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

In 2018, the commercial fishing and seafood industry in California generated the largest employment impacts in the Pacific region with 146,728 full- and part-time jobs. California also generated the largest sales impacts ($29.1 billion), value-added impacts ($10.3 billion), and income impacts ($6.1 billion).

Landings Revenue

In 2018, landings revenue in the Pacific Region totaled $635.6 million, a 50% increase from 2009 (a 29% increase in real terms after adjusting for inflation) and a 2% decrease from 2017. Landings revenue was highest in Washington ($249.5 million), followed by California ($182.7 million).

Shellfish landings revenue accounted for 66% of all landings revenue. In 2018, crab ($238.5 million), other shellfish ($91.2 million), and shrimp ($49.1 million) had the highest landings revenue in this region. Together, these top three species accounted for 60% of total landings revenue.

From 2009 to 2018, Pacific hake (whiting) (247%, 199% in real terms), shrimp (198%, 156% in real terms), and rockfish (174%, 136% in real terms) had the largest increases, while squid (-32%, -41% in real terms), sablefish (-27%, -37% in real terms), and albacore tuna (-10%, -22% in real terms) had the largest decreases. From 2017 to 2018, shrimp (65%), rockfish (24%), and crab (14%) had the largest increases, while squid (-43%), albacore tuna (-28%), and sablefish (-26%) had the largest decreases.

[3] Summary data is available online in the FEUS webtool. [Available at: https://www.fisheries.noaa.gov/data-tools/fisheries-economics-united-states-interactive-tool.]
[4] The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates. [Available at: https://www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf.]

Commercial Revenue: Largest Increases

From 2009:
- Pacific hake (whiting) (247%, 199% in real terms)
- Shrimp (198%, 156% in real terms)
- Rockfish (174%, 136% in real terms)

From 2017:
- Shrimp (65%)
- Rockfish (24%)
- Crab (14%)

Commercial Revenue: Largest Decreases

From 2009:
- Squid (-32%, -41% in real terms)
- Sablefish (-27%, -37% in real terms)
- Albacore tuna (-10%, -22% in real terms)

From 2017:
- Squid (-43%)
- Albacore tuna (-28%)
- Sablefish (-26%)

Commercial Landings: Largest Increases

From 2009:
- Rockfish (638%)
- Pacific hake (whiting) (159%)
- Shrimp (56%)

From 2017:
- Shrimp (46%)
- Rockfish (45%)
- Other shellfish (14%)

Commercial Landings: Largest Decreases

From 2009:
- Squid (-61%)
- Albacore tuna (-44%)
- Salmon (-42%)

From 2017:
- Squid (-42%)
- Pacific hake (whiting) (-25%)
- Flatfish (-17%)

Landings

In 2018, commercial fisheries landings in the Pacific Region totaled 977 million pounds. This represents a 14% increase from 2009 and a 17% decrease from 2017. Pacific hake (whiting) contributed the highest landings volume in the region, accounting for 60% of total landing weight.

From 2009 to 2018, rockfish (638%), Pacific hake (whiting) (159%), and shrimp (56%) had the largest increases, while squid (-61%), albacore tuna (-44%), and salmon (-42%) had the largest decreases. From 2017 to 2018, shrimp (46%), rockfish (45%), and other shellfish (14%) had the largest increases, while squid (-42%), Pacific hake (whiting) (-25%), and flatfish (-17%) had the largest decreases.

Prices

In 2018, other shellfish ($22 per pound) received the highest ex-vessel price in the region. Landings of Pacific hake (whiting) ($0.08 per pound) had the lowest ex-vessel price. From 2009 to 2018, salmon (211%, 168% in real terms), flatfish (99%, 71% in real terms), and shrimp (91%, 65% in real terms) had the largest increases, while rockfish (-63%, -68% in real terms) and sablefish (-1%, -15% in real terms) had the largest decreases. From 2017 to 2018, salmon (23%), shrimp (13%), and flatfish (8%) had the largest increases, while albacore tuna (-23%), sablefish (-22%), and rockfish (-15%) had the largest decreases.

RECREATIONAL FISHERIES — PACIFIC REGION

In this report, recreational fishing refers to fishing for leisure rather than to sell fish (commercial fishing) or for subsistence. This recreational fisheries section reports on economic impacts and expenditures, angler participation, fishing trips, and catch of key species/species groups.[5]

[5] Pacific recreational catch and effort estimates are based on multiple data sources. See data sources section.

Key Pacific Region Recreational Species[6,7]

- Black rockfish
- Bocaccio
- Cabezon
- Canary rockfish
- Lingcod
- Mackerels
- Pacific halibut
- Salmon
- Surfperches
- Tunas

Economic Impacts and Expenditures

The economic contribution of recreational fishing activities in the Pacific Region is based on spending by recreational anglers.[8] Total annual trip expenditures are estimated at the state level by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore) and adjusting by the CPI (consumer price index) to the current year. Total annual durable expenditures are estimated by multiplying mean durable expenditures in each state by the estimated annual number of adult participants for each state and adjusting by the CPI (consumer price index) to the current year.[9]

Four different measures are commonly used to show how angler expenditures affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as recreational fishing. The category includes both the direct sales made by the angler and sales made between businesses and households resulting from that original sale by the angler. Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the purchases made by anglers. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in number of jobs. Note that these categories are not additive. NOAA Fisheries uses a regional impact modeling software, called IMPLAN, to estimate these four types of impacts.

The economic contributions for both trip and durable expenditures from recreational fishing in 2018 were estimated using IMPLAN version 3, with base year data from 2017. Models for each state and for the nation were created in IMPLAN using trip expenditures (based on 2016/2017 survey data on average trip expenditures and total 2018 trips) and for durable expenditures (based on 2014 survey data on average durable expenditures and 2018 participants).

The greatest employment impacts from expenditures on saltwater recreational fishing in the Pacific Region were generated in California (21,145 jobs), followed by Washington (5,450 jobs) and Oregon (2,903 jobs).The largest sales impacts were observed in California ($2.8 billion), followed by Washington ($691.8 million) and Oregon ($306.3 million). The biggest income impacts were generated in California ($961.4 million), followed by Washington ($268.1 million) and Oregon ($133.6 million). The greatest value-added impacts were in California ($1.5 billion), followed by Washington ($443.8 million) and Oregon ($202.2 million).

Expenditures for fishing trips and durable equipment across the Pacific Region in 2018 totaled $2.6 billion. This total included $2 billion in durable goods expenditures, with the largest portion coming from boat expenses ($964.5 million).

Participation

In 2018, there were 1.2 million recreational anglers who fished in the Pacific Region. This number represented a 25% decrease from 2009 and a 12% decrease from 2017. The anglers are categorized as either residents from coastal (71%) or non-coastal (29%) counties.

Fishing Trips

In 2018, recreational fishermen took 4.2 million fishing trips in the Pacific Region. Oregon and Washington trip estimates are not available for the shore mode. This

[6] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[7] Mackerels: bullet mackerel, chub mackerel, frigate mackerel, mackerel family, and Pacific (chub) mackerel. Salmon: Chinook salmon, chum salmon, coho salmon, pink salmon, and sockeye salmon. Surfperches: barred surfperch, black perch, calico surfperch, dwarf perch, kelp perch, pile perch, pink seaperch, rainbow seaperch, redtail surfperch, rubberlip seaperch, sharpnose seaperch, shiner perch, silver surfperch, spotfin surfperch, striped seaperch, surfperch family, walleye surfperch, and white seaperch.
[8] Trip expenditure estimates were generated from the 2016/2017 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2020). Durable goods expenditures were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2016). [For citations: Publications-Recreational Fisheries Economics Research.]
[9] Summary data is available online in the FEUS webtool. [Available at: https://www.fisheries.noaa.gov/data-tools/fisheries-economics-united-states-interactive-tool.]

number represented a 29% decrease from 2009 and a 13% decrease from 2017. The largest proportions of trips were taken in the shore mode (54%) and private boat (27%). States with the highest number of recorded trips in the Pacific Region were California (3.4 million trips) and Washington (558,129 trips).

Harvest and Release Trends[10,11]

Of the Pacific Region's key species and species groups, mackerels (1.8 million fish), black rockfish (687,254 fish), and lingcod (352,224 fish), were most frequently caught by recreational fishermen. The text box below shows the species with the largest percentage increases and decreases in the past 10 years and in the past year.

From 2009 to 2018, bocaccio (234%) and canary rockfish (160%) had the largest increases, while surfperches (-84%), salmon (-66%), and Pacific halibut (-23%) had the largest decreases. From 2017 to 2018, bocaccio (14%) and tunas (12%) had the largest increases, while surfperches (-89%), canary rockfish (-23%), and cabezon (-14%) had the largest decreases.

Harvest and Release: Largest Increases

From 2009:
- Bocaccio (234%)
- Canary rockfish (160%)

From 2017:
- Bocaccio (14%)
- Tunas (12%)

Harvest and Release: Largest Decreases

From 2009:
- Surfperches (-84%)
- Salmon (-66%)
- Pacific halibut (-23%)

From 2017:
- Surfperches (-89%)
- Canary rockfish (-23%)
- Cabezon (-14%)

MARINE ECONOMY — PACIFIC REGION

For this report, the marine economy refers to the fishing and marine-related industries in a coastal state. The state marine economy consists of two industry sectors: 1) seafood sales and processing (employer establishments and non-employer firms); and 2) transportation support and marine operations (employer establishments). These sectors include several different marine-related industries.[12]

To measure the size of the commercial fishing sector in a state's economy relative to the size of the commercial fishing sector in the national economy, researchers use an index called the Commercial Fishing Location Quo-

[10] In the California tables, the following species are included in the species groups (if not listed, species groups are the same as for the entire Pacific Region as listed above): Barracuda, bass and bonito include grouper genus (epinephelus), sandbass genus, kelp bass, spotted sandbass, barred sandbass, giant seabass, Pacific barracuda, and threadfin bass. California and other scorpionfish include scorpionfish family and California scorpionfish. California halibut and other flatfishes include flatfish order, unidentified flounder or sole, lefteye flounder family, sanddab genus, whiff genus, Pacific sanddab, speckled sanddab, longfin sanddab, California halibut, bigmouth sole, fantail sole, righteye flounder family, arrowtooth flounder, deepsea sole, petrale sole, flathead sole, butter sole, rock sole, dover sole, english sole, starry flounder, c-o sole, curlfin sole, spotted turbot, sand sole, Pacific halibut, and diamond turbot. Rockfishes include scorpionfish family, rockfish genus, rockfish species, Pacific ocean perch, brown rockfish, redbanded rockfish, silvergray rockfish, copper rockfish, darkblotched rockfish, greenstriped rockfish, widow rockfish, yellowtail rockfish, chilipepper, rosethorn rockfish, quillback rockfish, black rockfish, vermilion rockfish, blue rockfish, china rockfish, tiger rockfish, bocaccio, canary rockfish, redstripe rockfish, yellowmouth rockfish, rosy rockfish, yelloweye rockfish, stripetail rockfish, black and yellow rockfish, kelp rockfish, greenspotted rockfish, starry rockfish, calico rockfish, bronzespotted rockfish, squarespot rockfish, cowcod, mexican rockfish, speckled rockfish, grass rockfish, flag rockfish, bank rockfish, halfbanded rockfish, olive rockfish, treefish, honeycomb rockfish, gopher rockfish, swordspine rockfish, freckled rockfish, pinkrose rockfish, greenblotched rockfish, shortspine thornyhead, deacon rockfish, and deacon/blue rockfish unknown.

[11] In the Oregon and Washington tables, the following species are included in the species groups: Greenlings (excluding lingcod) include greenling family, greenling genus, kelp greenling, rock greenling, longspine combfish, shortspine combfish, and painted greenling. Other flatfishes include flatfish order, unidentified flounder or sole, lefteye flounder family, sanddab genus, whiff genus, Pacific sanddab, speckled sanddab, longfin sanddab, California halibut, bigmouth sole, fantail sole, righteye flounder family, arrowtooth flounder, deepsea sole, petrale sole, flathead sole, butter sole, rock sole, dover sole, english sole, starry flounder, c-o sole, curlfin sole, spotted turbot, sand sole, and diamond turbot. Other rockfish include scorpionfish family, rockfish genus, rockfish species, Pacific ocean perch, brown rockfish, redbanded rockfish, silvergray rockfish, copper rockfish, darkblotched rockfish, greenstriped rockfish, widow rockfish, yellowtail rockfish, chilipepper, rosethorn rockfish, quillback rockfish, vermilion rockfish, blue rockfish, china rockfish, tiger rockfish, bocaccio, canary rockfish, redstripe rockfish, yellowmouth rockfish, rosy rockfish, yelloweye rockfish, stripetail rockfish, black and yellow rockfish, kelp rockfish, greenspotted rockfish, starry rockfish, calico rockfish, bronzespotted rockfish, squarespot rockfish, cowcod, mexican rockfish, speckled rockfish, grass rockfish, flag rockfish, bank rockfish, halfbanded rockfish, olive rockfish, treefish, honeycomb rockfish, gopher rockfish, swordspine rockfish, freckled rockfish, pinkrose rockfish, greenblotched rockfish, shortspine thornyhead, deacon rockfish, and deacon/blue rockfish unknown.

[12] Unless otherwise stated, data are from the U.S. Census Bureau (https://www.census.gov).

tient (CFLQ).[13] The CFLQ is calculated as the ratio of the percentage of regional employment in the commercial fishing sector relative to the percentage of national employment in the commercial fishing sector. The U.S. CFLQ is 1. If a state CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average.

The Bureau of Labor Statistics suppressed the CFLQ value for Oregon and Washington for 2017. Of the remaining states, California had a CFLQ value of 0.56.

In 2017, 1.2 million employer establishments operated throughout the entire Pacific Region (including marine and non-marine related establishments). These establishments employed 19.3 million workers and had a total annual payroll of $1.2 trillion. The combined gross state product of California, Oregon, and Washington was approximately $3.6 trillion in 2017.[14]

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2017, the Pacific Region had 262 non-employer firms in the seafood product preparation and packaging sector (a 19% increase from 2009). Annual receipts for these firms totaled $17.4 million. There were 130 employer firms in this sector (a 15% decrease from 2009). These establishments employed 7,949 workers (a 1% increase from 2009) and had a total annual payroll of $460.3 million. The greatest number of combined employer and non-employer establishments in this sector was in California (241), followed by Washington (121), and Oregon (30).

Seafood Sales, Retail: In 2017, there were 277 non-employer firms in seafood retail sales in the Pacific Region (an 8% increase from 2009). Annual receipts for these firms totaled $21.5 million. There were 208 employer firms in the seafood retail sector (a 5% decrease from 2009). These establishments employed 1,358 workers (a 1% decrease from 2009) and had a total annual payroll of $37.6 million. The greatest number of employer and non-employer establishments in this sector was in California (383), followed by Washington (69), and Oregon (33).

Seafood Sales, Wholesale: There were 449 employer firms in the seafood wholesale sector in the Pacific Region in 2017 (an 8% increase from 2009). These establishments employed 5,707 workers and had a total annual payroll of $290 million.[15] The greatest number of employer and non-employer establishments in this sector was in California (320), followed by Washington (109) and Oregon (20).

Transportation Support and Marine Operations

Data for the transportation support and marine operations sectors of the Pacific Region's economy were largely suppressed for confidentiality reasons. It is clear, however, that these sectors play an important role in the regional economy. For example, in 2017, the ship and boat building sector in the Pacific Region accounted for $936.5 million in payroll.

[13] U.S. Bureau of Labor Statistics, 'Location Quotient Calculator.' [For more information: https://www.bls.gov/cew/about-data/location-quotients-explained.htm.]
[14] U.S. Bureau of Economic Analysis. Gross Domestic Product by State, Fourth Quarter and Annual 2017. [Available at https://apps.bea.gov/regional/histdata/releases/0518gdpstate/.]
[15] The Census Bureau suppressed number of employees and payroll data for this sector in one or more states in this region in either 2017 or 2009, and thus cannot be compared.

Tables | Pacific Region

2018 Economic Impacts of the Pacific Seafood Industry (jobs, millions of dollars)[1]

		With Imports				Without Imports			
	Landings Revenue	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
California	183	146,728	29,081	6,136	10,260	8,856	771	287	396
Oregon	172	16,411	1,336	457	645	14,257	872	362	485
Washington	249	55,280	8,333	2,153	3,317	16,614	1,284	526	716

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	423,509	496,799	640,192	607,337	734,271	679,723	487,695	632,150	645,498	635,622
Finfish	153,228	186,194	245,212	231,232	262,507	248,508	183,074	207,335	232,890	203,315
Shellfish	257,386	296,901	375,766	355,920	450,986	413,133	287,101	408,698	396,559	417,664
Other	12,894	13,704	19,213	20,186	20,778	18,082	17,521	16,116	16,050	14,642
Key Species										
Albacore tuna	27,616	28,778	43,347	45,851	41,930	32,792	29,374	37,657	34,812	24,929
Crab	123,740	134,211	182,318	177,866	250,431	199,104	105,290	230,185	209,323	238,516
Flatfish	18,365	14,955	16,921	17,438	20,782	19,422	20,626	22,600	24,464	21,862
Other shellfish	60,209	71,229	86,643	74,060	84,630	80,289	70,065	90,166	88,841	91,185
Pacific hake (whiting)	13,925	25,454	56,739	48,635	64,877	64,111	25,206	46,843	60,438	48,307
Rockfish	4,630	4,585	5,230	5,714	5,552	5,950	7,058	5,647	10,247	12,682
Sablefish	34,371	35,879	44,851	28,334	19,423	24,489	28,680	31,632	34,011	25,164
Salmon	25,436	50,421	53,573	47,865	76,760	70,590	47,226	40,135	42,307	45,722
Shrimp	16,511	20,293	40,285	40,073	42,193	60,825	87,280	48,083	29,691	49,122
Squid	56,926	71,169	66,520	63,922	73,732	72,915	24,466	40,264	68,704	38,841

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	859,630	1,006,120	1,156,386	1,070,785	1,254,660	1,204,470	746,241	933,213	1,178,478	976,724
Finfish	540,206	592,264	732,979	712,911	839,561	806,851	518,398	710,747	930,293	763,131
Shellfish	302,012	396,658	404,903	338,453	393,021	379,030	212,794	210,592	237,924	204,689
Other	17,413	17,198	18,503	19,422	22,078	18,589	15,049	11,873	10,261	8,904
Key Species										
Albacore tuna	27,163	25,520	24,358	30,722	28,511	27,315	24,899	23,009	16,452	15,323
Crab	59,157	62,228	66,682	53,280	87,594	52,177	22,795	66,568	60,717	67,923
Flatfish	42,501	35,066	27,395	26,882	30,538	25,692	26,435	28,581	30,711	25,426
Other shellfish	3,635	3,316	3,462	3,126	3,451	3,748	3,554	3,967	3,637	4,145
Pacific hake (whiting)	226,167	308,885	508,267	352,393	514,495	581,576	339,488	577,353	778,901	586,773
Rockfish	4,977	5,561	5,957	6,813	6,511	7,247	9,044	7,617	25,309	36,748
Sablefish	15,882	15,080	14,169	11,696	9,147	9,792	11,420	11,971	12,442	11,787
Salmon	34,394	32,228	42,223	24,709	57,208	37,034	25,980	18,902	22,597	19,868
Shrimp	33,560	42,311	66,739	66,406	71,451	93,380	105,088	55,257	35,776	52,269
Squid	205,659	288,803	268,020	215,641	230,525	229,724	81,358	84,800	137,793	80,352

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Albacore tuna	1.02	1.13	1.78	1.49	1.47	1.20	1.18	1.64	2.12	1.63
Crab	2.09	2.16	2.73	3.34	2.86	3.82	4.62	3.46	3.45	3.51
Flatfish	0.43	0.43	0.62	0.65	0.68	0.76	0.78	0.79	0.80	0.86
Other shellfish	16.56	21.48	25.03	23.69	24.52	21.42	19.72	22.73	24.42	22.00
Pacific hake (whiting)	0.06	0.08	0.11	0.14	0.13	0.11	0.07	0.08	0.08	0.08
Rockfish	0.93	0.82	0.88	0.84	0.85	0.82	0.78	0.74	0.40	0.35
Sablefish	2.16	2.38	3.17	2.42	2.12	2.50	2.51	2.64	2.73	2.13
Salmon	0.74	1.56	1.27	1.94	1.34	1.91	1.82	2.12	1.87	2.30
Shrimp	0.49	0.48	0.60	0.60	0.59	0.65	0.83	0.87	0.83	0.94
Squid	0.28	0.25	0.25	0.30	0.32	0.32	0.30	0.47	0.50	0.48

[1] The Pacific Region includes landings by Pacific at-sea processors. However, revenue from these landings are not included in the state tables.

2018 Economic Impacts of the Pacific Recreational Fishing Expenditures (thousands of dollars, trips)

	Trips	#Jobs	Sales	Income	Value Added
California	3,405	21,145	2,781,129	961,391	1,543,312
Oregon	210	2,903	306,275	133,623	202,226
Washington	558	5,450	691,840	268,102	443,804

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	275,409
Private Boat	229,362
Shore	178,560
Total	683,331

Equipment	Durable Goods Expenditures
Fishing Tackle	472,540
Other Equipment	238,675
Boat Expenses	964,476
Vehicle Expenses	271,552
Second Home Expenses	4,652
Total Durable Expenditures	1,951,896

Total State Trip and Durable Goods Expenditures	2,635,227

Recreational Anglers by Residential Area (thousands of anglers)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	1,203	1,297	1,193	1,056	1,382	1,307	1,236	849	966	827
Non-Coastal	336	371	382	346	384	429	426	332	350	330
Total Anglers	1,539	1,668	1,575	1,402	1,766	1,736	1,662	1,181	1,316	1,157

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	436	451	675	683	747	1,079	874	753	779	774
Private	1,848	1,460	1,566	1,705	1,803	1,724	1,609	1,075	1,672	1,135
Shore	3,599	3,024	3,045	4,227	4,113	3,606	2,385	2,377	2,373	2,264
Total Trips	5,883	4,936	5,286	6,615	6,663	6,409	4,869	4,205	4,824	4,173

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Black rockfish	H	702	658	597	721	1,039	1,005	972	893	697	578
	R	85	75	66	65	114	115	132	105	142	110
Bocaccio	H	47	63	166	211	188	188	137	82	141	159
	R	< 1	1	< 1	2	13	7	1	2	< 1	2
Cabezon	H	28	26	32	33	28	33	35	34	28	21
	R	17	18	22	33	33	23	19	20	22	22
Canary rockfish	H	35	32	52	50	44	57	68	58	144	121
	R	18	22	32	36	56	59	87	68	36	18
Lingcod	H	79	86	157	194	256	290	354	330	288	243
	R	84	114	183	201	187	182	176	191	130	110
Mackerels	H	1,357	1,177	1,111	836	583	1,018	1,685	1,008	1,420	1,189
	R	664	581	532	409	333	728	533	592	773	636
Pacific halibut	H	23	18	19	21	23	23	20	21	22	21
	R	10	4	4	5	5	5	5	5	4	4
Salmon	H	503	212	248	328	368	657	360	135	239	180
	R	323	110	151	119	150	194	115	50	77	101
Surfperches	H	537	470	824	1,027	809	993	1,226	821	875	89
	R	510	223	714	984	819	1,002	912	521	702	80
Tunas	H	71	75	46	118	79	123	115	85	57	64
	R	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

[1] Oregon trip estimates are not available for the shore mode.
[2] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[3] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.

Tables | California

2018 Economic Impacts of the California Seafood Industry (millions of dollars)[1]

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	146,728	29,081	6,136	10,260	8,856	771	287	396
Commercial Harvesters	2,495	277	93	138	2,495	277	93	138
Seafood Processors & Dealers	4,689	564	209	278	1,078	130	48	64
Importers	69,144	22,377	3,586	6,821	0	0	0	0
Seafood Wholesalers & Distributors	13,486	2,237	725	1,014	353	59	19	27
Retail	56,914	3,627	1,521	2,010	4,931	305	127	168

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)[2]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	150,396	174,436	200,391	232,169	256,776	235,366	129,357	198,465	197,201	182,658
Finfish	37,176	35,812	46,312	46,111	53,942	49,892	44,645	39,789	46,866	45,648
Shellfish	102,981	129,293	141,824	174,224	189,642	173,345	74,838	149,211	141,327	128,842
Other	10,239	9,331	12,255	11,835	13,191	12,129	9,874	9,465	9,008	8,167
Key Species										
Crab	32,370	42,864	53,638	88,095	92,705	70,448	20,324	85,286	49,209	66,108
Pacific sardine	5,472	4,306	4,623	4,321	1,502	2,003	343	96	61	77
Rockfish	2,733	2,560	2,624	2,541	2,688	2,718	3,173	2,426	3,267	3,659
Sablefish	9,765	11,491	15,122	8,990	7,064	9,425	8,909	8,791	9,303	6,715
Salmon	NA	1,215	5,095	12,887	22,947	12,126	8,115	5,213	4,792	7,678
Sea urchins	7,805	7,397	8,206	9,008	10,771	9,698	7,325	7,283	6,436	5,724
Shrimp	5,509	3,666	8,537	8,338	9,377	11,752	14,048	10,808	9,790	12,409
Spiny lobster	7,890	11,333	12,911	13,698	13,629	17,982	15,740	13,594	13,177	14,143
Squid	56,877	71,163	66,519	63,920	73,730	72,903	24,453	39,122	68,703	35,768
Swordfish	1,952	2,203	3,319	2,090	2,701	3,067	3,641	3,763	3,948	3,282

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	374,709	434,890	405,088	354,507	365,624	361,296	187,025	167,282	212,468	179,005
Finfish	133,722	108,776	92,619	89,293	75,837	85,597	79,619	43,896	48,061	71,875
Shellfish	226,468	313,333	299,233	251,245	274,084	261,393	97,006	115,518	157,945	101,629
Other	14,519	12,780	13,236	13,969	15,704	14,306	10,401	7,867	6,461	5,502
Key Species										
Crab	16,579	23,262	22,157	27,548	33,441	20,837	5,361	28,013	14,176	20,293
Pacific sardine	82,843	74,228	61,098	50,803	15,594	17,133	3,751	954	953	720
Rockfish	1,748	1,750	1,478	1,472	1,547	1,421	1,408	946	2,166	3,054
Sablefish	5,096	5,508	5,657	3,928	3,311	4,132	4,068	3,853	3,930	3,271
Salmon	NA	261	1,139	2,892	4,353	2,577	1,359	707	571	1,065
Sea urchins	12,205	11,229	11,573	12,124	13,967	12,507	8,496	5,889	4,204	3,245
Shrimp	3,606	623	8,223	7,208	9,527	9,920	9,524	4,818	5,210	7,082
Spiny lobster	706	715	752	877	756	943	768	666	700	872
Squid	205,281	288,486	267,895	215,470	230,189	229,485	81,144	81,773	137,594	73,145
Swordfish	912	816	1,344	888	1,175	1,265	1,376	1,387	1,511	1,357

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Crab	1.95	1.84	2.42	3.20	2.77	3.38	3.79	3.04	3.47	3.26
Pacific sardine	0.07	0.06	0.08	0.09	0.10	0.12	0.09	0.10	0.06	0.11
Rockfish	1.56	1.46	1.77	1.73	1.74	1.91	2.25	2.56	1.51	1.20
Sablefish	1.92	2.09	2.67	2.29	2.13	2.28	2.19	2.28	2.37	2.05
Salmon	NA	4.66	4.47	4.46	5.27	4.71	5.97	7.37	8.39	7.21
Sea urchins	0.64	0.66	0.71	0.74	0.77	0.78	0.86	1.24	1.53	1.76
Shrimp	1.53	5.89	1.04	1.16	0.98	1.18	1.48	2.24	1.88	1.75
Spiny lobster	11.18	15.84	17.17	15.62	18.02	19.06	20.49	20.40	18.84	16.22
Squid	0.28	0.25	0.25	0.30	0.32	0.32	0.30	0.48	0.50	0.49
Swordfish	2.14	2.70	2.47	2.35	2.30	2.43	2.65	2.71	2.61	2.42

[1] The Pacific Region includes landings by Pacific at-sea processors. However, revenue from these landings are not included in the state tables.
[2] 'NA' = these data are confidential and therefore not disclosable.

2018 Economic Impacts of California Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	5,470	713,718	144,853	231,733
	Private Boat	835	134,154	44,300	84,206
	Shore	2,053	280,042	100,148	180,923
Total Durable Expenditures		12,787	1,653,216	672,090	1,046,450
Total State Economic Impacts		21,145	2,781,129	961,391	1,543,312

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	218,637
Private Boat	89,333
Shore	178,560
Total	486,530

Equipment	Durable Goods Expenditures
Fishing Tackle	353,953
Other Equipment	176,100
Boat Expenses	552,122
Vehicle Expenses	174,068
Second Home Expenses	0
Total Durable Expenditures	1,256,243

Total State Trip and Durable Goods Expenditures	1,742,773

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	812	992	863	722	1,024	964	893	591	576	551
Non-Coastal	177	220	230	190	222	264	263	182	189	174
Out-of-State	206	221	183	215	87	94	121	96	77	84
Total Anglers	1,195	1,433	1,276	1,127	1,333	1,322	1,277	869	842	809

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	308	334	554	557	613	929	727	632	636	644
Private	681	690	683	800	786	785	676	522	533	497
Shore	3,599	3,024	3,045	4,227	4,113	3,606	2,385	2,377	2,373	2,264
Total Trips	4,588	4,048	4,282	5,585	5,512	5,320	3,787	3,531	3,542	3,405

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1,2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Barracuda, bass and bonito[4]	H	333	311	423	353	143	218	185	173	156	166
	R	1,209	972	744	789	1,166	1,614	1,172	1,623	1,464	1,199
Bluefin tuna[5]	H	3	< 1	3	6	6	18	28	11	12	11
	R	< 1	< 1	0	< 1	< 1	< 1	< 1	< 1	< 1	< 1
California and other scorpionfish	H	134	133	198	256	241	268	171	150	181	230
	R	119	147	166	217	260	247	190	191	279	359
California halibut and other flatfishes	H	300	351	541	490	640	921	333	289	295	304
	R	199	231	175	248	404	294	193	149	293	210
Lingcod	H	39	32	85	108	153	201	256	234	178	131
	R	58	73	129	156	145	155	138	148	99	77
Mackerels	H	1,357	1,177	1,111	835	582	1,017	1,684	1,008	1,419	1,188
	R	664	581	532	409	332	728	533	592	773	636
Rockfishes[4]	H	1,535	1,505	2,181	2,615	3,004	3,072	2,829	2,520	2,688	2,567
	R	201	236	340	366	547	492	484	440	481	437
Salmon[6]	H	< 1	15	50	124	116	75	38	38	62	101
	R	0	0	0	0	0	0	0	0	0	0
Surfperches	H	537	470	823	1,027	809	992	1,226	817	871	89
	R	510	223	714	984	819	1,002	912	520	700	80
Yellowfin tuna	H	7	1	1	6	4	108	156	28	15	20
	R	< 1	< 1	< 1	< 1	< 1	< 1	4	< 1	< 1	< 1

[1] Pacific recreational catch and effort estimates are based on multiple data sources. See data sources section.
[2] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[3] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.
[4] This species may not be equivalent to species with similar names listed in the commercial tables.
[5] This table has been revised from an earlier version of this report. Recreational harvest and release data have been updated for bluefin tuna in California.
[6] Salmon harvest estimates exclude release mortality.

2017 California State Economy (% of national total)

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[1]
3,374,050 (13.1%)	941,377 (12%)	14,896,625 (11.6%)	955 (14.2%)	1,442 (14%)	2,802	0.56

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	159	184	187	151	157	164	169	174	202
	Receipts	10,852	9,695	9,788	9,283	9,866	11,112	12,978	14,725	13,419
Seafood sales, retail	Firms	202	203	209	236	218	227	221	228	230
	Receipts	17,095	19,021	18,006	18,238	18,581	17,055	17,896	19,375	18,015

Seafood Sales and Processing — Employer Establishments (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	47	48	48	41	44	53	48	41	39
	Employees	2,167	1,820	1,842	1,668	1,871	1,799	1,661	1,549	1,596
	Payroll	69,529	62,480	60,411	52,977	57,603	60,762	59,829	64,374	61,611
Seafood sales, wholesale	Establishments	289	314	404	275	320	341	349	371	320
	Employees	3,183	3,223	3,505	3,441	3,671	3,912	4,170	4,250	4,573
	Payroll	128,813	137,810	149,302	173,959	181,698	175,927	201,903	212,079	224,800
Seafood sales, retail	Establishments	153	158	157	149	155	167	170	171	153
	Employees	976	985	1,088	1,043	1,119	1,124	1,208	1,272	998
	Payroll	21,785	22,718	25,168	24,221	26,702	28,044	28,437	31,722	24,860

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	123	117	108	120	113	108	103	104	97
	Employees	10,483	9,720	9,165	12,681	12,651	9,814	11,379	11,236	10,806
	Payroll	460,239	448,338	434,449	544,819	537,438	534,787	583,717	548,198	551,754
Deep Sea Freight Transportation	Establishments	41	54	51	45	34	43	56	45	38
	Employees	ds	2,562	2,464	2,431	2,073	2,467	2,554	2,399	1,862
	Payroll	ds	236,235	256,962	236,423	218,054	187,383	235,546	230,946	186,036
Deep Sea Passenger Transportation	Establishments	5	3	2	2	4	5	6	7	8
	Employees	ds	ds	ds	ds	ds	ds	ds	0	0
	Payroll	ds	ds	ds	ds	ds	ds	ds	0	0
Coastal and Great Lakes Freight Transportation	Establishments	30	25	21	22	24	30	34	32	35
	Employees	ds	554	395	ds	ds	ds	851	759	620
	Payroll	ds	30,431	24,708	ds	ds	ds	70,978	62,151	55,847
Port and Harbor Operations	Establishments	19	21	19	59	31	33	30	30	19
	Employees	345	435	508	ds	651	535	570	742	574
	Payroll	26,889	37,560	41,688	ds	52,401	33,599	40,887	46,859	37,533
Marine Cargo Handling	Establishments	62	63	71	38	64	64	67	70	61
	Employees	17,428	18,449	18,812	18,759	ds	ds	18,859	20,694	20,829
	Payroll	1,211,572	1,273,268	1,333,805	1,351,874	ds	ds	1,761,284	1,898,249	2,047,600
Navigational Services to Shipping	Establishments	39	41	45	35	36	37	38	37	43
	Employees	804	765	760	800	805	634	587	1,221	714
	Payroll	61,720	58,899	62,065	61,166	67,665	59,927	60,228	68,514	73,082
Marinas	Establishments	276	270	269	251	250	249	258	243	227
	Employees	2,514	2,390	2,401	2,237	2,199	2,332	2,439	2,432	2,387
	Payroll	78,890	80,631	82,958	71,777	72,737	79,840	84,427	86,510	91,703

[1] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[2] ds = Data are suppressed.

Tables | Oregon

2018 Economic Impacts of the Oregon Seafood Industry (millions of dollars)[1]

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	16,411	1,336	457	645	14,257	872	362	485
Commercial Harvesters	5,061	317	133	186	5,061	317	133	186
Seafood Processors & Dealers	1,902	190	73	95	1,501	150	57	75
Importers	1,150	372	60	113	0	0	0	0
Seafood Wholesalers & Distributors	644	90	31	41	420	59	20	27
Retail	7,655	367	161	209	7,275	347	152	197

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	101,866	102,396	146,176	126,113	176,758	155,783	113,697	146,953	143,528	171,620
Finfish	51,879	57,310	75,076	70,833	78,764	76,415	59,072	62,771	69,794	64,683
Shellfish	49,569	44,015	69,467	54,116	95,684	77,853	53,103	82,882	72,161	105,468
Other	417	1,071	1,633	1,164	2,309	1,514	1,523	1,300	1,573	1,470
Key Species										
Albacore tuna	10,254	12,424	18,766	15,168	16,085	11,023	9,221	12,478	10,777	9,716
Crab	42,408	32,748	44,690	29,172	71,208	48,147	12,107	55,731	58,723	74,522
Flatfish	9,001	7,425	7,920	8,276	10,837	9,788	11,039	12,209	11,702	10,475
Pacific hake (whiting)	3,783	5,414	16,518	14,611	20,405	18,274	7,146	8,694	16,385	16,435
Pacific sardine	5,291	5,252	3,192	8,979	6,299	3,522	813	0	0	3
Rockfish	1,082	1,113	1,694	1,819	2,052	2,518	3,035	2,679	6,338	7,757
Sablefish	15,894	15,069	17,351	11,530	7,595	8,076	12,767	15,062	15,547	11,916
Salmon	3,535	7,677	6,726	6,943	12,417	20,075	11,842	8,265	5,531	5,675
Shrimp	6,865	11,006	24,607	24,749	24,153	29,367	40,413	25,093	12,745	26,909
Sole	7,692	6,289	6,314	6,808	9,329	8,252	9,396	10,539	10,192	9,236

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	209,785	215,868	285,574	306,177	348,514	299,715	202,383	214,590	301,695	312,535
Finfish	164,677	166,339	217,217	246,516	271,839	233,631	144,203	158,453	257,440	244,380
Shellfish	44,329	47,733	65,748	58,050	73,925	64,239	56,345	54,639	42,621	66,689
Other	780	1,796	2,609	1,611	2,749	1,845	1,834	1,499	1,635	1,466
Key Species										
Albacore tuna	10,138	10,702	9,682	9,938	10,209	8,769	7,585	7,235	4,732	5,809
Crab	21,856	15,869	17,260	8,691	26,034	11,918	2,294	15,714	19,015	23,135
Flatfish	26,893	23,003	16,691	16,029	19,708	16,731	17,622	19,851	19,319	16,238
Pacific hake (whiting)	62,956	69,530	151,464	107,652	167,499	168,226	94,907	113,035	201,499	185,554
Pacific sardine	47,357	45,971	24,302	94,062	57,956	17,171	4,699	9	3	21
Rockfish	1,227	1,485	2,395	2,531	3,096	4,199	5,643	4,969	18,596	25,550
Sablefish	7,279	6,301	5,081	4,745	3,844	3,297	5,001	5,526	5,556	5,678
Salmon	2,286	2,748	2,410	1,922	3,503	6,379	3,142	1,821	1,185	957
Shrimp	22,159	31,528	48,314	49,150	47,629	52,010	53,516	35,528	23,061	35,872
Sole	20,021	17,548	12,548	12,290	15,641	13,752	14,578	17,272	16,869	14,731

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Albacore tuna	1.01	1.16	1.94	1.53	1.58	1.26	1.22	1.72	2.28	1.67
Crab	1.94	2.06	2.59	3.36	2.74	4.04	5.28	3.55	3.09	3.22
Flatfish	0.33	0.32	0.47	0.52	0.55	0.59	0.63	0.62	0.61	0.65
Pacific hake (whiting)	0.06	0.08	0.11	0.14	0.12	0.11	0.08	0.08	0.08	0.09
Pacific sardine	0.11	0.11	0.13	0.10	0.11	0.21	0.17	0.04	0.09	0.15
Rockfish	0.88	0.75	0.71	0.72	0.66	0.60	0.54	0.54	0.34	0.30
Sablefish	2.18	2.39	3.42	2.43	1.98	2.45	2.55	2.73	2.80	2.10
Salmon	1.55	2.79	2.79	3.61	3.54	3.15	3.77	4.54	4.67	5.93
Shrimp	0.31	0.35	0.51	0.50	0.51	0.56	0.76	0.71	0.55	0.75
Sole	0.38	0.36	0.50	0.55	0.60	0.60	0.64	0.61	0.60	0.63

[1] The Pacific Region includes landings by Pacific at-sea processors. However, revenue from these landings are not included in the state tables.

2018 Economic Impacts of Oregon Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	408	38,938	13,691	23,062
	Private Boat	265	27,748	11,430	17,638
	Shore	NA	NA	NA	NA
Total Durable Expenditures		2,229	239,588	108,502	161,526
Total State Economic Impacts		2,903	306,275	133,623	202,226

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	25,291
Private Boat	24,472
Shore	NA
Total	49,762

Equipment	Durable Goods Expenditures
Fishing Tackle	54,164
Other Equipment	30,201
Boat Expenses	88,122
Vehicle Expenses	68,341
Second Home Expenses	4,652
Total Durable Expenditures	245,480

Total State Trip and Durable Goods Expenditures	295,242

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	85	83	82	86	90	92	90	86	87	90
Non-Coastal	129	126	125	129	134	137	135	129	130	134
Out-of-State	15	15	15	15	16	16	16	15	15	16
Total Anglers	229	224	222	230	240	245	241	230	232	240

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	49	45	45	51	58	61	65	57	59	64
Private	136	119	113	135	157	173	150	122	127	146
Shore	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Trips	184	164	159	187	214	235	214	179	187	210

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1,2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Albacore tuna	H	42	38	29	63	22	48	35	37	16	26
	R	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Black rockfish	H	261	268	182	194	285	318	421	387	393	260
	R	22	23	15	13	19	21	36	27	53	33
Cabezon	H	7	7	6	5	4	3	3	4	8	5
	R	2	4	4	5	6	4	4	4	6	12
Chinook salmon	H	3	10	10	38	60	37	19	8	9	5
	R	6	2	9	8	9	5	2	1	2	6
Coho salmon	H	90	18	19	16	15	100	28	8	21	26
	R	121	22	22	17	23	69	27	6	20	42
Greenlings (excluding lingcod)	H	6	9	11	10	12	5	5	4	4	4
	R	2	4	4	4	4	2	3	1	1	2
Lingcod	H	23	29	36	49	69	53	64	49	63	70
	R	16	25	31	28	32	18	28	29	26	27
Other flatfishes	H	< 1	1	< 1	1	2	1	3	3	17	4
	R	< 1	< 1	< 1	< 1	1	< 1	2	2	2	1
Other rockfish	H	56	63	69	84	77	59	96	60	110	130
	R	15	21	19	20	23	22	38	25	36	27
Pacific halibut	H	13	9	10	11	13	11	11	11	12	11
	R	7	2	2	3	3	2	2	2	2	2

[1] Pacific recreational catch and effort estimates are based on multiple data sources. See data sources section.
[2] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[3] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.

2017 Oregon State Economy (% of national total)[1]

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
295,127 (1.1%)	117,357 (1.5%)	1,596,637 (1.2%)	79.1 (1.2%)	123 (1.2%)	241	ds

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)[1]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	15	15	16	14	11	11	12	14	12
	Receipts	466	510	467	346	319	484	1,088	1,776	699
Seafood sales, retail	Firms	12	15	16	11	ds	16	15	14	11
	Receipts	1,140	1,907	1,896	1,600	ds	1,036	841	1,379	1,317

Seafood Sales and Processing — Employer Establishments (thousands of dollars)[1]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	20	21	22	18	19	20	20	20	18
	Employees	812	806	805	934	907	980	916	989	1,149
	Payroll	26,202	27,007	32,438	31,970	37,265	39,290	41,181	42,832	45,695
Seafood sales, wholesale	Establishments	19	22	27	21	19	22	24	27	20
	Employees	ds	ds	ds	180	189	192	196	187	194
	Payroll	ds	ds	ds	7,602	8,065	8,601	9,121	9,892	10,118
Seafood sales, retail	Establishments	23	21	20	18	20	23	25	23	22
	Employees	151	162	163	126	147	170	181	174	147
	Payroll	3,515	3,651	3,613	2,851	4,238	4,440	4,951	5,239	4,420

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[1,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	35	34	34	33	32	30	29	26	27
	Employees	1,886	980	1,179	1,504	1,406	ds	1,506	1,278	1,153
	Payroll	90,446	42,004	55,068	77,718	79,913	ds	94,956	83,079	88,198
Deep Sea Freight Transportation	Establishments	3	3	3	3	3	2	3	2	NA
	Employees	ds	ds	ds	ds	ds	ds	ds	0	NA
	Payroll	ds	ds	ds	ds	ds	ds	ds	0	NA
Coastal and Great Lakes Freight Transportation	Establishments	9	8	8	8	7	8	8	12	11
	Employees	ds	ds	ds	ds	ds	ds	437	506	501
	Payroll	ds	ds	ds	ds	ds	ds	40,746	47,896	47,693
Port and Harbor Operations	Establishments	1	3	3	10	5	5	5	5	3
	Employees	ds	ds	ds	90	ds	ds	49	45	29
	Payroll	ds	ds	ds	6,512	ds	ds	3,437	2,686	2,061
Marine Cargo Handling	Establishments	13	12	13	5	8	7	7	6	10
	Employees	ds	ds	ds	ds	ds	ds	ds	0	0
	Payroll	ds	ds	ds	ds	ds	ds	ds	0	0
Navigational Services to Shipping	Establishments	17	18	18	20	15	15	15	17	17
	Employees	189	144	152	176	81	67	74	69	109
	Payroll	10,154	9,577	9,592	12,219	6,534	3,958	3,998	4,789	5,566
Marinas	Establishments	33	30	33	32	34	34	36	35	31
	Employees	109	102	102	119	104	113	119	137	137
	Payroll	2,602	2,290	2,382	3,034	3,148	3,584	3,643	3,550	4,235

[1] ds = Data are suppressed.
[2] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[3] NA = Not applicable.

Tables | Washington

2018 Economic Impacts of the Washington Seafood Industry (millions of dollars)[1]

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	55,280	8,333	2,153	3,317	16,614	1,284	526	716
Commercial Harvesters	5,066	495	207	295	5,066	495	207	295
Seafood Processors & Dealers	15,591	1,738	653	864	1,918	214	80	106
Importers	14,857	4,808	771	1,466	0	0	0	0
Seafood Wholesalers & Distributors	2,394	361	121	165	628	95	32	43
Retail	17,371	931	401	527	9,001	480	207	272

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)[2]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	161,303	200,341	260,593	220,915	263,739	248,169	229,146	253,241	268,768	249,471
Finfish	54,229	73,446	90,793	86,148	92,802	81,795	63,861	71,284	80,229	61,112
Shellfish	104,835	123,594	164,475	127,580	165,659	161,935	159,160	176,605	183,071	183,354
Other	2,238	3,301	5,325	7,187	5,278	4,439	6,125	5,351	5,468	5,005
Key Species										
Albacore tuna	16,390	14,575	22,253	28,464	24,745	21,177	19,961	24,716	23,494	14,749
Clams	412	443	327	263	580	560	115	NA	NA	474
Crab	48,962	58,599	83,991	60,599	86,517	80,509	72,858	89,168	101,391	97,886
Pacific hake (whiting)	NA	NA	7,190	5,882	7,473	5,431	2,563	4,659	8,052	NA
Pacific halibut	1,140	1,551	2,333	2,665	2,295	2,531	2,624	3,210	3,303	3,095
Rockfish	815	912	912	1,355	812	713	850	542	642	1,265
Sablefish	8,712	9,320	12,378	7,813	4,764	6,988	7,003	7,779	9,161	6,533
Salmon	21,901	41,530	41,753	28,035	41,396	38,388	27,270	26,657	31,984	32,368
Shrimp	4,137	5,622	7,140	6,986	8,664	19,706	32,820	12,182	7,156	9,805
Sole	1,378	846	1,290	1,471	1,753	976	1,037	1,227	1,496	1,572

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	115,546	120,761	183,593	203,497	252,692	178,977	144,281	167,619	214,402	80,848
Finfish	82,225	82,625	141,097	170,618	204,349	123,314	82,149	124,884	175,036	42,684
Shellfish	31,207	35,516	39,837	29,038	44,717	53,226	59,318	40,228	37,202	36,229
Other	2,113	2,621	2,659	3,842	3,625	2,437	2,814	2,508	2,164	1,936
Key Species										
Albacore tuna	16,149	13,181	13,259	19,353	17,588	18,088	17,196	15,515	11,453	9,176
Clams	252	270	187	135	249	282	69	NA	NA	192
Crab	20,723	23,098	27,264	17,041	28,120	19,423	15,140	22,841	27,527	24,495
Pacific hake (whiting)	NA	NA	76,017	38,656	59,918	49,655	32,977	82,078	131,038	NA
Pacific halibut	495	416	527	615	546	538	557	656	768	896
Rockfish	1,691	1,897	1,806	2,584	1,633	1,455	1,810	1,327	2,638	6,777
Sablefish	3,507	3,263	3,423	3,014	1,970	2,328	2,326	2,544	2,728	2,638
Salmon	32,107	29,220	38,673	19,895	49,352	28,078	21,479	16,374	20,841	17,847
Shrimp	7,795	10,160	10,202	10,048	14,295	31,450	42,048	14,911	7,505	9,314
Sole	3,370	2,375	2,164	2,384	2,643	1,399	1,458	1,863	2,295	2,066

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Albacore tuna	1.01	1.11	1.68	1.47	1.41	1.17	1.16	1.59	2.05	1.61
Clams	1.63	1.64	1.75	1.95	2.32	1.98	1.67	NA	NA	2.47
Crab	2.36	2.54	3.08	3.56	3.08	4.15	4.81	3.90	3.68	4.00
Pacific hake (whiting)	NA	NA	0.09	0.15	0.12	0.11	0.08	0.06	0.06	NA
Pacific halibut	2.30	3.73	4.43	4.34	4.20	4.70	4.71	4.90	4.30	3.46
Rockfish	0.48	0.48	0.51	0.52	0.50	0.49	0.47	0.41	0.24	0.19
Sablefish	2.48	2.86	3.62	2.59	2.42	3.00	3.01	3.06	3.36	2.48
Salmon	0.68	1.42	1.08	1.41	0.84	1.37	1.27	1.63	1.53	1.81
Shrimp	0.53	0.55	0.70	0.70	0.61	0.63	0.78	0.82	0.95	1.05
Sole	0.41	0.36	0.60	0.62	0.66	0.70	0.71	0.66	0.65	0.76

[1] The Pacific Region includes landings by Pacific at-sea processors. However, revenue from these landings are not included in the state tables.
[2] 'NA' = these data are confidential and therefore not disclosable.

2018 Economic Impacts of Washington Recreational Fishing Expenditures (thousands of dollars)[1]

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	478	50,675	17,471	30,175
	Private Boat	1,039	154,078	50,304	92,206
	Shore	NA	NA	NA	NA
Total Durable Expenditures		3,934	487,087	200,327	321,424
Total State Economic Impacts		5,450	691,840	268,102	443,804

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	31,481
Private Boat	115,558
Shore	NA
Total	147,039

Equipment	Durable Goods Expenditures
Fishing Tackle	64,423
Other Equipment	32,374
Boat Expenses	324,232
Vehicle Expenses	29,143
Second Home Expenses	0
Total Durable Expenditures	450,173

Total State Trip and Durable Goods Expenditures	597,212

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	306	222	248	248	268	251	253	172	303	186
Non-Coastal	30	25	27	27	28	28	28	21	31	22
Out-of-State	24	19	21	21	22	22	22	17	24	17
Total Anglers	360	266	296	296	318	301	303	210	358	225

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	79	72	76	74	76	88	83	64	83	65
Private	1,031	652	770	770	860	766	784	431	1,012	493
Shore	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Trips	1,110	724	846	844	936	854	867	495	1,095	558

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[2,3,4]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Albacore tuna	H	25	31	15	50	54	75	79	47	30	25
	R	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Black rockfish	H	166	161	177	226	238	259	288	298	194	216
	R	9	17	13	14	14	19	15	16	19	15
Cabezon	H	2	3	3	3	2	2	2	2	2	2
	R	< 1	< 1	< 1	< 1	< 1	1	< 1	< 1	1	1
Chinook salmon	H	26	75	62	71	64	87	88	37	46	13
	R	28	32	44	36	39	34	20	18	12	10
Coho salmon	H	152	39	41	32	47	136	80	19	43	36
	R	166	54	66	59	76	85	60	25	42	42
Greenlings (excluding lingcod)	H	2	4	3	3	4	3	2	3	2	2
	R	1	3	2	2	3	3	2	2	2	1
Lingcod	H	18	25	37	38	34	37	34	48	46	41
	R	10	17	24	18	11	9	10	13	5	6
Other flatfishes	H	< 1	< 1	< 1	1	2	3	3	8	5	6
	R	< 1	1	< 1	1	2	2	1	< 1	< 1	< 1
Other rockfish	H	32	47	52	28	30	39	34	46	53	41
	R	4	6	6	5	7	8	8	9	7	8
Pacific halibut	H	7	7	8	8	8	9	8	8	10	11
	R	3	2	2	2	2	3	3	3	2	2

[1] 'NA' = these data are confidential and therefore not disclosable.
[2] Pacific recreational catch and effort estimates are based on multiple data sources. See data sources section.
[3] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[4] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.

2017 Washington State Economy (% of national total)[1]

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
478,331 (1.9%)	191,045 (2.4%)	2,768,660 (2.2%)	170 (2.5%)	265 (2.6%)	517	ds

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	47	39	37	42	42	51	59	65	48
	Receipts	5,022	4,228	3,859	4,377	4,094	5,270	3,555	4,697	3,297
Seafood sales, retail	Firms	42	30	34	42	41	36	35	33	36
	Receipts	2,462	1,273	2,370	1,871	3,017	2,559	2,071	1,991	2,213

Seafood Sales and Processing — Employer Establishments (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	86	93	90	90	86	90	85	83	73
	Employees	4,860	5,296	5,387	6,118	6,224	5,945	5,753	5,254	5,204
	Payroll	232,543	254,592	293,112	326,827	315,379	329,739	325,389	350,599	352,999
Seafood sales, wholesale	Establishments	108	105	107	101	116	119	118	120	109
	Employees	1,103	970	911	1,085	999	1,098	1,077	1,142	940
	Payroll	48,044	45,871	45,543	51,508	49,683	52,761	54,339	60,854	55,073
Seafood sales, retail	Establishments	43	47	44	40	35	33	39	37	33
	Employees	239	282	253	256	266	276	279	296	213
	Payroll	8,324	9,098	7,786	8,210	9,069	9,938	10,865	11,059	8,342

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[1]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	162	152	135	141	138	131	143	129	135
	Employees	6,710	5,406	5,232	5,294	5,387	5,060	4,653	4,930	5,213
	Payroll	312,240	284,759	276,402	290,400	273,825	262,730	265,732	269,879	296,499
Deep Sea Freight Transportation	Establishments	25	20	14	12	8	8	8	5	6
	Employees	305	209	ds	ds	200	204	194	170	0
	Payroll	28,897	24,711	ds	14,014	14,892	14,991	13,981	13,822	0
Deep Sea Passenger Transportation	Establishments	5	4	2	2	5	4	6	4	4
	Employees	ds	ds	ds	ds	ds	1,412	1,277	1,151	919
	Payroll	ds	ds	ds	ds	ds	54,346	73,134	72,462	59,817
Coastal and Great Lakes Freight Transportation	Establishments	24	30	28	28	35	38	35	41	39
	Employees	2,245	1,731	1,684	1,557	2,186	2,020	1,879	1,956	1,533
	Payroll	168,783	130,398	132,068	126,401	170,003	163,075	162,635	163,240	148,497
Port and Harbor Operations	Establishments	11	9	9	48	28	27	23	23	13
	Employees	118	74	75	1,509	181	304	250	226	128
	Payroll	6,437	4,662	4,937	85,042	11,894	16,449	14,278	14,169	9,911
Marine Cargo Handling	Establishments	27	26	32	13	30	29	30	30	35
	Employees	2,953	ds	3,910	ds	ds	ds	3,966	4,143	4,241
	Payroll	239,490	ds	323,286	ds	ds	ds	424,469	436,086	469,911
Navigational Services to Shipping	Establishments	69	79	78	72	73	71	68	76	81
	Employees	1,168	1,225	1,207	ds	ds	1,297	1,176	1,175	1,292
	Payroll	102,934	102,766	94,781	ds	ds	101,251	88,363	88,045	116,801
Marinas	Establishments	110	117	114	100	110	106	102	97	101
	Employees	570	560	517	479	529	530	588	525	559
	Payroll	18,811	18,783	18,364	18,038	18,914	20,348	21,944	21,809	22,021

[1] ds = Data are suppressed.
[2] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.

Western Pacific Region

- Hawai‘i

Commercial fishing boats at Pier 38 in Honolulu, Hawai‘i.
Photo: NOAA Fisheries/Noelle Olsen

MANAGEMENT CONTEXT

The U.S. Pacific Islands Region includes the state of Hawai'i; the territories of American Samoa and Guam; the Commonwealth of the Northern Mariana Islands (CNMI); and the Pacific Remote Island Areas. Federal fisheries in this region are managed by the Western Pacific Fishery Management Council (WPFMC) and NOAA Fisheries under five fishery ecosystem plans (FEPs). These plans focus on place-based rather than species- or fishery-based management.

Western Pacific Fishery Ecosystem Plans

- American Samoa
- Hawai'i
- Mariana Archipelago (Guam and the CNMI)
- Pacific Remote Island Areas
- Western Pacific Pelagics

Three of the stocks or stock complexes covered in these FEPs were listed as overfished in 2018: Pacific bluefin tuna (Pacific stock); striped marlin (Western/Central Pacific stock); and seamount groundfish complex (Hancock seamount stock). Four stocks/complexes were subject to overfishing in 2018: Pacific bluefin tuna (Pacific stock); swordfish (Eastern Pacific stock); yellowfin tuna (Eastern Pacific stock; newly added to the overfishing list in 2018); and striped marlin (Western/Central Pacific stock). Bigeye tuna (Western and Central Pacific stock) was removed from the overfishing list in 2018.

Because fishery data are limited in most of these areas, only information for the Hawai'i and Western Pacific pelagic fisheries is reported here. No catch share programs have been implemented in this region.

Hawai'i FEP: NOAA Fisheries, the WPFMC, and the State of Hawai'i collaborate to manage fisheries across the Hawai'i Archipelago. The major fisheries in Hawai'i include trolling for pelagic species such as tuna, marlin, wahoo, and mahimahi; deepwater hook-and-line bottom fishing; and various forms of net fishing that target nearshore pelagic and reef fish species. Under this FEP, the Hancock Seamount groundfish complex is currently overfished. This fishery has been closed since 1986.

Western Pacific Pelagics FEP: The management species covered under this FEP include tunas, billfishes, sharks, squids, and an assortment of other species. These species include mahimahi, wahoo, moonfish, and pomfret caught by the Hawai'i longline fishery and smaller boats that use diverse gears including trolling, handline, and traditional fishing methods. Of these species, yellowfin tuna, Pacific bluefin tuna, swordfish, and the Western/Central Pacific striped marlin stock are considered subject to overfishing. The Western/Central Pacific striped marlin stock and Pacific bluefin tuna stock are also listed as overfished.

In addition to management by the WPFMC and NOAA Fisheries, pelagic fish, such as bigeye and yellowfin tunas, are managed by two regional fishery management organizations (RFMOs). The Western and Central Pacific Fisheries Commission (WCPFC) has authority to manage pelagic fisheries in the Western and Central Pacific Ocean, while the Inter-American Tropical Tuna Commission (IATTC) manages pelagic fisheries in the Eastern Pacific Ocean. Fish species and fisheries under the purview of both RFMOs migrate across national boundaries and between RFMO areas, requiring coordinated management. Since 2009, the annual bigeye tuna catch limit has been recommended by the WCPFC and implemented by NOAA Fisheries for the U.S. longline fleet in the Western and Central Pacific. The IATTC establishes the harvest limit for bigeye tuna for U.S. longline vessels longer than 24 meters in the Eastern Tropical Pacific.

COMMERCIAL FISHERIES — WESTERN PACIFIC (HAWAI'I) REGION

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. The term does not include subsistence fishermen or saltwater anglers who fish for sport. It also excludes the for-hire sector, which earns its revenue from selling recreational fishing trips to saltwater anglers. The commercial fisheries section reports on economic impacts, landings revenue, landings, and ex-vessel prices of key species/species groups.

Key Western (Hawai'i) Pacific Commercial Species

- Dolphinfish (*mahi-mahi*)
- Lobsters (*ula*)
- Marlin (*a'u*)
- Moonfish (*opah*)
- Pomfrets (*mon-chong*)
- Scad (*opelu*)
- Snappers
- Swordfish (*meka-jiki*)
- Tunas (*aku*)
- Wahoo (*ono*)

Economic Impacts

The premise behind economic impact modeling is that every dollar spent in a regional economy (direct impact) is either saved or re-spent on additional goods or services. If those dollars are re-spent on other goods and services in the regional economy, this spending generates additional economic activity in the region.[1]

Four different measures are commonly used to show how commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. The category includes both the direct sales of fish landed and sales made between businesses and households resulting from the original sale. Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the sales of seafood or purchases of inputs to commercial fishing. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in numbers of jobs. Note that these categories are not additive. The United States seafood industry is defined here as the commercial fishing sector, seafood processors and dealers, seafood wholesalers and distributors, importers, and seafood retailers.[2]

This report provides estimates of total economic impacts for the nation and for each of the 23 coastal states. Total economic impacts for each state and the nation represent the sum of direct impacts; indirect impacts (in this case, the impact from suppliers to the seafood industry); and induced impacts (spending by employees on personal and household expenditures, where employees of both the seafood industry and its full supply chain are included). That is, the total economic impact estimates reported here measure jobs, sales, value-added, and income impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

In 2018, the commercial fishing and seafood industry supported 8,086 full- and part-time jobs and generated $776.2 million in sales, $233.4 million in income, and $343.6 million in value-added impacts in the Western Pacific (Hawai'i) Region. Importers generated the largest sales impacts ($306.4 million). Commercial harvesters generated the largest value-added impacts ($108.9 million), income impacts ($75.9 million), and employment impacts (3,559 jobs).

Landings Revenue

In 2018, landings revenue in the Western Pacific (Hawai'i) totaled $119.2 million, a 67% increase from 2009 (a 44% increase in real terms after adjusting for inflation) and a 2% increase from 2017.

Finfish landings revenue accounted for 100% of all landings revenue. In 2018, tunas (aku) ($94.2 million), swordfish (*mekajiki*) ($3.7 million), and dolphinfish (*mahimahi*) ($3.5 million) had the highest landings revenue in this region. Together, these top three species accounted for 85% of total landings revenue.

From 2009 to 2018, pomfrets (*monchong*) (107%, 78% in real terms), tunas (*aku*) (97%, 70% in real terms), and wahoo (*ono*) (82%, 57% in real terms) had the largest increases, while lobsters (*ula*) (-90%, -91% in real terms), swordfish (*mekajiki*) (-50%, -57% in real terms), and other (-23%, -34% in real terms) had the largest decreases. From 2017 to 2018, tunas (*aku*) (8%), moonfish (*opah*) (3%), and dolphinfish (*mahi-mahi*) (1%) had the largest increases, while swordfish (*mekajiki*) (-36%), lobsters (*ula*) (-33%), and snappers (-31%) had the largest decreases.

[1] Summary data is available online in the FEUS webtool. [Available at: https://www.fisheries.noaa.gov/data-tools/fisheries-economics-united-states-interactive-tool.]
[2] The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates. [Available at: https://www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf.]

Commercial Revenue: Largest Increases

From 2009:
- Pomfrets (*monchong*) (107%, 78% in real terms)
- Tunas (*aku*) (97%, 70% in real terms)
- Wahoo (*ono*) (82%, 57% in real terms)

From 2017:
- Tunas (*aku*) (8%)
- Moonfish (*opah*) (3%)
- Dolphinfish (*mahimahi*) (1%)

Commercial Revenue: Largest Decreases

From 2009:
- Lobsters (*ula*) (-90%, -91% in real terms)
- Swordfish (*mekajiki*) (-50%, -57% in real terms)

From 2017:
- Swordfish (*mekajiki*) (-36%)
- Lobsters (*ula*) (-33%)
- Snappers (-31%)

Commercial Landings: Largest Increases

From 2009:
- Wahoo (*ono*) (90%)
- Tunas (*aku*) (64%)
- Pomfrets (*monchong*) (48%)

From 2017:
- Moonfish (*opah*) (28%)
- Wahoo (*ono*) (18%)
- Dolphinfish (*mahimahi*) (6%)

Commercial Landings: Largest Decreases

From 2009:
- Lobsters (*ula*) (-86%)
- Swordfish (*mekajiki*) (-55%)
- Snappers (-31%)

From 2017:
- Lobsters (*ula*) (-52%)
- Snappers (-36%)
- Swordfish (*mekajiki*) (-32%)

Landings

In 2018, Western Pacific (Hawai'i) Region commercial fishermen landed over 35.5 million pounds of finfish and shellfish. This represents a 32% increase from 2009 and a 4% decrease from 2017. Tunas (aku) contributed the highest landings volume in the region, accounting for 67% of total landing weight.

From 2009 to 2018, wahoo (*ono*) (90%), tunas (*aku*) (64%), and pomfrets (*monchong*) (48%) had the largest increases, while lobsters (*ula*) (-86%), swordfish (*mekajiki*) (-55%), and snappers (-31%) had the largest decreases. From 2017 to 2018, moonfish (*opah*) (28%), wahoo (*ono*) (18%), and dolphinfish (*mahimahi*) (6%) had the largest increases, while lobsters (*ula*) (-52%), snappers (-36%), and swordfish (*mekajiki*) (-32%) had the largest decreases.

Prices

In 2018, lobsters (*ula*) ($8.97 per pound) received the highest ex-vessel price in the region. Landings of marlin (*a'u*) ($1.22 per pound) had the lowest ex-vessel price. From 2009 to 2018, dolphinfish (*mahimahi*) (56%, 35% in real terms), snappers (42%, 22% in real terms), and pomfrets (*monchong*) (39%, 20% in real terms) had the largest increases, while lobsters (*ula*) (-28%, -38% in real terms) and wahoo (*ono*) (-4%, -18% in real terms) had the largest decreases. From 2017 to 2018, lobsters (*ula*) (38%), tunas (*aku*) (13%), and snappers (9%) had the largest increases, while moonfish (*opah*) (-20%), wahoo (*ono*) (-16%), and marlin (*a'u*) (-11%) had the largest decreases.

RECREATIONAL FISHERIES — WESTERN PACIFIC (HAWAI'I) REGION

In the Western Pacific (Hawai'i) Region, recreational fishing includes all non-commercial fishing, which is fishing that does not meet the definition of commercial fishing in the Magnuson-Stevens Fishery Conservation and Management Act, and includes, but is not limited to, sustenance, subsistence, traditional indigenous, and recreational

fishing.[3] This recreational fisheries section reports on economic impacts and expenditures, angler participation, fishing trips, and catch of key species/species groups.[4]

Key Western Pacific (Hawai'i) Recreational Species[5,6]

- Bigeye (*akule*) and mackerel (*opelu*) scad
- Blue marlin (*a'u*)
- Deep 7 bottomfish: binghams snapper, hawaiian grouper, ironjaw snapper, longtailed red snapper, pink snapper, ruby snapper, and von siebolds snapper
- Dolphinfish (*mahimahi*)
- Goatfishes
- Jacks (trevallys and other jacks)
- Other snappers
- Skipjack tuna (*aku*)
- Wahoo (*ono*)
- Yellowfin tuna (*'ahi*)

Economic Impacts and Expenditures

The economic contribution of recreational fishing activities in the Western Pacific (Hawai'i) Region is based on spending by recreational anglers.[7] Total annual trip expenditures are estimated at the state level by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore) and adjusting by the CPI (consumer price index) to the current year.

Four different measures are commonly used to show how angler expenditures affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as recreational fishing. The category includes both the direct sales made by the angler and sales made between businesses and households resulting from that original sale by the angler. Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the purchases made by anglers. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in number of jobs. Note that these categories are not additive. NOAA Fisheries uses a regional impact modeling software, called IMPLAN, to estimate these four types of impacts.

The economic contributions for both trip and durable expenditures from recreational fishing in 2018 were estimated using IMPLAN version 3, with base year data from 2017. Models for each state and for the nation were created in IMPLAN using trip expenditures (based on 2016/2017 survey data on average trip expenditures and total 2018 trips) and for durable expenditures (based on 2014 survey data on average durable expenditures and 2018 participants).

In 2018, economic impacts from recreational fishing activities in Hawai'i generated 2,900 jobs, $394.2 million in sales, $121.6 million in income, and $218.4 million in value-added impacts.

Data for the for-hire mode is not available in Hawai'i. Of the two fishing trip modes, shore fishing trips had the greatest economic impact, accounting for 66% of employment impacts. Trip expenditures for shore and private boat modes totaled $325.4 million, with a large portion of these trip expenditures coming from trips in the shore (61%) mode. Data for durable expenditures is not available due to unavailable participation estimates.

Participation

Participation estimates for Hawai'i are not available.

Fishing Trips

In 2018, recreational fishermen took 3.4 million saltwater fishing trips in the state of Hawai'i. This number represented a 58% increase from 2009 and a 167% increase from 2017. Of all fishing trips, 80% were taken from the shore sector.

[3] For a definition of non-commercial fishing see the electronic code of federal regulations. [Available at: https://gov.ecfr.io/cgi-bin/text-idx?SID=3a25270218fea2849201cc659f78167f&mc=true&node=se50.13.665_112&rgn=div8.].
[4] Data for this state is from MRIP estimates produced using pre-calibration methods.
[5] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[6] Goatfishes: bandtail goatfish, blue goatfish, doublebar goatfish, goatfish family, goatfishes, manybar goatfish, pflugers goatfish, whitesaddle goatfish, yellowfin goatfish, and yellowstripe goatfish. Jacks (trevallys and other jacks): African pompano, bigeye trevally, black jack, black trevally, bluefin trevally, giant trevally, greater amberjack, island jack, jack family, and jack genus. Other snappers: binghams snapper, blacktail snapper, bluestripe snapper, green jobfish, ironjaw snapper, longtailed red snapper, pink snapper, ruby snapper, smalltooth jobfish, snapper family, snapper genus, and von siebolds snapper.
[7] Trip expenditure estimates were generated from the 2016/2017 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2020). Durable goods expenditures were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2016). [For citations: Publications-Recreational Fisheries Economics Research.]

Harvest and Release Trends

Of the Western Pacific (Hawai'i) Region's key species and species groups, bigeye (akule) and mackerel (opelu) scad (4 million fish), goatfishes (2.1 million fish), and jacks (trevallys and other jacks) (614,401 fish), were most frequently caught by recreational fishermen. The text box below shows the species with the largest percentage increases and decreases in the past 10 years and in the past year.

From 2009 to 2018, blue marlin (a'u) (472%), deep 7 bottomfish (466%), and dolphinfish (mahimahi) (113%) had the largest increases, while skipjack tuna (aku) (-5%) had the largest decreases. From 2017 to 2018, dolphinfish (mahimahi) (361%) and blue marlin (a'u) (320%) had the largest increases. There were no percent decreases.

Harvest and Release: Largest Increases

From 2009:

- Blue marlin (a'u) (472%)
- Deep 7 bottomfish (466%)
- Dolphinfish (mahimahi) (113%)

From 2017:

- Dolphinfish (mahimahi) (361%)
- Blue marlin (a'u) (320%)

Harvest and Release: Largest Decreases

From 2009:

- Skipjack tuna (aku) (-5%)

From 2017:

- There were no percent decreases.

MARINE ECONOMY — WESTERN PACIFIC (HAWAI'I) REGION

For this report, the marine economy refers to the fishing and marine-related industries in a coastal state. The state marine economy consists of two industry sectors: 1) seafood sales and processing (employer establishments and non-employer firms); and 2) transportation support and marine operations (employer establishments). These sectors include several different marine-related industries.[8]

To measure the size of the commercial fishing sector in a state's economy relative to the size of the commercial fishing sector in the national economy, researchers use an index called the Commercial Fishing Location Quotient (CFLQ).[9] The CFLQ is calculated as the ratio of the percentage of regional employment in the commercial fishing sector relative to the percentage of national employment in the commercial fishing sector. The U.S. CFLQ is 1. If a state CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average.

Hawai'i had a CFLQ value of 3.93 for 2017.

In 2017, 32,800 employer establishments operated in Hawai'i (including marine and non-marine related establishments). These establishments employed 544,056 workers and had a total annual payroll of $24.4 billion. The gross state product of Hawai'i was approximately $89.3 billion in 2017.[10]

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2017, Hawai'i had 10 non-employer firms in the seafood product preparation and packaging sector (a 43% increase from 2009). Annual receipts for these firms totaled $717,000. There were 3 employer firms in this sector (a 200% increase from 2009). The Census Bureau suppressed 2017 employment and payroll data for this sector in the state.

Seafood Sales, Retail: In 2017, there were 27 non-employer firms in seafood retail sales in Hawai'i (a 23% decrease from 2009). Annual receipts for these firms totaled $2.1 million. There were 21 employer firms in the seafood retail sector (a 16% decrease from 2009). These establishments employed 308 workers (a 95% increase from 2009) and had a total annual payroll of $8.5 million.

Seafood Sales, Wholesale: There were 32 employer firms in the seafood wholesale sector in Hawai'i in 2017 (a 16% decrease from 2009). These establishments employed 621 workers (a 15% increase from 2009) and had a total annual payroll of $22.9 million.

[8] Unless otherwise stated, data are from the U.S. Census Bureau (https://www.census.gov).

[9] U.S. Bureau of Labor Statistics, 'Location Quotient Calculator.' [For more information: https://www.bls.gov/cew/about-data/location-quotients-explained.htm.]

[10] U.S. Bureau of Economic Analysis. Gross Domestic Product by State, Fourth Quarter and Annual 2017. [Available at https://apps.bea.gov/regional/histdata/releases/0518gdpstate/.]

Transportation Support and Marine Operations

Data for the transportation support and marine operations sectors in Hawai`i's economy were largely suppressed for confidentiality reasons. It is clear, however, that these sectors play an important role in the state economy. For example, in 2017, the marine cargo handling sector accounted for $86.3 million in payroll.

Tables | Hawai‘i

2018 Economic Impacts of the Hawai'i Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	8,086	776	233	344	6,379	401	157	215
Commercial Harvesters	3,559	207	76	109	3,559	207	76	109
Seafood Processors & Dealers	692	71	28	36	411	42	17	21
Importers	947	306	49	93	0	0	0	0
Seafood Wholesalers & Distributors	411	45	16	21	199	22	8	10
Retail	2,478	146	64	84	2,210	130	57	74

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	71,257	84,091	91,611	112,343	108,031	101,313	103,424	118,182	116,423	119,158
Finfish	70,801	83,650	91,227	111,772	107,115	100,572	103,314	117,784	116,069	118,713
Shellfish	347	343	291	435	567	495	58	302	244	361
Other	110	98	93	136	349	247	52	96	110	84
Key Species										
Dolphinfish	2,853	3,303	4,314	5,309	4,130	4,412	3,427	4,512	3,451	3,493
Lobsters	136	117	104	98	95	105	NA	28	21	14
Marlin	1,193	1,124	1,238	1,455	1,467	1,607	1,639	2,097	2,120	1,617
Moonfish (*opah*)	2,409	2,591	2,853	3,163	3,203	2,910	3,151	NA	3,203	3,301
Pomfrets (*monchong*)	1,381	1,549	1,449	2,097	2,576	2,466	2,874	3,502	3,287	2,855
Scad (*opelu*)	1,198	1,251	964	1,181	1,147	1,128	108	1,173	996	998
Snappers	1,869	1,696	1,425	1,750	2,024	2,250	1,136	2,302	2,645	1,824
Swordfish (*mekajiki*)	7,336	7,303	6,669	6,693	4,493	5,405	4,629	4,813	5,823	3,699
Tunas (*aku*)	47,710	59,775	66,628	83,298	81,819	73,657	81,576	88,467	87,285	94,223
Wahoo (ono)	1,673	1,746	1,806	2,330	2,375	2,800	2,328	3,279	3,066	3,040

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	26,913	28,074	29,295	31,053	32,453	33,480	34,625	35,055	37,166	35,497
Finfish	26,842	28,001	29,235	30,962	32,337	33,380	34,610	34,995	37,119	35,444
Shellfish	57	62	49	79	101	86	11	52	39	47
Other	15	10	11	13	15	13	4	8	8	6
Key Species										
Dolphinfish	1,287	1,518	1,423	1,746	1,515	1,689	1,132	1,193	954	1,008
Lobsters	11	9	10	8	9	10	NA	3	3	2
Marlin (*a'u*)	1,033	878	916	800	948	1,220	1,440	1,302	1,544	1,329
Moonfish (*opah*)	1,884	1,824	1,564	1,549	2,072	2,004	2,067	NA	1,812	2,327
Pomfrets	627	593	427	731	1,142	1,243	1,339	1,166	980	930
Scad (*opelu*)	405	460	323	383	361	356	36	368	306	299
Snappers	393	346	272	311	363	376	181	387	427	271
Swordfish (*mekajiki*)	3,881	3,153	2,592	2,381	1,674	2,480	2,044	1,640	2,561	1,744
Tunas (*aku*)	14,594	16,706	18,519	20,147	20,900	20,296	22,932	23,507	25,028	23,913
Wahoo (ono)	605	600	564	652	744	1,056	993	1,144	973	1,148

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Dolphinfish (*mahimahi*)	2.22	2.18	3.03	3.04	2.73	2.61	3.03	3.78	3.62	3.46
Lobsters (*ula*)	12.37	12.36	10.39	11.84	10.71	10.21	NA	8.56	6.48	8.97
Marlin (*a'u*)	1.16	1.28	1.35	1.82	1.55	1.32	1.14	1.61	1.37	1.22
Moonfish (*opah*)	1.28	1.42	1.82	2.04	1.55	1.45	1.52	NA	1.77	1.42
Pomfrets (*monchong*)	2.20	2.61	3.39	2.87	2.25	1.98	2.15	3.00	3.35	3.07
Scad (*opelu*)	2.95	2.72	2.98	3.08	3.18	3.17	2.99	3.19	3.25	3.34
Snappers	4.75	4.90	5.24	5.63	5.57	5.99	6.27	5.95	6.20	6.73
Swordfish (*mekajiki*)	1.89	2.32	2.57	2.81	2.68	2.18	2.26	2.93	2.27	2.12
Tunas (*aku*)	3.27	3.58	3.60	4.13	3.91	3.63	3.56	3.76	3.49	3.94
Wahoo (*ono*)	2.77	2.91	3.20	3.57	3.19	2.65	2.34	2.87	3.15	2.65

[1] 'NA' = these data are confidential and therefore not disclosable.

2018 Economic Impacts of Hawai'i Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	NA	NA	NA	NA
	Private Boat	989	154,153	43,266	79,754
	Shore	1,911	240,086	78,303	138,695
Total Durable Expenditures		NA	NA	NA	NA
Total State Economic Impacts		2,900	394,240	121,569	218,448

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	NA
Private Boat	127,893
Shore	197,516
Total	325,409

Equipment	Durable Goods Expenditures
Fishing Tackle	NA
Other Equipment	NA
Boat Expenses	NA
Vehicle Expenses	NA
Second Home Expenses	NA
Total Durable Expenditures	NA

Total State Trip and Durable Goods Expenditures	325,409

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Private Boat	441	484	224	325	297	324	273	235	261	670
Shore	1,722	1,907	1,158	1,195	1,216	1,051	1,158	790	1,019	2,750
Total Trips	2,163	2,390	1,382	1,519	1,513	1,374	1,431	1,024	1,280	3,421

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1,2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Bigeye (*akule*) and mackerel (*opelu*) scad	H	1,102	840	662	608	889	899	1,245	690	1,172	4,043
	R	0	0	0	0	2	0	< 1	4	7	2
Blue marlin (*a'u*)	H	3	1	2	3	4	3	5	2	4	13
	R	< 1	0	0	0	0	< 1	0	0	< 1	5
Deep 7 bottom-fish	H	< 1	1	< 1	1	2	2	< 1	< 1	NA	2
	R	0	0	0	0	0	0	0	0	NA	0
Dolphinfish (*mahimahi*)	H	103	164	63	163	94	92	78	44	47	216
	R	0	0	0	0	0	< 1	0	< 1	< 1	2
Goatfishes	H	712	270	173	158	873	537	1,052	246	420	2,037
	R	7	18	13	13	3	22	15	16	18	69
Jacks (trevallys and other jacks)	H	123	140	99	110	144	156	170	112	115	202
	R	85	126	59	129	126	263	319	122	154	413
Other snappers	H	147	340	113	195	152	220	119	119	126	336
	R	24	25	14	15	10	3	9	14	10	19
Skipjack tuna (*aku*)	H	230	289	125	197	380	199	268	88	113	213
	R	0	0	< 1	0	0	0	< 1	2	2	6
Wahoo (*ono*)	H	61	41	15	32	37	43	55	45	32	127
	R	0	0	0	0	0	< 1	< 1	< 1	0	0
Yellowfin tuna (*'ahi*)	H	198	302	141	182	150	220	292	85	82	215
	R	1	1	0	0	0	< 1	1	< 1	0	6

[1] 'NA' = these data are confidential and therefore not disclosable.
[2] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[3] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.

2017 Hawai'i State Economy (% of national total)

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[1]
111,003 (0.4%)	32,800 (0.4%)	544,056 (0.4%)	24.4 (0.4%)	47.4 (0.5%)	89.3	3.93

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	7	11	14	14	16	14	12	12	10
	Receipts	712	741	866	965	821	1,048	1,271	1,071	717
Seafood sales, retail	Firms	35	37	39	42	40	38	39	31	27
	Receipts	3,666	4,124	3,558	4,086	3,764	3,727	4,053	4,025	2,106

Seafood Sales and Processing — Employer Establishments (thousands of dollars)[2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	1	1	1	2	2	2	2	2	3
	Employees	ds	ds	ds	ds	ds	ds	ds	0	0
	Payroll	ds	ds	ds	ds	ds	ds	ds	0	0
Seafood sales, wholesale	Establishments	38	37	40	33	32	30	30	30	32
	Employees	538	531	538	483	542	567	639	697	621
	Payroll	19,347	19,290	19,416	19,413	20,039	21,369	24,477	26,323	22,856
Seafood sales, retail	Establishments	25	24	25	24	25	26	25	22	21
	Employees	158	177	187	303	318	305	293	313	308
	Payroll	3,559	3,533	3,521	6,493	7,366	7,142	7,410	7,849	8,500

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	13	15	15	18	18	14	14	15	15
	Employees	ds	ds	ds	ds	ds	ds	660	727	927
	Payroll	ds	ds	ds	ds	ds	ds	46,560	45,051	66,270
Deep Sea Freight Transportation	Establishments	NA	1	1	2	1	1	1	1	3
	Employees	NA	ds	ds	ds	ds	ds	ds	0	0
	Payroll	NA	ds	ds	ds	ds	ds	ds	0	0
Deep Sea Passenger Transportation	Establishments	1	1	1	1	1	1	1	1	NA
	Employees	ds	ds	ds	ds	ds	ds	ds	0	NA
	Payroll	ds	ds	ds	ds	ds	ds	ds	0	NA
Coastal and Great Lakes Freight Transportation	Establishments	5	2	2	5	5	6	7	7	6
	Employees	475	ds	ds	431	ds	ds	452	425	275
	Payroll	34,367	ds	ds	34,538	ds	ds	36,675	50,267	42,282
Port and Harbor Operations	Establishments	3	2	2	2	1	1	1	NA	NA
	Employees	ds	ds	ds	ds	ds	ds	ds	NA	NA
	Payroll	2,031	ds	ds	ds	ds	ds	ds	NA	NA
Marine Cargo Handling	Establishments	11	14	14	11	10	10	11	12	11
	Employees	1,075	1,236	1,278	664	709	700	782	846	869
	Payroll	87,833	109,059	109,134	54,309	61,651	66,034	83,408	115,582	86,285
Navigational Services to Shipping	Establishments	11	11	8	8	9	9	11	11	8
	Employees	120	90	105	97	100	80	70	69	51
	Payroll	5,258	5,113	5,310	5,567	6,518	5,416	4,463	5,697	4,304
Marinas	Establishments	10	13	13	9	11	9	9	9	9
	Employees	164	189	208	162	166	153	120	113	123
	Payroll	4,368	5,362	5,237	3,779	4,003	3,304	3,412	3,421	3,756

[1] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[2] ds = Data are suppressed.
[3] NA = Not applicable.

New England Region

- Connecticut
- Maine
- Massachusetts
- New Hampshire
- Rhode Island

A fishing port at sunset in Gloucester, Massachusetts.
Photo: NOAA Fisheries

MANAGEMENT CONTEXT

The New England Region includes Connecticut, Maine, Massachusetts, New Hampshire, and Rhode Island. Federal fisheries in this region are managed by the New England Fishery Management Council (NEFMC) and NOAA Fisheries under nine fishery management plans (FMPs). Two of these FMPs, monkfish and spiny dogfish, are developed in conjunction with the Mid-Atlantic Fisheries Management Council (MAFMC). The MAFMC is the lead council for the Spiny Dogfish FMP; the NEFMC is the lead for the Monkfish FMP.

New England Regional FMPs

- Northeast multi-species
- Sea scallops
- Monkfish (with the MAFMC)
- Atlantic herring
- Small mesh multi-species
- Spiny dogfish (with the MAFMC)
- Red crab
- Northeast skate complex
- Atlantic salmon

Fifteen of the stocks or stock complexes covered in these FMPs were listed as overfished in 2018: Atlantic cod (Georges Bank stock and Gulf of Maine stock), windowpane (Gulf of Maine/Georges Bank stock), witch flounder, yellowtail flounder (Cape Cod/Gulf of Maine stock, Georges Bank stock, and Southern New England/Mid-Atlantic stock), thorny skate (Gulf of Maine stock), Atlantic halibut, Atlantic salmon, Atlantic wolffish, ocean pout, winter flounder (Southern New England/Mid-Atlantic stock), red hake (Southern Georges Bank/Mid-Atlantic stock), and Atlantic mackerel (Gulf of Maine/Cape Hatteras stock).

Seven stocks/complexes were subject to overfishing in 2018: Atlantic cod (Georges Bank stock and Gulf of Maine stock), yellowtail flounder (Cape Cod/Gulf of Maine stock, Georges Bank stock, and Southern New England/Mid-Atlantic stock), red hake (Southern Georges Bank/Mid-Atlantic stock), and Atlantic mackerel (Gulf of Maine/Cape Hatteras stock).

Smooth skate (Gulf of Maine stock) was declared rebuilt in 2018. Atlantic mackerel (Gulf of Maine/Cape Hatteras stock) was added to the overfishing and overfished list in 2018, which was a first time determination (status previously unknown) in both cases.

Catch Share Programs

Two catch share programs operate in the New England Region: 1) Northeast Multispecies Sectors; and 2) Northeast General Category Sea Scallop Individual Fishing Quota (IFQ) Program. The landings revenues for these programs totaled more than $76 million (in inflation-adjusted 2018 dollars) in 2017. The following are descriptions of these catch share programs and their performance.

Northeast Multispecies Sectors: This program was developed between 2004 and 2006 and included two pilot sectors that operated with an allocation of Georges Bank cod. The program was expanded in 2010 to 17 sectors and approximately 55% of eligible, limited-access permit holders joined a sector. At the same time, annual catch limits were implemented for the first time and sharply reduced the available quota for fishermen. The 2017 key performance indicators of the program show that relative to the baseline period (the three-year period prior to implementation), quota, landings, the number of active vessels, and inflation-adjusted landings revenue decreased, while inflation-adjusted revenue per active vessel increased.

Northeast General Category Sea Scallop IFQ Program: This program began in 2010 with two primary objectives: 1) Control capacity and mortality in the General Category Scallop fishery, and 2) allow better and timelier integration of sea scallop assessment results in management. The 2017 key performance indicators of the program show that relative to the baseline period, quota, landings, the number of active vessels, and inflation-adjusted landings revenue decreased, while inflation-adjusted revenue per active vessel increased.

COMMERCIAL FISHERIES — NEW ENGLAND REGION

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. The term does not include subsistence fishermen or saltwater anglers who fish for sport. It also excludes the for-hire sector, which earns its revenue from selling recreational fishing trips to saltwater anglers. The commercial fisheries section re-

ports on economic impacts, landings revenue, landings, and ex-vessel prices of key species/species groups.

Key New England Region Commercial Species

- American lobster
- Atlantic herring
- Atlantic mackerel
- Bluefin tuna
- Cod and haddock
- Flounders
- Goosefish
- Quahog clam
- Sea scallop
- Squid
- American lobster

Economic Impacts

The premise behind economic impact modeling is that every dollar spent in a regional economy (direct impact) is either saved or re-spent on additional goods or services. If those dollars are re-spent on other goods and services in the regional economy, this spending generates additional economic activity in the region.[1]

Four different measures are commonly used to show how commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. The category includes both the direct sales of fish landed and sales made between businesses and households resulting from the original sale. Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the sales of seafood or purchases of inputs to commercial fishing. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in numbers of jobs. Note that these categories are not additive. The United States seafood industry is defined here as the commercial fishing sector, seafood processors and dealers, seafood wholesalers and distributors, importers, and seafood retailers.[2]

This report provides estimates of total economic impacts for the nation and for each of the 23 coastal states. Total economic impacts for each state and the nation represent the sum of direct impacts; indirect impacts (in this case, the impact from suppliers to the seafood industry); and induced impacts (spending by employees on personal and household expenditures, where employees of both the seafood industry and its full supply chain are included). That is, the total economic impact estimates reported here measure jobs, sales, value-added, and income impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

In 2018, the commercial fishing and seafood industry in Massachusetts generated the largest employment impacts in the New England region with 143,902 full- and part-time jobs. Massachusetts also generated the largest sales impacts ($16 billion), value-added impacts ($6.1 billion), and income impacts ($3.9 billion).

Landings Revenue

In 2018, landings revenue in the New England Region totaled $1.4 billion, a 75% increase from 2009 (a 51% increase in real terms after adjusting for inflation) and a 7% increase from 2017. Landings revenue was highest in Massachusetts ($630.9 million), followed by Maine ($569 million).

Shellfish landings revenue accounted for 89% of all landings revenue. In 2018, American lobster ($627.1 million), sea scallop ($410.9 million), and squid ($39 million) had the highest landings revenue in this region. Together, these top three species accounted for 79% of total landings revenue.

From 2009 to 2018, squid (134%, 101% in real terms), bluefin tuna (110%, 81% in real terms), and American lobster (106%, 77% in real terms) had the largest increases, while Atlantic mackerel (-62%, -68% in real terms), cod and haddock (-53%, -60% in real terms), and flounders (-21%, -32% in real terms) had the largest decreases. From 2017 to 2018, bluefin tuna (24%), squid (24%), and American lobster (11%) had the largest increases, while goosefish (-21%), flounders (-19%), and Atlantic herring (-14%) had the largest decreases.

[1] Summary data is available online in the FEUS webtool. [Available at: https://www.fisheries.noaa.gov/data-tools/fisheries-economics-united-states-interactive-tool.]
[2] The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates. [Available at: https://www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf.]

Commercial Revenue: Largest Increases

From 2009:
- Squid (134%, 101% in real terms)
- Bluefin tuna (110%, 81% in real terms)
- American lobster (106%, 77% in real terms)

From 2017:
- Bluefin tuna (24%)
- Squid (24%)
- American lobster (11%)

Commercial Revenue: Largest Decreases

From 2009:
- Atlantic mackerel (-62%, -68%)
- Cod and haddock (-53%, -60%)
- Flounders (-21%, -32%)

From 2017:
- Goosefish (-21%)
- Flounders (-19%)
- Atlantic herring (-14%)

Commercial Landings: Largest Increases

From 2009:
- Bluefin tuna (116%)
- American lobster (48%)
- Squid (47%)

From 2017:
- Sea scallop (22%)
- Cod and haddock (19%)
- Bluefin tuna (16%)

Commercial Landings: Largest Decreases

From 2009:
- Atlantic mackerel (-70%)
- Atlantic herring (-56%)
- Flounders (-51%)

From 2017:
- Flounders (-21%)
- Atlantic herring (-11%)
- Goosefish (-8%)

Landings

In 2018, commercial fisheries landings in the New England Region totaled 552 million pounds. This represents a 13% decrease from 2009 and a 1% increase from 2017. American lobster contributed the highest landings volume in the region, accounting for 27% of total landing weight.

From 2009 to 2018, bluefin tuna (116%), American lobster (48%), and squid (47%) had the largest increases, while Atlantic mackerel (-70%), Atlantic herring (-56%), and flounders (-51%) had the largest decreases. From 2017 to 2018, sea scallop (22%), cod and haddock (19%), and bluefin tuna (16%) had the largest increases, while flounders (-21%), Atlantic herring (-11%), and goosefish (-8%) had the largest decreases.

Prices

In 2018, quahog clam ($9.65 per pound) received the highest ex-vessel price in the region. Landings of Atlantic herring ($0.24 per pound) had the lowest ex-vessel price. From 2009 to 2018, Atlantic herring (111%, 82% in real terms), quahog clam (74%, 50% in real terms), and flounders (62%, 39% in real terms) had the largest increases, while goosefish (-37%, -46% in real terms), cod and haddock (-8%, -21% in real terms), and bluefin tuna (-3%, -16% in real terms) had the largest decreases. From 2017 to 2018, squid (8%), bluefin tuna (7%), and quahog clam (5%) had the largest increases, while goosefish (-13%), sea scallop (-9%), and Atlantic mackerel (-8%) had the largest decreases.

RECREATIONAL FISHERIES — NEW ENGLAND REGION

In this report, recreational fishing refers to fishing for leisure rather than to sell fish (commercial fishing) or for subsistence. This recreational fisheries section reports on economic impacts and expenditures, angler participation, fishing trips, and catch of key species/species groups.[3]

[3] Atlantic and Gulf recreational catch and effort estimates are based upon the MRIP estimates released in 2018.

Key New England Recreational Species[4]

- Atlantic cod
- Atlantic mackerel
- Bluefin tuna
- Bluefish
- Little tunny
- Porgies (scup)
- Striped bass
- Summer flounder
- Winter flounder
- Wrasses (tautog)

Economic Impacts and Expenditures

The economic contribution of recreational fishing activities in the New England Region is based on spending by recreational anglers.[5] Total annual trip expenditures are estimated at the state level by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore) and adjusting by the CPI (consumer price index) to the current year. Total annual durable expenditures are estimated by multiplying mean durable expenditures in each state by the estimated annual number of adult participants for each state and adjusting by the CPI (consumer price index) to the current year.[6]

Four different measures are commonly used to show how angler expenditures affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as recreational fishing. The category includes both the direct sales made by the angler and sales made between businesses and households resulting from that original sale by the angler. Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the purchases made by anglers. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in number of jobs. Note that these categories are not additive. NOAA Fisheries uses a regional impact modeling software, called IMPLAN, to estimate these four types of impacts.

The economic contributions for both trip and durable expenditures from recreational fishing in 2018 were estimated using IMPLAN version 3, with base year data from 2017. Models for each state and for the nation were created in IMPLAN using trip expenditures (based on 2016/2017 survey data on average trip expenditures and total 2018 trips) and for durable expenditures (based on 2014 survey data on average durable expenditures and 2018 participants).

The greatest employment impacts from expenditures on saltwater recreational fishing in the New England Region were generated in Massachusetts (7,711 jobs), followed by Connecticut (5,118 jobs) and Rhode Island (3,963 jobs).The largest sales impacts were observed in Massachusetts ($930.9 million), followed by Connecticut ($605.9 million) and Rhode Island ($419.1 million). The biggest income impacts were generated in Massachusetts ($432.5 million), followed by Connecticut ($263.1 million) and Rhode Island ($178.6 million). The greatest value-added impacts were in Massachusetts ($636.6 million), followed by Connecticut ($422.5 million) and Rhode Island ($277 million).

Expenditures for fishing trips and durable equipment across the New England Region in 2018 totaled $2 billion. This total included $1.5 billion in durable goods expenditures, with the largest portion coming from boat expenses ($913.7 million).

Participation

In 2018, there were 887,291 recreational anglers who fished in the New England Region. This number represented a 36% decrease from 2009 and an 8% decrease from 2017. The anglers are categorized as either residents from coastal (94%) or non-coastal (6%) counties.

Fishing Trips

In 2018, recreational fishermen took 15.1 million fishing trips in the New England Region. This number represented a 37% decrease from 2009 and a 10% decrease from 2017. The largest proportions of trips were taken in the shore mode (59%) and private boat (39%). States with the highest number of recorded trips in the New England

[4] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[5] Trip expenditure estimates were generated from the 2016/2017 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2020). Durable goods expenditures were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2016). [For citations: Publications-Recreational Fisheries Economics Research.]
[6] Summary data is available online in the FEUS webtool. [Available at: https://www.fisheries.noaa.gov/data-tools/fisheries-economics-united-states-interactive-tool.]

Region were Massachusetts (6.7 million trips) and Connecticut (3.5 million trips).

Harvest and Release Trends

Of the New England Region's key species and species groups, striped bass (18.1 million fish), porgies (scup) (16.8 million fish), and Atlantic mackerel (11.2 million fish), were most frequently caught by recreational fishermen. The text box below shows the species with the largest percentage increases and decreases in the past 10 years and in the past year.

From 2009 to 2018, little tunny (253%), wrasses (tautog) (67%), and summer flounder (19%) had the largest increases, while bluefin tuna (-86%), winter flounder (-70%), and bluefish (-69%) had the largest decreases. From 2017 to 2018, little tunny (14%) and summer flounder (7%) had the largest increases, while bluefin tuna (-96%), bluefish (-55%), and winter flounder (-54%) had the largest decreases.

Harvest and Release: Largest Increases

From 2009:

- Little tunny (253%)
- Wrasses (tautog) (67%)
- Summer flounder (19%)

From 2017:

- Little tunny (14%)
- Summer flounder (7%)

Harvest and Release: Largest Decreases

From 2009:

- Bluefin tuna (-86%)
- Winter flounder (-70%)
- Bluefish (-69%)

From 2017:

- Bluefin tuna (-96%)
- Bluefish (-55%)
- Winter flounder (-54%)

MARINE ECONOMY — NEW ENGLAND REGION

For this report, the marine economy refers to the fishing and marine-related industries in a coastal state. The state marine economy consists of two industry sectors: 1) seafood sales and processing (employer establishments and non-employer firms); and 2) transportation support and marine operations (employer establishments). These sectors include several different marine-related industries.[7]

To measure the size of the commercial fishing sector in a state's economy relative to the size of the commercial fishing sector in the national economy, researchers use an index called the Commercial Fishing Location Quotient (CFLQ).[8] The CFLQ is calculated as the ratio of the percentage of regional employment in the commercial fishing sector relative to the percentage of national employment in the commercial fishing sector. The U.S. CFLQ is 1. If a state CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average.

The Bureau of Labor Statistics suppressed the CFLQ value for Connecticut, Massachusetts, New Hampshire, and Rhode Island for 2017. Maine had a CFLQ value of 26.82.

In 2017, there were 378,178 employer establishments that operated throughout the entire New England Region (including marine and non-marine related establishments). These establishments employed 6.4 million workers and had a total annual payroll of $386.4 billion. The combined gross state product of Connecticut, Maine, Massachusetts, New Hampshire, and Rhode Island was approximately $1 trillion in 2017.[9]

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2017, the New England Region had 96 non-employer firms in the seafood product preparation and packaging sector. Annual receipts for these firms totaled $10 million.[10] There were 63 employer firms in this sector (a 27% decrease from 2009). These establishments employed

[7] Unless otherwise stated, data are from the U.S. Census Bureau (https://www.census.gov).
[8] U.S. Bureau of Labor Statistics, 'Location Quotient Calculator.' [For more information: https://www.bls.gov/cew/about-data/location-quotients-explained.htm.]
[9] U.S. Bureau of Economic Analysis. Gross Domestic Product by State, Fourth Quarter and Annual 2017. [Available at https://apps.bea.gov/regional/histdata/releases/0518gdpstate/.]
[10] The Census Bureau suppressed number of firms and receipt data for this sector in one or more states in this region in either 2017 or 2009, and thus cannot be compared.

2,700 workers and had a total annual payroll of $151.2 million.[11] The greatest number of employer and non-employer establishments in this sector was in Massachusetts (76), followed by Maine (54) and Connecticut (19).

Seafood Sales, Retail: In 2017, there were 158 non-employer firms in seafood retail sales in the New England Region (a 4% decrease from 2009). Annual receipts for these firms totaled $15.7 million. There were 218 employer firms in the seafood retail sector (an 8% decrease from 2009). These establishments employed 1,340 workers (a 20% increase from 2009) and had a total annual payroll of $45.8 million. The greatest number of employer and non-employer establishments in this sector was in Massachusetts (154), followed by Maine (107) and Connecticut (59).

Seafood Sales, Wholesale: There were 327 employer firms in the seafood wholesale sector in the New England Region in 2017 (a 13% decrease from 2009). These establishments employed 3,301 workers (a 4% increase from 2009) and had a total annual payroll of $180.6 million. The greatest number of employer and non-employer establishments in this sector was in Maine (146), followed by Massachusetts (133) and Rhode Island (22).

Transportation Support and Marine Operations

Data for the transportation support and marine operations sector of the New England Region's economy were largely suppressed for confidentiality reasons. It is clear, however, that these sectors play an important role in the regional economy. For example, in 2017, the ship and boat building sector in the New England Region accounted for $466.3 million in payroll.

[11] The Census Bureau suppressed number of employees and payroll data for this sector in one or more states in this region in either 2017 or 2009, and thus cannot be compared.

Tables | New England Region

2018 Economic Impacts of the New England Seafood Industry (millions of dollars)

	Landings Revenue	With Imports				Without Imports			
		#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Connecticut	17	3,583	720	147	248	707	49	17	23
Maine	569	40,280	3,269	952	1,427	32,950	1,987	682	978
Massachusetts	631	143,902	16,047	3,941	6,132	70,370	3,112	1,163	1,572
New Hampshire	38	5,203	655	165	256	2,690	177	65	89
Rhode Island	105	7,173	952	233	368	3,773	250	92	128

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	776,875	952,596	1,088,613	1,172,644	1,143,716	1,192,298	1,235,228	1,305,970	1,271,127	1,359,891
Finfish	160,387	173,283	197,490	228,533	187,043	174,728	165,152	159,579	151,960	138,070
Shellfish	608,521	765,311	878,198	930,713	942,884	1,003,266	1,059,832	1,130,904	1,105,874	1,206,394
Other	7,967	14,002	12,926	13,398	13,789	14,304	10,244	15,488	13,293	15,426
Key Species										
American lobster	305,051	397,817	418,118	426,233	456,652	563,255	618,839	667,261	563,962	627,114
Atlantic herring	24,459	21,009	24,753	28,549	31,381	27,947	24,280	28,613	26,560	22,798
Atlantic mackerel	7,892	3,459	295	3,480	1,738	3,111	3,355	3,149	3,390	2,974
Bluefin tuna	4,448	8,470	9,258	8,388	3,649	6,108	7,716	11,932	7,554	9,344
Cod and haddock	38,751	49,698	48,747	29,697	16,288	20,307	18,897	19,189	16,355	18,107
Flounders	27,707	27,951	31,178	35,616	32,560	31,116	29,506	28,335	26,835	21,800
Goosefish	14,325	14,064	19,791	19,675	13,575	14,101	14,628	15,042	15,300	12,147
Quahog clam	8,983	9,713	8,317	9,276	9,077	9,922	11,223	11,935	11,568	12,580
Sea scallop	209,161	266,305	353,106	389,980	366,305	297,793	287,478	305,566	372,156	410,926
Squid	16,696	14,788	22,889	18,187	15,547	21,412	24,264	41,861	31,539	39,011

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	632,714	568,078	589,531	631,204	609,941	632,873	584,263	565,178	547,645	551,997
Finfish	409,948	319,096	336,104	358,539	341,108	355,520	319,164	285,849	264,936	244,097
Shellfish	213,177	233,606	235,585	253,169	246,166	263,458	256,378	271,042	274,117	281,999
Other	9,589	15,376	17,843	19,496	22,668	13,894	8,722	8,287	8,592	25,901
Key Species										
American lobster	99,155	116,035	125,215	149,134	149,275	147,169	146,379	158,832	136,338	147,023
Atlantic herring	210,784	141,955	174,291	190,558	203,673	197,908	171,779	135,156	104,578	93,100
Atlantic mackerel	39,398	16,904	913	9,680	9,049	12,934	10,140	12,080	12,488	11,958
Bluefin tuna	772	1,201	1,085	914	523	970	1,502	1,664	1,437	1,665
Cod and haddock	32,525	39,249	30,090	14,671	9,042	15,133	15,257	14,237	13,932	16,569
Flounders	16,252	14,564	17,950	18,408	16,367	14,270	12,510	9,143	10,048	7,902
Goosefish	14,260	12,378	14,699	16,406	14,320	14,557	15,272	15,984	21,072	19,314
Quahog clam	1,615	1,782	1,513	1,570	1,558	1,503	1,353	1,354	1,262	1,303
Sea scallop	31,601	32,987	35,339	39,251	32,093	23,470	23,343	24,918	36,503	44,435
Squid	28,014	21,722	27,909	16,155	14,576	28,783	23,698	39,377	35,851	41,235

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
American lobster	3.08	3.43	3.34	2.86	3.06	3.83	4.23	4.20	4.14	4.27
Atlantic herring	0.12	0.15	0.14	0.15	0.15	0.14	0.14	0.21	0.25	0.24
Atlantic mackerel	0.20	0.20	0.32	0.36	0.19	0.24	0.33	0.26	0.27	0.25
Bluefin tuna	5.76	7.05	8.54	9.18	6.98	6.29	5.14	7.17	5.26	5.61
Cod and haddock	1.19	1.27	1.62	2.02	1.80	1.34	1.24	1.35	1.17	1.09
Flounders	1.70	1.92	1.74	1.93	1.99	2.18	2.36	3.10	2.67	2.76
Goosefish	1.00	1.14	1.35	1.20	0.95	0.97	0.96	0.94	0.73	0.63
Quahog clam	5.56	5.45	5.50	5.91	5.82	6.60	8.29	8.81	9.17	9.65
Sea scallop	6.62	8.07	9.99	9.94	11.41	12.69	12.32	12.26	10.20	9.25
Squid	0.60	0.68	0.82	1.13	1.07	0.74	1.02	1.06	0.88	0.95

2018 Economic Impacts of the New England Recreational Fishing Expenditures (thousands of dollars, trips)

	Trips	#Jobs	Sales	Income	Value Added
Connecticut	3,543	5,118	605,892	263,055	422,538
Maine	1,626	1,141	117,379	43,507	71,103
Massachusetts	6,705	7,711	930,950	432,451	636,576
New Hampshire	676	474	48,916	21,349	32,520
Rhode Island	2,553	3,963	419,102	178,640	277,016

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	38,217
Private Boat	252,564
Shore	216,700
Total	507,481

Equipment	Durable Goods Expenditures
Fishing Tackle	349,814
Other Equipment	119,559
Boat Expenses	913,663
Vehicle Expenses	110,671
Second Home Expenses	1,448
Total Durable Expenditures	1,495,159

Total State Trip and Durable Goods Expenditures	2,002,640

Recreational Anglers by Residential Area (thousands of anglers)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	1,222	1,317	1,156	1,171	1,043	1,080	924	1,104	916	832
Non-Coastal	165	169	131	144	100	99	95	94	53	55
Total Anglers	1,387	1,486	1,288	1,316	1,143	1,179	1,018	1,198	969	887

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	490	322	380	374	515	488	348	237	362	277
Private	8,331	8,982	8,888	8,347	7,962	7,552	7,017	6,625	6,580	5,944
Shore	15,053	15,550	14,004	13,818	11,272	10,690	9,581	10,620	9,808	8,883
Total Trips	23,874	24,855	23,271	22,538	19,749	18,730	16,945	17,482	16,750	15,104

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Atlantic cod	H	726	957	967	690	842	408	59	167	87	16
	R	1,670	2,350	1,684	991	1,799	1,168	1,074	1,787	2,226	1,173
Atlantic mackerel	H	6,150	16,156	15,554	10,443	9,986	8,440	15,579	16,577	17,301	9,452
	R	1,080	1,447	1,867	1,456	716	1,253	3,194	2,027	3,138	1,779
Bluefin tuna	H	15	2	6	12	< 1	14	2	12	14	3
	R	7	< 1	11	5	< 1	< 1	7	7	55	< 1
Bluefish	H	1,658	3,279	1,799	4,744	5,720	2,383	1,293	1,676	1,601	614
	R	4,247	4,809	5,033	4,819	5,304	4,215	2,781	2,464	2,406	1,189
Little tunny	H	6	6	0	18	3	15	54	70	28	16
	R	95	42	85	202	26	1,034	159	811	285	341
Porgies (scup)	H	2,950	5,405	5,261	5,421	8,170	6,655	4,394	4,693	5,167	8,714
	R	7,890	9,386	7,161	8,249	7,298	6,481	5,325	9,253	9,928	8,048
Striped bass	H	1,097	1,199	1,270	1,347	1,373	930	718	454	607	543
	R	10,285	7,808	6,872	6,635	10,837	8,942	8,971	11,905	23,539	17,602
Summer flounder	H	281	568	663	592	844	878	686	556	342	389
	R	1,566	1,854	3,143	2,138	2,765	3,101	1,947	2,153	1,705	1,806
Winter flounder	H	345	287	431	162	115	178	194	83	317	145
	R	338	187	305	73	53	134	214	296	133	61
Wrasses (tautog)	H	820	798	294	849	1,087	1,199	873	730	995	483
	R	1,513	1,488	1,369	2,481	3,081	5,498	3,045	3,124	3,906	3,420

[1] Connecticut and Rhode Island anglers estimates are not available for the non-coastal mode.
[2] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[3] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.

Tables | Connecticut

2018 Economic Impacts of the Connecticut Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	3,583	720	147	248	707	49	17	23
Commercial Harvesters	365	25	7	11	365	25	7	11
Seafood Processors & Dealers	141	17	7	8	45	5	2	3
Importers	1,759	569	91	173	0	0	0	0
Seafood Wholesalers & Distributors	250	47	15	21	14	3	1	1
Retail	1,068	62	27	35	283	16	7	9

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	15,008	16,096	20,031	21,128	14,629	14,090	15,782	15,006	13,808	16,540
Finfish	3,109	3,700	4,817	5,467	5,122	4,375	5,404	4,467	4,118	4,837
Shellfish	11,899	12,397	15,213	15,662	9,506	9,715	10,378	10,539	9,690	11,703
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
American lobster	1,763	1,894	943	1,057	577	608	1,073	1,298	725	629
Goosefish	591	564	976	1,040	1,022	510	680	468	360	334
Loligo squid	260	473	694	1,861	1,257	1,354	1,631	2,199	996	2,246
Other flounders	84	40	25	62	182	88	161	250	168	312
Red hake	1,011	1,341	1,617	1,380	1,301	1,586	1,164	916	647	943
Scups or porgies	196	272	408	837	705	573	819	779	559	631
Sea scallop	8,952	9,458	13,007	12,005	7,220	7,219	7,039	5,881	7,205	7,727
Silver hake	137	76	89	88	115	104	112	109	88	61
Summer flounder	650	850	1,005	940	902	921	1,078	808	674	857
Whelks and conchs	796	452	482	625	295	347	487	997	585	1,019

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	6,569	6,699	7,403	8,940	7,957	7,510	9,390	12,148	10,170	11,473
Finfish	4,155	4,410	5,218	5,756	5,874	5,208	7,110	9,234	8,325	8,619
Shellfish	2,414	2,288	2,186	3,184	2,082	2,302	2,280	2,914	1,845	2,854
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
American lobster	412	442	199	248	127	127	205	254	130	111
Goosefish	546	358	630	765	967	493	605	432	398	532
Loligo squid	256	366	498	1,518	1,098	1,318	1,317	1,823	650	1,346
Other flounders	53	24	16	36	138	57	81	105	71	155
Red hake	1,881	1,973	2,041	1,848	1,647	2,037	1,320	948	746	1,010
Scups or porgies	204	324	644	907	1,195	811	983	942	748	793
Sea scallop	1,386	1,260	1,318	1,231	640	609	577	530	777	877
Silver hake	310	176	158	185	173	167	146	164	133	138
Summer flounder	251	308	401	315	284	253	287	191	135	177
Whelks and conchs	229	115	82	94	81	103	81	211	194	448

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
American lobster	4.27	4.29	4.74	4.26	4.53	4.78	5.23	5.10	5.57	5.69
Goosefish	1.08	1.58	1.55	1.36	1.06	1.04	1.12	1.08	0.90	0.63
Loligo squid	1.01	1.29	1.39	1.23	1.15	1.03	1.24	1.21	1.53	1.67
Other flounders	1.57	1.67	1.56	1.72	1.32	1.55	1.98	2.39	2.38	2.01
Red hake	0.54	0.68	0.79	0.75	0.79	0.78	0.88	0.97	0.87	0.93
Scups or porgies	0.96	0.84	0.63	0.92	0.59	0.71	0.83	0.83	0.75	0.80
Sea scallop	6.46	7.51	9.87	9.75	11.29	11.85	12.20	11.09	9.27	8.81
Silver hake	0.44	0.43	0.56	0.47	0.66	0.62	0.77	0.66	0.66	0.44
Summer flounder	2.59	2.76	2.50	2.98	3.18	3.63	3.76	4.23	5.01	4.83
Whelks and conch	3.47	3.94	5.91	6.67	3.65	3.37	6.04	4.72	3.01	2.27

2018 Economic Impacts of Connecticut Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	58	6,434	2,529	4,164
	Private Boat	377	48,290	20,275	36,664
	Shore	409	46,189	19,961	36,619
Total Durable Expenditures		4,274	504,979	220,290	345,091
Total State Economic Impacts		5,118	605,892	263,055	422,538

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	4,423
Private Boat	57,655
Shore	44,976
Total	107,054

Equipment	Durable Goods Expenditures
Fishing Tackle	101,162
Other Equipment	27,310
Boat Expenses	294,101
Vehicle Expenses	21,559
Second Home Expenses	0
Total Durable Expenditures	444,133

Total State Trip and Durable Goods Expenditures	551,187

Recreational Anglers by Residential Area (thousands of anglers)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	438	402	420	397	198	209	252	297	296	292
Non-Coastal	0	0	0	0	0	0	0	0	0	0
Out-of-State	93	112	98	67	43	64	57	88	102	96
Total Anglers	531	514	518	464	240	273	309	385	398	389

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	43	42	45	27	64	62	77	38	36	38
Private	1,567	1,807	1,688	1,776	1,730	1,693	1,576	1,629	1,337	1,422
Shore	1,777	1,847	1,746	1,931	1,712	1,885	2,192	2,563	2,565	2,083
Total Trips	3,388	3,696	3,479	3,734	3,506	3,641	3,844	4,230	3,937	3,543

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1,2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Atlantic cod	H	NA	NA	NA	2	NA	NA	NA	19	2	2
	R	NA	NA	NA	0	NA	NA	NA	12	< 1	< 1
Bluefish	H	564	1,482	697	1,399	3,476	1,179	501	554	586	312
	R	654	1,552	1,958	1,495	1,594	1,062	890	818	1,763	505
Hickory shad	H	0	4	65	61	15	92	0	36	19	2
	R	1	0	0	0	4	29	7	40	22	40
Little tunny	H	0	2	0	< 1	NA	2	0	< 1	14	3
	R	68	15	20	105	NA	17	3	45	50	158
Porgies (scup)	H	767	2,217	1,940	1,840	1,879	1,189	1,198	1,352	1,695	3,071
	R	2,484	2,305	1,170	2,052	2,775	2,729	1,814	3,288	4,646	3,029
Striped bass	H	100	170	91	137	270	132	141	63	95	85
	R	2,427	1,416	1,571	892	2,312	740	1,761	1,208	4,994	7,514
Summer flounder	H	62	73	99	135	529	281	252	338	121	153
	R	614	801	778	650	1,684	1,544	1,075	1,409	811	877
White perch	H	135	NA	0	50	0	9	< 1	22	114	0
	R	144	NA	2	115	6	26	< 1	29	5	37
Winter flounder	H	20	39	44	52	0	1	45	1	< 1	2
	R	9	33	2	29	8	1	83	7	< 1	< 1
Wrasses (tautog)	H	357	274	42	411	307	516	389	312	218	75
	R	337	576	72	1,287	1,276	2,908	1,260	1,809	1,472	1,014

[1] 'NA' = not available.
[2] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[3] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.

2017 Connecticut State Economy (% of national total)[1]

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
281,453 (1.1%)	89,574 (1.1%)	1,536,858 (1.2%)	95.8 (1.4%)	139 (1.3%)	266	ds

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	17	17	14	13	25	26	25	22	19
	Receipts	2,550	1,518	1,066	882	3,058	3,969	2,692	1,635	1,397
Seafood sales, retail	Firms	23	25	21	21	20	18	19	33	26
	Receipts	2,142	2,473	2,165	1,388	1,543	1,655	1,813	3,965	2,520

Seafood Sales and Processing — Employer Establishments (thousands of dollars)[1,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	2	2	2	1	1	1	1	NA	NA
	Employees	ds	ds	ds	ds	ds	ds	ds	NA	NA
	Payroll	ds	ds	ds	ds	ds	ds	ds	NA	NA
Seafood sales, wholesale	Establishments	25	23	24	16	17	19	20	18	17
	Employees	212	216	212	187	178	172	211	158	153
	Payroll	8,842	9,219	9,224	8,237	7,920	8,174	20,558	18,205	6,966
Seafood sales, retail	Establishments	36	39	37	37	36	35	34	32	33
	Employees	205	204	171	233	218	244	230	261	230
	Payroll	5,551	5,563	4,824	6,349	6,344	7,380	7,533	8,742	8,264

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[1,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	13	12	11	8	7	9	8	10	9
	Employees	ds	ds	ds	ds	ds	ds	ds	0	0
	Payroll	ds	ds	ds	ds	ds	ds	ds	0	0
Deep Sea Freight Transportation	Establishments	12	10	11	14	11	11	11	12	10
	Employees	222	225	225	297	184	ds	164	162	146
	Payroll	45,045	29,407	41,302	37,711	28,513	26,891	26,880	27,211	25,371
Deep Sea Passenger Transportation	Establishments	1	1	1	1	NA	NA	NA	1	NA
	Employees	ds	ds	ds	ds	NA	NA	NA	0	NA
	Payroll	ds	ds	ds	ds	NA	NA	NA	0	NA
Coastal and Great Lakes Freight Transportation	Establishments	5	6	5	10	9	9	9	8	8
	Employees	ds	ds	95	256	ds	ds	216	232	298
	Payroll	ds	8,148	7,856	32,789	ds	ds	27,698	34,550	37,814
Port and Harbor Operations	Establishments	8	6	5	4	5	5	5	4	3
	Employees	166	122	34	ds	ds	ds	22	19	0
	Payroll	5,787	2,162	848	1,414	ds	ds	1,142	1,465	0
Marine Cargo Handling	Establishments	3	3	3	NA	1	1	1	2	4
	Employees	ds	ds	ds	NA	ds	ds	ds	0	0
	Payroll	ds	ds	ds	NA	ds	ds	ds	0	0
Navigational Services to Shipping	Establishments	6	6	5	2	2	4	3	1	3
	Employees	5	ds	5	ds	ds	3	2	0	4
	Payroll	696	242	898	ds	ds	185	159	0	175
Marinas	Establishments	126	129	128	130	130	128	125	125	116
	Employees	1,261	1,284	1,283	1,257	1,265	1,174	1,153	1,193	1,167
	Payroll	58,065	58,877	59,851	60,803	63,211	59,054	59,526	62,504	51,217

[1] ds = Data are suppressed.
[2] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[3] NA = Not applicable.

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2018 Economic Impacts of the Maine Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	40,280	3,269	952	1,427	32,950	1,987	682	978
Commercial Harvesters	16,034	1,077	295	482	16,034	1,077	295	482
Seafood Processors & Dealers	3,076	251	101	129	2,476	202	81	104
Importers	3,171	1,026	164	313	0	0	0	0
Seafood Wholesalers & Distributors	1,595	178	64	83	931	104	37	49
Retail	16,403	736	328	420	13,508	604	268	344

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	284,311	380,695	410,855	450,968	474,227	549,291	586,762	623,344	516,685	569,040
Finfish	15,427	16,393	29,728	63,649	57,450	35,030	33,872	29,940	25,862	25,110
Shellfish	260,917	350,301	368,259	373,965	404,477	500,012	544,175	577,993	477,538	528,567
Other	7,967	14,002	12,868	13,354	12,301	14,249	8,715	15,410	13,285	15,363
Key Species										
American lobster	237,374	318,299	334,702	342,529	371,078	461,851	502,565	541,318	439,305	491,578
Atlantic herring	7,867	8,966	14,396	14,494	15,492	16,212	13,526	19,488	17,768	16,701
Bloodworms	6,196	5,893	5,847	5,191	5,644	6,085	6,333	6,585	6,444	6,659
Blue mussel	2,192	2,074	1,969	1,930	2,341	2,153	2,458	2,422	2,126	2,738
Cod and haddock	1,752	1,520	1,653	1,337	951	1,267	1,069	886	770	978
Goosefish	526	393	578	1,059	773	566	616	459	623	675
Ocean quahog clam	1,821	1,721	2,117	1,737	1,378	1,238	1,311	1,299	1,203	1,072
Pollock	2,047	1,502	1,929	2,527	2,562	2,878	1,965	1,663	1,182	988
Sea urchins	NA	5,490	5,113	5,024	5,781	5,282	NA	6,619	6,118	6,211
Softshell clam	11,731	13,025	15,944	15,668	18,104	20,233	22,841	16,231	12,347	12,922

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	177,086	198,469	244,852	259,895	263,325	257,873	230,483	234,860	201,564	227,845
Finfish	72,219	64,932	102,834	100,141	105,782	111,254	92,768	86,930	72,913	72,449
Shellfish	95,278	118,161	124,217	140,290	136,234	132,762	130,303	139,700	120,059	129,538
Other	9,589	15,376	17,802	19,464	21,309	13,857	7,412	8,231	8,592	25,858
Key Species										
American lobster	81,124	96,244	104,957	127,464	128,016	124,941	122,686	132,750	112,170	121,227
Atlantic herring	64,606	58,753	97,066	92,528	98,769	103,530	86,441	78,425	65,485	62,272
Bloodworms	574	534	526	457	470	448	401	413	403	415
Blue mussel	2,732	2,589	2,810	2,427	2,282	2,270	2,401	1,745	1,233	1,674
Cod and haddock	1,401	869	835	536	400	685	658	489	449	747
Goosefish	603	404	533	1,075	874	633	740	542	883	1,149
Ocean quahog clam	556	549	645	698	557	438	416	367	346	295
Pollock	3,040	1,640	2,325	2,666	2,227	2,319	1,381	1,049	848	818
Sea urchins	NA	2,592	2,407	1,904	1,988	1,958	NA	2,058	1,956	2,045
Softshell clam	1,910	2,087	2,383	2,260	2,297	2,080	1,891	1,560	1,411	1,468

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
American lobster	2.93	3.31	3.19	2.69	2.90	3.70	4.10	4.08	3.92	4.06
Atlantic herring	0.12	0.15	0.15	0.16	0.16	0.16	0.16	0.25	0.27	0.27
Bloodworms	10.79	11.03	11.12	11.36	12.00	13.59	15.80	15.93	15.99	16.04
Blue mussel	0.80	0.80	0.70	0.80	1.03	0.95	1.02	1.39	1.73	1.64
Cod and haddock	1.25	1.75	1.98	2.50	2.38	1.85	1.62	1.81	1.72	1.31
Goosefish	0.87	0.97	1.09	0.99	0.88	0.89	0.83	0.85	0.71	0.59
Ocean quahog clam	3.27	3.13	3.28	2.49	2.47	2.82	3.15	3.54	3.48	3.63
Pollock	0.67	0.92	0.83	0.95	1.15	1.24	1.42	1.58	1.39	1.21
Sea urchins	NA	2.12	2.12	2.64	2.91	2.70	NA	3.22	3.13	3.04
Softshell clam	6.14	6.24	6.69	6.93	7.88	9.73	12.08	10.40	8.75	8.81

[1] 'NA' = these data are confidential and therefore not disclosable.

2018 Economic Impacts of Maine Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	94	8,729	3,037	5,075
	Private Boat	122	14,425	4,839	8,144
	Shore	495	52,640	19,293	31,620
Total Durable Expenditures		430	41,586	16,338	26,265
Total State Economic Impacts		1,141	117,379	43,507	71,103

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	5,289
Private Boat	13,851
Shore	38,777
Total	57,917

Equipment	Durable Goods Expenditures
Fishing Tackle	12,548
Other Equipment	4,565
Boat Expenses	21,775
Vehicle Expenses	196
Second Home Expenses	0
Total Durable Expenditures	39,085

Total State Trip and Durable Goods Expenditures	97,002

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	117	122	85	116	102	79	67	114	114	57
Non-Coastal	12	9	7	6	4	5	4	13	10	2
Out-of-State	324	159	107	126	129	129	74	110	145	71
Total Anglers	453	290	198	248	235	213	145	237	269	130

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	28	24	23	23	30	27	23	17	16	29
Private	947	857	892	788	821	711	660	664	650	575
Shore	1,663	1,177	856	958	1,045	1,239	1,022	1,268	1,082	1,022
Total Trips	2,637	2,058	1,771	1,768	1,896	1,976	1,705	1,948	1,748	1,626

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1,2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
American shad	H	2	0	0	0	0	6	6	4	4	4
	R	42	20	15	43	5	0	50	20	40	41
Atlantic cod	H	77	21	98	48	110	70	3	4	< 1	< 1
	R	57	97	309	207	157	147	225	148	127	82
Atlantic mackerel	H	3,462	3,402	5,416	3,917	2,268	2,331	3,172	4,929	1,934	2,698
	R	625	643	1,215	739	214	603	488	963	215	154
Blue shark	H	0	NA	0	0	0	0	0	0	NA	0
	R	3	NA	24	7	36	20	35	2	NA	10
Bluefin tuna	H	0	0	0	0	0	0	0	0	0	0
	R	0	0	0	0	0	0	0	0	0	0
Bluefish	H	10	26	2	22	67	< 1	1	< 1	< 1	NA
	R	58	22	10	144	65	0	0	< 1	0	NA
Haddock	H	18	5	25	6	13	9	36	45	62	98
	R	2	10	8	30	94	212	122	166	182	88
Pollock	H	143	133	206	122	267	371	194	82	123	139
	R	99	289	493	291	839	441	310	206	134	239
Striped bass	H	146	37	49	31	73	86	14	14	22	16
	R	674	522	453	657	985	1,023	824	2,162	2,719	2,174
Winter flounder	H	0	NA	NA	NA	0	0	NA	0	12	NA
	R	23	NA	NA	NA	2	17	NA	47	0	NA

[1] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[2] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.
[3] 'NA' = not available.

2017 Maine State Economy (% of national total)

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[1]
116,299 (0.5%)	41,622 (0.5%)	513,745 (0.4%)	22.3 (0.3%)	35.6 (0.3%)	62.5	26.82

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	63	59	51	51	36	37	32	31	32
	Receipts	6,605	4,480	3,077	3,294	2,757	4,142	2,583	3,070	2,715
Seafood sales, retail	Firms	48	47	48	46	49	57	50	47	54
	Receipts	4,882	5,835	4,608	4,492	4,200	4,664	5,848	7,586	5,814

Seafood Sales and Processing — Employer Establishments (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	25	27	28	29	28	30	32	27	22
	Employees	545	594	500	492	376	546	552	509	494
	Payroll	10,427	12,851	10,353	12,011	11,797	18,713	18,506	18,774	16,933
Seafood sales, wholesale	Establishments	164	164	152	136	150	142	146	150	146
	Employees	1,126	1,153	1,109	1,047	1,340	1,047	1,123	1,174	1,165
	Payroll	37,687	39,915	38,412	40,734	46,782	40,392	42,337	49,043	52,014
Seafood sales, retail	Establishments	49	51	51	48	51	54	60	59	53
	Employees	152	176	177	215	243	235	237	229	209
	Payroll	4,481	5,126	5,108	6,902	7,618	7,558	9,601	9,162	9,890

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	82	75	76	76	79	84	84	83	82
	Employees	ds	ds	ds	ds	ds	ds	6,654	7,091	6,787
	Payroll	ds	ds	ds	ds	ds	ds	418,591	422,525	397,918
Deep Sea Freight Transportation	Establishments	1	1	NA	NA	NA	NA	NA	NA	NA
	Employees	ds	ds	NA	NA	NA	NA	NA	NA	NA
	Payroll	ds	ds	NA	NA	NA	NA	NA	NA	NA
Deep Sea Passenger Transportation	Establishments	1	1	1	NA	NA	NA	NA	NA	NA
	Employees	ds	ds	ds	NA	NA	NA	NA	NA	NA
	Payroll	ds	ds	ds	NA	NA	NA	NA	NA	NA
Coastal and Great Lakes Freight Transportation	Establishments	4	4	4	3	3	3	3	3	3
	Employees	22	28	ds	ds	ds	ds	17	0	0
	Payroll	1,037	1,067	1,105	ds	ds	ds	1,071	0	0
Port and Harbor Operations	Establishments	1	1	1	6	3	3	3	3	4
	Employees	ds	ds	ds	ds	2	ds	4	0	0
	Payroll	ds	ds	ds	ds	130	113	142	0	0
Marine Cargo Handling	Establishments	3	2	2	1	2	2	2	4	3
	Employees	ds	ds	ds	ds	ds	ds	ds	20	0
	Payroll	ds	ds	ds	ds	ds	ds	ds	1,857	0
Navigational Services to Shipping	Establishments	14	13	13	13	14	14	13	13	15
	Employees	93	68	63	65	86	75	77	65	61
	Payroll	5,369	4,928	4,776	4,730	5,660	5,243	4,752	3,852	4,477
Marinas	Establishments	89	86	84	80	79	79	80	79	77
	Employees	376	395	349	428	403	435	430	471	376
	Payroll	14,654	14,699	15,426	17,102	17,476	19,694	20,400	22,618	18,912

[1] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[2] ds = Data are suppressed.
[3] NA = Not applicable.

Tables | Massachusetts

2018 Economic Impacts of the Massachusetts Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	143,902	16,047	3,941	6,132	70,370	3,112	1,163	1,572
Commercial Harvesters	12,727	1,145	368	538	12,727	1,145	368	538
Seafood Processors & Dealers	15,262	2,305	879	1,143	3,446	521	198	258
Importers	30,030	9,719	1,558	2,963	0	0	0	0
Seafood Wholesalers & Distributors	5,355	991	324	440	1,291	239	78	106
Retail	80,527	1,887	812	1,049	52,906	1,208	518	670

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	399,754	474,426	559,432	602,238	550,151	519,265	523,428	539,596	603,799	630,938
Finfish	113,465	125,288	131,956	125,317	92,433	101,653	97,619	99,337	95,342	82,851
Shellfish	286,289	349,139	427,418	476,877	456,230	417,556	424,279	440,181	508,456	548,042
Other	0	0	58	44	1,489	55	1,530	78	0	46
Key Species										
American lobster	42,732	50,384	53,365	53,360	58,663	68,336	78,290	82,383	81,193	88,844
Atlantic herring	15,062	10,251	8,802	11,529	10,750	9,432	8,787	7,589	7,019	5,069
Atlantic mackerel	4,528	1,487	137	654	1,223	2,421	1,952	2,600	2,775	1,579
Cod and haddock	33,690	45,206	43,379	25,847	14,037	18,065	17,433	17,735	15,131	16,477
Eastern oyster	6,415	8,227	9,080	12,072	13,896	19,575	22,679	22,512	28,387	28,387
Flounders	19,715	20,048	22,124	25,191	20,780	18,183	18,118	18,317	18,505	14,762
Goosefish	9,906	9,922	13,429	13,578	8,869	10,028	10,251	11,291	11,833	8,453
Ocean quahog clam	10,710	8,974	NA	NA	NA	9,814	9,063	NA	10,719	NA
Other clams	10,074	11,971	14,424	20,026	23,675	22,221	22,769	24,017	25,056	25,364
Sea scallop	197,208	252,292	330,954	364,902	334,221	271,373	264,741	281,191	331,278	373,829

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	355,068	279,416	247,948	277,056	245,137	269,720	259,446	228,578	241,549	222,495
Finfish	277,955	200,538	178,835	192,544	162,558	180,416	168,147	147,647	138,607	124,349
Shellfish	77,113	78,878	69,073	84,480	81,220	89,267	89,989	80,875	102,942	98,122
Other	0	0	41	32	1,359	37	1,310	57	0	24
Key Species										
American lobster	11,790	12,772	13,385	14,486	15,159	15,313	16,450	17,785	16,493	17,697
Atlantic herring	133,531	71,922	66,970	81,781	74,992	77,873	70,888	47,149	31,687	27,078
Atlantic mackerel	30,199	12,156	515	4,131	7,279	10,755	7,059	10,556	10,403	7,534
Cod and haddock	28,569	36,457	27,153	13,028	8,107	13,977	14,393	13,445	13,280	15,378
Eastern oyster	159	213	227	308	328	444	504	494	618	651
Flounders	12,389	11,170	13,707	14,264	11,541	9,050	8,412	6,144	7,456	6,178
Goosefish	10,020	8,887	10,142	11,567	9,498	10,533	11,084	12,476	17,181	14,034
Ocean quahog clam	18,691	15,645	NA	NA	NA	13,422	13,340	NA	14,190	NA
Other clams	5,488	9,052	12,514	18,378	21,787	20,195	19,567	20,390	19,246	17,895
Sea scallop	29,769	31,160	33,093	36,722	29,253	21,316	21,491	22,844	32,488	40,382

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
American lobster	3.62	3.94	3.99	3.68	3.87	4.46	4.76	4.63	4.92	5.02
Atlantic herring	0.11	0.14	0.13	0.14	0.14	0.12	0.12	0.16	0.22	0.19
Atlantic mackerel	0.15	0.12	0.27	0.16	0.17	0.23	0.28	0.25	0.27	0.21
Cod and haddock	1.18	1.24	1.60	1.98	1.73	1.29	1.21	1.32	1.14	1.07
Eastern oyster	40.28	38.64	39.99	39.19	42.41	44.12	44.98	45.58	45.96	43.63
Flounders	1.59	1.79	1.61	1.77	1.80	2.01	2.15	2.98	2.48	2.39
Goosefish	0.99	1.12	1.32	1.17	0.93	0.95	0.92	0.90	0.69	0.60
Ocean quahog clam	0.57	0.57	NA	NA	NA	0.73	0.68	NA	0.76	NA
Other clams	1.84	1.32	1.15	1.09	1.09	1.10	1.16	1.18	1.30	1.42
Sea scallop	6.62	8.10	10.00	9.94	11.43	12.73	12.32	12.31	10.20	9.26

[1] 'NA' = these data are confidential and therefore not disclosable.

2018 Economic Impacts of Massachusetts Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	268	29,399	11,433	18,819
	Private Boat	882	112,021	55,005	76,728
	Shore	1,128	131,062	65,719	93,652
Total Durable Expenditures		5,433	658,468	300,294	447,377
Total State Economic Impacts		7,711	930,950	432,451	636,576

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	18,065
Private Boat	146,424
Shore	96,460
Total	260,950

Equipment	Durable Goods Expenditures
Fishing Tackle	148,463
Other Equipment	61,090
Boat Expenses	400,137
Vehicle Expenses	70,677
Second Home Expenses	572
Total Durable Expenditures	680,939

Total State Trip and Durable Goods Expenditures	941,889

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	489	586	490	502	546	582	428	476	350	335
Non-Coastal	144	152	115	130	77	82	85	73	38	45
Out-of-State	421	433	293	309	275	532	199	289	211	169
Total Anglers	1,054	1,171	897	941	898	1,196	711	837	599	550

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	251	151	197	227	260	238	117	95	224	130
Private	4,448	5,027	4,721	4,380	3,898	3,695	3,064	3,069	3,390	2,673
Shore	8,253	8,980	8,544	7,614	5,967	4,875	4,102	4,080	4,161	3,903
Total Trips	12,952	14,158	13,462	12,221	10,125	8,808	7,282	7,244	7,775	6,705

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1,2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Atlantic bonito	H	12	4	15	12	0	31	12	1	3	24
	R	2	15	0	< 1	2	42	13	13	< 1	378
Atlantic cod	H	474	782	697	486	544	252	5	56	48	5
	R	1,333	1,969	1,006	533	1,382	806	317	1,145	1,728	605
Atlantic mackerel	H	1,566	12,007	6,911	4,165	5,114	4,334	11,514	9,199	12,295	4,983
	R	315	744	261	403	417	524	2,385	684	2,689	1,414
Bluefish	H	688	1,361	684	977	1,520	739	693	977	595	182
	R	3,064	3,060	1,877	1,808	1,644	2,888	479	1,059	528	532
Haddock	H	361	318	123	189	189	153	74	741	1,465	504
	R	105	63	41	215	583	666	213	2,487	2,048	703
Porgies (scup)	H	1,778	2,349	2,125	2,549	3,783	2,802	1,977	1,791	2,086	3,266
	R	4,193	5,687	4,506	4,527	2,854	2,302	1,906	3,004	3,419	3,223
Striped bass	H	695	808	873	1,011	659	524	485	230	392	389
	R	5,989	5,090	4,036	3,629	4,670	6,425	4,471	6,299	12,866	5,377
Summer flounder	H	91	149	184	233	80	256	213	106	65	67
	R	171	460	594	560	144	643	242	267	110	138
Winter flounder	H	285	237	365	110	115	168	134	71	285	126
	R	292	134	299	35	40	101	113	230	125	52
Wrasses (tautog)	H	66	154	173	96	240	444	188	74	636	78
	R	384	533	817	348	1,012	2,168	670	261	1,889	399

[1] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[2] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.

2017 Massachusett State Economy (% of national total)[1]

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
559,925 (2.2%)	179,828 (2.3%)	3,316,716 (2.6%)	217 (3.2%)	306 (3%)	537	ds

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	22	27	36	25	28	33	38	38	40
	Receipts	1,943	2,082	2,433	1,699	1,857	2,356	4,474	3,800	4,462
Seafood sales, retail	Firms	64	61	66	65	51	56	52	46	53
	Receipts	7,686	6,287	7,640	5,213	3,842	5,782	5,154	4,566	5,153

Seafood Sales and Processing — Employer Establishments (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	44	44	44	39	40	42	41	37	36
	Employees	2,396	2,159	2,214	1,638	1,755	1,819	1,948	1,967	2,153
	Payroll	119,282	107,635	112,399	74,541	87,153	99,445	108,090	108,850	134,273
Seafood sales, wholesale	Establishments	144	149	141	140	142	130	129	128	133
	Employees	1,542	1,591	2,013	1,841	1,910	1,859	1,808	1,865	1,753
	Payroll	70,864	83,467	94,105	100,801	104,637	101,512	102,009	107,494	108,426
Seafood sales, retail	Establishments	115	112	106	114	114	114	106	107	101
	Employees	542	584	576	576	708	647	641	690	657
	Payroll	15,261	16,495	16,037	15,776	18,304	19,516	20,201	21,909	21,734

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[1,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	38	37	37	40	41	43	39	38	34
	Employees	579	535	445	446	463	623	576	525	495
	Payroll	20,685	20,196	22,066	23,195	23,615	31,451	31,153	30,808	28,965
Deep Sea Freight Transportation	Establishments	10	8	7	9	8	9	8	8	8
	Employees	ds	313	381	ds	ds	ds	ds	0	0
	Payroll	35,473	36,069	38,797	ds	ds	ds	ds	0	0
Deep Sea Passenger Transportation	Establishments	1	NA	NA	NA	NA	NA	NA	NA	NA
	Employees	ds	NA	NA	NA	NA	NA	NA	NA	NA
	Payroll	ds	NA	NA	NA	NA	NA	NA	NA	NA
Coastal and Great Lakes Freight Transportation	Establishments	12	12	10	14	8	12	12	10	7
	Employees	166	ds	ds	ds	22	25	36	34	35
	Payroll	10,011	ds	ds	3,266	1,352	1,478	2,766	3,026	2,542
Port and Harbor Operations	Establishments	4	8	6	5	3	1	1	1	NA
	Employees	66	86	95	35	ds	ds	ds	0	NA
	Payroll	1,323	2,662	3,035	1,519	ds	ds	ds	0	NA
Marine Cargo Handling	Establishments	2	2	2	4	3	3	2	2	NA
	Employees	ds	ds	ds	ds	ds	ds	ds	0	NA
	Payroll	ds	ds	ds	ds	ds	ds	ds	0	NA
Navigational Services to Shipping	Establishments	11	9	9	8	11	9	8	10	16
	Employees	71	150	139	120	94	83	88	106	156
	Payroll	4,342	9,413	6,980	5,965	6,578	6,645	7,311	8,984	10,898
Marinas	Establishments	177	175	176	172	178	177	178	175	176
	Employees	1,188	1,150	1,125	977	1,054	1,161	1,076	1,143	1,230
	Payroll	56,663	57,002	58,251	48,657	55,053	57,797	63,422	67,077	68,756

[1] ds = Data are suppressed.
[2] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[3] NA = Not applicable.

Tables | New Hampshire

2018 Economic Impacts of the New Hampshire Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	5,203	655	165	256	2,690	177	65	89
Commercial Harvesters	980	67	19	30	980	67	19	30
Seafood Processors & Dealers	374	47	19	24	225	28	11	14
Importers	1,181	382	61	117	0	0	0	0
Seafood Wholesalers & Distributors	269	40	14	19	87	13	5	6
Retail	2,399	118	52	68	1,398	69	30	39

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	17,670	20,521	23,427	23,191	20,127	23,239	27,458	33,246	34,995	38,321
Finfish	5,563	5,114	6,131	5,550	2,859	1,855	2,517	2,485	3,126	3,047
Shellfish	12,107	15,407	17,295	17,642	17,268	21,384	24,941	30,761	31,869	35,274
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
American lobster	11,919	14,836	16,343	17,169	16,602	20,751	24,544	30,372	31,723	35,106
Atlantic cod	2,587	2,186	2,500	1,750	546	571	93	109	150	209
Atlantic herring	271	375	208	349	232	NA	586	NA	827	436
Flounder	140	103	102	217	106	NA	156	191	269	198
Goosefish	280	212	207	153	186	NA	351	338	422	355
Haddock	68	29	35	91	20	18	8	14	22	107
Hake	215	237	445	475	373	NA	261	270	186	278
Pollock	1,283	839	1,355	1,224	1,133	860	356	207	189	284
Sea scallop	NA	3	26	143	296	345	398	284	64	154
Spiny dogfish	557	291	451	419	94	NA	NA	NA	178	NA

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	13,441	11,624	12,226	12,069	8,228	6,010	9,924	7,038	10,623	9,132
Finfish	10,095	7,011	7,124	7,500	3,970	1,203	5,171	1,082	4,991	3,015
Shellfish	3,346	4,613	5,103	4,569	4,257	4,807	4,753	5,956	5,632	6,117
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
American lobster	2,987	3,648	3,919	4,229	3,818	4,375	4,722	5,782	5,514	6,083
Atlantic cod	1,984	1,226	1,286	725	230	263	45	55	71	89
Atlantic herring	3,120	2,830	1,514	2,391	1,579	NA	3,999	NA	2,829	1,511
Flounder	87	58	70	133	61	NA	97	86	119	98
Goosefish	250	172	153	126	162	NA	314	331	549	540
Haddock	45	18	19	43	9	10	6	9	18	80
Hake	423	322	587	1,136	393	NA	309	330	267	288
Pollock	2,023	1,041	1,732	1,049	982	629	270	98	108	186
Sea scallop	NA	0	3	12	25	27	31	24	5	12
Spiny dogfish	2,073	1,207	1,643	1,788	508	NA	NA	NA	858	NA

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
American lobster	3.99	4.07	4.17	4.06	4.35	4.74	5.20	5.25	5.75	5.77
Atlantic cod	1.30	1.78	1.94	2.41	2.38	2.17	2.09	1.97	2.11	2.36
Atlantic herring	0.09	0.13	0.14	0.15	0.15	NA	0.15	NA	0.29	0.29
Flounder	1.61	1.78	1.46	1.63	1.74	NA	1.61	2.21	2.27	2.01
Goosefish	1.12	1.23	1.36	1.21	1.15	NA	1.12	1.02	0.77	0.66
Haddock	1.51	1.57	1.91	2.14	2.28	1.74	1.41	1.55	1.26	1.34
Hake	0.51	0.74	0.76	0.42	0.95	NA	0.85	0.82	0.70	0.96
Pollock	0.63	0.81	0.78	1.17	1.15	1.37	1.32	2.12	1.74	1.53
Sea scallop	NA	8.82	10.35	11.68	11.93	12.68	12.83	12.02	13.17	13.19
Spiny dogfish	0.27	0.24	0.27	0.23	0.19	NA	NA	NA	0.21	NA

[1] 'NA' = these data are confidential and therefore not disclosable.

2018 Economic Impacts of New Hampshire Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	74	7,132	2,728	4,313
	Private Boat	65	6,790	3,106	4,531
	Shore	128	12,784	5,101	8,845
Total Durable Expenditures		207	22,210	10,413	14,831
Total State Economic Impacts		474	48,916	21,349	32,520

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures	Equipment	Durable Goods Expenditures
For-Hire	4,683	Fishing Tackle	9,361
Private Boat	8,652	Other Equipment	2,870
Shore	9,928	Boat Expenses	10,551
Total	23,263	Vehicle Expenses	1,099
		Second Home Expenses	0
		Total Durable Expenditures	23,882
Total State Trip and Durable Goods Expenditures			47,145

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	67	46	56	58	68	50	54	69	24	39
Non-Coastal	9	7	10	9	19	11	6	8	4	8
Out-of-State	58	33	30	54	66	58	54	57	19	41
Total Anglers	134	86	96	121	153	120	115	134	48	88

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	108	65	76	55	114	110	82	38	51	38
Private	313	313	341	375	404	395	407	438	430	299
Shore	414	410	393	427	389	449	492	585	492	339
Total Trips	835	788	810	858	906	954	981	1,061	972	676

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1,2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Atlantic cod	H	170	148	165	97	188	66	3	12	32	< 1
	R	273	247	333	248	259	209	499	423	370	482
Atlantic mackerel	H	1,122	746	3,227	2,360	2,537	1,768	880	2,431	3,031	1,753
	R	141	60	391	312	51	125	315	362	232	208
Bluefin tuna	H	< 1	0	0	< 1	NA	NA	NA	NA	NA	< 1
	R	< 1	< 1	3	0	NA	NA	NA	NA	NA	0
Bluefish	H	< 1	4	1	33	0	2	8	< 1	NA	NA
	R	13	3	3	16	< 1	9	0	0	NA	NA
Bottomfish, unidentified	H	0	0	0	0	0	0	0	0	0	0
	R	0	0	0	0	0	0	0	0	0	0
Haddock	H	120	75	94	101	107	104	153	195	165	263
	R	37	18	25	177	404	582	1,062	553	441	314
Pollock	H	57	135	186	119	228	268	149	213	258	87
	R	59	197	243	282	469	459	1,273	294	321	147
Striped bass	H	17	21	54	37	63	17	10	18	38	13
	R	124	161	191	164	295	316	262	819	1,418	356
Unidentified flounder[4]	H	0	0	0	1	0	0	NA	0	0	0
	R	< 1	5	3	2	10	< 1	NA	3	5	< 1
Winter flounder	H	20	5	21	< 1	0	8	15	8	11	17
	R	9	17	4	5	3	13	18	12	8	9

[1] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[2] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.
[3] 'NA' = not available.
[4] Unidentified flounder include flatfish order and unidentified flounder or sole.

2017 New Hampshire State Economy (% of national total)[1]

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
107,083 (0.4%)	38,371 (0.5%)	603,923 (0.5%)	30.6 (0.5%)	45.0 (0.4%)	82.0	ds

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)[1]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	ds	3	7	7	6	6	4	4	5
	Receipts	ds	687	856	1,166	1,239	1,019	1,411	1,435	1,416
Seafood sales, retail	Firms	14	11	11	12	15	15	9	8	9
	Receipts	1,870	1,502	2,152	2,096	1,861	2,419	1,722	899	1,134

Seafood Sales and Processing — Employer Establishments (thousands of dollars)[1]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	8	8	8	8	7	6	8	6	5
	Employees	115	292	231	229	225	ds	182	0	0
	Payroll	3,234	10,971	12,010	12,181	13,751	ds	11,160	0	0
Seafood sales, wholesale	Establishments	8	8	7	8	9	8	9	9	9
	Employees	88	80	84	99	113	106	108	95	100
	Payroll	4,268	4,171	4,123	5,738	4,562	4,271	4,543	5,480	5,863
Seafood sales, retail	Establishments	14	12	16	9	9	9	9	9	7
	Employees	95	102	88	48	45	ds	57	58	138
	Payroll	2,299	2,296	1,934	870	966	1,699	1,659	1,397	2,900

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[1,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	8	7	7	7	7	8	6	7	6
	Employees	ds	ds	ds	ds	ds	ds	181	190	174
	Payroll	ds	ds	ds	ds	ds	ds	9,800	9,413	11,357
Deep Sea Freight Transportation	Establishments	1	1	1	1	1	1	NA	NA	NA
	Employees	ds	ds	ds	ds	ds	ds	NA	NA	NA
	Payroll	ds	ds	ds	ds	ds	ds	NA	NA	NA
Coastal and Great Lakes Freight Transportation	Establishments	NA	NA	NA	1	NA	NA	NA	NA	NA
	Employees	NA	NA	NA	ds	NA	NA	NA	NA	NA
	Payroll	NA	NA	NA	ds	NA	NA	NA	NA	NA
Port and Harbor Operations	Establishments	NA	NA	NA	2	2	1	1	1	NA
	Employees	NA	NA	NA	ds	ds	ds	ds	0	NA
	Payroll	NA	NA	NA	ds	ds	ds	ds	0	NA
Navigational Services to Shipping	Establishments	2	2	2	3	3	3	3	2	3
	Employees	ds	ds	ds	ds	ds	ds	18	0	0
	Payroll	ds	ds	ds	ds	ds	ds	1,920	0	0
Marinas	Establishments	37	35	34	31	35	35	35	35	31
	Employees	146	135	139	131	155	144	153	162	145
	Payroll	7,022	6,920	7,090	6,927	8,031	8,043	8,788	10,070	9,282

[1] ds = Data are suppressed.
[2] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[3] NA = Not applicable.

Tables | Rhode Island

2018 Economic Impacts of the Rhode Island Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	7,173	952	233	368	3,773	250	92	128
Commercial Harvesters	1,793	126	40	61	1,793	126	40	61
Seafood Processors & Dealers	309	38	15	19	240	29	11	15
Importers	1,802	583	93	178	0	0	0	0
Seafood Wholesalers & Distributors	454	64	23	30	98	14	5	6
Retail	2,816	142	63	81	1,642	81	36	46

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	60,133	60,857	74,870	75,118	84,581	86,413	81,798	94,779	101,840	105,051
Finfish	22,823	22,789	24,857	28,550	29,179	31,815	25,739	23,350	23,512	22,225
Shellfish	37,310	38,067	50,012	46,568	55,403	54,599	56,058	71,429	78,320	82,809
Other	0	0	0	0	0	0	0	0	7	17
Key Species										
American lobster	11,264	12,404	12,765	12,119	9,732	11,709	12,368	11,889	11,016	10,957
Atlantic herring	1,260	1,417	1,343	2,174	4,907	2,303	1,373	1,525	939	572
Atlantic mackerel	3,301	1,886	100	2,804	339	309	1,074	448	286	1,287
Goosefish	3,022	2,973	4,600	3,844	2,725	2,996	2,730	2,486	2,062	2,330
Other flounders	1,439	590	805	1,025	2,125	2,948	1,774	1,465	1,546	626
Quahog clam	2,849	3,293	3,919	5,169	4,727	5,099	5,453	5,612	5,011	4,798
Scups and porgies	2,640	2,833	3,312	3,904	3,666	4,118	4,278	4,053	3,078	2,740
Sea scallop	2,342	2,156	6,834	9,191	18,639	10,273	8,079	10,242	22,785	22,050
Squid	15,249	12,590	20,381	12,744	13,207	17,718	20,288	33,938	28,333	32,571
Summer flounder	4,502	5,534	6,408	6,937	6,751	7,298	6,107	5,480	4,299	4,710

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	80,551	71,870	77,101	73,244	85,295	91,760	75,021	82,554	83,738	81,052
Finfish	45,525	42,205	42,094	52,598	62,922	57,439	45,968	40,957	40,099	35,665
Shellfish	35,026	29,666	35,007	20,646	22,372	34,321	29,053	41,597	43,639	45,369
Other	0	0	0	0	0	0	0	0	0	19
Key Species										
American lobster	2,842	2,929	2,754	2,706	2,156	2,413	2,316	2,260	2,031	1,906
Atlantic herring	9,528	8,449	8,729	13,839	28,330	16,505	10,431	9,539	4,535	2,159
Atlantic mackerel	9,057	4,356	162	5,497	714	539	1,906	1,143	695	3,994
Goosefish	2,841	2,556	3,242	2,873	2,818	2,898	2,529	2,202	2,061	3,059
Other flounders	990	351	614	663	1,367	2,158	1,057	766	938	215
Quahog clam	511	599	666	903	784	764	684	660	546	512
Scups and porgies	3,619	4,298	6,336	6,311	7,346	6,949	6,794	6,809	5,973	4,714
Sea scallop	356	267	690	944	1,646	841	677	897	2,310	2,482
Squid	26,452	19,799	25,997	11,689	12,609	24,938	20,495	32,914	33,776	34,871
Summer flounder	1,794	2,289	2,824	2,409	2,193	2,056	1,716	1,306	896	1,023

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
American lobster	3.96	4.24	4.64	4.48	4.51	4.85	5.34	5.26	5.42	5.75
Atlantic herring	0.13	0.17	0.15	0.16	0.17	0.14	0.13	0.16	0.21	0.26
Atlantic mackerel	0.36	0.43	0.62	0.51	0.47	0.57	0.56	0.39	0.41	0.32
Goosefish	1.06	1.16	1.42	1.34	0.97	1.03	1.08	1.13	1.00	0.76
Other flounders	1.45	1.68	1.31	1.55	1.55	1.37	1.68	1.91	1.65	2.91
Quahog clam	5.58	5.50	5.89	5.72	6.03	6.67	7.98	8.51	9.17	9.37
Scups and porgies	0.73	0.66	0.52	0.62	0.50	0.59	0.63	0.60	0.52	0.58
Sea scallop	6.58	8.07	9.90	9.73	11.32	12.21	11.94	11.42	9.86	8.88
Squid	0.58	0.64	0.78	1.09	1.05	0.71	0.99	1.03	0.84	0.93
Summer flounder	2.51	2.42	2.27	2.88	3.08	3.55	3.56	4.20	4.80	4.61

2018 Economic Impacts of Rhode Island Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	98	9,337	3,682	5,622
	Private Boat	230	24,718	13,075	18,298
	Shore	321	33,395	16,309	24,291
Total Durable Expenditures		3,314	351,652	145,575	228,804
Total State Economic Impacts		3,963	419,102	178,640	277,016

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	5,756
Private Boat	25,982
Shore	26,559
Total	58,297

Equipment	Durable Goods Expenditures
Fishing Tackle	78,280
Other Equipment	23,724
Boat Expenses	187,099
Vehicle Expenses	17,140
Second Home Expenses	876
Total Durable Expenditures	307,120

Total State Trip and Durable Goods Expenditures	365,417

Recreational Anglers by Residential Area (thousands of anglers)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	111	161	105	99	129	160	123	149	132	109
Non-Coastal	0	0	0	0	0	0	0	0	0	0
Out-of-State	209	225	190	169	255	304	175	243	194	233
Total Anglers	320	387	296	268	383	464	298	392	326	342

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	59	41	39	41	47	52	50	49	35	43
Private	1,057	978	1,247	1,028	1,109	1,058	1,310	825	774	974
Shore	2,947	3,136	2,464	2,888	2,159	2,241	1,774	2,124	1,508	1,536
Total Trips	4,063	4,155	3,750	3,957	3,316	3,351	3,134	2,999	2,318	2,553

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[2,3,4]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Atlantic bonito	H	< 1	< 1	NA	< 1	9	1	1	0	10	11
	R	0	0	NA	0	11	9	5	23	< 1	26
Atlantic cod	H	5	6	7	57	< 1	19	49	77	5	9
	R	8	37	36	3	< 1	7	33	59	< 1	3
Black seabass	H	92	346	102	226	166	404	434	508	328	706
	R	533	433	489	2,145	1,623	1,981	1,405	2,319	1,867	2,671
Bluefish	H	395	406	414	2,312	658	463	90	145	419	120
	R	459	173	1,185	1,356	2,000	257	1,412	587	116	152
Porgies (scup)	H	405	839	1,196	1,032	2,508	2,664	1,219	1,551	1,383	2,377
	R	1,213	1,394	1,486	1,670	1,669	1,451	1,604	2,961	1,863	1,796
Striped bass	H	138	162	202	131	308	172	67	128	60	39
	R	1,070	619	621	1,292	2,574	438	1,653	1,416	1,543	2,180
Summer flounder	H	128	346	380	224	235	340	222	113	156	169
	R	780	594	1,772	928	938	910	630	476	784	791
Winter flounder	H	21	5	0	0	NA	< 1	< 1	2	8	< 1
	R	4	3	< 1	3	NA	1	0	< 1	< 1	0
Wrasses (tautog)	H	397	370	79	341	540	239	296	344	141	330
	R	792	378	480	846	793	422	1,113	1,052	545	2,006
Yellowfin tuna	H	NA	NA	NA	NA	13	1	8	< 1	NA	NA
	R	NA	NA	NA	NA	0	0	11	0	NA	NA

[1] Non-coastal data are not available because all of the state's residents are considered coastal county residents.
[2] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[3] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.
[4] 'NA' = not available.

2017 Rhode Island's State Economy (% of national total)[1]

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
80,905 (0.3%)	28,783 (0.4%)	435,978 (0.3%)	20.9 (0.3%)	33.5 (0.3%)	60.7	ds

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	9	6	9	10	8	8	6	6	0
	Receipts	1,045	907	1,168	1,441	1,393	1,418	1,381	1,374	0
Seafood sales, retail	Firms	16	17	25	20	22	16	15	14	16
	Receipts	2,821	2,769	3,033	2,536	2,501	1,331	1,259	1,569	1,059

Seafood Sales and Processing — Employer Establishments (thousands of dollars)[1,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	7	5	4	3	3	3	3	2	NA
	Employees	275	193	178	ds	ds	ds	71	0	NA
	Payroll	5,821	6,096	5,544	ds	ds	ds	2,243	0	NA
Seafood sales, wholesale	Establishments	34	32	34	32	31	28	28	26	22
	Employees	202	204	230	278	182	188	182	164	130
	Payroll	9,534	9,815	10,264	13,064	8,412	8,763	8,140	8,567	7,308
Seafood sales, retail	Establishments	24	26	23	24	24	27	26	24	24
	Employees	127	113	109	111	113	114	113	100	106
	Payroll	2,398	2,309	2,232	2,388	2,610	2,608	2,925	2,932	2,971

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[1,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	33	29	30	37	33	33	33	30	27
	Employees	1,085	954	916	717	768	939	902	757	565
	Payroll	41,246	40,004	33,316	32,070	34,483	42,200	41,096	34,132	28,098
Deep Sea Freight Transportation	Establishments	2	2	2	2	1	1	2	2	NA
	Employees	ds	ds	ds	ds	ds	ds	ds	0	NA
	Payroll	ds	ds	ds	ds	ds	ds	ds	0	NA
Deep Sea Passenger Transportation	Establishments	1	1	1	1	2	3	3	2	NA
	Employees	ds	ds	ds	ds	ds	ds	18	0	NA
	Payroll	ds	ds	ds	ds	ds	ds	1,574	0	NA
Coastal and Great Lakes Freight Transportation	Establishments	1	1	2	1	1	1	1	1	NA
	Employees	ds	ds	ds	ds	ds	ds	ds	0	NA
	Payroll	ds	ds	ds	ds	ds	ds	ds	0	NA
Port and Harbor Operations	Establishments	1	1	1	5	2	3	3	3	3
	Employees	ds	ds	ds	ds	ds	ds	18	14	19
	Payroll	ds	ds	ds	ds	ds	ds	951	813	1,040
Marine Cargo Handling	Establishments	5	5	5	4	4	3	2	3	3
	Employees	ds	ds	ds	ds	ds	ds	ds	244	0
	Payroll	ds	ds	ds	ds	ds	ds	ds	6,495	0
Navigational Services to Shipping	Establishments	8	8	8	7	7	6	6	6	7
	Employees	ds	ds	107	ds	ds	ds	69	81	83
	Payroll	3,728	3,955	4,002	3,272	ds	ds	4,209	3,771	4,578
Marinas	Establishments	70	72	71	67	71	65	72	71	63
	Employees	459	428	460	424	466	449	409	435	375
	Payroll	21,372	22,227	22,618	20,811	24,214	24,876	25,206	26,264	20,323

[1] ds = Data are suppressed.
[2] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[3] NA = Not applicable.

Mid-Atlantic Region

- Delaware
- Maryland
- New Jersey
- New York
- Virginia

A commercial fishing boat docked near shore.
Photo: NOAA Fisheries/Emily Markowitz

MANAGEMENT CONTEXT

The Mid-Atlantic Region includes Delaware, Maryland, New Jersey, New York, and Virginia. Federal fisheries in this region are managed by the Mid-Atlantic Fishery Management Council (MAFMC) and NOAA Fisheries under seven fishery management plans (FMPs). Two of these FMPs are developed in conjunction with the New England Fishery Management Council (NEFMC). The MAFMC is the lead council for the Spiny Dogfish FMP; the NEFMC is the lead for the Monkfish FMP.

Mid-Atlantic Region FMPs

- Atlantic mackerel, squid and butterfish
- Atlantic bluefish
- Spiny dogfish (with the NEFMC)
- Summer flounder, scup and black sea bass
- Surfclam and ocean quahog
- Golden tilefish
- Monkfish (with the NEFMC)

Summer flounder was the only stock/complex in the Mid-Atlantic region listed as experiencing overfishing in 2018. No stock managed by the MAFMC was determined to be overfished in 2018.

Catch Share Programs

Two catch share programs operate in the Mid-Atlantic: 1) Mid-Atlantic Surfclam and Ocean Quahog IFQ Program; and 2) Mid-Atlantic Golden Tilefish IFQ Program. Following is a description of these catch share programs and their performance. The landings revenues for these programs totaled more than $64 million (in inflation-adjusted 2018 dollars) in 2017.

Mid-Atlantic Surfclam and Ocean Quahog IFQ Program: This program was implemented in 1990 to conserve the surfclam and quahog resource and stabilize harvest rates; simplify regulatory requirements to minimize public and private management costs; promote economic efficiency by bringing harvest capacity in line with processing and biological capacity; and create a management approach that is flexible and adaptive to short-term events or circumstances. The performance metrics for the surfclam and ocean quahog fisheries are presented separately here because these fisheries are prosecuted as independent fisheries despite being in the same catch share program. The 2017 key performance indicators of the surfclam program show that relative to the baseline period (the three-year period prior to implementation), landings, the number of active vessels, and inflation-adjusted landings revenue decreased, while quota and inflation-adjusted revenue per active vessel increased.

The 2017 key performance indicators of the quahog program show that relative to the baseline period, quota, landings, the number of active vessels, and inflation-adjusted landings revenue decreased, while inflation-adjusted revenue per active vessel increased.

Mid-Atlantic Golden Tilefish IFQ Program: This program was implemented in 2009 to reduce over-capacity and eliminate problems associated with the race to fish golden tilefish. This IFQ program is unique because many key events occurred outside the traditional management process. Prior to the implementation of the IFQ program, fishermen crafted internal agreements that promoted cooperation. Their cooperative processes helped fishing businesses stay viable under new regulations, which laid the foundation for implementing the IFQ program. The 2017 key performance indicators of the program show that relative to the baseline period (the three-year period prior to implementation), quota, landings, the number of active vessels, and inflation-adjusted landings revenue decreased, while inflation-adjusted revenue per active vessel increased.

COMMERCIAL FISHERIES — MID-ATLANTIC REGION

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. The term does not include subsistence fishermen or saltwater anglers who fish for sport. It also excludes the for-hire sector, which earns its revenue from selling recreational fishing trips to saltwater anglers. The commercial fisheries section reports on economic impacts, landings revenue, landings, and ex-vessel prices of key species/species groups.

Key Mid-Atlantic Region Commercial Species

- American lobster
- Atlantic surf clam
- Blue crab
- Eastern oyster
- Menhaden
- Quahog clam
- Sea scallop
- Squid
- Striped bass
- Summer flounder
- American lobster

Economic Impacts

The premise behind economic impact modeling is that every dollar spent in a regional economy (direct impact) is either saved or re-spent on additional goods or services. If those dollars are re-spent on other goods and services in the regional economy, this spending generates additional economic activity in the region.[1]

Four different measures are commonly used to show how commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. The category includes both the direct sales of fish landed and sales made between businesses and households resulting from the original sale. Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the sales of seafood or purchases of inputs to commercial fishing. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in numbers of jobs. Note that these categories are not additive. The United States seafood industry is defined here as the commercial fishing sector, seafood processors and dealers, seafood wholesalers and distributors, importers, and seafood retailers.[2]

This report provides estimates of total economic impacts for the nation and for each of the 23 coastal states. Total economic impacts for each state and the nation represent the sum of direct impacts; indirect impacts (in this case, the impact from suppliers to the seafood industry); and induced impacts (spending by employees on personal and household expenditures, where employees of both the seafood industry and its full supply chain are included). That is, the total economic impact estimates reported here measure jobs, sales, value-added, and income impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

In 2018, the commercial fishing and seafood industry in New Jersey generated the largest employment impacts in the Mid-Atlantic region with 49,398 full- and part-time jobs. New Jersey also generated the largest sales impacts ($10.3 billion), value-added impacts ($3.6 billion), and income impacts ($2.1 billion).

Landings Revenue

In 2018, landings revenue in the Mid-Atlantic Region totaled $451.2 million, a 7% increase from 2009 (an 8% decrease in real terms after adjusting for inflation) and a 4% decrease from 2017. Landings revenue was highest in Virginia ($177.3 million), followed by New Jersey ($151.9 million).

Shellfish landings revenue accounted for 76% of all landings revenue. In 2018, sea scallop ($120.8 million), blue crab ($84.7 million), and eastern oyster ($52.5 million) had the highest landings revenue in this region. Together, these top three species accounted for 57% of total landings revenue.

From 2009 to 2018, eastern oyster (461%, 383% in real terms), squid (224%, 179% in real terms), and quahog clam (55%, 34% in real terms) had the largest increases, while Atlantic surf clam (-53%, -59% in real terms) and sea scallop (-25%, -36% in real terms) were the only species with landings revenue declines during this period. From 2017 to 2018, Atlantic surf clam (756%), squid (47%), and menhaden (3%) had the largest increases, while striped bass (-18%), eastern oyster (-15%), and American lobster (-15%) had the largest decreases.

[1] Summary data is available online in the FEUS webtool. [Available at: https://www.fisheries.noaa.gov/data-tools/fisheries-economics-united-states-interactive-tool.]
[2] The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates. [Available at: https://www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf.]

Commercial Revenue: Largest Increases

From 2009:
- Eastern oyster (461%, 383% in real terms)
- Squid (224%, 179% in real terms)
- Quahog clam (55%, 34% in real terms)

From 2017:
- Atlantic surf clam (756%)
- Squid (47%)
- Menhaden (3%)

Commercial Revenue: Largest Decreases

From 2009:
- Atlantic surf clam (-53%, -59% in real terms)
- Sea scallop (-25%, -36% in real terms)

From 2017:
- Striped bass (-18%)
- Eastern oyster (-15%)
- American lobster (-15%)

Commercial Landings: Largest Increases

From 2009:
- Squid (374%)
- Eastern oyster (228%)
- Quahog clam (56%)

From 2017:
- Atlantic surf clam (757%)
- Squid (19%)
- Menhaden (3%)

Commercial Landings: Largest Decreases

From 2009:
- Atlantic surf clam (-55%)
- Sea scallop (-48%)
- Striped bass (-44%)

From 2017:
- American lobster (-22%)
- Sea scallop (-12%)
- Striped bass (-9%)

Landings

In 2018, Mid-Atlantic Region commercial fishermen landed over 602 million pounds of finfish and shellfish. This represents a 9% decrease from 2009 and a 5% increase from 2017. Menhaden contributed the highest landings volume in the region, accounting for 67% of total landing weight.

From 2009 to 2018, squid (374%), eastern oyster (228%), and quahog clam (56%) had the largest increases, while Atlantic surf clam (-55%), sea scallop (-48%), and striped bass (-44%) had the largest decreases. From 2017 to 2018, Atlantic surf clam (757%), squid (19%), and menhaden (3%) had the largest increases, while American lobster (-22%), sea scallop (-12%), and striped bass (-9%) had the largest decreases.

Prices

In 2018, eastern oyster ($11.2 per pound) received the highest ex-vessel price in the region. Landings of menhaden ($0.1 per pound) had the lowest ex-vessel price. From 2009 to 2018, summer flounder (112%, 82% in real terms), striped bass (99%, 71% in real terms), and eastern oyster (71%, 48% in real terms) had the largest increases, while squid (-32%, -41% in real terms) and quahog clam (-0.4%, -14% in real terms) had the largest decreases. From 2017 to 2018, squid (24%), American lobster (9%), and sea scallop (0.2%) had the largest increases, while striped bass (-9%), eastern oyster (-8%), and quahog clam (-5%) had the largest decreases.

RECREATIONAL FISHERIES — MID-ATLANTIC REGION

In this report, recreational fishing refers to fishing for leisure rather than to sell fish (commercial fishing) or for subsistence. This recreational fisheries section reports on economic impacts and expenditures, angler participation, fishing trips, and catch of key species/species groups.[3]

[3] Atlantic and Gulf recreational catch and effort estimates are based upon the MRIP estimates released in 2018.

Key Mid-Atlantic Region Recreational Species[4]

- Black sea bass
- Bluefish
- Drum (Atlantic croaker)
- Drum (spot)
- Drum (weakfish)
- Porgies (scup)
- Striped bass
- Summer flounder
- Winter flounder
- Wrasses (tautog)

Economic Impacts and Expenditures

The economic contribution of recreational fishing activities in the Mid-Atlantic Region is based on spending by recreational anglers.[5] Total annual trip expenditures are estimated at the state level by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore) and adjusting by the CPI (consumer price index) to the current year. Total annual durable expenditures are estimated by multiplying mean durable expenditures in each state by the estimated annual number of adult participants for each state and adjusting by the CPI (consumer price index) to the current year.[6]

Four different measures are commonly used to show how angler expenditures affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as recreational fishing. The category includes both the direct sales made by the angler and sales made between businesses and households resulting from that original sale by the angler. Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the purchases made by anglers. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in number of jobs. Note that these categories are not additive. NOAA Fisheries uses a regional impact modeling software, called IMPLAN, to estimate these four types of impacts.

The economic contributions for both trip and durable expenditures from recreational fishing in 2018 were estimated using IMPLAN version 3, with base year data from 2017. Models for each state and for the nation were created in IMPLAN using trip expenditures (based on 2016/2017 survey data on average trip expenditures and total 2018 trips) and for durable expenditures (based on 2014 survey data on average durable expenditures and 2018 participants).

The greatest employment impacts from expenditures on saltwater recreational fishing in the Mid-Atlantic Region were generated in New Jersey (14,395 jobs), followed by New York (10,360 jobs) and Maryland (7,692 jobs). The largest sales impacts were observed in New Jersey ($1.9 billion), followed by New York ($1.1 billion) and Maryland ($839.5 million). The biggest income impacts were generated in New Jersey ($814.7 million), followed by New York ($479.3 million) and Maryland ($334.8 million). The greatest value-added impacts were in New Jersey ($1.3 billion), followed by New York ($817.1 million) and Maryland ($556.1 million).

Expenditures for fishing trips and durable equipment across the Mid-Atlantic Region in 2018 totaled $4.3 billion. This total included $2.8 billion in durable goods expenditures, with the largest portion coming from boat expenses ($1.7 billion).

Participation

In 2018, there were 1.9 million recreational anglers who fished in the Mid-Atlantic Region. This number represented a 27% decrease from 2009 and a 1% increase from 2017. The anglers are categorized as either residents from coastal (94%) or non-coastal (6%) counties.

Fishing Trips

In 2018, recreational fishermen took 39 million fishing trips in the Mid-Atlantic Region. This number represented a 24% decrease from 2009 and a 15% decrease from 2017. The largest proportions of trips were taken in the shore mode (60%) and private boat (38%).

[4] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[5] Trip expenditure estimates were generated from the 2016/2017 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2020). Durable goods expenditures were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2016). [For citations: Publications-Recreational Fisheries Economics Research.]
[6] Summary data is available online in the FEUS webtool. [Available at: https://www.fisheries.noaa.gov/data-tools/fisheries-economics-united-states-interactive-tool.]

States with the highest number of recorded trips in the Mid-Atlantic Region were New Jersey (12.5 million trips) and New York (11.2 million trips).

Harvest and Release Trends

Of the Mid-Atlantic Region's key species and species groups, summer flounder (21.3 million fish), black sea bass (16 million fish), and striped bass (15.5 million fish), were most frequently caught by recreational fishermen. The text box below shows the species with the largest percentage increases and decreases in the past 10 years and in the past year.

From 2009 to 2018, porgies (scup) (37%) had the largest increases, while winter flounder (-84%), drum (Atlantic croaker) (-68%), and bluefish (-55%) had the largest decreases. From 2017 to 2018, winter flounder (119%) had the largest increases, while drum (weakfish) (-51%), bluefish (-49%), and drum (spot) (-48%) had the largest decreases.

Harvest and Release: Largest Increases

From 2009:
- Porgies (scup) (37%)

From 2017:
- Winter flounder (119%)

Harvest and Release: Largest Decreases

From 2009:
- Winter flounder (-84%)
- Drum (Atlantic croaker) (-68%)
- Bluefish (-55%)

From 2017:
- Drum (weakfish) (-51%)
- Bluefish (-49%)
- Drum (spot) (-48%)

MARINE ECONOMY — MID-ATLANTIC REGION

For this report, the marine economy refers to the fishing and marine-related industries in a coastal state. The state marine economy consists of two industry sectors: 1) seafood sales and processing (employer establishments and non-employer firms); and 2) transportation support and marine operations (employer establishments). These sectors include several different marine-related industries.[7]

To measure the size of the commercial fishing sector in a state's economy relative to the size of the commercial fishing sector in the national economy, researchers use an index called the Commercial Fishing Location Quotient (CFLQ).[8] The CFLQ is calculated as the ratio of the percentage of regional employment in the commercial fishing sector relative to the percentage of national employment in the commercial fishing sector. The U.S. CFLQ is 1. If a state CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average.

The Bureau of Labor Statistics suppressed the CFLQ value for Delaware for 2017. Of the remaining states, New Jersey had the highest CFLQ at 0.93. Maryland had a CFLQ value of 0.61.

In 2017, 1.1 million employer establishments operated throughout the entire Mid-Atlantic Region (including marine and non-marine related establishments). These establishments employed 18 million workers and had a total annual payroll of $1.1 trillion. The combined gross state product of Delaware, Maryland, New Jersey, New York, and Virginia was approximately $3.2 trillion in 2017.[9]

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2017, the Mid-Atlantic Region had 380 non-employer firms in the seafood product preparation and packaging sector. Annual receipts for these firms totaled $25.8 million.[10] There were 70 employer firms in this sector (a 4% decrease from 2009). These establishments employed 2,077 workers and had a total annual payroll of $107.1 million.[11] The greatest number of employer and non-employer establishments in this sector was in New York

[7] Unless otherwise stated, data are from the U.S. Census Bureau (https://www.census.gov).
[8] U.S. Bureau of Labor Statistics, 'Location Quotient Calculator.' [For more information: https://www.bls.gov/cew/about-data/location-quotients-explained.htm.]
[9] U.S. Bureau of Economic Analysis. Gross Domestic Product by State, Fourth Quarter and Annual 2017. [Available at https://apps.bea.gov/regional/histdata/releases/0518gdpstate/.]
[10] The Census Bureau suppressed number of firms data for this sector in one or more states in this region in either 2017 or 2009, and thus cannot be compared.
[11] The Census Bureau suppressed number of employees and payroll data for this sector in one or more states in this region in either 2017 or 2009, and thus cannot be compared.

(211), followed by Virginia (87) and Maryland (85).

Seafood Sales, Retail: In 2017, there were 413 non-employer firms in seafood retail sales in the states that make up the Mid-Atlantic Region (a 12% decrease from 2009). Annual receipts for these firms totaled $43.1 million. There were 645 employer firms in the seafood retail sector (a 2% decrease from 2009). These establishments employed 3,094 workers (a 17% increase from 2009) and had a total annual payroll of $84.7 million. The greatest number of employer and non-employer establishments in this sector was in New York (564), followed by New Jersey (183) and Maryland (156).

Seafood Sales, Wholesale: There were 449 employer firms in the seafood wholesale sector in the Mid-Atlantic Region in 2017 (a 4% decrease from 2009). These establishments employed 4,011 workers and had a total annual payroll of $200.2 million.[12] The greatest number of employer and non-employer establishments in this sector was in New York (259), followed by New Jersey (73) and Virginia (58).

Transportation Support and Marine Operations

Data for the transportation support and marine operations sectors of the Mid-Atlantic Region's economy were largely suppressed for confidentiality reasons. It is clear, however, that these sectors play an important role in the regional economy. For example, in 2017, the ship and boat building sector in the Mid-Atlantic Region accounted for $1.9 billion in payroll. The marine cargo handling sector in Delaware, Maryland, New Jersey, and New York totaled $702.6 million in payroll in 2017.

[12] The Census Bureau suppressed number of employees and payroll data for this sector in one or more states in this region in either 2017 or 2009, and thus cannot be compared.

Tables | Mid-Atlantic Region

2018 Economic Impacts of the Mid-Atlantic Seafood Industry (millions of dollars)

		With Imports				Without Imports			
	Landings Revenue	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Delaware	10	479	84	16	28	341	45	10	15
Maryland	66	16,456	2,518	582	928	4,910	302	110	151
New Jersey	152	49,398	10,266	2,109	3,555	5,372	512	169	243
New York	47	43,674	6,708	1,388	2,330	2,523	138	48	67
Virginia	177	23,487	3,239	800	1,248	12,382	808	306	416

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	421,035	492,796	551,785	507,484	428,135	457,713	484,626	526,969	472,362	451,212
Finfish	99,437	109,605	119,580	128,531	118,726	117,884	112,368	105,702	112,512	106,193
Shellfish	321,458	382,996	432,115	378,875	309,343	339,696	372,183	421,215	359,795	344,984
Other	141	195	91	78	66	133	76	52	55	35
Key Species										
American lobster	2,863	6,281	4,762	5,271	4,062	3,853	3,308	3,125	3,420	2,909
Atlantic surf clam	26,426	19,940	18,737	16,813	13,688	11,455	13,004	12,477	1,465	12,546
Blue crab	79,837	127,735	101,638	101,947	78,901	89,022	96,449	108,083	90,693	84,659
Eastern oyster	9,356	12,038	13,043	20,231	43,700	54,577	60,951	46,551	61,899	52,503
Menhaden	28,594	40,345	39,675	40,043	33,778	33,332	40,325	34,081	40,405	41,477
Quahog clam	23,022	7,886	27,608	29,502	35,902	38,153	28,133	45,239	38,390	35,773
Sea scallop	161,643	184,289	227,449	168,921	100,411	125,679	150,716	180,782	137,369	120,817
Squid	6,975	11,806	20,562	17,661	12,039	8,294	8,378	15,325	15,412	22,625
Striped bass	11,465	11,306	12,680	13,877	17,802	16,057	12,189	14,077	15,447	12,733
Summer flounder	9,973	12,850	15,614	17,190	17,150	13,195	14,398	13,913	12,061	11,948

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	658,631	796,807	795,994	759,889	574,820	562,970	615,267	565,083	571,331	602,051
Finfish	485,856	573,163	573,739	569,008	441,070	454,904	500,287	423,896	446,045	461,139
Shellfish	172,656	223,515	222,109	190,726	133,618	107,957	114,916	141,146	125,231	140,881
Other	119	129	147	155	132	109	63	41	54	31
Key Species										
American lobster	790	1,553	1,105	1,546	1,228	844	654	601	623	485
Atlantic surf clam	41,692	30,946	30,272	27,008	22,788	19,447	21,392	20,169	2,167	18,580
Blue crab	75,842	119,283	104,425	88,974	51,667	54,414	59,730	74,652	63,253	58,998
Eastern oyster	1,431	1,761	2,031	2,738	4,922	5,456	6,626	5,036	5,110	4,689
Menhaden	395,617	499,747	496,876	492,532	366,584	379,997	435,313	363,902	388,167	401,358
Quahog clam	3,255	1,246	3,551	3,730	4,586	5,016	3,256	6,231	5,203	5,077
Sea scallop	25,621	23,999	23,386	17,627	8,855	10,256	12,202	15,619	15,235	13,376
Squid	7,552	25,853	33,150	25,435	14,516	8,142	7,102	15,078	30,116	35,792
Striped bass	5,861	5,582	5,464	5,337	4,676	4,878	3,556	3,520	3,601	3,275
Summer flounder	5,135	6,385	8,673	7,794	8,025	4,901	4,975	3,725	2,846	2,907

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
American lobster	3.62	4.04	4.31	3.41	3.31	4.56	5.06	5.20	5.49	6.00
Atlantic surf clam	0.63	0.64	0.62	0.62	0.60	0.59	0.61	0.62	0.68	0.68
Blue crab	1.05	1.07	0.97	1.15	1.53	1.64	1.61	1.45	1.43	1.43
Eastern oyster	6.54	6.84	6.42	7.39	8.88	10.00	9.20	9.24	12.11	11.20
Menhaden	0.07	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.10
Quahog clam	7.07	6.33	7.77	7.91	7.83	7.61	8.64	7.26	7.38	7.05
Sea scallop	6.31	7.68	9.73	9.58	11.34	12.25	12.35	11.57	9.02	9.03
Squid	0.92	0.46	0.62	0.69	0.83	1.02	1.18	1.02	0.51	0.63
Striped bass	1.96	2.03	2.32	2.60	3.81	3.29	3.43	4.00	4.29	3.89
Summer flounder	1.94	2.01	1.80	2.21	2.14	2.69	2.89	3.74	4.24	4.11

2018 Economic Impacts of the Mid-Atlantic Recreational Fishing Expenditures (thousands of dollars, trips)

	Trips	#Jobs	Sales	Income	Value Added
Delaware	2,147	1,534	172,848	63,097	114,929
Maryland	6,762	7,692	839,473	334,833	556,102
New Jersey	12,493	14,395	1,900,220	814,677	1,271,683
New York	11,242	10,360	1,123,921	479,264	817,145
Virginia	6,386	6,504	711,537	275,441	465,047

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	98,126
Private Boat	772,145
Shore	540,376
Total	1,410,648

Equipment	Durable Goods Expenditures
Fishing Tackle	745,615
Other Equipment	261,579
Boat Expenses	1,651,038
Vehicle Expenses	175,932
Second Home Expenses	13,055
Total Durable Expenditures	2,847,218

Total State Trip and Durable Goods Expenditures	4,257,866

Recreational Anglers by Residential Area (thousands of anglers)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	2,437	2,598	2,244	2,093	2,080	2,111	1,860	2,238	1,751	1,811
Non-Coastal	187	178	145	175	139	130	124	169	147	106
Total Anglers	2,623	2,776	2,389	2,268	2,219	2,241	1,984	2,407	1,898	1,917

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	1,109	871	1,031	983	1,361	1,209	1,299	688	743	770
Private	22,753	24,273	22,649	22,528	21,648	20,821	18,975	19,112	18,863	14,692
Shore	27,660	29,410	29,535	29,617	28,119	29,679	27,409	28,558	26,399	23,569
Total Trips	51,522	54,554	53,214	53,129	51,128	51,710	47,683	48,359	46,005	39,030

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Black sea bass	H	3,054	3,221	1,092	2,171	2,054	2,062	3,146	3,935	4,292	2,222
	R	16,444	18,521	8,802	24,303	15,652	11,901	14,406	23,076	28,100	13,787
Bluefish	H	7,268	7,770	8,379	7,886	5,807	10,557	5,256	6,108	6,720	3,419
	R	15,134	13,328	13,772	15,150	9,207	15,481	10,901	11,933	12,805	6,596
Drum (Atlantic croaker)	H	15,419	16,307	10,726	12,385	18,080	13,390	10,437	7,969	8,134	5,894
	R	20,848	17,969	15,564	26,605	30,906	15,221	8,602	8,250	11,677	5,792
Drum (spot)	H	11,796	11,511	12,741	14,839	16,002	18,694	3,174	6,456	19,198	8,787
	R	6,456	7,705	8,266	11,896	18,447	6,604	2,746	3,591	5,644	4,109
Drum (weakfish)	H	101	37	28	386	135	59	100	58	120	33
	R	420	1,239	1,215	1,972	626	652	1,219	1,978	819	431
Porgies (scup)	H	3,114	5,189	2,336	1,912	3,376	2,832	7,101	4,450	8,653	5,831
	R	6,794	5,150	3,760	5,647	7,025	4,907	8,331	13,098	17,450	7,781
Striped bass	H	3,596	4,122	3,529	2,699	3,785	3,103	2,368	3,047	2,331	1,701
	R	11,293	11,705	9,350	13,897	15,757	15,196	16,664	21,183	14,468	13,802
Summer flounder	H	3,144	2,698	3,477	4,969	5,633	4,337	3,249	3,680	2,741	1,966
	R	45,411	53,519	48,568	36,828	35,595	36,106	28,159	24,784	23,194	19,327
Winter flounder	H	161	167	234	177	21	124	18	93	9	14
	R	271	296	259	125	104	47	105	31	23	57
Wrasses (tautog)	H	1,738	2,053	972	577	1,055	1,667	987	1,349	1,048	584
	R	5,714	6,669	5,018	5,626	7,082	5,460	7,617	10,302	9,736	6,149

[1] Delaware anglers estimates are not available for the non-coastal mode.
[2] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.

Tables | Delaware

2018 Economic Impacts of the Delaware Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	479	84	16	28	341	45	10	15
Commercial Harvesters	173	18	4	6	173	18	4	6
Seafood Processors & Dealers	47	10	2	3	33	7	1	2
Importers	97	31	5	10	0	0	0	0
Seafood Wholesalers & Distributors	38	6	2	3	22	3	1	2
Retail	124	19	3	6	113	17	3	6

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	7,050	7,502	6,478	8,037	6,700	6,145	5,955	10,706	8,861	9,596
Finfish	790	847	906	679	940	283	506	506	308	664
Shellfish	6,260	6,638	5,546	7,358	5,760	5,862	5,449	10,199	8,553	8,931
Other	0	17	26	0	0	0	0	0	0	0
Key Species										
American eel	134	206	274	159	244	156	127	130	NA	97
Black drum	12	17	0	4	11	0	17	20	0	11
Black sea bass	149	190	196	0	0	0	304	301	278	513
Blue crab	5,435	5,957	4,819	6,664	4,576	4,379	4,498	9,145	7,318	7,574
Eastern oyster	334	404	347	345	407	420	358	498	701	644
Knobbed whelk	284	123	106	18	299	438	381	294	237	640
Northern quahog clam	117	110	143	123	177	133	97	69	101	73
Quahog clam	117	110	143	123	177	133	97	69	101	73
Summer flounder	0	5	2	0	0	5	4	7	5	2
Weakfish	0	0	0	0	0	0	0	0	0	0

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	4,621	4,933	4,444	5,406	3,659	3,171	2,786	5,427	4,242	4,691
Finfish	487	481	448	424	441	337	390	329	215	455
Shellfish	4,134	4,442	3,979	4,982	3,218	2,834	2,396	5,098	4,027	4,236
Other	0	9	17	0	0	0	0	0	0	0
Key Species										
American eel	60	69	91	54	83	62	45	45	NA	31
Black drum	31	50	0	11	25	0	39	49	1	32
Black sea bass	50	80	86	0	0	0	112	97	117	172
Blue crab	3,414	4,110	3,502	4,571	2,488	2,000	2,124	4,555	3,788	3,842
Eastern oyster	67	71	62	60	71	73	61	72	79	107
Knobbed whelk	234	89	74	12	125	189	159	123	99	267
Northern quahog clam	31	30	39	32	43	41	30	18	28	20
Quahog clam	31	30	39	32	43	41	30	18	28	20
Summer flounder	0	2	1	0	0	2	1	2	1	1
Weakfish	0	0	0	0	0	0	0	0	0	0

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
American eel	2.24	3.00	3.03	2.93	2.94	2.50	2.83	2.93	NA	3.08
Black drum	0.41	0.35	NA	0.35	0.43	NA	0.44	0.41	0.61	0.35
Black sea bass	2.96	2.38	2.29	NA	NA	NA	2.73	3.11	2.36	2.98
Blue crab	1.59	1.45	1.38	1.46	1.84	2.19	2.12	2.01	1.93	1.97
Eastern oyster	4.97	5.67	5.56	5.76	5.71	5.71	5.85	6.90	8.83	6.03
Knobbed whelk	1.21	1.39	1.43	1.43	2.40	2.31	2.40	2.40	2.40	2.40
Northern quahog clam	3.79	3.69	3.72	3.84	4.07	3.25	3.26	3.75	3.61	3.61
Quahog clam	3.79	3.69	3.72	3.84	4.07	3.25	3.26	3.75	3.61	3.61
Summer flounder	NA	2.47	2.42	NA	NA	2.90	3.09	3.24	3.27	2.95
Weakfish	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

[1] 'NA' = these data are confidential and therefore not disclosable.

2018 Economic Impacts of Delaware Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	17	1,471	551	834
	Private Boat	287	38,282	11,762	23,715
	Shore	596	65,774	22,693	44,435
Total Durable Expenditures		635	67,321	28,091	45,945
Total State Economic Impacts		1,534	172,848	63,097	114,929

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	962
Private Boat	36,159
Shore	58,041
Total	95,161

Equipment	Durable Goods Expenditures
Fishing Tackle	24,218
Other Equipment	8,283
Boat Expenses	44,257
Vehicle Expenses	5,141
Second Home Expenses	0
Total Durable Expenditures	81,899

Total State Trip and Durable Goods Expenditures	177,060

Recreational Anglers by Residential Area (thousands of anglers)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	114	128	129	111	82	93	67	104	80	64
Non-Coastal	0	0	0	0	0	0	0	0	0	0
Out-of-State	173	165	190	151	97	146	84	168	94	69
Total Anglers	287	293	318	262	179	239	151	272	174	133

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	45	19	18	21	37	39	37	14	14	7
Private	1,034	1,065	1,028	973	950	858	744	637	680	701
Shore	1,871	2,012	1,832	1,523	1,448	1,593	1,289	1,480	1,297	1,439
Total Trips	2,950	3,097	2,878	2,516	2,435	2,491	2,071	2,130	1,991	2,147

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[2,3,4]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Atlantic mackerel	H	0	NA	NA	0	< 1	NA	< 1	0	< 1	NA
	R	2	NA	NA	< 1	< 1	NA	0	< 1	0	NA
Black sea bass	H	103	70	121	108	48	48	57	95	112	88
	R	803	708	580	605	512	528	526	780	485	371
Bluefish	H	301	98	124	95	57	333	235	110	261	76
	R	751	210	396	400	161	802	464	359	612	536
Drum (Atlantic croaker)	H	983	208	213	202	530	806	335	25	66	12
	R	1,284	1,057	215	1,036	1,812	1,397	309	391	230	85
Drum (weakfish)	H	9	< 1	< 1	11	16	7	2	1	1	2
	R	10	42	14	213	52	55	34	63	38	27
Striped bass	H	65	61	44	51	71	26	42	6	28	4
	R	444	256	338	358	273	530	309	218	254	352
Summer flounder	H	169	144	141	101	120	189	120	173	98	85
	R	1,957	1,669	1,330	556	518	651	431	557	591	513
White perch	H	155	638	344	183	331	305	118	10	99	117
	R	455	1,232	876	534	1,139	186	355	46	179	416
Wrasses (tautog)	H	324	182	118	95	97	132	29	46	32	9
	R	1,108	868	312	226	322	200	113	277	388	250
Yellowfin tuna	H	< 1	< 1	1	< 1	2	1	5	< 1	NA	1
	R	< 1	0	< 1	0	< 1	< 1	< 1	0	NA	< 1

[1] Non-coastal data are not available because all of the state's residents are considered coastal county residents.
[2] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[3] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.
[4] 'NA' = not available.

2017 Delaware State Economy (% of national total)[1]

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
65,634 (0.3%)	25,452 (0.3%)	400,714 (0.3%)	22.0 (0.3%)	31.9 (0.3%)	75.0	ds

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)[1,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	NA	ds	ds	ds	ds	ds	ds	3	5
	Receipts	NA	ds	ds	ds	ds	ds	ds	558	458
Seafood sales, retail	Firms	10	9	9	11	8	13	11	11	12
	Receipts	813	1,107	1,226	1,333	520	452	479	608	2,868

Seafood Sales and Processing — Employer Establishments (thousands of dollars)[1,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	1	1	1	1	1	2	1	2	NA
	Employees	ds	ds	ds	ds	ds	ds	ds	0	NA
	Payroll	ds	ds	ds	ds	ds	ds	ds	0	NA
Seafood sales, wholesale	Establishments	7	7	7	7	9	8	6	6	5
	Employees	ds	ds	ds	ds	ds	ds	54	56	67
	Payroll	ds	ds	ds	ds	3,020	2,381	2,404	2,707	3,072
Seafood sales, retail	Establishments	16	15	18	16	17	17	14	12	12
	Employees	50	47	49	ds	60	52	36	45	40
	Payroll	1,348	1,414	1,493	1,545	1,396	1,261	1,224	1,037	1,370

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[1,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	2	2	3	4	4	6	6	5	4
	Employees	ds	ds	ds	50	61	55	57	53	0
	Payroll	ds	ds	ds	2,313	2,516	2,174	2,168	2,410	0
Deep Sea Freight Transportation	Establishments	4	5	2	1	1	2	4	2	NA
	Employees	ds	120	ds	ds	ds	ds	98	0	NA
	Payroll	ds	10,768	ds	ds	ds	ds	8,771	0	NA
Deep Sea Passenger Transportation	Establishments	NA	1	NA	NA	2	2	1	1	NA
	Employees	NA	ds	NA	NA	ds	ds	ds	0	NA
	Payroll	NA	ds	NA	NA	ds	ds	ds	0	NA
Coastal and Great Lakes Freight Transportation	Establishments	2	1	NA	NA	NA	NA	1	2	5
	Employees	ds	ds	NA	NA	NA	NA	ds	0	38
	Payroll	ds	ds	NA	NA	NA	NA	ds	0	4,534
Port and Harbor Operations	Establishments	2	3	3	4	3	2	2	2	NA
	Employees	ds	29	44	ds	ds	ds	ds	0	NA
	Payroll	ds	1,182	1,512	ds	ds	ds	ds	0	NA
Marine Cargo Handling	Establishments	3	3	3	2	3	3	3	3	4
	Employees	ds	434	511	ds	565	541	577	540	513
	Payroll	16,952	16,835	19,203	ds	20,698	22,789	23,370	22,994	25,453
Navigational Services to Shipping	Establishments	8	8	8	8	8	10	10	11	12
	Employees	85	76	78	ds	82	92	81	92	101
	Payroll	5,672	5,176	5,096	3,111	5,330	5,350	5,938	6,709	6,796
Marinas	Establishments	16	19	17	18	19	18	18	18	15
	Employees	ds	65	ds	67	64	95	86	86	67
	Payroll	1,877	2,342	3,106	1,963	2,196	2,293	2,527	2,527	2,128

[1] ds = Data are suppressed.
[2] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[3] NA = Not applicable.

Tables | Maryland

2018 Economic Impacts of the Maryland Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	16,456	2,518	582	928	4,910	302	110	151
Commercial Harvesters	2,056	116	33	51	2,056	116	33	51
Seafood Processors & Dealers	2,092	217	85	108	466	48	19	24
Importers	5,322	1,722	276	525	0	0	0	0
Seafood Wholesalers & Distributors	1,012	156	53	70	147	23	8	10
Retail	5,974	307	135	173	2,240	116	51	65

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	70,803	95,417	80,797	83,093	78,170	89,724	84,157	87,136	75,952	65,583
Finfish	11,053	9,789	11,305	14,703	12,745	18,609	12,769	15,710	13,493	10,995
Shellfish	59,609	85,450	69,427	68,313	65,359	70,982	71,312	71,374	62,405	54,553
Other	141	178	65	78	66	133	76	52	55	35
Key Species										
Atlantic croaker	444	507	482	689	455	492	342	179	138	77
Black sea bass	451	590	507	421	710	834	792	896	1,236	1,254
Blue crab	52,049	79,055	60,326	60,467	50,167	52,849	52,084	54,534	48,535	45,308
Eastern oyster	3,849	4,385	3,691	5,710	13,827	15,687	15,093	12,265	10,473	6,741
Menhaden	897	729	685	1,669	902	1,380	1,222	1,036	648	733
Sea scallop	3,160	1,188	552	202	8	1,328	3,077	1,804	945	1,209
Shad	23	164	118	151	146	486	361	233	3	566
Shark	325	246	422	385	349	299	228	327	364	137
Striped bass	5,180	5,425	5,623	6,172	8,043	8,092	6,194	7,131	7,061	6,022
Summer flounder	550	541	463	380	541	598	597	668	564	608

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	58,592	90,193	76,050	75,839	43,199	47,842	47,406	54,699	43,591	42,076
Finfish	17,991	22,960	18,251	28,848	15,399	20,981	16,978	16,373	11,118	13,250
Shellfish	40,481	67,114	57,669	46,836	27,668	26,751	30,365	38,285	32,419	28,795
Other	119	120	130	155	132	109	63	41	54	31
Key Species										
Atlantic croaker	597	628	804	1,091	864	504	340	162	94	53
Black sea bass	126	203	182	144	234	252	236	272	410	374
Blue crab	38,801	66,262	51,163	43,741	24,797	24,690	28,759	36,734	30,655	27,822
Eastern oyster	498	432	356	618	1,404	1,196	1,191	887	671	465
Menhaden	9,567	15,467	8,016	16,383	7,674	8,363	8,786	6,473	3,568	4,388
Sea scallop	521	153	58	20	1	110	248	151	98	144
Shad	48	425	974	1,514	1,449	1,639	2,145	1,148	3	3,289
Shark	590	659	1,434	1,334	1,426	1,304	1,259	1,669	2,039	787
Striped bass	2,812	2,510	2,343	2,285	1,981	2,353	1,708	1,718	1,829	1,760
Summer flounder	214	261	259	165	194	192	188	159	137	143

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Atlantic croaker	0.74	0.81	0.60	0.63	0.53	0.98	1.01	1.10	1.47	1.46
Black sea bass	3.59	2.90	2.78	2.92	3.03	3.31	3.35	3.30	3.02	3.35
Blue crab	1.34	1.19	1.18	1.38	2.02	2.14	1.81	1.48	1.58	1.63
Eastern oyster	7.73	10.15	10.37	9.24	9.85	13.11	12.67	13.83	15.60	14.50
Menhaden	0.09	0.05	0.09	0.10	0.12	0.17	0.14	0.16	0.18	0.17
Sea scallop	6.06	7.77	9.54	10.23	12.77	12.11	12.40	11.94	9.68	8.38
Shad	0.47	0.38	0.12	0.10	0.10	0.30	0.17	0.20	1.18	0.17
Shark	0.55	0.37	0.29	0.29	0.24	0.23	0.18	0.20	0.18	0.17
Striped bass	1.84	2.16	2.40	2.70	4.06	3.44	3.63	4.15	3.86	3.42
Summer flounder	2.57	2.07	1.78	2.30	2.80	3.11	3.18	4.20	4.10	4.24

2018 Economic Impacts of Maryland Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	389	39,299	15,212	24,169
	Private Boat	1,120	112,728	41,572	71,246
	Shore	1,252	107,950	39,607	71,589
Total Durable Expenditures		4,931	579,496	238,441	389,099
Total State Economic Impacts		7,692	839,473	334,833	556,102

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	24,607
Private Boat	116,962
Shore	94,655
Total	236,224

Equipment	Durable Goods Expenditures
Fishing Tackle	132,454
Other Equipment	62,776
Boat Expenses	348,124
Vehicle Expenses	47,073
Second Home Expenses	2,712
Total Durable Expenditures	593,138

Total State Trip and Durable Goods Expenditures	829,362

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	514	552	415	374	404	413	364	453	353	406
Non-Coastal	43	54	49	40	36	41	31	23	41	30
Out-of-State	327	462	372	258	329	338	352	352	265	274
Total Anglers	884	1,068	836	672	769	792	748	829	659	709

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	189	136	154	156	153	189	177	131	211	145
Private	4,345	4,897	4,708	5,150	4,861	4,167	4,366	4,160	3,415	2,692
Shore	4,309	4,829	4,859	4,234	4,695	5,038	4,586	5,073	4,717	3,924
Total Trips	8,843	9,862	9,721	9,539	9,710	9,394	9,129	9,364	8,343	6,762

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1,2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Black sea bass	H	35	42	79	161	27	63	89	207	149	154
	R	1,080	2,027	811	1,323	768	956	763	1,054	865	1,282
Bluefish	H	1,517	739	731	349	119	396	287	212	176	275
	R	1,813	572	1,037	521	723	491	662	556	197	418
Drum (Atlantic croaker)	H	2,587	2,995	1,531	2,566	2,309	2,197	1,739	659	424	305
	R	2,425	3,061	937	7,091	7,557	2,807	1,236	727	2,829	203
Drum (spot)	H	4,588	2,840	2,125	2,121	2,456	4,396	1,352	1,145	3,251	1,210
	R	1,901	2,773	783	3,292	7,621	2,207	642	713	2,280	943
Striped bass	H	1,105	1,152	1,113	720	1,185	1,640	1,112	1,546	1,092	993
	R	4,011	5,390	3,484	9,001	6,676	8,304	8,524	13,781	7,788	7,458
Summer flounder	H	178	76	47	99	119	118	98	40	57	48
	R	2,553	4,082	1,632	852	915	1,358	719	1,712	862	793
Weakfish drum	H	10	13	< 1	39	4	2	13	2	9	0
	R	30	417	51	72	20	27	341	161	41	5
White perch	H	1,425	7,239	4,341	5,820	6,827	2,746	3,817	6,028	4,380	2,808
	R	3,857	8,715	7,837	16,250	18,587	7,879	7,200	10,339	7,388	4,141
Wrasses (tautog)	H	107	290	64	20	23	1	12	4	19	18
	R	383	1,318	340	651	325	5	267	530	761	215
Yellowfin tuna	H	7	1	< 1	NA	4	17	12	23	112	< 1
	R	2	< 1	0	NA	10	4	0	24	10	< 1

[1] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[2] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.
[3] 'NA' = not available.

2017 Maryland State Economy (% of national total)

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[1]
497,161 (1.9%)	139,446 (1.8%)	2,335,479 (1.8%)	127 (1.9%)	214 (2.1%)	401	0.61

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	42	43	55	67	49	60	53	64	70
	Receipts	2,268	2,138	2,374	3,030	3,158	3,230	3,133	3,440	3,676
Seafood sales, retail	Firms	94	85	86	96	95	87	87	91	79
	Receipts	8,819	6,177	7,396	6,454	6,147	8,437	8,104	9,426	8,653

Seafood Sales and Processing — Employer Establishments (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	19	18	17	16	16	17	17	19	15
	Employees	245	273	264	266	309	284	288	260	280
	Payroll	13,049	12,652	12,773	13,587	12,455	13,131	13,631	17,775	18,251
Seafood sales, wholesale	Establishments	61	63	57	60	58	58	53	60	54
	Employees	777	795	775	724	636	630	605	654	752
	Payroll	39,055	39,067	38,971	34,194	30,119	31,503	33,739	36,196	41,754
Seafood sales, retail	Establishments	87	87	88	87	87	83	79	85	77
	Employees	485	526	562	575	574	562	539	561	522
	Payroll	11,499	11,810	12,883	13,027	13,623	13,907	15,033	15,910	15,031

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	38	35	35	34	31	35	36	36	31
	Employees	416	ds	633	378	371	449	456	482	474
	Payroll	16,238	ds	36,675	14,619	16,822	18,130	20,599	21,425	20,616
Deep Sea Freight Transportation	Establishments	15	15	16	14	10	11	11	9	10
	Employees	255	390	329	245	139	135	118	140	119
	Payroll	20,722	24,185	25,071	17,938	10,041	11,600	11,097	10,396	10,504
Deep Sea Passenger Transportation	Establishments	2	1	NA	NA	1	NA	NA	NA	NA
	Employees	ds	ds	NA	NA	ds	NA	NA	NA	NA
	Payroll	ds	ds	NA	NA	ds	NA	NA	NA	NA
Coastal and Great Lakes Freight Transportation	Establishments	7	8	6	4	4	8	6	8	5
	Employees	ds	ds	ds	ds	ds	ds	ds	0	0
	Payroll	ds	ds	ds	ds	538	ds	ds	0	0
Port and Harbor Operations	Establishments	4	5	5	22	16	17	15	14	19
	Employees	ds	ds	ds	1,875	962	1,220	1,349	1,080	1,211
	Payroll	ds	ds	ds	93,001	44,436	57,543	55,375	52,510	62,934
Marine Cargo Handling	Establishments	16	17	17	6	12	12	12	13	11
	Employees	1,599	2,742	1,924	ds	1,519	1,132	1,140	1,424	1,292
	Payroll	46,727	95,182	86,680	ds	60,500	60,962	81,751	75,022	78,142
Navigational Services to Shipping	Establishments	11	10	11	10	11	10	11	11	16
	Employees	77	84	84	ds	245	131	125	114	194
	Payroll	3,807	4,015	4,259	ds	17,066	6,345	6,411	6,055	11,241
Marinas	Establishments	176	175	172	159	170	166	172	171	161
	Employees	1,289	1,275	1,294	1,276	1,328	1,366	1,380	1,396	1,234
	Payroll	45,483	43,508	43,330	43,531	45,540	47,443	50,633	51,934	47,963

[1] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[2] ds = Data are suppressed.
[3] NA = not applicable.

Tables | New Jersey

2018 Economic Impacts of the New Jersey Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	49,398	10,266	2,109	3,555	5,372	512	169	243
Commercial Harvesters	1,996	274	72	117	1,996	274	72	117
Seafood Processors & Dealers	1,575	171	65	85	512	56	21	28
Importers	24,930	8,068	1,293	2,459	0	0	0	0
Seafood Wholesalers & Distributors	4,061	760	244	332	147	28	9	12
Retail	16,835	993	435	562	2,717	154	67	87

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	143,836	178,502	220,156	187,689	123,818	134,409	152,718	174,880	154,885	151,881
Finfish	23,267	22,950	26,791	28,628	25,889	24,921	29,077	25,956	33,442	30,697
Shellfish	120,569	155,552	193,365	159,061	97,929	109,488	123,641	148,924	121,443	121,183
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
American lobster	NA	2,911	3,088	3,938	2,797	2,380	2,248	1,883	2,245	2,052
Atlantic herring	1,507	416	414	145	401	615	308	292	482	354
Atlantic mackerel	1,539	812	53	577	18	12	535	79	596	1,298
Black sea bass	592	996	970	1,054	1,370	1,603	1,763	1,945	2,823	2,809
Blue crab	2	12,028	9,429	10,011	NA	4,157	8,699	5,668	8,946	8,607
Goosefish	3,018	2,752	3,654	3,301	2,453	2,428	2,364	2,470	1,558	1,349
Sea scallop	90,153	109,120	142,510	110,560	65,190	87,745	97,855	123,362	99,253	83,181
Squid	2,805	7,242	12,806	8,949	5,804	2,643	2,798	7,209	10,437	14,464
Summer flounder	3,376	4,553	5,461	5,433	4,899	4,862	5,059	5,442	4,296	4,549
Tilefish	944	1,026	1,063	1,168	1,154	1,760	1,604	1,261	1,217	1,190

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	136,128	161,377	187,115	180,388	113,434	98,698	131,087	114,034	162,684	171,755
Finfish	73,210	74,557	94,621	104,118	61,364	64,780	94,006	70,888	117,688	107,983
Shellfish	62,917	86,820	92,494	76,270	52,070	33,918	37,081	43,146	44,996	63,772
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
American lobster	NA	693	698	919	660	526	445	350	409	345
Atlantic herring	13,692	4,107	2,380	1,106	2,344	4,087	3,428	2,798	3,353	3,374
Atlantic mackerel	10,255	4,633	106	1,997	46	17	2,188	306	2,778	7,108
Black sea bass	204	305	294	311	421	494	468	526	899	700
Blue crab	2	9,458	9,611	7,396	NA	3,233	7,247	6,816	6,410	5,435
Goosefish	2,692	2,024	2,275	2,212	2,231	2,172	1,903	1,885	1,388	1,719
Sea scallop	14,045	14,171	14,545	11,379	5,640	7,133	7,847	10,491	10,961	9,206
Squid	3,450	21,893	25,956	17,521	9,189	2,773	2,647	8,512	26,749	30,730
Summer flounder	1,799	2,166	2,831	2,269	2,004	1,826	1,682	1,297	962	1,046
Tilefish	451	396	360	406	377	582	434	335	438	411

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
American lobster	NA	4.20	4.42	4.28	4.23	4.52	5.05	5.38	5.49	5.96
Atlantic herring	0.11	0.10	0.17	0.13	0.17	0.15	0.09	0.10	0.14	0.10
Atlantic mackerel	0.15	0.18	0.50	0.29	0.40	0.73	0.24	0.26	0.21	0.18
Black sea bass	2.90	3.26	3.30	3.39	3.25	3.25	3.76	3.70	3.14	4.01
Blue crab	0.90	1.27	0.98	1.35	NA	1.29	1.20	0.83	1.40	1.58
Goosefish	1.12	1.36	1.61	1.49	1.10	1.12	1.24	1.31	1.12	0.78
Sea scallop	6.42	7.70	9.80	9.72	11.56	12.30	12.47	11.76	9.05	9.04
Squid	0.81	0.33	0.49	0.51	0.63	0.95	1.06	0.85	0.39	0.47
Summer flounder	1.88	2.10	1.93	2.39	2.44	2.66	3.01	4.20	4.47	4.35
Tilefish	2.10	2.59	2.95	2.88	3.06	3.02	3.69	3.76	2.78	2.89

[1] 'NA' = these data are confidential and therefore not disclosable.

2018 Economic Impacts of New Jersey Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	464	49,439	18,030	31,067
	Private Boat	1,891	322,462	127,590	204,737
	Shore	1,391	198,335	86,196	132,974
Total Durable Expenditures		10,649	1,329,984	582,861	902,905
Total State Economic Impacts		14,395	1,900,220	814,677	1,271,683

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	30,744
Private Boat	278,482
Shore	158,074
Total	467,299

Equipment	Durable Goods Expenditures
Fishing Tackle	277,712
Other Equipment	82,854
Boat Expenses	629,689
Vehicle Expenses	65,949
Second Home Expenses	3,543
Total Durable Expenditures	1,059,748

Total State Trip and Durable Goods Expenditures	1,527,047

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	656	776	687	662	581	607	515	507	447	411
Non-Coastal	35	36	23	27	20	17	24	32	16	17
Out-of-State	454	449	357	431	330	566	448	378	253	322
Total Anglers	1,145	1,261	1,067	1,121	931	1,189	987	916	716	750

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	436	331	370	388	532	494	450	234	215	289
Private	7,373	8,126	7,129	7,107	6,476	6,260	5,013	4,741	4,848	4,432
Shore	9,850	10,228	10,033	10,659	8,759	10,259	9,021	8,877	7,225	7,772
Total Trips	17,659	18,685	17,532	18,153	15,767	17,012	14,485	13,852	12,288	12,493

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1,2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Black sea bass	H	1,489	2,006	285	1,364	934	639	440	517	1,500	1,040
	R	7,938	11,907	4,454	11,111	8,612	4,789	4,984	6,239	7,939	5,613
Bluefin tuna	H	32	16	13	< 1	30	11	2	5	22	23
	R	5	20	31	0	0	2	2	9	22	30
Bluefish	H	2,161	3,036	3,934	3,133	2,322	4,557	1,765	3,282	3,047	1,421
	R	6,408	6,367	6,867	6,407	3,540	7,411	4,001	7,084	7,677	2,512
Drum (weakfish)	H	23	4	8	277	90	16	73	12	79	16
	R	205	240	288	1,384	331	194	598	278	147	41
Red hake	H	338	196	220	71	104	218	51	41	58	165
	R	40	71	29	259	157	33	17	13	57	93
Striped bass	H	1,141	1,091	1,039	742	1,324	502	600	660	626	465
	R	3,503	2,436	2,447	1,822	4,349	2,840	2,440	1,808	2,317	2,756
Summer flounder	H	1,721	1,318	1,969	3,086	3,450	2,418	1,180	1,456	1,211	1,045
	R	23,087	28,058	24,558	22,080	19,160	22,209	10,821	12,299	7,785	10,371
Winter flounder	H	55	37	122	< 1	21	52	3	56	8	14
	R	81	60	92	2	89	19	102	21	15	13
Wrasses (tautog)	H	420	717	314	92	443	533	339	190	569	385
	R	2,649	2,491	2,518	1,754	1,811	2,040	1,614	1,984	3,048	2,572
Yellowfin tuna	H	19	84	18	183	148	22	13	29	33	147
	R	46	< 1	< 1	8	6	0	23	20	4	78

[1] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[2] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.

2017 New Jersey State Economy (% of national total)

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[1]
716,918 (2.8%)	233,907 (3%)	3,679,443 (2.9%)	220 (3.3%)	320 (3.1%)	602	0.93

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	33	47	29	35	48	45	39	44	44
	Receipts	3,670	3,613	3,447	3,565	4,981	5,736	3,603	3,811	3,701
Seafood sales, retail	Firms	86	66	68	77	74	74	70	68	68
	Receipts	11,131	8,265	8,049	8,972	8,257	7,135	7,711	7,042	9,733

Seafood Sales and Processing — Employer Establishments (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	13	11	12	11	13	13	15	13	18
	Employees	661	482	518	404	671	647	715	452	716
	Payroll	22,025	17,427	17,940	13,747	22,764	21,933	25,929	17,030	27,436
Seafood sales, wholesale	Establishments	83	90	91	82	80	78	78	73	73
	Employees	858	848	935	1,058	765	795	784	753	775
	Payroll	37,348	38,065	40,103	44,033	37,405	36,773	39,900	41,239	42,765
Seafood sales, retail	Establishments	106	108	109	114	114	108	115	116	115
	Employees	332	332	332	382	419	434	446	471	428
	Payroll	9,126	9,094	9,264	11,561	11,657	12,520	12,591	13,351	12,696

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	25	24	23	21	24	24	23	24	23
	Employees	1,188	1,056	864	901	917	1,080	1,329	1,417	1,594
	Payroll	42,909	37,920	39,810	36,334	41,886	50,459	59,130	64,354	78,326
Deep Sea Freight Transportation	Establishments	26	26	26	25	20	21	24	22	18
	Employees	1,045	ds	ds	390	225	212	193	187	137
	Payroll	66,547	78,898	81,936	27,481	12,263	11,271	11,522	11,988	9,580
Deep Sea Passenger Transportation	Establishments	3	2	2	2	NA	2	1	1	NA
	Employees	ds	ds	ds	ds	NA	ds	ds	0	NA
	Payroll	ds	ds	ds	ds	NA	ds	ds	0	NA
Coastal and Great Lakes Freight Transportation	Establishments	19	18	20	16	16	13	13	15	15
	Employees	594	600	508	402	367	365	414	404	419
	Payroll	41,925	44,246	40,587	32,007	32,431	33,308	37,888	38,330	45,683
Port and Harbor Operations	Establishments	6	11	7	25	18	18	17	18	14
	Employees	54	124	163	ds	ds	ds	106	105	79
	Payroll	5,548	10,463	16,933	139,276	5,995	6,334	6,305	6,202	5,457
Marine Cargo Handling	Establishments	22	21	22	15	20	21	20	20	20
	Employees	3,479	3,292	3,744	2,582	6,912	6,082	5,005	4,692	4,454
	Payroll	230,886	260,894	273,636	203,148	538,991	563,746	521,401	519,594	553,019
Navigational Services to Shipping	Establishments	19	16	17	18	18	18	20	18	23
	Employees	133	75	110	96	106	92	88	75	123
	Payroll	6,638	6,125	5,619	5,983	6,057	5,597	6,914	5,851	7,635
Marinas	Establishments	214	212	206	210	206	190	196	194	191
	Employees	784	781	773	811	787	737	776	826	811
	Payroll	35,811	35,475	34,675	35,760	37,606	36,583	38,469	40,971	41,403

[1] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[2] ds = Data are suppressed.
[3] NA = not applicable.

Tables | New York

2018 Economic Impacts of the New York Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	43,674	6,708	1,388	2,330	2,523	138	48	67
Commercial Harvesters	1,234	70	20	31	1,234	70	20	31
Seafood Processors & Dealers	990	167	64	83	93	16	6	8
Importers	16,460	5,327	854	1,624	0	0	0	0
Seafood Wholesalers & Distributors	4,790	406	137	185	91	8	3	4
Retail	20,200	739	314	408	1,106	46	19	25

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	47,971	49,693	50,544	54,994	57,274	55,019	44,717	50,345	46,157	46,821
Finfish	17,307	20,416	22,384	23,598	23,260	19,715	19,395	19,260	18,139	15,889
Shellfish	30,665	29,276	28,161	31,397	34,014	35,304	25,322	31,085	28,019	30,932
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
American lobster	2,620	3,165	1,398	999	938	985	711	1,037	761	658
Atlantic surf clam	5,858	3,929	545	3,096	2,410	NA	2,115	2,507	1,465	1,019
Eastern oyster	1,428	2,047	2,174	2,227	4,149	9,372	9,001	NA	1,442	1,666
Loligo squid	4,167	4,516	7,250	8,648	5,949	5,448	5,413	7,830	4,924	7,946
Quahog clam	8,397	7,774	6,905	9,218	13,475	11,777	NA	11,957	11,678	9,573
Scups and porgies	1,887	2,114	2,554	3,536	2,971	2,313	3,138	2,897	2,492	2,800
Sea scallop	5,018	3,778	4,960	4,083	2,602	2,963	978	3,783	2,136	1,361
Softshell clam	700	710	351	332	848	982	2,854	1,137	596	603
Summer flounder	3,087	3,550	3,732	3,653	3,197	2,997	3,043	2,527	2,402	2,219
Tilefishes	3,262	4,077	4,525	4,260	4,675	4,255	3,656	2,985	3,329	3,651

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	34,100	33,679	31,938	37,044	34,351	25,024	26,300	29,792	24,548	22,786
Finfish	15,880	18,415	18,464	19,115	18,446	15,636	15,706	15,499	14,790	12,212
Shellfish	18,221	15,263	13,474	17,929	15,905	9,387	10,593	14,293	9,758	10,574
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
American lobster	732	814	344	550	497	223	147	219	150	113
Atlantic surf clam	8,799	5,857	809	4,590	3,452	NA	3,110	3,677	2,167	1,518
Eastern oyster	64	81	98	108	204	422	787	NA	273	316
Loligo	4,098	3,900	5,630	7,838	4,985	5,138	4,259	6,303	3,315	4,901
Quahog clams	1,410	1,216	1,131	1,299	1,932	1,781	NA	2,174	2,027	1,787
Scups and porgies	1,851	2,691	3,735	4,307	4,575	3,175	4,050	3,504	3,465	3,354
Sea scallop	918	508	522	430	256	262	87	398	251	157
Softshell clam	114	116	57	54	138	160	499	243	127	129
Summer flounder	1,142	1,364	1,517	1,238	1,033	833	830	604	491	463
Tilefishes	1,435	1,586	1,521	1,413	1,468	1,383	936	745	1,051	1,161

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
American lobster	3.58	3.89	4.06	1.81	1.89	4.42	4.82	4.74	5.06	5.84
Atlantic surf clam	0.67	0.67	0.67	0.67	0.70	NA	0.68	0.68	0.68	0.67
Eastern oyster	22.23	25.41	22.23	20.58	20.32	22.23	11.43	NA	5.29	5.28
Loligo	1.02	1.16	1.29	1.10	1.19	1.06	1.27	1.24	1.49	1.62
Quahog clams	5.96	6.39	6.10	7.10	6.97	6.61	NA	5.50	5.76	5.36
Scups and porgies	1.02	0.79	0.68	0.82	0.65	0.73	0.77	0.83	0.72	0.83
Sea scallop	5.47	7.44	9.50	9.50	10.18	11.33	11.21	9.51	8.50	8.66
Softshell clam	6.13	6.13	6.13	6.12	6.13	6.13	5.73	4.69	4.69	4.69
Summer flounder	2.70	2.60	2.46	2.95	3.09	3.60	3.67	4.19	4.89	4.80
Tilefishes	2.27	2.57	2.97	3.01	3.18	3.08	3.90	4.01	3.17	3.14

[1] 'NA' = these data are confidential and therefore not disclosable.

2018 Economic Impacts of New York Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	466	50,273	19,138	32,466
	Private Boat	2,312	190,882	85,045	148,751
	Shore	1,172	96,219	43,590	75,059
Total Durable Expenditures		6,410	786,548	331,490	560,868
Total State Economic Impacts		10,360	1,123,921	479,264	817,145

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	35,173
Private Boat	228,732
Shore	99,867
Total	363,771

Equipment	Durable Goods Expenditures
Fishing Tackle	194,289
Other Equipment	66,371
Boat Expenses	443,469
Vehicle Expenses	35,234
Second Home Expenses	569
Total Durable Expenditures	739,932

Total State Trip and Durable Goods Expenditures	1,103,703

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	638	646	497	533	595	657	555	780	541	605
Non-Coastal	21	24	18	30	8	19	10	29	10	14
Out-of-State	58	69	46	53	93	155	53	113	62	103
Total Anglers	717	740	561	616	695	830	618	922	613	722

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	385	334	457	374	580	434	569	270	259	304
Private	5,302	5,374	5,528	5,652	5,961	6,457	6,400	6,915	7,372	4,652
Shore	7,972	8,459	8,221	8,607	8,668	8,511	8,302	8,580	9,003	6,286
Total Trips	13,659	14,167	14,206	14,633	15,209	15,402	15,271	15,765	16,634	11,242

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1,2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Atlantic herring[4]	H	22	704	732	1,391	1,520	1,190	11,460	2,105	1,052	82
	R	0	156	< 1	0	409	41	229	161	104	0
Black seabass	H	1,113	1,040	570	526	999	1,234	2,494	3,035	2,434	853
	R	3,223	2,393	1,787	9,302	4,255	3,666	7,486	13,134	16,538	5,049
Bluefish	H	2,907	2,878	3,344	3,785	2,830	4,847	2,438	2,078	3,063	1,204
	R	5,218	5,079	5,001	7,100	4,248	6,228	5,090	3,368	3,936	2,702
Drum (weakfish)	H	0	8	< 1	13	21	2	2	5	17	9
	R	7	7	119	30	19	< 1	14	9	139	124
Porgies (scup)	H	2,477	3,277	2,141	1,636	2,907	2,787	7,013	3,645	6,473	5,371
	R	6,141	3,657	3,606	4,633	6,691	4,877	7,728	12,401	15,352	7,454
Shortfin mako shark[5]	H	NA	1	0	< 1	0	35	22	4	41	< 1
	R	NA	0	24	24	3	52	21	29	5	65
Striped bass	H	574	1,449	1,005	928	902	804	407	698	477	182
	R	2,262	3,036	2,692	2,428	3,956	2,784	3,682	3,739	2,771	1,989
Summer flounder	H	498	596	661	1,005	1,385	1,173	1,517	1,800	1,186	641
	R	9,877	13,931	16,598	10,682	13,492	9,658	14,470	9,651	12,345	6,776
Winter flounder	H	106	130	113	177	< 1	72	16	37	< 1	< 1
	R	188	233	168	120	15	28	3	10	< 1	43
Wrasses (tautog)	H	691	541	323	303	473	913	581	1,069	405	163
	R	1,457	1,628	1,738	2,935	4,570	3,017	5,577	7,367	5,462	3,040

[1] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[2] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.
[3] NA = not available.
[4] Atlantic herring include Atlantic herring and Pacific herring. This species may not be equivalent to species with similar names listed in the commercial tables.
[5] Shortfin mako shark include shortfin mako and shortfin mako shark.

2017 New York State Economy (% of national total)

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[1]
1,751,378 (6.8%)	547,034 (7%)	8,261,269 (6.4%)	547 (8.1%)	816 (7.9%)	1,564	0.12

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	101	115	142	133	150	181	183	187	195
	Receipts	4,896	6,784	7,380	8,279	9,946	10,681	12,890	11,541	12,531
Seafood sales, retail	Firms	196	214	183	205	197	188	172	161	179
	Receipts	19,753	18,999	16,286	16,714	15,923	14,369	13,299	12,089	13,667

Seafood Sales and Processing — Employer Establishments (thousands of dollars)[2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	15	15	18	17	17	17	17	18	16
	Employees	ds	272	299	265	280	ds	310	284	232
	Payroll	15,227	16,976	21,372	25,666	22,776	22,687	24,100	22,323	14,970
Seafood sales, wholesale	Establishments	246	263	291	243	264	270	275	286	259
	Employees	1,741	1,798	1,876	1,839	1,937	2,051	2,056	2,149	2,038
	Payroll	68,345	72,442	76,970	78,324	84,346	87,511	93,859	97,304	95,766
Seafood sales, retail	Establishments	386	394	391	385	399	401	409	406	385
	Employees	1,509	1,586	1,660	1,674	1,796	2,054	2,163	2,226	1,889
	Payroll	31,640	32,001	35,664	38,721	45,049	51,605	53,952	60,961	49,413

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	47	41	43	49	45	42	42	38	38
	Employees	585	575	552	560	ds	ds	487	479	517
	Payroll	28,880	26,771	25,998	24,599	24,338	28,028	25,591	26,257	28,329
Deep Sea Freight Transportation	Establishments	32	30	31	23	20	23	22	21	16
	Employees	782	704	752	214	ds	ds	174	212	208
	Payroll	89,313	98,499	88,354	31,229	22,691	19,387	26,452	19,416	28,951
Deep Sea Passenger Transportation	Establishments	4	2	1	2	3	2	2	1	NA
	Employees	8	ds	ds	ds	ds	ds	ds	0	NA
	Payroll	126	ds	ds	ds	ds	ds	ds	0	NA
Coastal and Great Lakes Freight Transportation	Establishments	48	65	62	42	59	72	73	73	70
	Employees	2,299	1,654	1,708	ds	ds	ds	1,551	1,732	1,696
	Payroll	198,352	136,577	154,087	ds	ds	ds	185,742	196,617	174,203
Port and Harbor Operations	Establishments	4	8	9	18	15	15	14	14	13
	Employees	ds	ds	33	1,294	196	168	230	205	257
	Payroll	ds	568	1,493	105,325	12,358	10,342	13,774	15,087	14,868
Marine Cargo Handling	Establishments	9	13	12	6	9	12	11	9	7
	Employees	ds	1,086	1,019	ds	922	835	577	429	633
	Payroll	ds	68,555	66,439	ds	60,079	52,523	52,731	41,922	45,977
Navigational Services to Shipping	Establishments	37	37	35	53	33	36	33	36	47
	Employees	312	598	596	712	687	722	695	709	933
	Payroll	19,126	50,119	54,406	63,334	68,141	74,395	73,699	76,693	99,475
Marinas	Establishments	418	429	431	415	424	427	429	422	402
	Employees	2,099	2,052	2,033	1,868	1,907	1,986	1,930	1,950	1,883
	Payroll	96,640	94,654	96,408	87,124	93,212	95,900	99,181	102,523	95,528

[1] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[2] ds = Data are suppressed.
[2] NA = Not applicable.

Tables | Virginia

2018 Economic Impacts of the Virginia Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	23,487	3,239	800	1,248	12,382	808	306	416
Commercial Harvesters	4,014	303	97	144	4,014	303	97	144
Seafood Processors & Dealers	3,157	325	127	163	1,271	131	51	66
Importers	6,118	1,980	317	604	0	0	0	0
Seafood Wholesalers & Distributors	1,513	215	74	99	433	62	21	28
Retail	8,685	416	185	238	6,664	312	137	177

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	151,375	161,683	193,810	173,670	162,173	172,416	197,079	203,902	186,506	177,331
Finfish	47,020	55,604	58,194	60,924	55,893	54,356	50,620	44,269	47,130	47,947
Shellfish	104,355	106,079	135,616	112,747	106,281	118,060	146,459	159,633	139,376	129,384
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
Atlantic croaker	6,940	6,025	4,571	7,534	6,247	4,186	4,059	3,071	2,705	2,893
Black sea bass	569	928	1,003	1,401	1,716	1,365	1,607	2,071	2,074	1,829
Blue crab	21,169	29,133	26,274	24,561	23,991	27,047	30,607	38,267	25,245	22,394
Goosefish	631	594	752	1,217	920	654	516	401	170	150
Menhaden	23,578	34,476	32,995	31,107	25,343	26,046	28,202	24,236	22,865	27,716
Oysters	3,745	5,202	6,832	11,949	25,318	29,099	36,498	33,788	49,284	43,452
Sea scallop	63,312	70,204	79,427	54,076	32,610	33,643	48,806	51,832	35,036	35,067
Spot	3,411	975	3,431	770	2,406	5,763	2,263	449	3,439	1,034
Striped bass	4,219	3,635	4,497	5,542	5,701	6,390	4,363	4,664	5,912	5,994
Summer flounder	2,959	4,202	5,956	7,725	8,513	4,733	5,694	5,268	4,794	4,570

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	425,191	506,625	496,447	461,212	380,177	388,236	407,687	361,132	336,265	360,743
Finfish	378,288	456,749	441,954	416,503	345,421	353,170	373,207	320,807	302,234	327,240
Shellfish	46,903	49,875	54,493	44,709	34,756	35,066	34,480	40,325	34,031	33,503
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
Atlantic croaker	8,575	7,873	5,569	6,940	6,325	4,814	4,506	3,934	2,892	2,440
Black sea bass	165	264	275	392	496	388	422	553	745	606
Blue crab	32,756	38,490	39,656	33,143	24,258	24,205	21,378	26,298	22,011	21,384
Goosefish	743	596	604	907	846	587	445	366	216	203
Menhaden	351,392	433,241	414,159	390,318	317,950	326,817	352,855	302,899	284,226	311,544
Oysters	802	1,177	1,515	1,951	3,243	3,765	4,587	4,076	4,087	3,802
Sea scallop	10,137	9,167	8,260	5,798	2,958	2,752	4,020	4,579	3,925	3,869
Spot	3,910	1,024	3,741	613	2,085	3,983	1,457	275	1,635	601
Striped bass	2,109	2,139	2,077	2,175	1,680	1,995	1,331	1,241	1,082	1,277
Summer flounder	1,980	2,592	4,065	4,122	4,794	2,049	2,274	1,663	1,254	1,254

Average Annual Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Atlantic croaker	0.81	0.77	0.82	1.09	0.99	0.87	0.90	0.78	0.94	1.19
Black sea bass	3.46	3.52	3.65	3.57	3.46	3.52	3.80	3.74	2.78	3.02
Blue crab	0.65	0.76	0.66	0.74	0.99	1.12	1.43	1.46	1.15	1.05
Goosefish	0.85	1.00	1.25	1.34	1.09	1.11	1.16	1.10	0.79	0.74
Menhaden	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09
Oysters	4.67	4.42	4.51	6.12	7.81	7.73	7.96	8.29	12.06	11.43
Sea scallop	6.25	7.66	9.62	9.33	11.02	12.23	12.14	11.32	8.93	9.06
Spot	0.87	0.95	0.92	1.26	1.15	1.45	1.55	1.63	2.10	1.72
Striped bass	2.00	1.70	2.16	2.55	3.39	3.20	3.28	3.76	5.46	4.69
Summer flounder	1.49	1.62	1.47	1.87	1.78	2.31	2.50	3.17	3.82	3.64

2018 Economic Impacts of Virginia Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	116	10,904	3,632	6,456
	Private Boat	951	106,179	37,371	68,526
	Shore	1,639	176,880	66,814	116,277
Total Durable Expenditures		3,798	417,574	167,625	273,788
Total State Economic Impacts		6,504	711,537	275,441	465,047

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	6,641
Private Boat	111,811
Shore	129,740
Total	248,191

Equipment	Durable Goods Expenditures
Fishing Tackle	116,942
Other Equipment	41,295
Boat Expenses	185,499
Vehicle Expenses	22,535
Second Home Expenses	6,231
Total Durable Expenditures	372,501

Total State Trip and Durable Goods Expenditures	620,692

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	515	496	516	412	419	341	359	394	329	324
Non-Coastal	87	63	56	78	74	53	59	86	80	45
Out-of-State	305	279	320	193	267	206	203	244	263	218
Total Anglers	907	838	892	684	760	600	620	724	672	587

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	54	52	31	45	59	53	66	39	43	25
Private	4,700	4,811	4,256	3,646	3,399	3,079	2,451	2,660	2,548	2,215
Shore	3,657	3,882	4,590	4,596	4,549	4,277	4,210	4,549	4,157	4,147
Total Trips	8,411	8,745	8,876	8,287	8,007	7,410	6,727	7,247	6,749	6,386

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Black sea bass	H	313	63	36	13	46	78	66	81	97	87
	R	3,401	1,487	1,170	1,961	1,506	1,962	647	1,869	2,272	1,472
Cobia	H	34	17	13	1	24	22	39	44	15	81
	R	33	21	27	17	36	58	41	81	77	195
Drum (Atlantic croaker)	H	10,790	12,962	8,891	8,786	12,517	9,534	8,024	7,277	7,645	5,472
	R	16,733	13,471	14,160	15,140	18,480	10,314	6,815	6,993	8,464	5,359
Drum (spot)	H	6,906	5,631	10,129	10,148	11,734	13,653	1,731	5,279	15,944	7,361
	R	4,014	4,081	7,291	6,371	7,549	4,125	1,897	2,858	3,336	3,043
Drum (spotted seatrout)	H	68	77	644	392	154	85	23	164	172	190
	R	550	2,530	3,463	1,257	738	1,059	834	3,709	3,155	4,455
Drum (weakfish)	H	59	13	19	46	4	32	10	38	14	6
	R	168	533	744	274	205	375	232	1,467	455	234
Red drum	H	122	44	0	91	334	252	22	16	347	6
	R	606	88	157	8,323	577	1,109	79	165	1,723	85
Striped bass	H	711	369	328	258	302	131	208	138	108	57
	R	1,072	586	389	289	503	738	1,709	1,638	1,338	1,247
Summer flounder	H	579	564	659	678	560	439	334	212	188	146
	R	7,937	5,780	4,449	2,658	1,510	2,230	1,718	567	1,610	874
Wrasses (tautog)	H	196	324	153	66	20	87	24	40	22	8
	R	117	364	110	61	54	197	46	144	76	73

[1] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.

2017 Virginia State Economy (% of national total)

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[1]
617,046 (2.4%)	201,893 (2.6%)	3,310,542 (2.6%)	177 (2.6%)	293 (2.8%)	518	0.61

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	69	56	73	76	84	83	85	94	66
	Receipts	4,053	3,698	3,792	4,691	4,276	5,720	5,849	7,389	5,476
Seafood sales, retail	Firms	82	82	78	87	94	90	80	80	75
	Receipts	6,642	6,951	7,819	8,373	7,612	7,084	7,489	7,698	8,170

Seafood Sales and Processing — Employer Establishments (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	25	23	18	19	18	20	17	18	21
	Employees	941	961	899	919	781	804	790	790	839
	Payroll	30,600	30,460	33,285	32,955	30,682	29,763	31,614	32,991	46,474
Seafood sales, wholesale	Establishments	72	76	62	64	70	65	65	60	58
	Employees	519	518	469	492	483	448	444	457	379
	Payroll	15,620	17,901	15,733	14,271	14,719	14,769	16,089	16,115	16,872
Seafood sales, retail	Establishments	62	59	58	51	55	57	59	56	56
	Employees	271	265	277	280	254	224	279	247	215
	Payroll	5,401	5,480	5,453	5,563	5,526	5,537	6,641	7,255	6,222

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	53	56	51	59	54	56	54	60	53
	Employees	ds	ds	ds	ds	ds	ds	30,622	30,387	27,924
	Payroll	ds	ds	ds	ds	ds	ds	1,955,354	1,922,736	1,817,205
Deep Sea Freight Transportation	Establishments	16	17	21	19	12	12	12	14	13
	Employees	ds	421	492	ds	ds	ds	254	301	270
	Payroll	19,241	35,917	42,018	ds	ds	ds	33,057	38,674	34,928
Deep Sea Passenger Transportation	Establishments	2	1	2	1	1	1	1	1	NA
	Employees	ds	ds	ds	ds	ds	ds	ds	0	NA
	Payroll	ds	ds	ds	ds	ds	ds	ds	0	NA
Coastal and Great Lakes Freight Transportation	Establishments	9	7	7	12	11	12	10	12	12
	Employees	ds	ds	ds	ds	177	152	186	325	387
	Payroll	ds	ds	ds	ds	10,077	9,264	11,951	18,059	24,801
Port and Harbor Operations	Establishments	6	7	6	13	14	15	14	13	14
	Employees	ds	ds	ds	ds	ds	ds	1,922	2,167	2,052
	Payroll	ds	ds	ds	ds	ds	ds	132,983	125,111	144,903
Marine Cargo Handling	Establishments	12	7	11	6	8	8	8	8	6
	Employees	ds	ds	ds	ds	ds	ds	ds	805	751
	Payroll	ds	41,280	41,262	ds	ds	ds	ds	50,903	54,946
Navigational Services to Shipping	Establishments	25	26	21	20	18	20	20	18	26
	Employees	384	411	419	428	303	322	302	294	314
	Payroll	22,177	22,910	22,132	25,732	20,283	21,348	20,746	19,600	21,965
Marinas	Establishments	118	115	110	105	113	107	108	103	96
	Employees	829	868	818	673	840	814	818	821	636
	Payroll	24,631	24,182	23,379	18,874	24,468	24,436	25,146	25,777	19,270

[1] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[2] ds = Data are suppressed.
[2] NA = Not applicable.

South Atlantic Region

- East Florida
- Georgia
- North Carolina
- South Carolina

A row of recreational fishing boats in Hatteras, North Carolina.
Photo: NOAA Fisheries/Cameron Rhodes

MANAGEMENT CONTEXT

The South Atlantic Region includes East Florida, Georgia, North Carolina, and South Carolina. Federal fisheries in this region are managed by the South Atlantic Fishery Management Council and NOAA Fisheries under eight fishery management plans. The coastal migratory pelagic resources and spiny lobster FMPs are managed jointly with the Gulf of Mexico Fishery Management Council.

South Atlantic Region FMPs

- Coastal migratory pelagic resources (with GMFMC)
- Coral, coral reef and live/hardbottom habitat
- Dolphin/wahoo
- Golden crab
- Pelagic sargassum habitat
- Shrimp
- Snapper grouper
- Spiny lobster (with GMFMC)

Five of the stocks/complexes covered in these FMPs were listed as overfished in 2018: hogfish (Southeast Florida stock), red snapper (South Atlantic stock), red porgy, snowy grouper, and red grouper (South Atlantic stock).

Six stocks/complexes were subject to overfishing in 2018: hogfish (Southeast Florida stock), red snapper (South Atlantic stock), speckled hind, warsaw grouper, tilefish (South Atlantic stock), and blueline tilefish (South Atlantic stock). Red grouper (Southern Atlantic Coast stock) was removed from the overfishing list in 2018.

Catch Share Programs

One catch share program has been implemented in the South Atlantic: the South Atlantic Wreckfish ITQ Program. This catch share program is described below.

South Atlantic Wreckfish ITQ Program: This program was implemented in 1992 and is the only catch share program in the South Atlantic Region. The program was developed to create incentives for the conservation of wreckfish; provide a management regime that promotes stability and facilitates long-range planning and investment by harvesters and dealers; promote management regimes that minimize gear and area conflicts among fishermen; minimize the tendency for overcapitalization in the harvesting and processing/distribution sectors; and provide a reasonable opportunity for fishermen to make adequate returns from commercial fishing by limiting entry into the program. NOAA Fisheries continues to collect data on this program to develop standard performance indicators that measure its basic economic performance.

COMMERCIAL FISHERIES — SOUTH ATLANTIC REGION

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. The term does not include subsistence fishermen or saltwater anglers who fish for sport. It also excludes the for-hire sector, which earns its revenue from selling recreational fishing trips to saltwater anglers. The commercial fisheries section reports on economic impacts, landings revenue, landings, and ex-vessel prices of key species/species groups.

Key South Atlantic Commercial Species

- Blue crab
- Clams
- Flounders
- Groupers
- King mackerels
- Oysters
- Shrimp
- Snappers
- Swordfish
- Tunas

Economic Impacts

The premise behind economic impact modeling is that every dollar spent in a regional economy (direct impact) is either saved or re-spent on additional goods or services. If those dollars are re-spent on other goods and services in the regional economy, this spending generates additional economic activity in the region.[1]

Four different measures are commonly used to show how commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. The category includes both the direct sales of fish landed and sales made between businesses and households resulting from the original sale. Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the

[1] Summary data is available online in the FEUS webtool. [Available at: https://www.fisheries.noaa.gov/data-tools/fisheries-economics-united-states-interactive-tool.]

contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the sales of seafood or purchases of inputs to commercial fishing. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in numbers of jobs. Note that these categories are not additive. The United States seafood industry is defined here as the commercial fishing sector, seafood processors and dealers, seafood wholesalers and distributors, importers, and seafood retailers.[2,3]

This report provides estimates of total economic impacts for the nation and for each of the 23 coastal states. Total economic impacts for each state and the nation represent the sum of direct impacts; indirect impacts (in this case, the impact from suppliers to the seafood industry); and induced impacts (spending by employees on personal and household expenditures, where employees of both the seafood industry and its full supply chain are included). That is, the total economic impact estimates reported here measure jobs, sales, value-added, and income impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

In 2018, the commercial fishing and seafood industry in Georgia generated the largest employment impacts in the South Atlantic region with 18,267 full- and part-time jobs. Georgia also generated the largest sales impacts ($3 billion), value-added impacts ($1.1 billion), and income impacts ($669 million).

Landings Revenue

In 2018, landings revenue in the South Atlantic Region totaled $175.2 million, an 18% increase from 2009 (a 2% increase in real terms after adjusting for inflation) and a 13% decrease from 2017. Landings revenue was highest in North Carolina ($78.8 million), followed by East Florida ($57.7 million).

Shellfish landings revenue accounted for 64% of all landings revenue. In 2018, shrimp ($58.9 million), blue crab ($35.1 million), and flounders ($11 million) had the highest landings revenue in this region. Together, these top three species accounted for 60% of total landings revenue.

From 2009 to 2018, shrimp (79%, 54% in real terms), oysters (56%, 35% in real terms), and tunas (30%, 12% in real terms) had the largest increases, while groupers (-33%, -42% in real terms), king mackerels (-13%, -25% in real terms), and other (-12%, -25% in real terms) had the largest decreases. From 2017 to 2018, other (32%), groupers (8%), and swordfish (7%) had the largest increases, while shrimp (-23%), oysters (-16%), and tunas (-13%) had the largest decreases.

Commercial Revenue: Largest Increases

From 2009:
- Shrimp (79%, 54% in real terms)
- Oysters (56%, 35% in real terms)
- Tunas (30%, 12% in real terms)

From 2017:
- Groupers (8%)
- Swordfish (7%)
- Snappers (5%)

Commercial Revenue: Largest Decreases

From 2009:
- Groupers (-33%, -42% in real terms)
- King mackerels (-13%, -25% in real terms)
- Blue crab (-7%, -13% in real terms)

From 2017:
- Shrimp (-23%)
- Oysters (-16%)
- Tunas (-13%)

Landings

In 2018, South Atlantic Region commercial fishermen landed over 104.9 million pounds of finfish and shellfish. This represents an 8% decrease from 2009 and a 9% decrease from 2017. Shrimp contributed the highest landings volume in the region, accounting for 31% of total landing weight.

From 2009 to 2018, only shrimp (62%) and tuna (3%) landings increased, while groupers (-56%) and flounders

[2] The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates. [Available at: https://www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf.]
[3] Commercial economic impacts data were not available for East Florida specifically; data for the entire state of Florida are reported here.

(-51%) had the largest decreases. From 2017 to 2018, swordfish (16%), groupers (5%), and snappers (1%) had the largest increases, while tunas (-24%), oysters (-20%), and shrimp (-17%) had the largest decreases.

Commercial Landings: Largest Increases

From 2009:
- Shrimp (62%)
- Tunas (3%)

From 2017:
- Swordfish (16%)
- Groupers (5%)
- Snappers (1%)

Commercial Landings: Largest Decreases

From 2009:
- Groupers (-56%)
- Flounders (-51%)
- Oysters (-39%)

From 2017:
- Tunas (-24%)
- Oysters (-20%)
- Shrimp (-17%)

Prices

In 2018, oysters ($12.51 per pound) received the highest ex-vessel price in the region. Landings of blue crab ($1.28 per pound) had the lowest ex-vessel price. From 2009 to 2018, oysters (155%, 120% in real terms), flounders (115%, 86% in real terms), and king mackerels (55%, 33% in real terms) had the largest increases; no species experienced a price decline for this period. From 2017 to 2018, tunas (14%), king mackerels (8%), and clams (5%) had the largest increases, while shrimp (-8%) and swordfish (-7%) had the largest decreases.

RECREATIONAL FISHERIES — SOUTH ATLANTIC REGION

In this report, recreational fishing refers to fishing for leisure rather than to sell fish (commercial fishing) or for subsistence. This recreational fisheries section reports on economic impacts and expenditures, angler participation, fishing trips, and catch of key species/species groups.[4]

Key South Atlantic Recreational Species[5,6]

- Black sea bass
- Bluefish
- Dolphinfish
- Drum (Atlantic croaker and spot)
- Drum (spotted seatrout)
- King mackerel
- Porgies (sheepshead)
- Red drum
- Sharks
- Spanish mackerel

Economic Impacts and Expenditures

The economic contribution of recreational fishing activities in the South Atlantic Region is based on spending by recreational anglers.[7] Total annual trip expenditures are estimated at the state level by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore) and adjusting by the CPI (consumer price index) to the current year. Total annual durable expenditures are estimated by multiplying mean durable expenditures in each state by the estimated annual number of adult participants for each state and adjusting by the CPI (consumer price index) to the current year.[8]

Four different measures are commonly used to show how angler expenditures affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as recreational fishing. The category includes both the direct sales made by the angler and sales made between businesses and households resulting from that original sale by the angler. Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the purchases made by anglers. The first three

[4] Atlantic and Gulf recreational catch and effort estimates are based upon the MRIP estimates released in 2018.
[5] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[6] Sharks: Atlantic sharpnose shark, blacktip shark, requiem shark, requiem shark family, requiem shark genus, shark species, unidentified (sharks), and unidentified sharks.
[7] Trip expenditure estimates were generated from the 2016/2017 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2020). Durable goods expenditures were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2016). [For citations: Publications-Recreational Fisheries Economics Research.]
[8] Summary data is available online in the FEUS webtool. [Available at: https://www.fisheries.noaa.gov/data-tools/fisheries-economics-united-states-interactive-tool.]

measures are calculated in terms of dollars, whereas employment impacts are measured in number of jobs. Note that these categories are not additive. NOAA Fisheries uses a regional impact modeling software, called IMPLAN, to estimate these four types of impacts.

The economic contributions for both trip and durable expenditures from recreational fishing in 2018 were estimated using IMPLAN version 3, with base year data from 2017. Models for each state and for the nation were created in IMPLAN using trip expenditures (based on 2016/2017 survey data on average trip expenditures and total 2018 trips) and for durable expenditures (based on 2014 survey data on average durable expenditures and 2018 participants).

The greatest employment impacts from expenditures on saltwater recreational fishing in the South Atlantic Region were generated in East Florida (55,407 jobs), followed by North Carolina (24,795 jobs) and South Carolina (11,010 jobs).The largest sales impacts were observed in East Florida ($6.5 billion), followed by North Carolina ($2.6 billion) and South Carolina ($1 billion). The biggest income impacts were generated in East Florida ($2.3 billion), followed by North Carolina ($947.4 million) and South Carolina ($358.8 million). The greatest value-added impacts were in East Florida ($4 billion), followed by North Carolina ($1.6 billion) and South Carolina ($642.7 million).

Expenditures for fishing trips and durable equipment across the South Atlantic Region in 2018 totaled $8.6 billion. This total included $5.4 billion in durable goods expenditures, with the largest portion coming from boat expenses ($3.1 billion).

Participation

In 2018, there were 2.4 million recreational anglers who fished in the South Atlantic Region. This number represented a 1% increase from 2009 and a 12% increase from 2017. The anglers are categorized as either residents from coastal (81%) or non-coastal (19%) counties.

Fishing Trips

In 2018, recreational fishermen took 75.1 million fishing trips in the South Atlantic Region. This number represented a 4% decrease from 2009 and a 2% decrease from 2017. The largest proportions of trips were taken in the shore mode (69%) and private boat (30%). States with the highest number of recorded trips in the South Atlantic Region were East Florida (44 million trips) and North Carolina (16.6 million trips).

Harvest and Release Trends

Of the South Atlantic Region's key species and species groups, drum (spotted seatrout) (26.5 million fish), drum (Atlantic croaker and spot) (21.7 million fish), and bluefish (19.1 million fish), were most frequently caught by recreational fishermen. The text box below shows the species with the largest percentage increases and decreases in the past 10 years and in the past year.

From 2009 to 2018, red drum (82%), porgies (sheepshead) (55%), and dolphinfish (40%) had the largest increases, while sharks (-42%), king mackerel (-4%), and black sea bass (-0.4%) had the largest decreases. From 2017 to 2018, Spanish mackerel (64%), porgies (sheepshead) (39%), and sharks (8%) had the largest increases, while black sea bass (-48%) and red drum (-4%) had the largest decreases.

Harvest and Release: Largest Increases

From 2009:

- Red drum (82%)
- Porgies (sheepshead) (55%)
- Dolphinfish (40%)

From 2017:

- Spanish mackerel (64%)
- Porgies (sheepshead) (39%)
- Sharks (8%)

Harvest and Release: Largest Decreases

From 2009:

- Sharks (-42%)
- King mackerel (-4%)
- Black sea bass (-0.4%)

From 2017:

- Black sea bass (-48%)
- Red drum (-4%)

MARINE ECONOMY — SOUTH ATLANTIC REGION

For this report, the marine economy refers to the fishing and marine-related industries in a coastal state. The state marine economy consists of two industry sectors: 1) seafood sales and processing (employer establishments and non-employer firms); and 2) transportation support and marine operations (employer establishments). These sectors include several different marine-related industries.[9]

Note that when discussing the marine economy in the South Atlantic Region, all statistics include the entire state of Florida and not just East Florida.[10]

To measure the size of the commercial fishing sector in a state's economy relative to the size of the commercial fishing sector in the national economy, researchers use an index called the Commercial Fishing Location Quotient (CFLQ).[11] The CFLQ is calculated as the ratio of the percentage of regional employment in the commercial fishing sector relative to the percentage of national employment in the commercial fishing sector. The U.S. CFLQ is 1. If a state CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average.

Florida had the highest CFLQ at 0.97 in 2017. South Carolina had a CFLQ value of 0.11.

In 2017, 1.1 million employer establishments operated throughout the entire South Atlantic Region (including marine and non-marine related establishments). These establishments employed 17.9 million workers and had a total annual payroll of $822.6 billion. The combined gross state product of Florida, Georgia, North Carolina, and South Carolina was approximately $2.3 trillion in 2017.[12]

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2017, the South Atlantic Region had 465 non-employer firms in the seafood product preparation and packaging sector (a 44% increase from 2009). Annual receipts for these firms totaled $36.5 million. There were 41 employer firms in this sector (a 16% decrease from 2009). These establishments employed 2,868 workers and had a total annual payroll of $121 million.[13] The greatest number of employer and non-employer establishments in this sector was in Florida (303), followed by Georgia (101) and North Carolina (72).

Seafood Sales, Retail: In 2017, there were 609 non-employer firms in seafood retail sales in the states that make up the South Atlantic Region (a 3% decrease from 2009). Annual receipts for these firms totaled $57.2 million. There were 387 employer firms in the seafood retail sector (a 16% increase from 2009). These establishments employed 1,888 workers (a 22% increase from 2009) and had a total annual payroll of $45.4 million. The greatest number of employer and non-employer establishments in this sector was in Florida (492), followed by North Carolina (242) and Georgia (142).

Seafood Sales, Wholesale: There were 319 employer firms in the seafood wholesale sector in the South Atlantic Region in 2017 (a 3% decrease from 2009). These establishments employed 3,192 workers (a 7% increase from 2009) and had a total annual payroll of $128.2 million. The greatest number of employer and non-employer establishments in this sector was in Florida (230), followed by North Carolina (51) and Georgia (24).

Transportation Support and Marine Operations

Data for the transportation support and marine operations sectors of the South Atlantic Region's economy were largely suppressed for confidentiality reasons. It is clear, however, that these sectors play an important role in the regional economy. For example, in 2017, the ship and boat building sector in the South Atlantic Region accounted for $1.4 billion in payroll. The deep sea passenger transportation sector in Florida alone accounted for $970.6 million in payroll in 2017.

[9] Unless otherwise stated, data are from the U.S. Census Bureau (https://www.census.gov).
[10] Marine economy information was not available for East Florida, information for the entire state of Florida is provided in this report.
[11] U.S. Bureau of Labor Statistics, 'Location Quotient Calculator.' [For more information: https://www.bls.gov/cew/about-data/location-quotients-explained.htm.]
[12] U.S. Bureau of Economic Analysis. Gross Domestic Product by State, Fourth Quarter and Annual 2017. [Available at https://apps.bea.gov/regional/histdata/releases/0518gdpstate/.]
[13] The Census Bureau suppressed number of employees and payroll data for this sector in one or more states in this region in either 2017 or 2009, and thus cannot be compared.

Tables | South Atlantic Region

2018 Economic Impacts of the South Atlantic Seafood Industry (millions of dollars)

	Landings Revenue	With Imports				Without Imports			
		#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Florida[1]	248	82,094	19,200	3,591	6,422	9,847	1,006	265	406
Georgia	17	18,267	3,049	669	1,105	1,912	104	41	55
North Carolina	79	8,048	862	232	352	4,747	272	111	148
South Carolina	21	1,644	175	50	74	1,145	72	29	39

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	148,001	166,821	172,494	173,130	164,103	191,704	198,654	192,176	202,422	175,178
Finfish	63,453	66,365	66,764	65,027	62,900	71,607	65,073	64,992	68,541	62,378
Shellfish	84,480	100,409	105,390	108,062	100,181	119,047	133,007	127,056	133,836	112,740
Other	68	47	340	41	1,022	1,049	575	128	45	59
Key Species										
Blue crab	37,826	36,435	34,422	38,018	44,563	47,048	46,437	37,645	37,481	35,093
Clams	3,975	4,458	3,804	3,801	3,054	3,559	8,013	5,857	4,847	4,432
Flounders	10,387	11,179	9,530	8,014	7,538	13,495	13,133	12,428	12,255	10,969
Groupers	4,349	3,873	3,802	3,445	3,385	3,474	3,190	2,564	2,728	2,936
King mackerels	8,082	7,571	6,614	5,569	5,242	5,831	5,623	6,291	7,408	7,037
Oysters	4,602	7,131	6,852	5,492	6,080	7,209	16,536	7,234	8,610	7,197
Shrimp	32,894	45,938	53,765	55,002	39,023	50,967	51,568	67,249	76,514	58,875
Snappers	4,024	3,490	3,897	4,214	3,890	4,037	3,564	3,426	3,737	3,937
Swordfish	4,805	7,851	10,031	9,536	8,438	6,858	5,910	5,765	5,184	5,565
Tunas	4,847	4,075	5,162	7,053	6,107	7,053	5,673	5,003	7,260	6,300

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	114,138	120,329	123,658	107,503	101,057	113,411	114,269	106,750	115,805	104,952
Finfish	51,288	52,490	49,072	39,984	37,419	45,005	38,307	34,887	34,481	31,815
Shellfish	62,768	67,791	69,803	67,489	51,174	55,502	69,370	70,512	81,305	73,119
Other	83	48	4,783	31	12,464	12,905	6,593	1,351	19	18
Key Species										
Blue crab	39,007	39,014	42,564	40,721	33,042	34,392	40,587	35,249	30,003	27,437
Clams	666	681	630	661	472	529	887	775	702	609
Flounders	5,362	5,108	4,355	2,963	2,890	4,734	4,179	3,145	3,052	2,629
Groupers	1,294	1,105	953	859	787	762	675	537	546	571
King mackerels	4,855	4,245	3,048	2,457	1,913	2,381	2,267	2,634	3,113	2,729
Oysters	938	1,428	1,233	903	1,038	1,152	1,053	1,073	720	575
Shrimp	19,846	23,174	22,960	22,760	14,132	15,894	23,289	29,992	38,531	32,115
Snappers	1,373	1,196	1,295	1,349	1,221	1,191	1,042	973	1,033	1,045
Swordfish	1,793	2,379	2,721	2,734	2,466	1,629	1,731	1,695	1,456	1,688
Tunas	1,931	1,842	2,234	2,496	2,390	2,721	2,069	2,140	2,617	1,991

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Blue crab	0.97	0.93	0.81	0.93	1.35	1.37	1.14	1.07	1.25	1.28
Clams	5.97	6.55	6.04	5.75	6.47	6.73	9.03	7.56	6.91	7.28
Flounders	1.94	2.19	2.19	2.70	2.61	2.85	3.14	3.95	4.02	4.17
Groupers	3.36	3.51	3.99	4.01	4.30	4.56	4.73	4.78	5.00	5.15
King mackerels	1.66	1.78	2.17	2.27	2.74	2.45	2.48	2.39	2.38	2.58
Oysters	4.91	4.99	5.56	6.08	5.86	6.26	15.71	6.74	11.96	12.51
Shrimp	1.66	1.98	2.34	2.42	2.76	3.21	2.21	2.24	1.99	1.83
Snappers	2.93	2.92	3.01	3.12	3.19	3.39	3.42	3.52	3.62	3.77
Swordfish	2.68	3.30	3.69	3.49	3.42	4.21	3.41	3.40	3.56	3.30
Tunas	2.51	2.21	2.31	2.83	2.55	2.59	2.74	2.34	2.77	3.16

[1] The information for Florida in this table is for the entire state.

2018 Economic Impacts of the South Atlantic Recreational Fishing Expenditures (thousands of dollars, trips)

	Trips	#Jobs	Sales	Income	Value Added
East Florida	43,987	55,407	6,475,640	2,324,056	3,966,505
Georgia	4,593	3,811	343,662	121,963	220,496
North Carolina	16,624	24,795	2,615,215	947,410	1,583,200
South Carolina	9,897	11,010	1,041,944	358,784	642,710

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	151,882
Private Boat	950,160
Shore	2,150,935
Total	3,252,977

Equipment	Durable Goods Expenditures
Fishing Tackle	1,266,453
Other Equipment	539,791
Boat Expenses	3,137,895
Vehicle Expenses	376,844
Second Home Expenses	47,554
Total Durable Expenditures	5,368,536

Total State Trip and Durable Goods Expenditures	8,621,513

Recreational Anglers by Residential Area (thousands of anglers)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	1,922	1,933	1,893	2,135	2,092	2,189	1,753	1,873	1,750	1,954
Non-Coastal	462	536	450	502	396	530	475	472	401	465
Total Anglers	2,384	2,470	2,343	2,637	2,488	2,719	2,229	2,345	2,151	2,419

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	405	350	360	362	392	448	508	540	560	523
Private	23,532	25,415	23,391	20,786	20,495	22,194	21,753	21,252	21,506	22,890
Shore	54,669	54,096	52,923	48,186	47,627	52,768	53,562	51,317	54,849	51,687
Total Trips	78,605	79,861	76,674	69,334	68,513	75,410	75,824	73,109	76,914	75,101

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Black sea bass	H	673	1,330	933	687	629	1,113	727	553	620	351
	R	5,670	7,037	10,197	11,658	7,259	15,547	11,307	10,161	11,526	5,967
Bluefish	H	9,159	10,881	10,637	5,949	8,448	8,571	7,176	7,116	5,525	6,213
	R	12,400	22,284	18,670	12,110	19,009	13,887	14,742	13,232	13,106	12,898
Dolphinfish	H	1,438	1,212	1,421	1,436	1,142	1,618	2,255	1,345	1,666	1,807
	R	209	244	885	246	448	701	889	131	629	504
Drum (Atlantic croaker and spot)	H	11,474	9,229	15,301	11,548	14,762	17,704	18,413	12,502	7,209	6,247
	R	16,394	11,600	19,797	15,980	25,015	29,222	24,075	24,625	14,655	15,454
Drum (spotted seatrout)	H	4,230	3,360	2,611	5,115	3,608	2,821	1,805	3,543	3,904	2,804
	R	12,768	20,219	17,352	18,486	13,513	14,324	13,867	15,163	15,380	23,720
King mackerel	H	833	474	302	254	236	298	323	526	637	681
	R	168	160	104	97	78	199	144	123	323	285
Porgies (sheepshead)	H	1,953	2,647	2,357	1,630	2,056	2,658	1,572	2,415	1,885	2,604
	R	1,991	2,281	2,089	2,805	2,288	3,474	3,177	2,944	2,536	3,525
Red drum	H	990	1,781	1,518	1,422	2,048	1,958	1,585	2,010	2,256	2,239
	R	5,536	11,626	6,767	8,857	9,458	8,787	7,835	9,806	10,164	9,644
Sharks	H	98	64	59	65	151	137	45	162	34	25
	R	8,375	7,485	6,357	6,689	12,893	8,491	10,102	6,926	4,522	4,879
Spanish mackerel	H	3,184	3,638	2,644	2,034	3,764	2,577	1,461	2,866	1,741	2,309
	R	1,538	2,193	1,411	1,164	2,708	1,878	1,060	2,017	1,460	2,944

[1] East Florida anglers estimates are not available for the non-coastal mode.
[2] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.

Tables | East Florida

2018 Economic Impacts of the Florida Seafood Industry (millions of dollars)[1]

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	82,094	19,200	3,591	6,422	9,847	1,006	265	406
Commercial Harvesters	6,431	493	154	205	6,431	493	154	205
Seafood Processors & Dealers	4,774	900	174	343	525	106	21	40
Importers	43,137	13,960	2,237	4,256	0	0	0	0
Seafood Wholesalers & Distributors	10,450	1,400	550	684	434	58	23	28
Retail	17,302	2,446	476	935	2,456	348	68	133

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)[2]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	41,484	51,775	61,430	58,600	49,586	57,716	51,550	56,262	63,085	57,658
Finfish	23,254	25,688	26,355	26,167	24,101	26,769	23,388	22,914	23,101	23,535
Shellfish	18,164	26,040	35,037	32,393	25,400	30,888	28,049	33,304	39,944	34,065
Other	67	47	38	41	85	59	113	44	40	58
Key Species										
Blue crab	2,473	3,649	4,699	5,172	4,220	3,402	3,641	3,793	4,682	4,325
Clams	414	332	287	145	46	61	58	32	NA	1
Groupers	661	620	631	906	744	799	883	685	674	729
King mackerel	6,559	6,902	5,534	4,695	4,348	4,585	4,805	5,314	6,058	5,831
Lobsters	1,089	2,825	3,213	1,891	3,442	5,152	3,736	3,032	1,966	3,580
Sharks	464	374	355	299	383	508	573	425	529	386
Shrimp	12,605	17,252	24,536	21,969	14,354	18,312	16,353	22,601	29,967	23,495
Snappers	2,383	1,454	1,808	1,979	1,898	2,224	1,700	1,381	1,624	1,609
Spanish mackerel	2,004	2,414	2,687	2,463	2,678	2,652	2,171	2,534	2,760	2,918
Swordfish	2,368	3,664	3,785	4,420	3,132	3,819	2,607	2,637	1,917	2,805

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	28,273	30,542	32,513	29,621	22,678	24,442	24,251	27,632	35,298	33,805
Finfish	16,080	17,042	16,122	14,382	12,589	13,642	12,201	12,110	12,057	12,359
Shellfish	12,112	13,453	16,353	15,209	10,050	10,769	12,020	15,492	23,224	21,429
Other	82	46	38	30	39	32	30	30	16	17
Key Species										
Blue crab	1,701	2,728	3,663	3,769	2,491	1,659	1,783	1,901	2,501	2,013
Clams	54	42	38	18	7	8	8	3	NA	0
Groupers	188	167	158	226	178	179	187	142	137	141
King mackerel	4,061	3,903	2,633	2,145	1,562	1,812	1,859	2,162	2,438	2,191
Lobsters	298	481	515	337	486	543	481	394	256	528
Sharks	1,095	719	698	577	631	463	554	249	442	296
Shrimp	8,664	8,751	10,531	9,208	5,316	5,808	7,072	10,601	19,002	17,305
Snappers	805	510	612	645	623	670	506	407	447	415
Spanish mackerel	2,629	3,553	3,433	2,597	2,265	2,585	1,808	2,461	2,673	2,926
Swordfish	831	1,024	1,004	1,218	783	778	753	722	521	811

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Blue crab	1.45	1.34	1.28	1.37	1.69	2.05	2.04	1.99	1.87	2.15
Clams	7.71	7.89	7.62	7.97	6.35	7.62	7.48	9.83	NA	11.19
Groupers	3.52	3.72	3.99	4.01	4.18	4.46	4.71	4.80	4.91	5.17
King mackerel	1.62	1.77	2.10	2.19	2.78	2.53	2.58	2.46	2.48	2.66
Lobsters	3.66	5.87	6.24	5.60	7.08	9.48	7.76	7.70	7.68	6.78
Sharks	0.42	0.52	0.51	0.52	0.61	1.10	1.03	1.71	1.20	1.30
Shrimp	1.45	1.97	2.33	2.39	2.70	3.15	2.31	2.13	1.58	1.36
Snappers	2.96	2.85	2.96	3.07	3.04	3.32	3.36	3.40	3.63	3.88
Spanish mackerel	0.76	0.68	0.78	0.95	1.18	1.03	1.20	1.03	1.03	1.00
Swordfish	2.85	3.58	3.77	3.63	4.00	4.91	3.46	3.65	3.68	3.46

[1] Information reported in this table is for the entire state of Florida.
[2] NA = these data are confidential and therefore not disclosable.

2018 Economic Impacts of East Florida Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	802	83,241	29,330	49,601
	Private Boat	5,851	592,821	196,299	397,338
	Shore	9,059	912,145	312,783	617,893
Total Durable Expenditures		39,695	4,887,434	1,785,645	2,901,673
Total State Economic Impacts		55,407	6,475,640	2,324,056	3,966,505

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	47,429
Private Boat	599,814
Shore	724,306
Total	1,371,548

Equipment	Durable Goods Expenditures
Fishing Tackle	883,735
Other Equipment	384,610
Boat Expenses	2,281,695
Vehicle Expenses	275,233
Second Home Expenses	23,100
Total Durable Expenditures	3,848,373

Total State Trip and Durable Goods Expenditures	5,219,921

Recreational Anglers by Residential Area (thousands of anglers)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	1,099	1,033	1,109	1,181	1,263	1,334	1,001	1,059	975	1,227
Non-Coastal	0	0	0	0	0	0	0	0	0	0
Out-of-State	643	629	553	514	540	807	819	674	613	913
Total Anglers	1,741	1,662	1,662	1,695	1,803	2,141	1,821	1,733	1,588	2,140

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	188	132	141	160	161	192	229	256	250	216
Private	15,352	17,003	14,771	12,325	12,231	13,759	13,029	12,393	11,756	14,728
Shore	33,470	31,818	30,883	27,193	24,914	30,016	29,138	26,046	28,398	29,043
Total Trips	49,010	48,952	45,795	39,678	37,306	43,968	42,395	38,695	40,404	43,987

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Bluefish	H	5,502	6,046	5,575	2,319	2,037	3,262	2,081	1,492	1,591	2,052
	R	5,169	13,455	8,484	8,079	10,002	6,293	5,361	4,751	1,716	3,161
Dolphinfish[3]	H	801	485	771	949	806	1,179	1,505	799	1,285	1,170
	R	190	234	869	220	440	694	815	127	626	456
Drum (kingfish)[4]	H	5,342	8,187	10,137	9,676	6,043	6,745	3,507	4,762	2,079	5,920
	R	7,197	9,425	8,447	10,159	6,505	7,265	9,140	5,872	1,978	7,340
Drum (spotted seatrout)	H	639	1,187	931	1,683	1,122	1,111	504	963	978	929
	R	5,178	9,718	7,839	9,611	5,723	7,280	6,131	4,784	5,846	5,306
Gray snapper	H	811	447	404	464	2,102	2,556	1,819	3,778	3,355	2,513
	R	7,881	1,732	2,017	6,419	7,167	8,095	6,469	11,947	10,260	8,575
Jack (Florida pompano)	H	513	1,712	507	1,602	630	575	486	380	612	557
	R	840	1,093	2,676	2,666	1,261	1,780	984	1,190	827	1,033
King mackerel	H	596	391	252	181	179	208	219	409	489	513
	R	99	132	89	83	62	146	122	67	171	152
Porgies (sheepshead)	H	982	1,893	1,420	1,015	1,076	2,248	1,129	1,942	1,240	1,740
	R	1,559	1,879	1,704	2,315	1,467	2,767	2,520	2,272	1,114	2,341
Red drum	H	421	721	788	878	1,008	1,028	982	1,310	979	1,070
	R	2,276	6,759	4,192	2,615	5,197	5,075	4,132	4,734	4,727	5,375
Spanish mackerel	H	1,556	2,525	1,304	777	2,666	1,349	230	1,619	651	957
	R	699	1,353	522	254	1,892	920	219	1,137	454	1,585

[1] Non-coastal data are not available because all of the state's residents are considered coastal county residents.
[2] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[3] Dolphinfish include dolphin and dolphinfish.
[4] Drum (kingfish) include kingfish genus and Gulf kingfish.

2017 Florida State Economy (% of national total)[1]

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
2,245,127 (8.7%)	557,308 (7.1%)	8,385,577 (6.5%)	378 (5.6%)	532 (5.2%)	984	0.97

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)[1]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	217	280	294	307	300	315	300	316	280
	Receipts	12,473	14,635	14,618	17,557	17,214	22,329	21,841	20,834	19,651
Seafood sales, retail	Firms	316	361	362	383	338	346	355	320	316
	Receipts	25,667	27,964	29,037	30,765	25,332	26,433	29,033	24,296	27,937

Seafood Sales and Processing — Employer Establishments (thousands of dollars)[1]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	25	27	24	27	25	27	27	23	23
	Employees	1,143	1,269	1,095	1,608	1,374	1,419	1,429	1,535	1,942
	Payroll	46,235	45,772	42,612	51,735	50,003	50,556	58,246	63,039	79,173
Seafood sales, wholesale	Establishments	215	229	250	226	234	233	242	239	230
	Employees	1,762	1,747	1,913	1,957	1,878	1,974	2,055	1,849	2,098
	Payroll	72,159	70,889	77,115	75,945	79,266	83,964	90,247	83,818	89,907
Seafood sales, retail	Establishments	158	145	145	151	165	166	181	191	176
	Employees	885	865	849	945	909	1,037	1,137	1,133	1,140
	Payroll	21,182	20,783	20,158	21,577	23,476	25,844	29,066	26,981	29,146

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[1,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	261	248	246	258	259	263	278	281	269
	Employees	8,221	7,363	7,909	8,621	8,813	9,608	10,913	11,170	11,114
	Payroll	296,537	302,909	325,942	374,831	390,853	448,514	488,050	512,454	516,473
Deep Sea Freight Transportation	Establishments	58	61	65	75	69	77	76	65	58
	Employees	2,801	2,279	2,374	3,345	2,485	2,015	2,154	1,639	2,189
	Payroll	180,139	159,025	177,386	231,887	140,564	131,069	137,786	113,897	193,568
Deep Sea Passenger Transportation	Establishments	33	29	29	39	31	28	32	33	38
	Employees	ds	ds	ds	ds	ds	ds	10,510	10,161	9,882
	Payroll	ds	ds	ds	ds	ds	ds	967,938	864,475	970,607
Coastal and Great Lakes Freight Transportation	Establishments	42	50	54	60	47	62	57	62	64
	Employees	972	709	753	1,381	1,050	1,743	1,815	1,966	2,245
	Payroll	37,774	50,217	53,341	100,402	82,078	175,366	173,004	199,592	242,810
Port and Harbor Operations	Establishments	32	34	32	66	61	56	55	54	50
	Employees	527	470	377	2,082	555	588	987	1,006	1,560
	Payroll	19,006	20,525	16,879	72,554	25,439	20,647	32,032	32,969	39,956
Marine Cargo Handling	Establishments	59	55	64	43	58	61	69	63	72
	Employees	7,288	7,547	7,484	4,598	6,258	6,992	7,834	7,048	6,269
	Payroll	185,309	191,560	195,458	86,461	188,997	179,024	208,186	191,828	210,284
Navigational Services to Shipping	Establishments	145	145	150	151	180	190	196	194	226
	Employees	829	980	1,047	853	1,390	878	861	922	1,074
	Payroll	60,641	76,853	75,561	68,366	130,893	74,185	72,483	73,708	81,050
Marinas	Establishments	428	430	411	432	444	464	466	458	450
	Employees	4,665	4,439	4,657	4,918	5,076	5,421	5,472	5,405	5,481
	Payroll	132,955	133,017	142,997	148,573	145,265	168,185	171,354	176,315	184,529

[1] All data presented on this page are for the entire state of Florida, not just East Florida.
[2] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[3] ds = Data are suppressed.

Tables | Georgia

2018 Economic Impacts of the Georgia Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	18,267	3,049	669	1,105	1,912	104	41	55
Commercial Harvesters	678	30	10	15	678	30	10	15
Seafood Processors & Dealers	1,536	141	54	72	205	19	7	10
Importers	7,069	2,288	367	697	0	0	0	0
Seafood Wholesalers & Distributors	1,489	214	74	104	42	6	2	3
Retail	7,495	377	164	218	987	49	21	28

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	10,857	13,134	16,028	16,390	10,925	15,471	17,134	13,466	16,115	17,429
Finfish	56	35	42	66	90	80	50	56	67	89
Shellfish	10,800	13,099	15,684	16,324	9,898	14,401	16,623	13,329	16,049	17,340
Other	0	0	302	0	937	990	461	81	0	0
Key Species										
Blue crab	3,840	2,658	3,345	4,267	3,975	3,774	4,248	4,011	4,993	5,956
Clams	601	572	831	834	NA	NA	2,284	2,402	2,262	2,247
Eastern oyster	66	NA	131	143	127	150	204	148	178	126
Kingfishes	1	9	13	5	3	6	5	0	3	19
Quahog clams	601	572	831	834	NA	NA	2,284	2,402	2,262	2,247
Shad	33	NA	NA	45	71	48	27	8	51	43
Shrimp	6,279	9,830	11,337	11,051	5,789	10,474	9,886	6,767	8,615	9,009

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	6,838	7,030	12,782	8,490	17,681	18,421	13,672	7,455	7,157	7,857
Finfish	51	27	32	58	76	70	36	21	57	59
Shellfish	6,787	7,002	8,005	8,432	5,180	5,477	7,073	6,114	7,100	7,798
Other	0	0	4,745	0	12,424	12,873	6,563	1,320	0	0
Key Species										
Blue crab	3,598	2,329	3,427	4,265	3,215	2,669	2,934	3,320	3,839	4,519
Clams	102	98	147	144	NA	NA	371	348	354	338
Eastern oyster	15	NA	26	25	26	26	33	24	29	20
Kingfishes	1	8	10	4	3	4	3	0	2	12
Quahog clams	102	98	147	144	NA	NA	371	348	354	338
Shad	32	NA	NA	43	62	53	23	6	46	33
Shrimp	3,058	4,519	4,375	3,977	1,918	2,780	3,735	2,422	2,878	2,921

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Blue crab	1.07	1.14	0.98	1.00	1.24	1.41	1.45	1.21	1.30	1.32
Clams	5.91	5.80	5.65	5.78	NA	NA	6.15	6.91	6.39	6.65
Eastern oyster	4.24	NA	5.09	5.73	4.85	5.71	6.26	6.17	6.19	6.46
Kingfishes	1.03	1.10	1.27	1.28	1.30	1.67	1.46	1.40	1.14	1.59
Quahog clams	5.91	5.80	5.65	5.78	NA	NA	6.15	6.91	6.39	6.65
Shad	1.04	NA	NA	1.06	1.13	0.92	1.13	1.32	1.13	1.32
Shrimp	2.05	2.18	2.59	2.78	3.02	3.77	2.65	2.79	2.99	3.08

[1] 'NA' = these data are confidential and therefore not disclosable.

2018 Economic Impacts of Georgia Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	89	8,853	2,987	5,230
	Private Boat	786	59,166	18,933	38,992
	Shore	1,889	165,027	54,508	101,865
Total Durable Expenditures		1,047	110,616	45,535	74,410
Total State Economic Impacts		3,811	343,662	121,963	220,496

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	5,173
Private Boat	61,121
Shore	120,647
Total	186,941

Equipment	Durable Goods Expenditures
Fishing Tackle	38,023
Other Equipment	12,359
Boat Expenses	41,495
Vehicle Expenses	19,184
Second Home Expenses	0
Total Durable Expenditures	111,060

Total State Trip and Durable Goods Expenditures	298,001

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	146	145	146	134	99	125	81	110	110	91
Non-Coastal	91	136	131	96	72	115	80	89	73	81
Out-of-State	45	61	78	74	53	70	70	49	57	74
Total Anglers	282	342	355	303	225	310	231	248	241	247

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	15	7	16	20	21	31	34	26	28	28
Private	1,152	1,164	1,236	1,184	1,228	1,262	1,360	1,375	1,569	1,604
Shore	1,525	1,536	1,650	1,786	2,071	2,444	2,715	2,480	3,028	2,960
Total Trips	2,693	2,707	2,902	2,990	3,320	3,737	4,109	3,880	4,624	4,593

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Black drum	H	42	138	26	43	65	48	48	96	64	129
	R	60	73	20	53	35	22	56	54	85	189
Black sea bass	H	41	38	98	53	234	167	123	19	26	79
	R	307	513	526	425	826	1,925	1,087	314	681	849
Bluefish	H	6	27	10	21	17	70	49	12	9	91
	R	163	249	124	148	42	261	427	96	30	295
Drum (Atlantic croaker)	H	185	121	130	105	265	290	790	402	371	241
	R	1,170	652	749	781	1,362	2,058	1,321	1,179	1,060	1,404
Drum (Southern kingfish)	H	1,545	1,772	1,820	1,346	1,732	2,199	3,437	1,505	1,825	3,383
	R	1,538	1,522	1,689	1,778	1,206	984	1,490	1,742	1,283	2,234
Drum (spotted seatrout)	H	1,363	1,135	762	1,207	937	724	741	1,290	1,060	1,168
	R	2,126	1,676	1,348	2,197	1,321	1,688	1,764	2,113	2,437	2,113
Porgies (sheepshead)	H	154	240	282	141	129	56	121	187	159	403
	R	72	91	102	58	114	62	128	69	75	237
Red drum	H	164	443	201	96	237	212	201	290	468	607
	R	346	926	370	220	505	751	961	601	1,177	1,046
Sharks[2]	H	12	8	11	14	26	< 1	8	19	4	5
	R	756	564	759	1,015	907	1,059	902	1,085	569	681
Southern flounder	H	83	81	55	43	52	58	130	84	101	117
	R	18	6	44	9	22	22	127	34	80	14

[1] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[2] Sharks include unidentified (sharks), shark species, unidentified sharks, requiem shark family, requiem shark, Atlantic sharpnose shark, requiem shark genus, and blacktip shark.

2017 Georgia State Economy (% of national total)

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[1]
915,043 (3.6%)	233,500 (3%)	3,888,928 (3%)	192 (2.9%)	299 (2.9%)	564	0.04

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	51	52	61	71	60	62	87	100	96
	Receipts	3,817	5,458	5,540	4,974	4,378	5,471	6,265	7,582	9,137
Seafood sales, retail	Firms	98	96	89	97	77	103	84	75	72
	Receipts	5,701	6,474	8,646	8,233	6,932	9,338	8,379	8,298	9,462

Seafood Sales and Processing — Employer Establishments (thousands of dollars)[2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	6	6	5	6	5	7	6	7	5
	Employees	ds	1,056	1,022	854	945	895	854	917	641
	Payroll	ds	37,343	39,433	32,928	35,987	37,122	37,368	38,634	31,721
Seafood sales, wholesale	Establishments	33	36	28	18	28	24	23	35	24
	Employees	532	514	562	468	469	792	701	731	198
	Payroll	18,628	20,075	20,660	15,459	17,326	24,726	26,254	28,745	6,327
Seafood sales, retail	Establishments	42	48	51	54	60	62	70	70	70
	Employees	162	176	176	214	210	229	248	283	269
	Payroll	2,447	2,502	2,566	3,425	3,390	3,745	4,539	4,966	4,863

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	14	12	15	14	15	16	17	15	15
	Employees	ds	ds	ds	ds	ds	ds	3,150	2,272	2,384
	Payroll	ds	ds	ds	ds	ds	ds	110,951	81,978	86,762
Deep Sea Freight Transportation	Establishments	13	14	12	12	7	9	9	9	11
	Employees	29	ds	51	236	28	63	64	70	39
	Payroll	2,192	2,465	4,833	11,238	2,311	3,856	4,421	5,255	2,904
Deep Sea Passenger Transportation	Establishments	NA	NA	1	1	1	1	2	1	NA
	Employees	NA	NA	ds	ds	ds	ds	ds	0	NA
	Payroll	NA	NA	ds	ds	ds	ds	ds	0	NA
Coastal and Great Lakes Freight Transportation	Establishments	5	4	4	3	4	7	8	8	7
	Employees	ds	ds	ds	ds	ds	ds	66	84	71
	Payroll	1,700	ds	ds	ds	ds	ds	4,356	5,074	4,661
Port and Harbor Operations	Establishments	5	4	2	13	7	4	4	5	4
	Employees	ds	ds	ds	ds	ds	ds	68	47	30
	Payroll	ds	ds	ds	ds	ds	ds	2,961	3,230	1,200
Marine Cargo Handling	Establishments	18	17	20	10	19	19	18	17	17
	Employees	3,707	2,971	4,655	ds	2,986	3,561	4,956	3,966	4,022
	Payroll	87,410	84,675	108,674	ds	120,985	124,394	117,785	98,105	105,327
Navigational Services to Shipping	Establishments	9	8	8	10	8	7	9	8	10
	Employees	ds	ds	ds	ds	ds	ds	203	149	142
	Payroll	12,185	11,237	ds	ds	ds	ds	12,202	9,904	10,117
Marinas	Establishments	58	62	63	63	59	65	67	63	66
	Employees	541	631	580	636	644	586	639	648	747
	Payroll	15,736	17,428	16,986	17,921	17,768	18,604	20,210	22,546	25,197

[1] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[2] ds = Data are suppressed.
[3] NA = Not applicable.

Tables | North Carolina

2018 Economic Impacts of the North Carolina Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	8,048	862	232	352	4,747	272	111	148
Commercial Harvesters	2,021	134	53	73	2,021	134	53	73
Seafood Processors & Dealers	552	43	17	22	385	30	12	15
Importers	1,495	484	78	148	0	0	0	0
Seafood Wholesalers & Distributors	390	49	17	23	114	14	5	7
Retail	3,590	152	67	87	2,228	94	41	53

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	78,288	80,309	71,099	73,720	79,636	94,900	106,080	98,532	97,705	78,816
Finfish	34,994	33,836	31,478	31,752	30,347	37,947	34,109	34,944	36,885	32,562
Shellfish	43,294	46,473	39,620	41,968	49,289	56,953	71,971	63,585	60,815	46,252
Other	1	0	0	0	0	0	0	3	5	1
Key Species										
Atlantic croaker	2,988	3,409	3,160	2,132	1,727	1,865	1,651	2,290	1,135	1,635
Black sea bass	1,401	947	627	688	869	1,408	1,354	1,398	1,859	1,517
Blue crab	27,463	26,537	21,295	22,779	30,001	34,050	33,717	24,303	22,238	19,669
Clams	2,093	2,574	1,862	2,239	2,309	2,912	5,101	2,696	2,151	1,603
Flounders	10,122	10,907	8,893	7,419	7,066	13,058	12,845	12,057	11,967	10,719
Groupers	1,879	1,729	1,462	1,421	1,247	1,263	1,108	1,126	1,012	1,112
King mackerel	1,498	645	1,062	831	878	1,204	786	902	1,265	1,147
Shrimp	8,527	10,689	10,888	13,293	12,945	14,146	16,804	29,751	29,619	20,047
Snappers	1,074	956	1,004	900	917	865	797	955	998	1,172
Tunas	2,923	1,490	2,437	4,400	3,208	3,721	3,193	3,337	5,330	4,550

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	69,543	72,224	66,269	56,902	50,337	61,232	65,573	61,010	62,716	54,915
Finfish	32,910	32,720	29,740	22,945	22,144	28,908	22,946	20,077	19,298	17,481
Shellfish	36,632	39,502	36,529	33,956	28,193	32,325	42,627	40,932	43,415	37,433
Other	1	2	0	1	0	0	0	1	3	1
Key Species										
Atlantic croaker	6,135	7,312	5,054	3,107	1,928	2,630	1,819	2,164	1,008	1,644
Black sea bass	615	401	272	256	330	527	468	439	631	497
Blue crab	29,707	30,683	30,035	26,787	22,203	26,231	32,124	25,645	19,273	17,014
Clams	351	355	295	396	347	431	414	339	289	211
Flounders	5,256	5,001	4,102	2,736	2,728	4,584	4,080	3,021	2,957	2,558
Groupers	637	561	408	382	311	299	259	261	223	239
King mackerel	778	329	408	297	345	550	391	437	629	507
Shrimp	5,408	5,955	5,140	6,141	4,859	4,691	9,077	13,832	13,896	9,730
Snappers	374	320	326	279	276	251	231	279	281	323
Tunas	1,028	703	1,056	1,482	1,283	1,460	1,085	1,239	1,802	1,300

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Atlantic croaker	0.49	0.47	0.63	0.69	0.90	0.71	0.91	1.06	1.13	0.99
Black sea bass	2.28	2.36	2.30	2.69	2.64	2.67	2.89	3.18	2.94	3.05
Blue crab	0.92	0.86	0.71	0.85	1.35	1.30	1.05	0.95	1.15	1.16
Clams	5.97	7.25	6.30	5.65	6.65	6.76	12.31	7.96	7.45	7.60
Flounders	1.93	2.18	2.17	2.71	2.59	2.85	3.15	3.99	4.05	4.19
Groupers	2.95	3.08	3.58	3.72	4.01	4.22	4.28	4.31	4.53	4.65
King mackerel	1.93	1.96	2.60	2.79	2.54	2.19	2.01	2.07	2.01	2.26
Shrimp	1.58	1.79	2.12	2.16	2.66	3.02	1.85	2.15	2.13	2.06
Snappers	2.87	2.99	3.08	3.22	3.32	3.44	3.45	3.42	3.55	3.63
Tunas	2.84	2.12	2.31	2.97	2.50	2.55	2.94	2.69	2.96	3.50

2018 Economic Impacts of North Carolina Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	1,108	106,097	35,933	61,076
	Private Boat	2,114	216,015	75,370	130,653
	Shore	12,378	1,237,577	435,587	752,571
Total Durable Expenditures		9,194	1,055,527	400,520	638,900
Total State Economic Impacts		24,795	2,615,215	947,410	1,583,200

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	64,271
Private Boat	203,570
Shore	877,104
Total	1,144,946

Equipment	Durable Goods Expenditures
Fishing Tackle	251,621
Other Equipment	101,919
Boat Expenses	636,628
Vehicle Expenses	59,159
Second Home Expenses	24,454
Total Durable Expenditures	1,073,781

Total State Trip and Durable Goods Expenditures	2,218,727

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	446	544	490	614	564	549	479	541	481	460
Non-Coastal	259	296	254	283	240	301	239	281	235	268
Out-of-State	976	1,073	755	764	601	805	830	1,066	795	809
Total Anglers	1,681	1,914	1,499	1,661	1,405	1,656	1,548	1,889	1,512	1,537

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	129	139	129	159	161	130	148	181	195	148
Private	4,822	4,983	5,213	5,055	4,848	4,896	4,993	4,860	5,045	4,279
Shore	14,393	15,052	14,127	13,342	13,127	13,934	15,216	16,158	17,258	12,197
Total Trips	19,345	20,173	19,469	18,555	18,136	18,960	20,357	21,199	22,497	16,624

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1,2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Black sea bass	H	153	184	180	134	90	333	320	195	317	86
	R	1,681	2,224	2,570	4,650	3,041	5,023	5,036	5,536	6,191	2,224
Bluefish	H	3,190	3,692	3,614	2,684	4,288	4,419	4,123	4,489	3,173	3,305
	R	6,448	7,420	7,150	3,268	7,051	5,863	6,356	6,803	8,256	7,912
Dolphinfish[3]	H	596	615	639	427	323	403	740	481	280	495
	R	4	6	16	5	5	7	74	3	3	28
Drum (Atlantic croaker and spot)[4]	H	5,156	5,111	7,354	3,526	7,422	10,279	4,010	3,038	3,085	2,542
	R	10,470	8,187	11,999	6,875	12,243	14,391	12,617	9,086	6,534	6,374
Drum (spotted seatrout)	H	1,858	631	724	1,603	1,108	725	249	979	1,218	449
	R	4,463	7,658	7,421	4,916	4,279	3,949	4,824	6,475	5,148	15,238
Flounder (lefteye and summer)[5]	H	296	401	291	283	229	443	227	94	227	102
	R	4,052	4,435	3,226	4,025	4,012	3,290	2,781	2,877	2,990	1,497
King mackerel	H	169	58	32	56	48	72	96	108	110	103
	R	24	10	< 1	6	9	35	17	44	95	76
Spanish mackerel	H	1,481	927	855	996	995	1,029	835	918	996	1,013
	R	753	702	480	592	686	814	515	547	688	1,019
Striped bass	H	32	109	249	24	58	21	41	20	73	161
	R	290	332	808	501	361	374	343	1,089	3,691	1,867
Yellowfin tuna	H	36	42	33	70	53	44	38	80	119	61
	R	1	< 1	< 1	9	1	7	2	29	18	4

[1] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[2] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.
[3] Dolphinfish include dolphin and dolphinfish.
[4] Drum (Atlantic croaker and spot) include spot and Atlantic croaker.
[5] Flounder (lefteye and summer) include lefteye flounder genus and summer flounder.

2017 North Carolina State Economy (% of national total)

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[1]
760,638 (3%)	233,363 (3%)	3,774,377 (2.9%)	176 (2.6%)	282 (2.7%)	547	0.04

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)[2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	34	40	50	46	58	63	72	69	59
	Receipts	1,297	1,652	2,705	1,630	4,605	4,599	4,715	4,204	3,535
Seafood sales, retail	Firms	140	126	144	136	127	137	134	122	149
	Receipts	12,188	9,057	10,386	11,990	12,175	13,430	12,705	12,215	13,921

Seafood Sales and Processing — Employer Establishments (thousands of dollars)[2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	16	16	14	12	13	14	16	14	13
	Employees	170	171	ds	ds	135	128	128	128	240
	Payroll	4,461	4,749	4,830	5,084	4,563	4,720	6,582	6,366	10,124
Seafood sales, wholesale	Establishments	66	66	64	59	59	56	59	57	51
	Employees	584	590	603	793	849	966	1,187	1,267	739
	Payroll	17,383	18,348	19,344	23,949	26,687	30,292	38,462	43,297	27,127
Seafood sales, retail	Establishments	77	82	84	88	86	93	91	93	93
	Employees	243	247	244	289	254	278	255	282	316
	Payroll	4,494	5,017	5,250	5,860	5,872	6,263	6,681	7,207	8,223

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	64	60	57	60	52	52	62	63	66
	Employees	1,983	1,501	1,515	1,760	1,059	1,153	1,422	1,571	1,807
	Payroll	68,004	64,807	66,929	74,843	49,462	50,102	65,388	73,550	89,950
Deep Sea Freight Transportation	Establishments	6	10	8	7	8	8	6	5	3
	Employees	9	ds	ds	25	ds	ds	ds	0	0
	Payroll	617	ds	ds	1,579	ds	ds	ds	0	0
Deep Sea Passenger Transportation	Establishments	1	NA	1	NA	NA	NA	NA	2	NA
	Employees	ds	NA	ds	NA	NA	NA	NA	0	NA
	Payroll	ds	NA	ds	NA	NA	NA	NA	0	NA
Coastal and Great Lakes Freight Transportation	Establishments	6	4	5	6	5	5	6	5	NA
	Employees	ds	ds	ds	ds	ds	ds	ds	0	NA
	Payroll	2,366	ds	ds	ds	ds	ds	ds	0	NA
Port and Harbor Operations	Establishments	2	4	3	9	5	2	2	2	4
	Employees	ds	ds	ds	ds	46	ds	ds	0	126
	Payroll	ds	ds	ds	ds	1,579	ds	ds	0	4,437
Marine Cargo Handling	Establishments	12	11	14	6	9	9	9	9	8
	Employees	914	600	ds	ds	ds	ds	797	594	627
	Payroll	20,707	20,755	ds	ds	ds	ds	14,767	14,204	26,470
Navigational Services to Shipping	Establishments	11	13	11	8	10	13	13	12	17
	Employees	96	94	86	90	77	78	78	71	133
	Payroll	4,313	3,968	4,041	3,203	3,583	3,844	4,350	4,369	5,941
Marinas	Establishments	105	102	104	102	99	100	105	109	92
	Employees	501	536	524	531	501	541	579	624	525
	Payroll	15,858	16,238	16,187	15,975	16,369	16,774	18,672	21,964	17,773

[1] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[2] ds = Data are suppressed.
[3] NA = Not applicable.

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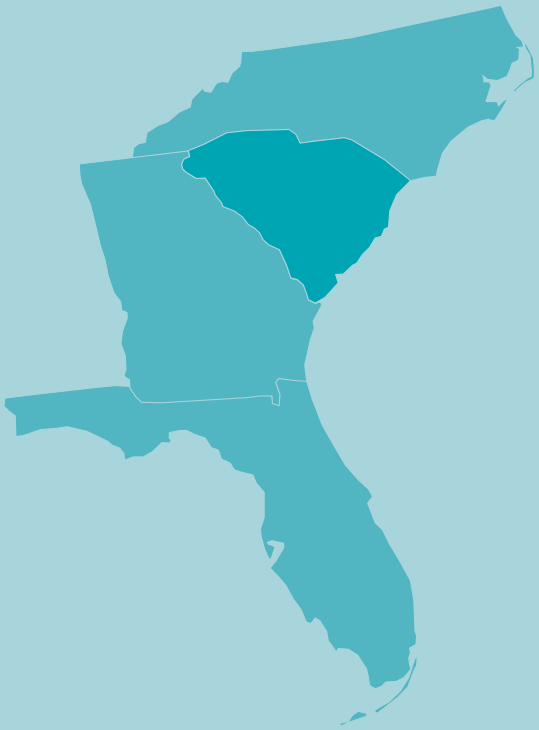


2018 Economic Impacts of the South Carolina Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	1,644	175	50	74	1,145	72	29	39
Commercial Harvesters	434	35	14	19	434	35	14	19
Seafood Processors & Dealers	106	9	4	5	87	8	3	4
Importers	272	88	14	27	0	0	0	0
Seafood Wholesalers & Distributors	87	10	4	5	31	4	1	2
Retail	744	32	14	18	593	25	11	14

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	17,371	21,603	23,936	24,420	23,957	23,616	23,891	23,916	25,516	21,275
Finfish	5,149	6,807	8,888	7,043	8,363	6,810	7,526	7,079	8,488	6,192
Shellfish	12,222	14,796	15,049	17,377	15,594	16,805	16,364	16,837	17,028	15,083
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
Black sea bass	362	213	181	303	471	341	246	156	251	187
Blue crab	4,049	3,592	5,084	5,800	6,368	5,822	4,831	5,538	5,569	5,143
Clams	866	980	823	583	699	585	570	726	434	580
Groupers	1,808	1,524	1,709	1,119	1,394	1,412	1,199	754	1,042	1,094
Oysters	1,734	1,906	1,975	2,153	2,402	2,243	2,258	2,321	2,612	2,967
Sharks	39	75	99	108	55	87	18	33	42	38
Shrimp	5,483	8,166	7,004	8,689	5,935	8,035	8,525	8,129	8,313	6,324
Snappers	568	1,079	1,085	1,334	1,075	948	1,067	1,090	1,116	1,156
Swordfish	1,116	2,289	3,628	2,105	2,370	1,298	1,437	1,785	1,815	1,614
Tilefish	69	117	8	148	404	538	537	NA	780	326

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	9,485	10,533	12,095	12,490	10,361	9,316	10,774	10,654	10,634	8,374
Finfish	2,247	2,700	3,178	2,598	2,610	2,385	3,124	2,680	3,069	1,915
Shellfish	7,238	7,833	8,916	9,892	7,750	6,931	7,650	7,973	7,566	6,459
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
Black sea bass	168	99	100	118	178	131	81	49	81	62
Blue crab	4,001	3,274	5,439	5,900	5,134	3,833	3,746	4,382	4,390	3,890
Clams	160	185	150	102	118	90	94	85	59	60
Groupers	469	377	386	252	298	284	229	133	185	190
Oysters	308	340	337	361	376	339	331	314	327	324
Sharks	43	86	108	103	44	56	13	21	29	23
Shrimp	2,717	3,949	2,914	3,433	2,039	2,615	3,406	3,136	2,755	2,159
Snappers	194	365	358	425	321	270	305	287	305	307
Swordfish	459	725	912	613	625	366	428	528	526	529
Tilefish	30	46	4	51	160	194	171	NA	191	83

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Black sea bass	2.15	2.16	1.82	2.57	2.64	2.60	3.03	3.20	3.11	3.00
Blue crab	1.01	1.10	0.93	0.98	1.24	1.52	1.29	1.26	1.27	1.32
Clams	5.42	5.29	5.48	5.71	5.94	6.49	6.08	8.53	7.39	9.69
Groupers	3.85	4.04	4.42	4.45	4.68	4.97	5.24	5.67	5.63	5.75
Oysters	5.64	5.61	5.85	5.96	6.39	6.61	6.81	7.39	7.99	9.15
Sharks	0.92	0.87	0.91	1.04	1.26	1.55	1.34	1.59	1.44	1.61
Shrimp	2.02	2.07	2.40	2.53	2.91	3.07	2.50	2.59	3.02	2.93
Snappers	2.92	2.95	3.03	3.14	3.34	3.52	3.50	3.79	3.66	3.77
Swordfish	2.43	3.16	3.98	3.43	3.79	3.54	3.36	3.38	3.45	3.05
Tilefish	2.33	2.54	1.84	2.87	2.53	2.76	3.15	NA	4.08	3.92

[1] 'NA' = these data are confidential and therefore not disclosable.

2018 Economic Impacts of South Carolina Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	610	54,370	18,056	31,285
	Private Boat	1,032	79,903	24,495	52,039
	Shore	6,129	558,935	187,469	353,834
Total Durable Expenditures		3,239	348,735	128,764	205,552
Total State Economic Impacts		11,010	1,041,944	358,784	642,710

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	35,009
Private Boat	85,654
Shore	428,878
Total	549,541

Equipment	Durable Goods Expenditures
Fishing Tackle	93,074
Other Equipment	40,903
Boat Expenses	178,077
Vehicle Expenses	23,268
Second Home Expenses	0
Total Durable Expenditures	335,322

Total State Trip and Durable Goods Expenditures	884,863

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	231	210	148	207	166	181	192	163	184	176
Non-Coastal	112	104	66	123	84	114	157	102	93	116
Out-of-State	554	494	264	406	602	569	684	510	437	569
Total Anglers	898	809	478	736	852	864	1,033	775	714	861

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	72	72	75	24	48	95	97	78	88	131
Private	2,205	2,265	2,170	2,223	2,187	2,276	2,371	2,624	3,136	2,279
Shore	5,280	5,691	6,262	5,865	7,515	6,375	6,494	6,634	6,165	7,487
Total Trips	7,558	8,028	8,507	8,111	9,751	8,746	8,962	9,335	9,389	9,897

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1,2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Black sea bass	H	38	531	104	127	53	249	88	56	197	63
	R	913	1,238	2,366	1,212	1,022	4,286	2,079	2,282	3,266	1,362
Bluefish	H	461	1,115	1,439	924	2,106	820	921	1,123	752	765
	R	621	1,160	2,911	615	1,914	1,470	2,597	1,583	3,105	1,530
Drum (Atlantic croaker and spot)[3]	H	3,560	2,610	4,124	5,135	5,041	1,859	8,094	5,243	2,663	1,232
	R	2,341	1,199	2,477	1,744	9,645	6,651	6,055	8,655	5,125	5,884
Drum (Southern kingfish)	H	2,952	1,093	1,731	2,774	3,639	2,207	1,368	1,450	1,783	923
	R	2,870	0	458	712	0	22	11	45	3	4
Drum (spotted seatrout)	H	370	407	193	622	441	260	311	311	648	257
	R	1,002	1,167	744	1,762	2,191	1,407	1,148	1,791	1,950	1,063
Porgies (sheepshead)	H	454	187	458	128	66	169	141	136	204	118
	R	61	121	203	163	315	421	368	391	436	421
Red drum	H	191	437	373	296	283	393	258	241	456	263
	R	1,676	2,269	1,618	1,083	1,865	1,875	1,433	1,267	2,094	1,494
Sharks[4]	H	27	11	26	22	57	33	13	19	11	6
	R	3,675	2,196	1,714	2,489	4,477	2,571	2,921	1,694	1,429	1,867
Southern flounder	H	242	309	323	258	191	140	184	187	221	114
	R	454	25	63	120	0	0	0	< 1	0	< 1
Spanish mackerel	H	137	171	472	258	101	194	390	306	46	289
	R	84	139	389	313	130	137	322	334	300	322

[1] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[2] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.
[3] Drum (Atlantic croaker and spot) include spot and Atlantic croaker.
[4] Sharks include unidentified (sharks), shark species, unidentified sharks, requiem shark family, requiem shark, Atlantic sharpnose shark, requiem shark genus, and blacktip shark.

2017 South Carolina State Economy (% of national total)

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[1]
351,453 (1.4%)	109,238 (1.4%)	1,866,451 (1.5%)	76.7 (1.1%)	121 (1.2%)	222	0.11

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	21	23	32	35	30	28	26	31	30
	Receipts	1,794	1,386	1,326	1,868	1,657	2,690	2,438	3,782	4,136
Seafood sales, retail	Firms	77	78	87	67	67	73	69	57	72
	Receipts	4,709	3,978	5,535	4,818	3,765	4,845	6,007	5,753	5,869

Seafood Sales and Processing — Employer Establishments (thousands of dollars)[2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	2	2	1	NA	NA	4	2	1	NA
	Employees	ds	ds	ds	NA	NA	ds	ds	0	NA
	Payroll	ds	ds	ds	NA	NA	ds	ds	0	NA
Seafood sales, wholesale	Establishments	15	16	12	15	16	12	16	15	14
	Employees	111	120	101	125	134	148	146	151	157
	Payroll	3,676	3,868	3,760	4,506	4,849	5,329	5,327	5,193	4,840
Seafood sales, retail	Establishments	57	56	61	60	56	56	54	58	48
	Employees	261	260	245	228	222	224	185	200	163
	Payroll	4,901	4,580	4,231	3,670	3,713	3,633	3,883	4,006	3,186

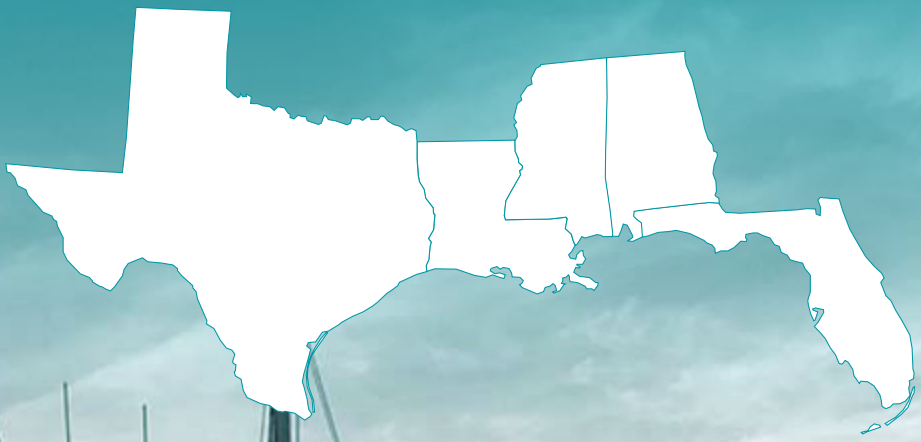
Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	41	39	41	39	37	37	34	34	32
	Employees	1,929	1,922	1,943	1,980	2,262	2,225	2,690	2,789	3,031
	Payroll	73,988	74,945	85,568	90,942	96,081	98,324	115,262	125,487	141,999
Deep Sea Freight Transportation	Establishments	8	7	6	6	4	1	1	1	NA
	Employees	ds	20	ds	ds	21	ds	ds	0	NA
	Payroll	ds	758	722	ds	633	ds	ds	0	NA
Deep Sea Passenger Transportation	Establishments	6	2	2	1	NA	NA	NA	1	NA
	Employees	ds	ds	ds	ds	NA	NA	NA	0	NA
	Payroll	ds	ds	ds	ds	NA	NA	NA	0	NA
Coastal and Great Lakes Freight Transportation	Establishments	4	4	4	5	5	5	4	5	7
	Employees	ds	ds	ds	40	ds	ds	ds	33	44
	Payroll	ds	ds	ds	2,625	ds	ds	ds	1,899	2,777
Port and Harbor Operations	Establishments	2	2	5	7	2	3	4	4	3
	Employees	ds	ds	ds	676	ds	ds	ds	0	0
	Payroll	ds	ds	ds	29,332	ds	ds	ds	0	0
Marine Cargo Handling	Establishments	14	12	14	10	13	14	15	14	10
	Employees	1,953	1,731	1,717	715	ds	1,902	2,467	2,117	1,614
	Payroll	43,170	39,625	49,172	30,381	ds	66,803	59,595	75,187	79,262
Navigational Services to Shipping	Establishments	8	7	8	10	8	9	9	9	10
	Employees	208	222	217	247	221	219	236	255	320
	Payroll	12,522	12,591	11,922	16,625	13,820	14,513	16,311	18,135	21,257
Marinas	Establishments	69	73	75	70	77	70	70	74	67
	Employees	533	537	543	595	650	661	633	717	684
	Payroll	12,642	13,786	15,805	15,408	16,147	17,212	16,996	19,201	18,948

[1] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[2] ds = Data are suppressed.
[3] NA = Not applicable.

Gulf of Mexico Region

- Alabama
- West Florida
- Louisiana
- Mississippi
- Texas



Shrimp trawlers in Bayou La Batre, Alabama.
Photo: NOAA Fisheries/Noelle Olsen

MANAGEMENT CONTEXT

The Gulf of Mexico Region includes Alabama, Louisiana, Mississippi, Texas and West Florida. Federal fisheries in this region are managed by the Gulf of Mexico Fishery Management Council (GMFMC) and NOAA Fisheries under seven fishery management plans (FMPs). The coastal migratory pelagic resources and spiny lobster fisheries are managed jointly with the South Atlantic Fishery Management Council (SAFMC).

FMPs in the Gulf of Mexico Region

- Aquaculture
- Coastal migratory pelagic resources (with SAFMC)
- Corals
- Red drum
- Reef fish
- Shrimp
- Spiny lobster (with SAFMC)

Only one of the stocks/stock complexes covered in these FMPs — greater amberjack — was listed as overfished in 2018.

Two stocks/complexes, gray snapper and lane snapper, were subject to overfishing. In 2018, greater amberjack (Gulf of Mexico stock) and gray triggerfish (Gulf of Mexico stock) were removed from the overfishing lists, and gray snapper (Gulf of Mexico stock) and lane snapper (Gulf of Mexico stock) were added to the overfishing lists.

Catch Share Programs

Two catch share programs have been implemented in the Gulf of Mexico: 1) the Red Snapper Individual Fishing Quota (IFQ) Program; and 2) the Grouper and Tilefish IFQ Program. The landings revenues for these programs totaled more than $54 million (in inflation-adjusted 2018 dollars) in 2017. The following are descriptions of these catch share programs and their performance.

Red Snapper IFQ Program: This program was implemented in 2007 to reduce overcapacity and mitigate derby fishing conditions in the red snapper segment of the commercial reef fish fishery. The 2017 key performance indicators of the program show that relative to the baseline period (the three-year period prior to implementation), the number of active vessels decreased, while quota, landings, inflation-adjusted landings revenue, and inflation-adjusted revenue per active vessel increased.

Grouper and Tilefish IFQ Program: This program was implemented in 2010 to reduce overcapacity, increase harvesting efficiency, and eliminate the race to fish in the grouper–tilefish segment of the commercial reef fish fishery. The 2017 key performance indicators of the program show that relative to the baseline period (the three-year period prior to implementation), landings, the number of active vessels, and inflation-adjusted landings revenue decreased, while quota and inflation-adjusted revenue per active vessel increased.

COMMERCIAL FISHERIES — GULF OF MEXICO REGION

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. The term does not include subsistence fishermen or saltwater anglers who fish for sport. It also excludes the for-hire sector, which earns its revenue from selling recreational fishing trips to saltwater anglers. The commercial fisheries section reports on economic impacts, landings revenue, landings, and ex-vessel prices of key species/species groups.

Key Gulf of Mexico Region Commercial Species

- Blue crab
- Crawfish
- Groupers
- Menhaden
- Mullets
- Oysters
- Red snapper
- Shrimp
- Spiny lobster
- Tunas

Economic Impacts

The premise behind economic impact modeling is that every dollar spent in a regional economy (direct impact) is either saved or re-spent on additional goods or services. If those dollars are re-spent on other goods and services in the regional economy, this spending generates additional economic activity in the region.[1]

Four different measures are commonly used to show how commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. The category includes both the direct sales of fish landed and sales made between businesses and households re-

[1] Summary data is available online in the FEUS webtool. [Available at: https://www.fisheries.noaa.gov/data-tools/fisheries-economics-united-states-interactive-tool.]

sulting from the original sale. Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the sales of seafood or purchases of inputs to commercial fishing. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in numbers of jobs. Note that these categories are not additive. The United States seafood industry is defined here as the commercial fishing sector, seafood processors and dealers, seafood wholesalers and distributors, importers, and seafood retailers.[2,3]

This report provides estimates of total economic impacts for the nation and for each of the 23 coastal states. Total economic impacts for each state and the nation represent the sum of direct impacts; indirect impacts (in this case, the impact from suppliers to the seafood industry); and induced impacts (spending by employees on personal and household expenditures, where employees of both the seafood industry and its full supply chain are included). That is, the total economic impact estimates reported here measure jobs, sales, value-added, and income impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

In 2018, the commercial fishing and seafood industry in Florida generated the largest employment impacts in the Gulf of Mexico region with 82,094 full- and part-time jobs. Florida also generated the largest sales impacts ($19.2 billion), value-added impacts ($6.4 billion), and income impacts ($3.6 billion).

Landings Revenue

In 2018, landings revenue in the Gulf of Mexico Region totaled $890.3 million, a 40% increase from 2009 (a 21% increase in real terms after adjusting for inflation) and a 2% increase from 2017. Landings revenue was highest in Louisiana ($375.9 million), followed by Texas ($211.8 million).

Shellfish landings revenue accounted for 75% of all landings revenue. In 2018, shrimp ($398.4 million), menhaden ($116.5 million), and oysters ($104.1 million) had the highest landings revenue in this region. Together, these top three species accounted for 70% of total landings revenue.

From 2009 to 2018, red snapper (273%, 221% in real terms), spiny lobster (258%, 208% in real terms), and menhaden (68%, 45% in real terms) had the largest increases, while tunas (-55%, -61% in real terms), crawfish (-18%, -30% in real terms), and mullets (-4%, -18% in real terms) had the largest decreases. From 2017 to 2018, menhaden (61%), spiny lobster (37%), and blue crab (10%) had the largest increases, while tunas (-28%), mullets (-12%), and groupers (-12%) had the largest decreases.

Commercial Revenue: Largest Increases

From 2009:
- Red snapper (273%, 221% in real terms)
- Spiny lobster (258%, 208% in real terms)
- Menhaden (68%, 45% in real terms)

From 2017:
- Menhaden (61%)
- Spiny lobster (37%)
- Blue crab (10%)

Commercial Revenue: Largest Decreases

From 2009:
- Tunas (-55%, -61% in real terms)
- Crawfish (-18%, -30% in real terms)
- Mullets (-4%, -18% in real terms)

From 2017:
- Tunas (-28%)
- Mullets (-12%)
- Groupers (-12%)

Landings

In 2018, commercial fisheries landings by South Atlantic Region commercial fishermen totaled 105.0 million pounds. This represents a 3% decrease from 2009 and a 10% increase from 2017. Menhaden contributed the highest landings volume in the region, accounting for 76% of total landing weight.

[2] The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates. [Available at: https://www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf.]
[3] Commercial economic impacts data were not available for West Florida specifically; data for the entire state of Florida are reported here.

From 2009 to 2018, red snapper (176%) and spiny lobster (47%) had the largest increases, while menhaden landings were flat for this period. Tunas (-66%), crawfish (-41%), and groupers (-33%) experienced the largest decline in landings from 2009 to 2018. From 2017 to 2018, spiny lobster (61%), crawfish (30%), and menhaden (15%) had the largest increases, while tunas (-36%), groupers (-20%), and oysters (-13%) had the largest decreases.

Commercial Landings: Largest Increases

From 2009:
- Red snapper (176%)
- Spiny lobster (47%)

From 2017:
- Spiny lobster (61%)
- Crawfish (30%)
- Menhaden (15%)

Commercial Landings: Largest Decreases

From 2009:
- Tunas (-66%)
- Crawfish (-41%)
- Groupers (-33%)

From 2017:
- Tunas (-36%)
- Groupers (-20%)
- Oysters (-13%)

Prices

In 2018, spiny lobster ($7.49 per pound) received the highest ex-vessel price in the region. Landings of menhaden ($0.1 per pound) had the lowest ex-vessel price. From 2009 to 2018, spiny lobster (143%, 109% in real terms), oysters (111%, 82% in real terms), and blue crab (95%, 68% in real terms) had the largest increases; no species experienced a price decline for this period. From 2017 to 2018, menhaden (41%), blue crab (13%), and tunas (12%) had the largest increases, while crawfish (-20%), spiny lobster (-15%), and shrimp (-8%) had the largest decreases.

RECREATIONAL FISHERIES — GULF OF MEXICO REGION

In this report, recreational fishing refers to fishing for leisure rather than to sell fish (commercial fishing) or for subsistence. This recreational fisheries section reports on economic impacts and expenditures, angler participation, fishing trips, and catch of key species/species groups.[4]

Key Gulf of Mexico Region Recreational Species[5]

- Drum (Atlantic croaker)
- Drum (Gulf and Southern kingfish
- Drum (sand and silver seatrouts)
- Drum (spotted seatrout)
- Porgies (sheepshead)
- Red drum
- Red snapper
- Southern flounder
- Spanish mackerel
- Striped mullet

Economic Impacts and Expenditures

The economic contribution of recreational fishing activities in the Gulf of Mexico Region is based on spending by recreational anglers.[6] Total annual trip expenditures are estimated at the state level by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore) and adjusting by the CPI (consumer price index) to the current year. Total annual durable expenditures are estimated by multiplying mean durable expenditures in each state by the estimated annual number of adult participants for each state and adjusting by the CPI (consumer price index) to the current year.[7]

Four different measures are commonly used to show how angler expenditures affect the economy in a region (state or nationwide): sales, income, value-added, and employment. The term sales refers to the gross value of all sales by regional businesses affected by an activity, such as recreational fishing. The category includes both the direct sales made by the angler and sales made between businesses and households resulting from that original sale by the angler. Income includes personal

[4] Atlantic and Gulf recreational catch and effort estimates are based upon the MRIP estimates released in 2018. Louisiana harvest and release totals for 2014-2018 are estimated using data from a state creel survey.
[5] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[6] Trip expenditure estimates were generated from the 2016/2017 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2020). Durable goods expenditures were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (Lovell et al., 2016). [For citations: Publications-Recreational Fisheries Economics Research.]
[7] Summary data is available online in the FEUS webtool. [Available at: https://www.fisheries.noaa.gov/data-tools/fisheries-economics-united-states-interactive-tool.]

income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the purchases made by anglers. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in number of jobs. Note that these categories are not additive. NOAA Fisheries uses a regional impact modeling software, called IMPLAN, to estimate these four types of impacts.

The economic contributions for both trip and durable expenditures from recreational fishing in 2018 were estimated using IMPLAN version 3, with base year data from 2017. Models for each state and for the nation were created in IMPLAN using trip expenditures (based on 2016/2017 survey data on average trip expenditures and total 2018 trips) and for durable expenditures (based on 2014 survey data on average durable expenditures and 2018 participants).

The greatest employment impacts from expenditures on saltwater recreational fishing in the Gulf of Mexico Region were generated in West Florida (71,419 jobs), followed by Alabama (20,465 jobs) and Louisiana (16,819 jobs).The largest sales impacts were observed in West Florida ($8.3 billion), followed by Alabama ($1.9 billion) and Louisiana ($1.9 billion). The biggest income impacts were generated in West Florida ($3 billion), followed by Alabama ($714.1 million) and Texas ($681.2 million). The greatest value-added impacts were in West Florida ($5.1 billion), followed by Alabama ($1.3 billion) and Louisiana ($1.2 billion).

Expenditures for fishing trips and durable equipment across the Gulf of Mexico Region in 2018 totaled $12.8 billion. This total included $9.4 billion in durable goods expenditures, with the largest portion coming from boat expenses ($5.3 billion).

Participation

In 2018, there were 1.8 million recreational anglers who fished in the Gulf of Mexico Region. This number represented a 37% decrease from 2009 and a 31% decrease from 2017. The anglers are categorized as either residents from coastal (87%) or non-coastal (13%) counties.

Fishing Trips

In 2018, recreational fishermen took 55.8 million fishing trips in the Gulf of Mexico Region. Texas trip estimates are not available for the shore mode. Shore mode in Louisiana has been included in the private mode since 2014. This number represented a 4% decrease from 2009 and a 5% decrease from 2017. The largest proportions of trips were taken in the shore mode (55%) and private boat (43%). States with the highest number of recorded trips in the Gulf of Mexico Region were West Florida (41 million trips) and Alabama (6.7 million trips).

Harvest and Release Trends

Of the Gulf of Mexico Region's key species and species groups, drum (spotted seatrout) (28.9 million fish), drum (Atlantic croaker) (15.5 million fish), and red drum (11.8 million fish), were most frequently caught by recreational fishermen. The text box below shows the species with the largest percentage increases and decreases in the past 10 years and in the past year.

From 2009 to 2018, striped mullet (186%), Spanish mackerel (49%), and red snapper (36%) had the largest increases, while southern flounder (-74%) and drum (sand and silver seatrouts) (-44%) had the largest decreases. From 2017 to 2018, striped mullet (50%) and Southern flounder (41%) had the largest increases, while drum (sand and silver seatrouts) (-44%), red snapper (-31%), and Spanish mackerel (-24%) had the largest decreases.

Harvest and Release: Largest Increases

From 2009:
- Striped mullet (186%)
- Spanish mackerel (49%)
- Red snapper (36%)

From 2017:
- Striped mullet (50%)
- Southern flounder (41%)

Harvest and Release: Largest Decreases

From 2009:
- Southern flounder (-74%)
- Drum (sand and silver seatrouts) (-44%)

From 2017:
- Drum (sand and silver seatrouts) (-44%)
- Red snapper (-31%)
- Spanish mackerel (-24%)

MARINE ECONOMY — GULF OF MEXICO REGION

For this report, the marine economy refers to the fishing and marine-related industries in a coastal state. The state marine economy consists of two industry sectors: 1) seafood sales and processing (employer establishments and non-employer firms); and 2) transportation support and marine operations (employer establishments). These sectors include several different marine-related industries.[8]

Note that when discussing the marine economy in the Gulf of Mexico Region, all statistics include the entire state of Florida and not just West Florida.[9]

To measure the size of the commercial fishing sector in a state's economy relative to the size of the commercial fishing sector in the national economy, researchers use an index called the Commercial Fishing Location Quotient (CFLQ).[10] The CFLQ is calculated as the ratio of the percentage of regional employment in the commercial fishing sector relative to the percentage of national employment in the commercial fishing sector. The U.S. CFLQ is 1. If a state CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average.

Louisiana had the highest CFLQ at 3.71 in 2017. Mississippi had a CFLQ value of 0.99.

In 2017, 1.4 million employer establishments operated throughout the entire Gulf of Mexico Region (including marine and non-marine related establishments). These establishments employed 23.3 million workers and had a total annual payroll of $1.1 trillion. The combined gross state product of Alabama, Florida, Louisiana, Mississippi, and Texas was approximately $3.3 trillion in 2017.[11]

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2017, the Gulf of Mexico Region had 598 non-employer firms in the seafood product preparation and packaging sector (a 41% increase from 2009). Annual receipts for these firms totaled $46.1 million. There were 133 employer firms in this sector (a 3% increase from 2009). These establishments employed 8,038 workers (a 9% increase from 2009) and had a total annual payroll of $270.3 million. The greatest number of employer and non-employer establishments in this sector was in Florida (303), followed by Texas (166) and Louisiana (160).

Seafood Sales, Retail: In 2017, there were 766 non-employer firms in seafood retail sales in the states that make up the Gulf of Mexico Region (a 5% decrease from 2009). Annual receipts for these firms totaled $66.9 million. There were 370 employer firms in the seafood retail sector (a 3% increase from 2009). These establishments employed 2,452 workers (a 26% increase from 2009) and had a total annual payroll of $53.8 million. The greatest number of employer and non-employer establishments in this sector was in Florida (492), followed by Louisiana (267) and Texas (226).

Seafood Sales, Wholesale: There were 454 employer firms in the seafood wholesale sector in the Gulf of Mexico Region in 2017 (a 5% increase from 2009). These establishments employed 4,136 workers (a 15%

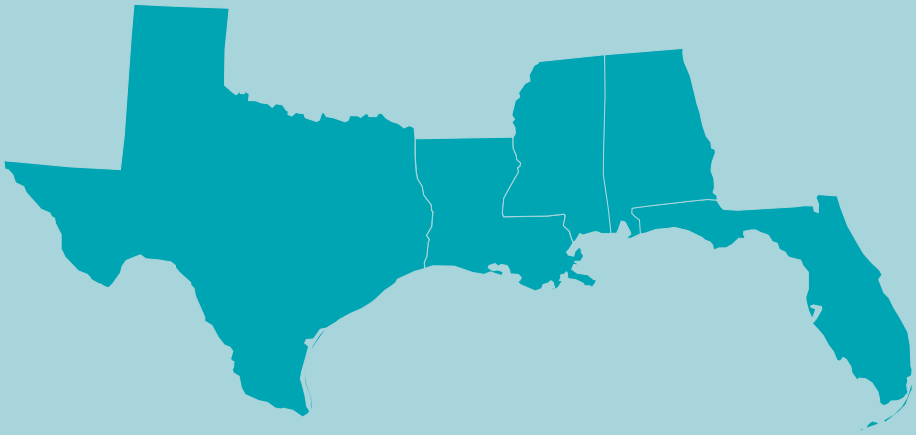
[8] Unless otherwise stated, data are from the U.S. Census Bureau (https://www.census.gov).
[9] Marine economy information was not available for East Florida, information for the entire state of Florida is provided in this report.
[10] U.S. Bureau of Labor Statistics, 'Location Quotient Calculator.' [For more information: https://www.bls.gov/cew/about-data/location-quotients-explained.htm.]
[11] U.S. Bureau of Economic Analysis. Gross Domestic Product by State, Fourth Quarter and Annual 2017. [Available at https://apps.bea.gov/regional/histdata/releases/0518gdpstate/.]

increase from 2009) and had a total annual payroll of $157.7 million. The greatest number of employer and non-employer establishments in this sector was in Florida (230), followed by Louisiana (114) and Texas (81).

Transportation Support and Marine Operations

Data for the transportation support and marine operations sectors of the Gulf of Mexico Region's economy were largely suppressed for confidentiality reasons. It is clear, however, that these sectors play an important role in the regional economy. For example, in 2017, the ship and boat building sector in the Gulf of Mexico Region accounted for $2.8 billion in payroll.

Tables | Gulf of Mexico Region



2018 Economic Impacts of the Gulf of Mexico Seafood Industry (millions of dollars)

	Landings Revenue	With Imports				Without Imports			
		#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Alabama	688	12,236	610	237	312	11,869	559	224	293
Florida[1]	248	82,094	19,200	3,591	6,422	9,847	1,006	265	406
Louisiana	376	33,217	2,040	750	1,020	32,027	1,786	699	934
Mississippi	44	6,100	317	125	162	6,043	308	123	158
Texas	212	39,806	5,393	1,318	2,084	16,973	1,176	431	602

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	635,887	604,174	803,759	780,471	929,975	1,056,597	853,226	888,755	872,774	890,279
Finfish	150,646	130,571	195,092	191,347	201,556	207,707	247,363	259,446	182,034	220,220
Shellfish	483,625	472,504	607,400	587,599	726,639	846,543	604,324	627,067	688,571	668,349
Other	1,616	1,099	1,267	1,525	1,780	2,348	1,540	2,241	2,168	1,710
Key Species										
Blue crab	46,016	41,030	48,943	52,538	62,042	79,679	74,567	65,569	69,146	76,392
Crawfish	15,387	14,014	9,887	8,291	16,457	16,144	6,852	12,373	12,105	12,550
Groupers	18,414	14,260	19,932	24,672	24,910	30,435	27,693	28,746	22,287	19,692
Menhaden	69,456	66,020	103,523	87,377	90,706	93,267	138,628	143,342	72,202	116,530
Mullets	6,147	5,222	10,395	8,753	13,552	11,715	7,654	8,560	6,668	5,879
Oysters	66,656	54,878	64,908	76,025	75,552	90,240	96,093	86,217	110,900	104,074
Red snapper	7,693	9,837	11,109	13,319	20,253	22,527	26,792	25,843	28,374	28,675
Shrimp	322,526	304,468	421,762	401,797	497,398	577,479	345,593	390,430	434,005	398,359
Spiny lobster	12,201	32,702	35,568	22,249	47,116	53,416	44,059	41,311	31,944	43,629
Tunas	8,170	2,685	5,518	10,726	7,345	5,153	4,585	5,699	5,153	3,711

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	1,597,407	1,275,888	1,761,956	1,667,796	1,351,473	1,241,971	1,548,537	1,735,469	1,401,446	1,542,885
Finfish	1,233,677	1,022,417	1,444,885	1,352,588	1,042,312	922,013	1,254,444	1,435,356	1,084,020	1,227,584
Shellfish	361,959	251,820	315,384	312,771	307,039	311,919	292,040	297,890	315,461	314,250
Other	1,771	1,651	1,687	2,438	2,122	8,039	2,053	2,224	1,965	1,051
Key Species										
Blue crab	62,359	41,078	55,688	53,747	47,119	51,643	52,623	51,991	54,468	53,191
Crawfish	19,009	14,609	9,582	6,834	19,641	13,055	5,461	13,573	8,575	11,178
Groupers	6,995	5,071	7,026	8,329	7,701	8,991	7,824	7,951	5,871	4,679
Menhaden	1,165,948	967,025	1,374,285	1,275,789	971,306	848,599	1,188,941	1,364,034	1,016,831	1,166,097
Mullets	11,320	8,958	14,256	12,210	13,899	15,163	10,858	11,430	9,317	8,237
Oysters	20,752	16,302	19,092	21,200	19,526	17,513	16,633	15,272	17,705	15,329
Red snapper	2,421	3,158	3,482	3,942	5,198	5,548	6,559	6,284	6,903	6,692
Shrimp	247,267	165,813	216,852	217,589	204,215	217,012	203,612	204,478	223,240	221,546
Spiny lobster	3,959	5,278	5,295	3,770	5,645	5,039	5,451	5,016	3,622	5,821
Tunas	2,830	1,322	1,590	3,084	2,113	1,717	1,342	1,633	1,509	973

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Blue crab	0.74	1.00	0.88	0.98	1.32	1.54	1.42	1.26	1.27	1.44
Crawfish	0.81	0.96	1.03	1.21	0.84	1.24	1.25	0.91	1.41	1.12
Groupers	2.63	2.81	2.84	2.96	3.23	3.39	3.54	3.62	3.80	4.21
Menhaden	0.06	0.07	0.08	0.07	0.09	0.11	0.12	0.11	0.07	0.10
Mullets	0.54	0.58	0.73	0.72	0.98	0.77	0.70	0.75	0.72	0.71
Oysters	3.21	3.37	3.40	3.59	3.87	5.15	5.78	5.65	6.26	6.79
Red snapper	3.18	3.11	3.19	3.38	3.90	4.06	4.08	4.11	4.11	4.29
Shrimp	1.30	1.84	1.94	1.85	2.44	2.66	1.70	1.91	1.94	1.80
Spiny lobster	3.08	6.20	6.72	5.90	8.35	10.60	8.08	8.24	8.82	7.49
Tunas	2.89	2.03	3.47	3.48	3.48	3.00	3.42	3.49	3.41	3.81

[1] The information for Florida in this table is for the entire state.

2018 Economic Impacts of the Gulf of Mexico Recreational Fishing Expenditures (thousands of dollars, trips)

	Trips	#Jobs	Sales	Income	Value Added
Alabama	6,681	20,465	1,947,161	714,116	1,274,497
Louisiana	2,276	16,819	1,928,798	635,051	1,153,922
Mississippi	4,555	5,955	601,744	204,012	375,147
Texas	1,247	14,226	1,829,883	681,174	1,146,709
West Florida	40,996	71,419	8,347,067	2,980,591	5,063,201

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	538,020
Private Boat	1,450,918
Shore	1,417,499
Total	3,406,438

Equipment	Durable Goods Expenditures
Fishing Tackle	2,085,690
Other Equipment	908,243
Boat Expenses	5,316,984
Vehicle Expenses	980,170
Second Home Expenses	139,302
Total Durable Expenditures	9,430,387

Total State Trip and Durable Goods Expenditures	12,836,825

Recreational Anglers by Residential Area (thousands of anglers)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	2,550	2,480	2,737	2,803	2,973	2,674	2,437	2,445	2,316	1,572
Non-Coastal	296	235	311	268	400	185	199	259	296	234
Total Anglers	2,846	2,715	3,048	3,071	3,373	2,859	2,635	2,704	2,612	1,806

Recreational Fishing Effort by Mode (thousands of angler trips)

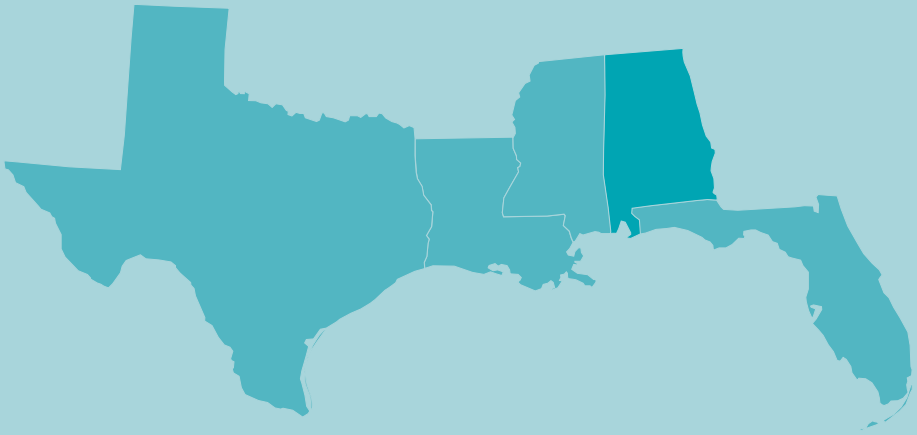
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	932	730	907	1,121	1,054	1,065	1,214	1,274	1,252	1,431
Private	30,390	31,433	31,484	33,726	31,787	25,410	23,585	24,714	25,254	23,717
Shore	26,457	29,336	30,492	32,843	36,483	26,239	25,823	28,414	32,128	30,607
Total Trips	57,779	61,499	62,884	67,690	69,324	52,715	50,622	54,403	58,634	55,755

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Drum (Atlantic croaker)	H	3,870	3,819	4,765	3,096	4,646	6,229	3,533	2,362	3,552	4,010
	R	10,115	10,456	13,084	8,842	7,303	5,307	5,857	5,372	11,053	11,481
Drum (Gulf and Southern kingfish)	H	2,566	4,893	2,250	3,378	4,071	1,655	2,556	4,254	3,924	3,661
	R	1,851	1,921	1,300	1,492	1,208	1,120	703	1,936	2,134	1,269
Drum (sand and silver seatrouts)	H	9,730	11,400	11,141	11,061	6,414	5,187	6,145	6,146	9,583	5,894
	R	5,688	4,551	5,594	5,597	3,614	1,466	2,567	2,767	6,074	2,805
Drum (spotted seatrout)	H	24,870	21,831	27,012	27,503	24,005	8,291	10,913	14,523	12,084	9,012
	R	36,579	32,908	43,436	47,941	43,650	18,523	19,787	29,400	30,569	19,870
Porgies (sheepshead)	H	3,910	3,966	6,109	4,834	3,259	2,717	2,688	2,266	4,754	2,626
	R	3,234	5,718	4,029	3,921	5,081	3,683	3,848	2,320	4,159	5,265
Red drum	H	5,040	7,211	7,326	5,907	7,621	2,857	3,226	2,892	3,381	3,642
	R	12,038	15,447	14,072	14,547	17,579	7,256	8,064	7,128	7,074	8,203
Red snapper	H	1,466	1,155	1,512	1,516	2,422	1,106	1,460	1,714	3,067	2,261
	R	4,759	4,815	5,818	4,463	5,630	4,205	3,455	6,650	9,270	6,190
Southern flounder	H	1,831	1,842	1,878	1,509	2,339	677	586	714	395	336
	R	575	617	541	659	639	214	337	203	56	298
Spanish mackerel	H	3,595	4,472	4,882	5,482	9,000	4,491	5,501	5,601	6,378	4,759
	R	3,738	6,456	6,370	4,616	11,855	6,157	4,236	2,762	7,935	6,153
Striped mullet	H	1,943	4,128	4,397	6,239	7,848	6,216	7,001	5,630	4,575	6,124
	R	543	300	666	536	557	1,416	382	1,195	147	976

[1] West Florida anglers estimates are not available for the non-coastal mode.
[2] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.

Tables | Alabama



2018 Economic Impacts of the Alabama Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	12,236	610	237	312	11,869	559	224	293
Commercial Harvesters	1,975	112	33	49	1,975	112	33	49
Seafood Processors & Dealers	2,175	161	63	80	1,933	143	56	71
Importers	99	32	5	10	0	0	0	0
Seafood Wholesalers & Distributors	181	10	4	5	178	10	3	4
Retail	7,805	296	132	168	7,783	295	132	168

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	36,972	26,283	49,995	44,942	50,777	62,843	43,165	50,820	56,222	67,670
Finfish	3,479	2,626	3,933	4,917	4,519	4,393	4,064	4,454	4,001	4,534
Shellfish	33,493	23,657	46,062	40,025	46,258	58,450	39,101	46,367	52,221	63,136
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
Blue crab	961	732	1,128	1,044	1,037	1,296	1,226	1,785	1,520	1,150
King mackerel	140	93	207	220	439	416	344	281	121	143
Menhaden	42	15	58	84	104	147	154	164	158	173
Mullets	771	594	695	1,266	1,181	1,123	761	522	537	591
Oysters	77	389	1,322	1,255	786	433	341	601	557	914
Red snapper	262	329	314	316	401	697	1,443	1,423	1,852	1,559
Sharks	12	NA	26	6	202	116	NA	0	71	122
Shrimp	32,454	22,534	43,608	37,720	44,427	56,712	37,533	43,973	50,138	61,038
Spanish mackerel	301	499	582	1,149	940	471	705	833	439	670
Vermilion snapper	841	384	622	393	88	385	247	242	267	277

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	27,658	13,995	25,621	25,553	21,648	23,718	22,773	24,579	26,737	35,353
Finfish	4,354	3,316	4,859	6,348	5,595	5,150	3,778	4,443	4,055	5,950
Shellfish	23,304	10,680	20,762	19,205	16,054	18,569	18,994	20,136	22,683	29,403
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
Blue crab	1,459	927	1,617	1,325	1,027	1,161	1,301	1,918	1,425	1,034
King mackerel	94	49	119	117	175	184	146	112	53	59
Menhaden	190	81	364	521	496	700	695	804	1,052	1,713
Mullets	1,840	1,202	1,270	2,002	1,795	1,907	1,385	952	990	1,250
Oysters	23	68	296	265	133	58	26	37	26	25
Red snapper	65	83	78	78	108	180	356	320	410	360
Sharks	32	NA	75	18	312	193	NA	2	153	201
Shrimp	21,821	9,683	18,840	17,603	14,883	17,339	17,665	18,171	21,224	28,309
Spanish mackerel	418	733	839	1,377	972	431	617	859	440	948
Vermilion snapper	346	148	224	132	28	124	74	76	80	83

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Blue crab	0.66	0.79	0.70	0.79	1.01	1.12	0.94	0.93	1.07	1.11
King mackerel	1.49	1.91	1.74	1.89	2.51	2.26	2.35	2.50	2.29	2.44
Menhaden	0.22	0.18	0.16	0.16	0.21	0.21	0.22	0.20	0.15	0.10
Mullets	0.42	0.49	0.55	0.63	0.66	0.59	0.55	0.55	0.54	0.47
Oysters	3.33	5.75	4.47	4.73	5.91	7.43	12.96	16.36	21.21	36.13
Red snapper	4.04	3.97	4.04	4.05	3.70	3.86	4.05	4.45	4.52	4.33
Sharks	0.39	NA	0.35	0.33	0.65	0.60	NA	0.11	0.46	0.61
Shrimp	1.49	2.33	2.31	2.14	2.99	3.27	2.12	2.42	2.36	2.16
Spanish mackerel	0.72	0.68	0.69	0.83	0.97	1.09	1.14	0.97	1.00	0.71
Vermilion snapper	2.43	2.59	2.78	2.97	3.12	3.11	3.33	3.19	3.34	3.32

[1] 'NA' = these data are confidential and therefore not disclosable.

2018 Economic Impacts of Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	783	69,596	21,828	38,270
	Private Boat	1,184	124,083	31,211	80,191
	Shore	5,893	559,052	167,038	324,604
Total Durable Expenditures		12,605	1,194,430	494,039	831,432
Total State Economic Impacts		20,465	1,947,161	714,116	1,274,497

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	45,839
Private Boat	125,015
Shore	422,857
Total	593,710

Equipment	Durable Goods Expenditures
Fishing Tackle	338,507
Other Equipment	106,725
Boat Expenses	987,800
Vehicle Expenses	41,965
Second Home Expenses	31,221
Total Durable Expenditures	1,506,217

Total State Trip and Durable Goods Expenditures	2,099,927

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	205	195	295	254	279	220	225	274	186	211
Non-Coastal	151	140	177	131	224	123	151	176	246	156
Out-of-State	209	220	435	339	549	510	455	465	480	551
Total Anglers	566	554	907	723	1,052	853	831	915	911	917

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	56	33	77	59	90	87	96	104	93	95
Private	2,282	2,316	2,288	2,114	2,155	2,037	2,080	2,010	2,540	1,833
Shore	3,103	2,980	3,373	3,978	4,524	4,357	4,653	5,206	5,860	4,753
Total Trips	5,442	5,329	5,738	6,151	6,769	6,482	6,830	7,320	8,493	6,681

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1,2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Bluefish	H	30	108	398	210	362	173	109	690	105	93
	R	191	270	688	581	1,554	722	408	3,705	651	559
Drum (Atlantic croaker)	H	663	2,073	1,844	544	860	2,844	2,003	559	1,522	1,771
	R	4,017	4,412	4,659	2,011	2,016	3,605	3,468	1,393	6,101	4,870
Drum (kingfish)[2]	H	1,366	2,069	1,408	646	2,545	850	1,082	916	1,756	2,047
	R	1,009	932	659	240	691	389	371	734	1,327	1,008
Drum (sand seatrout)	H	3,095	5,519	3,379	2,277	1,078	1,431	2,315	1,894	2,639	2,268
	R	1,662	2,114	1,384	828	601	740	715	1,043	3,300	652
Drum (spotted seatrout)	H	814	1,576	1,455	1,396	1,299	574	1,228	1,464	891	839
	R	1,997	1,152	2,572	2,030	2,009	581	2,354	2,711	1,567	1,511
Porgies (sheepshead)	H	511	779	1,113	1,065	493	335	845	283	569	310
	R	120	171	372	117	104	41	660	71	43	184
Red drum	H	175	307	343	323	451	290	413	386	387	378
	R	347	377	244	808	1,130	861	493	604	989	1,297
Red snapper	H	277	241	604	403	757	364	630	646	1,249	824
	R	1,200	1,269	1,434	549	1,477	2,018	1,366	2,834	2,397	1,720
Southern flounder	H	278	579	318	242	194	123	104	139	101	83
	R	70	161	101	121	102	74	110	85	12	49
Spanish mackerel	H	204	631	1,309	1,478	2,921	477	2,240	1,772	2,529	1,601
	R	127	297	447	477	2,496	162	1,054	355	1,233	1,362

[1] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[2] Drum (kingfish) include southern kingfish and Gulf kingfish.

2017 Alabama State Economy (% of national total)

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[1]
329,993 (1.3%)	100,419 (1.3%)	1,690,061 (1.3%)	71.7 (1.1%)	116 (1.1%)	214	0.45

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	41	68	67	47	58	57	49	38	44
	Receipts	1,809	3,314	4,354	1,965	3,069	3,446	2,901	3,365	3,362
Seafood sales, retail	Firms	67	71	58	68	66	55	46	43	48
	Receipts	5,484	5,197	4,759	7,073	5,520	4,351	3,274	2,971	3,602

Seafood Sales and Processing — Employer Establishments (thousands of dollars)

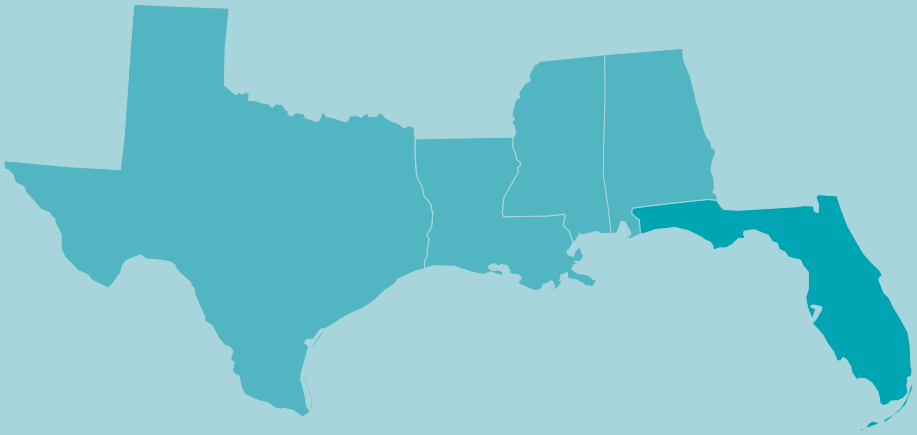
		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	22	21	16	17	22	23	20	20	20
	Employees	1,086	1,128	882	778	989	963	961	900	892
	Payroll	24,900	22,824	21,922	19,730	22,641	23,973	25,951	27,924	25,272
Seafood sales, wholesale	Establishments	28	23	25	16	18	18	21	17	16
	Employees	339	332	321	306	281	388	378	412	280
	Payroll	5,893	5,119	6,547	6,221	6,861	9,321	10,034	10,487	5,629
Seafood sales, retail	Establishments	31	34	32	32	28	31	32	32	37
	Employees	130	132	120	189	219	200	234	255	157
	Payroll	2,044	2,016	1,888	2,990	3,267	3,330	3,706	4,013	3,040

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	40	32	35	37	38	37	41	43	35
	Employees	3,913	2,598	3,176	4,936	5,948	5,904	6,049	6,025	5,748
	Payroll	159,065	151,813	166,116	251,063	303,016	311,296	342,082	342,073	341,849
Deep Sea Freight Transportation	Establishments	7	5	6	5	5	2	2	1	NA
	Employees	ds	ds	ds	ds	ds	ds	ds	0	NA
	Payroll	ds	ds	ds	ds	ds	ds	ds	0	NA
Deep Sea Passenger Transportation	Establishments	3	2	2	1	NA	NA	NA	NA	NA
	Employees	ds	ds	ds	ds	NA	NA	NA	NA	NA
	Payroll	ds	ds	ds	ds	NA	NA	NA	NA	NA
Coastal and Great Lakes Freight Transportation	Establishments	4	5	5	4	5	5	4	4	8
	Employees	ds	ds	215	ds	ds	45	ds	0	56
	Payroll	ds	ds	13,117	ds	ds	2,617	ds	0	4,066
Port and Harbor Operations	Establishments	5	5	3	6	3	2	2	2	7
	Employees	ds	ds	ds	101	4	ds	ds	0	62
	Payroll	ds	ds	ds	5,788	160	ds	ds	0	3,704
Marine Cargo Handling	Establishments	19	19	19	10	13	13	14	15	12
	Employees	658	548	536	ds	554	778	666	709	574
	Payroll	27,272	32,143	34,998	ds	34,481	37,273	37,154	47,407	44,177
Navigational Services to Shipping	Establishments	16	16	16	14	12	16	14	14	22
	Employees	294	276	283	241	208	124	121	113	293
	Payroll	15,383	14,737	14,981	8,808	14,761	6,902	6,922	5,911	17,849
Marinas	Establishments	55	54	53	57	54	54	57	57	56
	Employees	278	609	ds	329	332	343	387	372	482
	Payroll	8,418	12,149	12,196	10,253	9,659	9,804	11,182	12,086	15,065

[1] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[2] ds = Data are suppressed.
[3] NA = Not applicable.

Tables | West Florida



2018 Economic Impacts of the Florida Seafood Industry (millions of dollars)[1]

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	82,094	19,200	3,591	6,422	9,847	1,006	265	406
Commercial Harvesters	6,431	493	154	205	6,431	493	154	205
Seafood Processors & Dealers	4,774	900	174	343	525	106	21	40
Importers	43,137	13,960	2,237	4,256	0	0	0	0
Seafood Wholesalers & Distributors	10,450	1,400	550	684	434	58	23	28
Retail	17,302	2,446	476	935	2,456	348	68	133

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	118,907	138,672	167,406	152,757	190,428	211,678	196,142	186,101	185,756	190,431
Finfish	50,748	41,535	60,515	63,227	70,408	72,084	65,574	68,537	64,959	58,660
Shellfish	66,549	96,051	105,638	88,023	118,257	137,282	129,064	115,356	118,857	130,297
Other	1,611	1,087	1,252	1,507	1,763	2,311	1,504	2,208	1,940	1,475
Key Species										
Blue crab	4,197	6,744	7,829	5,490	6,791	7,406	8,508	6,596	7,194	8,884
Gag	2,749	2,079	1,439	2,445	2,846	2,889	2,783	4,671	2,556	2,763
Lobsters	12,207	32,709	35,575	22,257	47,125	53,420	44,062	41,316	31,947	43,632
Mullet	5,109	4,189	8,649	6,192	11,409	9,389	6,181	6,988	5,009	4,499
Oyster	6,970	6,299	8,776	9,887	5,920	4,179	4,722	5,163	5,179	3,169
Quahog clam	1,909	1,029	1,003	805	1,141	221	191	58	117	73
Red grouper	10,488	8,992	15,086	16,761	16,428	21,219	18,952	17,881	14,158	11,258
Red snapper	2,980	4,553	5,417	6,142	8,208	8,126	10,011	8,649	9,552	10,166
Shrimp	22,467	24,977	27,255	23,831	30,452	42,790	34,663	31,189	44,136	41,417
Stone crab	17,739	23,258	24,233	24,594	25,172	27,965	35,775	29,925	29,058	32,273

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)[2]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	69,859	67,481	77,399	74,861	74,838	79,742	69,840	71,367	74,859	71,323
Finfish	38,899	31,950	39,586	41,774	38,728	40,966	35,004	39,730	36,832	31,102
Shellfish	29,191	33,892	36,135	30,661	34,003	30,763	32,800	29,424	36,081	39,184
Other	1,769	1,639	1,678	2,425	2,107	8,013	2,036	2,213	1,946	1,037
Key Species										
Blue crab	3,371	5,796	6,924	4,463	4,767	4,467	4,880	3,871	4,411	5,465
Gag	823	572	369	613	687	689	642	1,076	575	576
Lobsters	3,962	5,280	5,298	3,772	5,647	5,041	5,451	5,017	3,624	5,824
Mullet	9,166	7,258	11,428	8,632	11,294	11,945	8,647	9,321	7,042	6,054
Oyster	2,875	2,164	3,167	3,368	1,735	758	844	853	786	517
Quahog clam	284	164	154	132	199	36	23	7	13	9
Red grouper	4,387	3,488	5,635	6,151	5,479	6,630	5,672	5,304	3,921	2,801
Red snapper	863	1,317	1,538	1,699	2,216	2,107	2,646	2,338	2,532	2,565
Shrimp	10,416	11,959	11,930	9,493	11,007	12,877	13,386	12,153	19,429	20,252
Stone crab	2,691	2,550	2,727	2,667	1,946	1,948	2,759	3,006	2,510	2,114

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)[2]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Blue crab	1.25	1.16	1.13	1.23	1.42	1.66	1.74	1.70	1.63	1.63
Gag	3.34	3.63	3.90	3.99	4.14	4.19	4.33	4.34	4.45	4.79
Lobsters	3.08	6.20	6.72	5.90	8.34	10.60	8.08	8.24	8.81	7.49
Mullet	0.56	0.58	0.76	0.72	1.01	0.79	0.71	0.75	0.71	0.74
Oyster	2.42	2.91	2.77	2.94	3.41	5.51	5.60	6.05	6.59	6.13
Quahog clam	6.73	6.28	6.51	6.08	5.74	6.20	8.17	7.82	8.65	7.67
Red grouper	2.39	2.58	2.68	2.73	3.00	3.20	3.34	3.37	3.61	4.02
Red snapper	3.45	3.46	3.52	3.62	3.70	3.86	3.78	3.70	3.77	3.96
Shrimp	2.16	2.09	2.28	2.51	2.77	3.32	2.59	2.57	2.27	2.05
Stone crab	6.59	9.12	8.89	9.22	12.94	14.36	12.97	9.96	11.58	15.27

[1] Information reported in this table is for the entire state of Florida.
[2] NA = these data are confidential and therefore not disclosable.

2018 Economic Impacts of Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	4,460	468,999	163,205	279,286
	Private Boat	8,861	936,862	317,180	604,447
	Shore	11,983	1,265,624	426,607	809,871
Total Durable Expenditures		46,115	5,675,583	2,073,599	3,369,598
Total State Economic Impacts		71,419	8,347,067	2,980,591	5,063,201

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	264,571
Private Boat	816,594
Shore	885,922
Total	1,967,086

Equipment	Durable Goods Expenditures
Fishing Tackle	1,125,229
Other Equipment	468,883
Boat Expenses	2,560,796
Vehicle Expenses	263,560
Second Home Expenses	50,495
Total Durable Expenditures	4,468,963

Total State Trip and Durable Goods Expenditures	6,436,049

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	1,551	1,538	1,592	1,718	1,813	1,649	1,414	1,393	1,400	1,193
Non-Coastal[1]	0	0	0	0	0	0	0	0	0	0
Out-of-State	1,671	1,470	1,624	2,141	2,538	2,716	2,399	2,306	2,383	2,046
Total Anglers	3,222	3,008	3,216	3,859	4,351	4,365	3,813	3,699	3,783	3,238

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	575	494	560	715	686	693	769	805	772	825
Private	19,828	20,585	20,688	23,306	21,551	18,859	16,775	17,883	18,025	17,326
Shore	15,804	18,368	18,815	20,977	24,056	19,073	18,186	20,249	23,043	22,845
Total Trips	36,207	39,446	40,063	44,998	46,293	38,625	35,730	38,936	41,840	40,996

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Common snook	H	31	0	1	1	39	33	36	48	66	22
	R	3,489	1,244	1,687	2,561	3,801	3,622	5,195	7,208	5,824	4,967
Drum (sand and silver seatrouts)	H	2,202	1,097	2,424	4,387	2,139	1,279	959	521	1,463	598
	R	1,160	600	856	2,309	675	420	1,434	665	1,052	364
Drum (spotted seatrout)	H	3,071	2,519	3,821	4,493	3,657	2,714	2,730	3,299	3,680	3,467
	R	17,234	19,924	28,685	29,785	20,134	16,124	15,691	22,996	24,949	16,301
Gag grouper	H	428	590	313	282	466	327	278	214	279	304
	R	6,128	5,084	3,597	2,680	2,663	2,057	1,289	2,122	3,354	2,267
Gray snapper	H	2,749	1,396	1,528	3,877	3,561	4,609	3,474	3,787	3,098	3,171
	R	6,698	5,094	7,116	10,027	15,084	17,621	15,712	12,922	13,954	13,778
King mackerel	H	947	389	350	470	399	563	485	575	476	352
	R	345	201	159	202	182	254	157	405	204	49
Mullets[3]	H	1,315	2,383	2,308	4,424	4,394	4,022	3,146	3,931	3,699	9,364
	R	382	160	266	245	597	1,519	519	1,585	606	977
Porgies (sheepshead)	H	1,698	1,696	1,634	2,113	1,500	1,883	1,349	1,546	2,757	1,827
	R	1,941	4,232	3,054	3,108	3,468	3,590	2,130	2,201	4,039	4,956
Red drum	H	460	570	702	1,110	902	836	1,124	844	805	626
	R	3,097	5,505	6,632	6,061	5,576	5,510	6,996	5,755	4,423	5,407
Spanish mackerel	H	3,338	3,767	3,510	3,796	5,960	3,974	3,184	3,677	3,810	2,964
	R	3,565	6,130	5,865	4,014	9,343	5,986	3,171	2,354	6,589	4,719

[1] Non-coastal data are not available because all of the state's residents are considered coastal county residents.
[2] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[3] Mullets include mullet genus and striped mullet.

2017 Florida State Economy (% of national total)[1]

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
2,245,127 (8.7%)	557,308 (7.1%)	8,385,577 (6.5%)	378 (5.6%)	532 (5.2%)	984	0.97

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)[1]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	217	280	294	307	300	315	300	316	280
	Receipts	12,473	14,635	14,618	17,557	17,214	22,329	21,841	20,834	19,651
Seafood sales, retail	Firms	316	361	362	383	338	346	355	320	316
	Receipts	25,667	27,964	29,037	30,765	25,332	26,433	29,033	24,296	27,937

Seafood Sales and Processing — Employer Establishments (thousands of dollars)[1]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	25	27	24	27	25	27	27	23	23
	Employees	1,143	1,269	1,095	1,608	1,374	1,419	1,429	1,535	1,942
	Payroll	46,235	45,772	42,612	51,735	50,003	50,556	58,246	63,039	79,173
Seafood sales, wholesale	Establishments	215	229	250	226	234	233	242	239	230
	Employees	1,762	1,747	1,913	1,957	1,878	1,974	2,055	1,849	2,098
	Payroll	72,159	70,889	77,115	75,945	79,266	83,964	90,247	83,818	89,907
Seafood sales, retail	Establishments	158	145	145	151	165	166	181	191	176
	Employees	885	865	849	945	909	1,037	1,137	1,133	1,140
	Payroll	21,182	20,783	20,158	21,577	23,476	25,844	29,066	26,981	29,146

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[1,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	261	248	246	258	259	263	278	281	269
	Employees	8,221	7,363	7,909	8,621	8,813	9,608	10,913	11,170	11,114
	Payroll	296,537	302,909	325,942	374,831	390,853	448,514	488,050	512,454	516,473
Deep Sea Freight Transportation	Establishments	58	61	65	75	69	77	76	65	58
	Employees	2,801	2,279	2,374	3,345	2,485	2,015	2,154	1,639	2,189
	Payroll	180,139	159,025	177,386	231,887	140,564	131,069	137,786	113,897	193,568
Deep Sea Passenger Transportation	Establishments	33	29	29	39	31	28	32	33	38
	Employees	ds	ds	ds	ds	ds	ds	10,510	10,161	9,882
	Payroll	ds	ds	ds	ds	ds	ds	967,938	864,475	970,607
Coastal and Great Lakes Freight Transportation	Establishments	42	50	54	60	47	62	57	62	64
	Employees	972	709	753	1,381	1,050	1,743	1,815	1,966	2,245
	Payroll	37,774	50,217	53,341	100,402	82,078	175,366	173,004	199,592	242,810
Port and Harbor Operations	Establishments	32	34	32	66	61	56	55	54	50
	Employees	527	470	377	2,082	555	588	987	1,006	1,560
	Payroll	19,006	20,525	16,879	72,554	25,439	20,647	32,032	32,969	39,956
Marine Cargo Handling	Establishments	59	55	64	43	58	61	69	63	72
	Employees	7,288	7,547	7,484	4,598	6,258	6,992	7,834	7,048	6,269
	Payroll	185,309	191,560	195,458	86,461	188,997	179,024	208,186	191,828	210,284
Navigational Services to Shipping	Establishments	145	145	150	151	180	190	196	194	226
	Employees	829	980	1,047	853	1,390	878	861	922	1,074
	Payroll	60,641	76,853	75,561	68,366	130,893	74,185	72,483	73,708	81,050
Marinas	Establishments	428	430	411	432	444	464	466	458	450
	Employees	4,665	4,439	4,657	4,918	5,076	5,421	5,472	5,405	5,481
	Payroll	132,955	133,017	142,997	148,573	145,265	168,185	171,354	176,315	184,529

[1] All data presented on this page are for the entire state of Florida, not just West Florida.
[2] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[3] ds = Data are suppressed.

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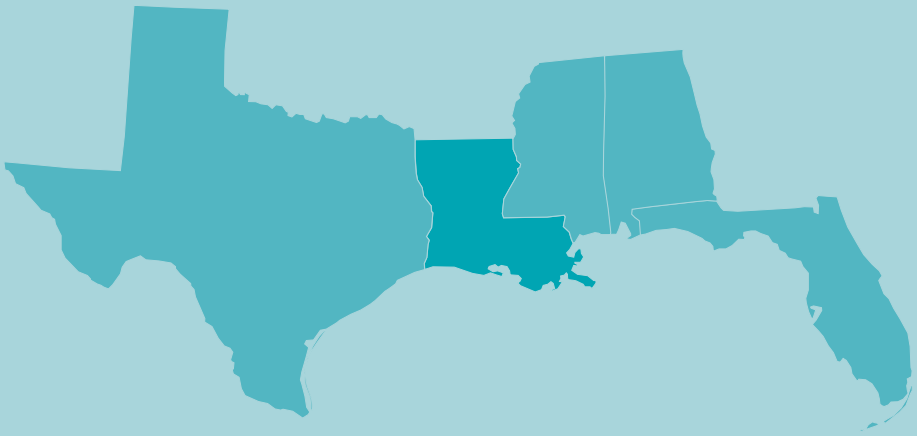


2018 Economic Impacts of the Louisiana Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	33,217	2,040	750	1,020	32,027	1,786	699	934
Commercial Harvesters	12,439	699	242	352	12,439	699	242	352
Seafood Processors & Dealers	2,883	285	110	141	2,677	264	103	131
Importers	640	207	33	63	0	0	0	0
Seafood Wholesalers & Distributors	1,058	135	46	60	934	119	41	53
Retail	16,196	714	319	405	15,977	704	314	399

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	287,494	244,507	331,054	327,870	396,047	480,068	368,762	417,711	369,090	375,899
Finfish	70,586	69,887	111,840	90,061	103,216	96,810	108,267	157,447	84,818	114,458
Shellfish	216,903	174,608	219,200	237,791	292,814	383,222	260,460	260,231	284,044	261,206
Other	6	12	15	18	17	37	35	33	228	236
Key Species										
Blue crab	37,829	30,052	36,827	42,402	51,467	66,989	58,084	49,487	54,217	60,667
Crawfish	15,387	14,014	9,887	8,291	16,457	16,144	6,852	12,373	12,105	12,550
King mackerel	1,125	1,147	1,570	1,452	1,477	2,379	2,006	2,150	2,073	2,003
Menhaden	51,405	57,600	93,547	64,861	80,325	72,832	85,439	132,105	60,909	90,315
Mullets	69	185	775	976	626	916	418	720	757	389
Oysters	44,134	24,775	41,086	41,981	43,832	64,665	81,806	62,236	84,417	75,973
Red snapper	1,895	1,945	1,936	2,187	4,315	5,836	5,951	5,198	6,716	6,112
Shrimp	119,548	105,764	131,393	145,103	181,053	235,420	113,711	136,128	133,299	112,016
Tunas	6,338	1,647	3,369	7,906	4,594	3,418	2,837	4,290	2,583	2,324
Vermilion snapper	755	371	505	662	473	688	619	914	821	699

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	1,167,758	1,003,999	1,284,246	1,213,719	991,060	870,175	1,067,089	1,252,400	897,825	1,031,962
Finfish	969,381	878,001	1,129,173	1,051,027	822,538	686,846	915,801	1,091,045	737,800	876,429
Shellfish	198,375	125,987	155,065	162,680	168,508	183,304	151,272	161,345	160,006	155,518
Other	2	12	9	13	15	26	16	10	19	15
Key Species										
Blue crab	54,140	30,554	43,891	44,323	39,064	43,219	41,308	40,099	43,874	42,742
Crawfish	19,009	14,609	9,582	6,834	19,641	13,055	5,461	13,573	8,575	11,178
King mackerel	901	690	986	954	759	1,144	1,047	994	1,052	1,021
Menhaden	948,944	862,144	1,106,931	1,026,240	800,101	663,693	893,789	1,068,690	716,056	855,216
Mullets	181	362	1,385	1,385	609	1,186	692	1,005	1,093	630
Oysters	12,929	6,822	11,039	11,324	11,196	12,235	13,994	11,010	13,329	10,924
Red snapper	584	728	829	928	1,067	1,325	1,405	1,236	1,557	1,414
Shrimp	112,295	74,000	90,552	100,182	98,604	114,794	90,507	96,658	94,226	90,673
Tunas	2,009	490	932	2,152	1,241	1,104	664	1,139	679	570
Vermilion snapper	389	173	229	287	173	237	207	331	311	254

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Blue crab	0.70	0.98	0.84	0.96	1.32	1.55	1.41	1.23	1.24	1.42
Crawfish	0.81	0.96	1.03	1.21	0.84	1.24	1.25	0.91	1.41	1.12
King mackerel	1.25	1.66	1.59	1.52	1.95	2.08	1.92	2.16	1.97	1.96
Menhaden	0.05	0.07	0.08	0.06	0.10	0.11	0.10	0.12	0.09	0.11
Mullets	0.38	0.51	0.56	0.70	1.03	0.77	0.60	0.72	0.69	0.62
Oysters	3.41	3.63	3.72	3.71	3.91	5.29	5.85	5.65	6.33	6.95
Red snapper	3.24	2.67	2.33	2.36	4.04	4.40	4.23	4.20	4.31	4.32
Shrimp	1.06	1.43	1.45	1.45	1.84	2.05	1.26	1.41	1.41	1.24
Tunas	3.16	3.36	3.62	3.67	3.70	3.09	4.27	3.77	3.80	4.07
Vermilion snapper	1.94	2.15	2.20	2.30	2.73	2.90	3.00	2.76	2.64	2.75

2018 Economic Impacts of Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	1,899	158,059	49,600	84,145
	Private Boat	3,183	393,094	124,062	229,623
	Shore	686	77,752	25,687	46,656
Total Durable Expenditures		11,051	1,299,893	435,702	793,497
Total State Economic Impacts		16,819	1,928,798	635,051	1,153,922

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	98,528
Private Boat	299,384
Shore	59,178
Total	457,090

Equipment	Durable Goods Expenditures
Fishing Tackle	233,336
Other Equipment	115,838
Boat Expenses	907,201
Vehicle Expenses	171,101
Second Home Expenses	15,246
Total Durable Expenditures	1,442,722

Total State Trip and Durable Goods Expenditures	1,899,812

Recreational Anglers by Residential Area (thousands of anglers)[1]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	669	609	690	651	709	NA	NA	NA	NA	NA
Non-Coastal	108	67	86	77	109	NA	NA	NA	NA	NA
Out-of-State	139	120	183	165	262	NA	NA	NA	NA	NA
Total Anglers	916	796	959	893	1,080	NA	NA	NA	NA	NA

Recreational Fishing Effort by Mode (thousands of angler trips)[2]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	168	76	97	108	122	131	160	179	179	183
Private	5,731	6,098	5,944	5,730	5,477	2,096	2,266	2,062	2,130	2,093
Shore	4,617	5,048	5,413	5,051	5,172	NA	NA	NA	NA	NA
Total Trips	10,516	11,223	11,454	10,889	10,770	2,227	2,425	2,242	2,308	2,276

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Black drum	H	1,040	897	1,091	995	1,020	218	220	138	143	148
	R	2,268	2,424	2,854	2,421	4,064	0	0	0	0	0
Drum (Atlantic croaker)	H	1,223	581	1,123	1,288	2,328	235	209	150	150	134
	R	2,866	3,861	5,472	4,122	3,973	0	0	0	0	0
Drum (sand seatrout)	H	1,748	2,178	2,513	2,070	1,458	532	370	354	359	426
	R	1,910	1,150	2,475	1,397	1,845	0	0	0	0	0
Drum (Southern kingfish)	H	243	206	34	316	41	4	20	6	18	25
	R	273	91	72	113	118	0	0	0	0	0
Drum (spotted seatrout)	H	17,959	15,582	19,035	19,410	16,267	3,231	4,292	5,326	5,142	2,578
	R	15,203	10,186	10,961	14,055	19,153	0	0	0	0	0
Porgies (sheepshead)	H	1,588	1,323	2,748	1,277	975	262	258	225	553	308
	R	1,146	1,306	514	605	1,386	0	0	0	0	0
Red drum	H	3,918	5,850	5,780	3,941	5,679	1,283	1,244	1,045	1,644	1,977
	R	7,989	8,994	6,809	6,505	10,046	0	0	0	0	0
Red snapper	H	130	12	63	153	113	128	171	145	119	101
	R	312	12	210	216	333	0	0	0	0	0
Southern flounder	H	888	674	988	689	1,531	209	217	222	94	65
	R	177	187	189	207	251	0	0	0	0	0
Yellowfin tuna	H	6	2	21	47	13	14	23	28	23	6
	R	0	0	8	6	2	0	0	0	0	0

[1] Louisiana resident participation is estimated from historical Marine Recreational Information Program (MRIP) data (2009-2013) and a state creel survey (2014-2018).
[2] Effort for 2014-2018 in Louisiana is estimated using data from a state creel survey and does not capture shore-based effort separately from private boat effort.
[3] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.

2017 Louisiana State Economy (% of national total)

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[1]
378,493 (1.5%)	106,599 (1.4%)	1,688,674 (1.3%)	75.4 (1.1%)	120 (1.2%)	251	3.71

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	68	120	94	78	99	111	115	113	124
	Receipts	5,308	10,358	9,308	8,492	9,136	8,632	10,086	11,917	12,051
Seafood sales, retail	Firms	173	197	192	184	173	177	169	180	174
	Receipts	17,622	16,001	18,758	16,804	17,538	17,383	17,870	18,880	17,009

Seafood Sales and Processing — Employer Establishments (thousands of dollars)

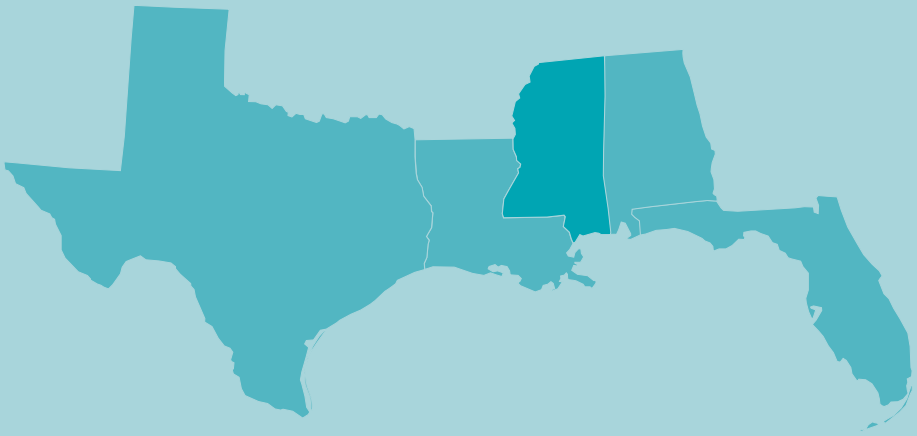
		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	38	34	33	35	36	37	38	34	36
	Employees	1,301	1,209	1,006	1,117	964	943	1,015	1,069	1,495
	Payroll	37,657	35,770	46,440	51,237	49,339	50,881	63,909	37,506	53,273
Seafood sales, wholesale	Establishments	98	97	94	103	106	109	111	116	114
	Employees	702	683	767	862	846	672	865	805	750
	Payroll	17,261	15,554	18,427	22,296	23,235	24,107	25,837	28,013	25,327
Seafood sales, retail	Establishments	106	101	100	97	94	90	90	90	93
	Employees	703	527	590	704	643	562	612	710	748
	Payroll	11,564	11,214	11,090	13,042	11,213	10,421	11,802	13,095	12,844

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	109	109	109	116	110	117	109	105	105
	Employees	12,521	11,737	11,722	10,933	7,413	8,512	8,470	5,629	5,765
	Payroll	613,188	600,259	639,047	631,098	416,319	479,243	401,977	316,927	311,710
Deep Sea Freight Transportation	Establishments	21	16	17	18	11	19	21	16	13
	Employees	1,192	93	93	ds	95	ds	451	300	126
	Payroll	91,760	6,147	5,608	ds	5,435	ds	21,706	25,246	12,921
Deep Sea Passenger Transportation	Establishments	2	1	3	2	4	4	3	3	3
	Employees	ds	ds	ds	ds	3	ds	ds	0	0
	Payroll	ds	ds	ds	ds	363	ds	ds	0	0
Coastal and Great Lakes Freight Transportation	Establishments	117	125	125	105	102	124	116	104	94
	Employees	6,077	5,610	5,834	6,422	5,317	6,275	5,212	3,919	4,686
	Payroll	391,914	405,796	417,362	497,165	458,589	556,693	396,625	273,575	351,229
Port and Harbor Operations	Establishments	17	21	20	46	18	14	15	15	24
	Employees	440	431	461	1,205	443	ds	399	421	806
	Payroll	33,907	38,776	38,745	80,780	37,122	ds	37,866	39,772	68,059
Marine Cargo Handling	Establishments	44	41	42	37	44	49	45	43	42
	Employees	2,193	2,511	2,526	2,016	2,834	3,106	3,418	2,955	2,324
	Payroll	92,883	105,063	108,491	93,896	174,054	212,786	175,092	156,891	116,330
Navigational Services to Shipping	Establishments	137	138	138	136	133	137	142	144	167
	Employees	2,893	3,176	3,396	2,545	2,533	2,816	2,862	2,780	3,079
	Payroll	175,271	224,533	208,306	162,094	169,795	206,318	218,379	203,905	223,344
Marinas	Establishments	43	43	45	44	41	39	36	38	38
	Employees	244	314	329	257	250	229	194	204	227
	Payroll	8,989	14,716	10,771	9,209	8,693	7,276	4,683	4,521	6,790

[1] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[2] ds = Data are suppressed.

Tables | Mississippi



2018 Economic Impacts of the Mississippi Seafood Industry (millions of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	6,100	317	125	162	6,043	308	123	158
Commercial Harvesters	1,241	71	22	32	1,241	71	22	32
Seafood Processors & Dealers	1,071	94	37	47	1,035	91	36	45
Importers	18	6	1	2	0	0	0	0
Seafood Wholesalers & Distributors	99	11	4	5	98	11	4	5
Retail	3,672	135	61	77	3,668	135	61	77

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	37,744	21,612	30,163	49,142	34,600	38,394	64,711	28,994	31,073	44,431
Finfish	18,430	8,661	10,400	23,058	10,571	20,752	53,337	11,417	11,980	26,488
Shellfish	19,314	12,951	19,763	26,084	24,029	17,642	11,374	17,577	19,093	17,942
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
Blue crab	574	371	321	724	416	931	1,209	913	793	806
Eastern oyster	6,100	4,268	928	1,596	1,544	1,742	969	1,088	344	19
Menhaden	17,987	8,378	9,871	22,394	10,230	20,234	52,962	10,973	11,086	25,992
Mullets	30	31	56	63	61	14	12	22	39	72
Oysters	6,100	4,268	928	1,596	1,544	1,742	969	1,088	344	19
Red drum	50	65	58	69	75	93	155	150	140	116
Shrimp	12,639	8,312	18,515	23,765	22,069	14,969	9,196	15,576	17,956	17,117

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	229,779	110,909	277,769	263,504	180,343	190,309	304,606	307,757	311,351	319,863
Finfish	216,976	104,941	267,107	249,291	170,745	184,230	294,442	294,408	300,100	309,445
Shellfish	12,803	5,968	10,662	14,213	9,598	6,079	10,164	13,350	11,251	10,417
Other	0	0	0	0	0	0	0	0	0	0
Key Species										
Blue crab	546	367	370	782	359	559	798	780	626	519
Eastern oyster	2,192	1,453	247	425	336	333	182	245	60	3
Menhaden	216,709	104,729	266,756	248,846	170,495	183,950	294,189	294,189	299,630	309,058
Mullets	62	59	93	99	95	22	21	40	68	176
Oysters	2,192	1,453	247	425	336	333	182	245	60	3
Red drum	32	36	28	35	37	43	61	61	57	48
Shrimp	10,066	4,148	10,045	13,006	8,903	5,187	9,184	12,324	10,566	9,896

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Blue crab	1.05	1.01	0.87	0.93	1.16	1.66	1.51	1.17	1.27	1.55
Eastern oyster	2.78	2.94	3.75	3.75	4.59	5.23	5.32	4.44	5.78	7.46
Menhaden	0.08	0.08	0.04	0.09	0.06	0.11	0.18	0.04	0.04	0.08
Mullets	0.48	0.52	0.61	0.64	0.64	0.63	0.56	0.55	0.58	0.41
Oysters	2.78	2.94	3.75	3.75	4.59	5.23	5.32	4.44	5.78	7.46
Red drum	1.57	1.77	2.04	1.99	2.04	2.15	2.53	2.48	2.47	2.42
Shrimp	1.26	2.00	1.84	1.83	2.48	2.89	1.00	1.26	1.70	1.73

2018 Economic Impacts of Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	191	15,786	4,809	8,360
	Private Boat	557	53,538	16,966	32,251
	Shore	741	57,663	20,298	37,325
Total Durable Expenditures		4,467	474,757	161,938	297,211
Total State Economic Impacts		5,955	601,744	204,012	375,147

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	10,347
Private Boat	50,290
Shore	49,542
Total	110,179

Equipment	Durable Goods Expenditures
Fishing Tackle	122,121
Other Equipment	61,101
Boat Expenses	360,792
Vehicle Expenses	105,948
Second Home Expenses	391
Total Durable Expenditures	650,352

Total State Trip and Durable Goods Expenditures	760,531

Recreational Anglers by Residential Area (thousands of anglers)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coastal	125	137	160	179	171	171	195	156	153	169
Non-Coastal	36	29	48	60	67	62	48	83	50	78
Out-of-State	50	50	60	91	101	94	114	106	97	176
Total Anglers	212	216	268	331	339	328	357	345	300	423

Recreational Fishing Effort by Mode (thousands of angler trips)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	11	4	11	11	11	17	42	25	16	19
Private	1,629	1,566	1,600	1,643	1,599	1,486	1,568	1,733	1,606	1,527
Shore	2,933	2,940	2,892	2,838	2,731	2,808	2,984	2,960	3,225	3,009
Total Trips	4,573	4,509	4,503	4,493	4,342	4,312	4,594	4,718	4,848	4,555

Harvest (H) and Release (R) of Key Species/Species Groups (thousands of fish)[1,2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Drum (Atlantic croaker)	H	1,648	692	1,358	752	819	2,120	957	1,241	1,262	1,270
	R	2,679	1,585	1,842	1,673	630	704	1,690	3,292	4,239	4,503
Drum (king-fish)[3]	H	351	413	395	546	976	437	1,066	1,713	798	698
	R	153	162	90	326	195	298	122	409	391	130
Drum (sand and silver seatrouts)	H	2,574	2,338	2,599	2,145	1,589	1,797	2,391	3,242	4,924	2,540
	R	957	680	879	1,063	494	305	418	1,059	1,513	1,790
Drum (spotted seatrout)	H	2,215	1,421	1,563	1,395	1,985	1,183	1,838	3,410	1,390	1,383
	R	2,145	1,645	1,218	2,071	2,354	1,818	1,741	3,693	4,053	2,059
Porgies (sheepshead)	H	79	119	557	235	207	198	185	107	815	98
	R	26	10	89	91	122	52	1,059	48	77	124
Red drum	H	202	219	153	210	320	201	203	329	246	384
	R	605	571	387	1,173	828	885	575	769	1,662	1,500
Red snapper	H	52	< 1	40	109	48	13	20	91	121	101
	R	335	120	< 1	10	134	127	472	333	750	246
Sharks[4]	H	34	232	56	19	109	12	11	6	12	4
	R	81	333	82	207	147	65	27	134	28	94
Southern flounder	H	597	546	421	401	448	255	172	225	96	126
	R	326	256	246	319	279	138	225	110	39	249
Striped mullet	H	376	521	1,291	660	1,883	869	2,664	1,254	615	1,631
	R	18	65	165	204	57	17	323	18	5	133

[1] Key species/species groups were chosen to represent those most frequently caught or highly prized by recreational anglers, or important for management. It is not a comprehensive list nor ranked by the total number of fish caught/released.
[2] In this table, '<1' = 0-999 fish, and '1' = 1,000-1,499 fish.
[3] Drum (kingfish) include southern kingfish and Gulf kingfish.
[4] Sharks include requiem shark family, Atlantic sharpnose shark, requiem shark genus, unidentified (sharks), requiem shark, blacktip shark, unidentified sharks, and shark species.

2017 Mississippi State Economy (% of national total)

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[1]
219,596 (0.9%)	59,294 (0.8%)	939,485 (0.7%)	35.4 (0.5%)	59.6 (0.6%)	113	0.99

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)[2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	16	30	25	27	ds	21	12	20	19
	Receipts	753	1,937	2,108	930	ds	1,932	1,539	2,879	2,852
Seafood sales, retail	Firms	56	69	51	50	54	42	53	58	54
	Receipts	4,206	3,421	3,505	3,957	3,855	3,129	4,053	4,836	4,397

Seafood Sales and Processing — Employer Establishments (thousands of dollars)[2]

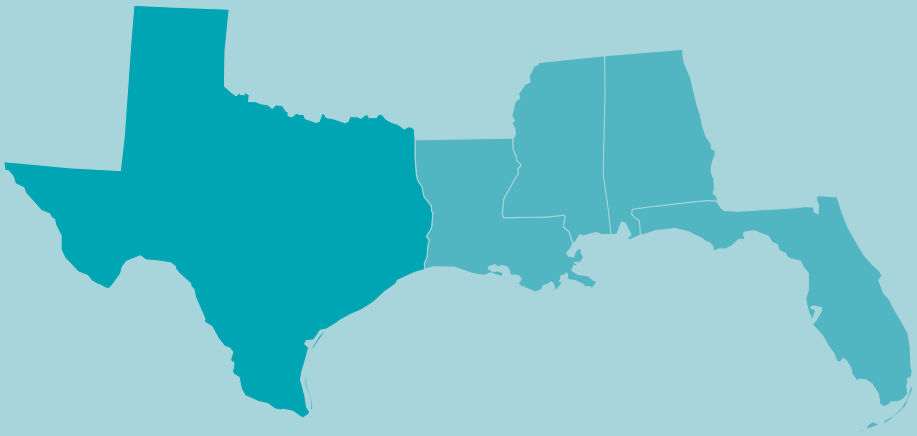
		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	20	20	18	18	19	19	18	18	19
	Employees	2,796	2,849	2,464	2,368	2,284	2,289	2,370	2,589	2,686
	Payroll	61,926	61,731	52,502	55,407	59,212	57,324	60,906	65,003	79,080
Seafood sales, wholesale	Establishments	16	18	18	17	14	14	14	15	13
	Employees	113	ds	64	102	ds	ds	39	46	37
	Payroll	2,836	2,542	2,532	4,412	1,546	1,587	1,800	2,038	1,819
Seafood sales, retail	Establishments	14	15	17	13	13	10	8	9	12
	Employees	46	50	58	ds	ds	ds	96	228	128
	Payroll	841	810	838	1,902	ds	ds	2,672	3,092	3,029

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	20	20	20	18	19	18	18	16	14
	Employees	ds	ds	ds	ds	ds	ds	14,722	14,066	13,602
	Payroll	ds	ds	ds	ds	ds	ds	892,317	899,814	875,851
Deep Sea Freight Transportation	Establishments	1	1	1	2	1	1	1	1	NA
	Employees	ds	ds	ds	ds	ds	ds	ds	0	NA
	Payroll	ds	ds	ds	ds	ds	ds	ds	0	NA
Coastal and Great Lakes Freight Transportation	Establishments	5	4	4	4	6	4	4	4	3
	Employees	114	ds	127	ds	230	277	259	0	1
	Payroll	7,730	8,058	7,233	ds	17,080	16,365	17,353	0	242
Port and Harbor Operations	Establishments	1	1	1	3	2	1	1	1	3
	Employees	ds	ds	ds	ds	ds	ds	ds	0	0
	Payroll	ds	ds	ds	ds	ds	ds	ds	0	0
Marine Cargo Handling	Establishments	8	7	7	2	4	5	5	6	6
	Employees	ds	ds	ds	ds	ds	ds	241	173	0
	Payroll	ds	ds	ds	ds	ds	ds	10,390	7,562	0
Navigational Services to Shipping	Establishments	7	8	6	7	6	7	7	7	9
	Employees	ds	141	ds	ds	ds	ds	57	42	130
	Payroll	ds	6,982	ds	ds	ds	ds	2,698	2,748	8,406
Marinas	Establishments	13	18	19	16	16	18	17	18	17
	Employees	172	183	189	204	154	193	197	199	201
	Payroll	3,479	4,163	5,137	5,361	3,972	4,960	5,047	5,517	5,215

[1] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[2] ds = Data are suppressed.
[3] NA = Not applicable.

Tables | Texas



2018 Economic Impacts of the Texas Seafood Industry (millions of dollars)[1]

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	39,806	5,393	1,318	2,084	16,973	1,176	431	602
Commercial Harvesters	4,613	445	133	210	4,613	445	133	210
Seafood Processors & Dealers	3,433	331	124	164	1,567	151	57	75
Importers	10,206	3,303	529	1,007	0	0	0	0
Seafood Wholesalers & Distributors	2,231	347	116	160	449	70	23	32
Retail	19,323	969	416	543	10,343	510	218	285

Total Landings Revenue and Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	154,771	173,100	225,141	205,760	258,124	263,614	180,446	205,129	230,633	211,848
Finfish	7,404	7,862	8,405	10,084	12,842	13,668	16,121	17,592	16,276	16,079
Shellfish	147,367	165,237	216,736	195,676	245,282	249,947	164,325	187,537	214,357	195,768
Key Species	-	-	-	-	-	-	-	-	-	
Other	0	0	0	0	0	0	0	0	0	0
Key Species	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atlantic croaker	484	531	621	743	819	690	725	856	767	1,276
Black drum	1,377	1,574	1,443	1,492	1,706	1,981	2,074	2,341	2,458	1,840
Blue crab	2,454	3,131	2,838	2,878	2,331	3,057	5,539	6,789	5,423	4,886
Flounders	NA	58	204	175	73	99	187	239	164	73
Groupers	695	384	560	760	1,149	1,154	1,481	1,593	1,154	755
Oysters	9,376	19,147	12,796	21,306	23,471	19,222	8,254	17,129	20,404	23,999
Red snapper	2,398	3,009	3,274	4,448	7,329	7,617	9,387	10,573	9,881	10,838
Shrimp	135,418	142,879	200,992	171,379	219,396	227,588	150,491	163,564	188,477	166,771
Tunas	140	4	2	5	7	27	3	3	1	1
Vermilion snapper	1,328	1,337	1,274	1,434	659	604	920	584	443	333

Total Landings and Landings of Key Species/Species Groups (thousands of pounds)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	102,354	79,503	96,920	90,159	83,583	78,027	84,228	79,366	90,673	84,385
Finfish	4,067	4,209	4,161	4,148	4,706	4,822	5,418	5,730	5,232	4,657
Shellfish	98,287	75,293	92,759	86,012	78,877	73,205	78,810	73,636	85,441	79,727
Key Species	-	-	-	-	-	-	-	-	-	-
Other	0	0	0	0	0	0	0	0	0	0
Key Species	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atlantic croaker	63	67	79	89	96	79	88	101	88	131
Black drum	1,610	1,733	1,789	1,624	1,698	1,747	1,879	2,055	1,926	1,469
Blue crab	2,844	3,434	2,886	2,854	1,902	2,238	4,336	5,323	4,132	3,431
Flounders	NA	20	75	60	21	25	51	64	40	18
Groupers	227	154	194	220	300	280	354	372	271	169
Oysters	2,733	5,796	4,342	5,818	6,126	4,129	1,587	3,127	3,504	3,859
Red snapper	851	1,031	952	1,123	1,807	1,797	2,152	2,390	2,213	2,353
Shrimp	92,669	66,022	85,485	77,304	70,818	66,815	72,871	65,171	77,795	72,415
Tunas	46	1	1	3	3	9	1	2	1	1
Vermilion snapper	598	539	466	511	234	203	307	192	149	107

Average Annual Ex-Vessel Price of Key Species/Species Groups (dollars per pound)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Atlantic croaker	7.64	7.98	7.84	8.31	8.55	8.68	8.20	8.51	8.73	9.78
Black drum	0.86	0.91	0.81	0.92	1.00	1.13	1.10	1.14	1.28	1.25
Blue crab	0.86	0.91	0.98	1.01	1.23	1.37	1.28	1.28	1.31	1.42
Flounders	NA	2.92	2.74	2.94	3.55	3.91	3.65	3.72	4.10	3.98
Groupers	3.06	2.49	2.89	3.45	3.84	4.12	4.18	4.28	4.25	4.47
Oysters	3.43	3.30	2.95	3.66	3.83	4.66	5.20	5.48	5.82	6.22
Red snapper	2.82	2.92	3.44	3.96	4.06	4.24	4.36	4.42	4.47	4.61
Shrimp	1.46	2.16	2.35	2.22	3.10	3.41	2.07	2.51	2.42	2.30
Tunas	3.07	3.19	1.82	1.83	2.10	2.94	2.43	1.41	1.53	2.11
Vermilion snapper	2.22	2.48	2.73	2.80	2.81	2.98	3.00	3.04	2.97	3.12

[1] 'NA' = these data are confidential and therefore not disclosable.

2018 Economic Impacts of Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	1,768	200,685	67,723	120,852
	Private Boat	1,848	256,168	79,495	155,454
	Shore	NA	NA	NA	NA
Total Durable Expenditures		10,610	1,373,030	533,956	870,403
Total State Economic Impacts		14,226	1,829,883	681,174	1,146,709

2018 Angler Trip and Durable Goods Expenditures (thousands of dollars)[1]

Fishing Mode	Trip Expenditures
For-Hire	118,736
Private Boat	159,636
Shore	NA
Total	278,372

Equipment	Durable Goods Expenditures
Fishing Tackle	266,497
Other Equipment	155,696
Boat Expenses	500,395
Vehicle Expenses	397,596
Second Home Expenses	41,949
Total Durable Expenditures	1,362,133

Total State Trip and Durable Goods Expenditures	1,640,505

Recreational Fishing Effort by Mode (thousands of angler trips)[2]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
For-Hire	122	123	162	227	145	137	147	162	191	309
Private	919	868	963	932	1,005	932	896	1,025	953	938
Shore	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Trips	1,041	991	1,125	1,159	1,150	1,069	1,043	1,187	1,144	1,247

Harvest (H) of Key Species/Species Groups (thousands of fish)[3]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Black drum	98	165	129	257	150	139	128	138	165	139
Drum (Atlantic croaker)	117	125	157	157	152	117	214	126	67	64
Drum (sand seatrout)	111	127	227	177	151	147	110	135	96	60
Drum (spotted seatrout)	810	732	1,137	810	796	590	825	1,025	982	746
King mackerel	16	6	9	9	10	13	9	12	15	24
Porgies (sheepshead)	34	49	57	143	84	39	51	106	60	84
Red drum	285	264	347	323	269	247	241	288	300	276
Red snapper	31	33	36	34	48	40	50	31	45	55
Southern flounder	47	30	92	96	92	71	85	104	77	42

[1] 'NA' = not available.
[2] The Marine Recreational Information Program (MRIP) does not collect participation (number of anglers) or effort (number of trips) data for Texas. To calculate trip expenditure estimates, effort by fishing mode was estimated based on 2018 data provided by the Texas Parks and Wildlife Department (TPWD). [For more information: www.tpwd.state.tx.us.]
[3] Data collected by the Texas Parks and Wildlife Department (TPWD) is reported in this table. Data collected by TPWD differs from the data collected and reported in MRIP. Data on the number of fish released are not reported by TPWD. [For more information: www.tpwd.state.tx.us.]

2017 Texas State Economy (% of national total)

#Non-Employer Firms	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[1]
2,399,267 (9.3%)	592,677 (7.5%)	10,580,160 (8.2%)	545 (8.1%)	840 (8.2%)	1,747	0.26

Seafood Sales and Processing — Non-Employer Firms (thousands of dollars)

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Firms	82	99	119	123	123	128	178	165	131
	Receipts	3,858	3,224	5,734	6,675	7,484	6,706	11,051	10,057	8,187
Seafood sales, retail	Firms	196	184	171	194	173	199	178	167	174
	Receipts	13,177	12,124	13,433	14,891	15,094	15,160	15,660	13,072	13,935

Seafood Sales and Processing — Employer Establishments (thousands of dollars)[2]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Seafood product prep. & packaging	Establishments	24	22	24	22	30	32	29	34	35
	Employees	1,026	1,184	1,273	1,248	1,026	1,062	1,006	975	1,023
	Payroll	29,006	24,961	26,425	27,737	27,638	28,643	29,729	27,765	33,479
Seafood sales, wholesale	Establishments	75	77	82	71	75	89	90	86	81
	Employees	683	715	723	603	729	816	874	928	971
	Payroll	23,650	23,879	26,356	25,309	30,370	35,553	37,315	37,519	34,972
Seafood sales, retail	Establishments	51	52	50	60	60	59	62	57	52
	Employees	189	199	ds	ds	331	395	415	439	279
	Payroll	3,393	3,742	4,090	6,102	6,891	8,201	9,319	9,097	5,750

Transport, Support and Marine Operations — Employer Establishments (thousands of dollars)[2,3]

		2009	2010	2011	2012	2013	2014	2015	2016	2017
Ship and Boat Building	Establishments	99	97	91	89	87	88	84	81	82
	Employees	3,891	3,386	2,773	5,601	5,686	5,178	4,956	5,098	4,936
	Payroll	158,261	147,492	153,077	310,230	297,248	306,571	283,838	270,717	261,783
Deep Sea Freight Transportation	Establishments	36	30	39	40	33	33	35	36	32
	Employees	802	764	860	742	ds	790	639	607	615
	Payroll	61,309	63,408	71,515	65,818	44,902	55,106	47,119	47,952	59,864
Deep Sea Passenger Transportation	Establishments	2	1	1	NA	2	2	2	2	NA
	Employees	ds	ds	ds	NA	ds	ds	ds	0	NA
	Payroll	ds	ds	ds	NA	ds	ds	ds	0	NA
Coastal and Great Lakes Freight Transportation	Establishments	43	48	48	39	42	48	48	49	45
	Employees	2,729	1,909	1,764	1,814	2,253	2,227	2,058	2,115	1,574
	Payroll	200,219	161,080	177,549	174,686	207,831	215,950	208,286	199,415	129,590
Port and Harbor Operations	Establishments	30	29	26	37	27	25	25	26	29
	Employees	421	ds	439	1,381	630	387	395	572	688
	Payroll	13,778	18,627	18,842	55,470	25,229	13,544	16,436	17,603	29,801
Marine Cargo Handling	Establishments	57	54	55	42	48	53	56	57	56
	Employees	6,276	5,262	5,259	4,373	6,390	7,451	8,179	6,687	5,030
	Payroll	167,562	166,877	153,360	130,817	272,286	327,690	324,552	280,303	210,606
Navigational Services to Shipping	Establishments	95	87	91	91	89	93	91	80	81
	Employees	1,849	1,606	1,448	1,676	1,485	1,588	1,415	1,430	1,187
	Payroll	137,289	132,283	113,444	124,500	130,572	139,259	144,090	135,341	110,529
Marinas	Establishments	131	148	144	132	124	128	138	137	134
	Employees	1,423	1,198	1,233	1,169	1,258	1,222	1,209	1,226	1,289
	Payroll	33,803	33,968	34,928	34,711	36,461	36,776	37,054	39,658	38,913

[1] The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.
[2] ds = Data are suppressed.
[3] NA = Not applicable.

Data Sources

Charter boats docked in San Diego, California.
Photo: Pacific Fishery Management Council/Jennifer Gilden

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Closeup of a hook on a red snapper during a recreational fishing trip.
Photo: NOAA Fisheries/Cameron Rhodes

Selected publications by NOAA Fisheries Economics and Social Sciences Program staff are grouped by geographic region of focus and then organized under the following categories:

- Climate Change Research
- Coastal and Marine Recreation Research
- Commercial Fisheries Economics Research
- Spatial Analysis and Marine Protected Areas Research
- Ocean Governance, Policy and Management Research
- Marine Protected Areas Research
- Other Marine Environmental Research
- Ecosystem-Based Management Research
- Recreational Fisheries Economics Research
- Habitat Economics Research
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Resources

An angler hook and line fishing during a family trip in Florida.
Photo: NOAA Fisheries/Kristy Wallmo

UNITED STATES

Federal Agencies

- Office of Science and Technology, NOAA Fisheries | www.fisheries.noaa.gov/about/office-science-and-technology
- Marine Recreational Information Program | www.fisheries.noaa.gov/topic/recreational-fishing-data
- Office of Marine Conservation, Bureau of Oceans and International Environmental and Scientific Affairs, U.S. Department of State | www.state.gov/bureaus-offices/under-secretary-for-economic-growth-energy-and-the-environment/bureau-of-oceans-and-international-environmental-and-scientific-affairs/office-of-marine-conservation/

NORTH PACIFIC

Federal Agencies

- Alaska Fisheries Science Center, NOAA Fisheries | www.fisheries.noaa.gov/about/alaska-fisheries-science-center
- Alaska Regional Office, NOAA Fisheries | www.fisheries.noaa.gov/about/alaska-regional-office
- Alaska Region, U.S. Fish and Wildlife Service | www.fws.gov/alaska/
- District 17, U.S. Coast Guard | www.pacificarea.uscg.mil/Our-Organization/District-17/

State Agencies

- Alaska Department of Fish and Game | www.adfg.state.ak.us

Councils and Commissions

- North Pacific Fishery Management Council | www.npfmc.org
- Pacific States Marine Fisheries Commission | www.psmfc.org
- Fisheries Economics Data Program Pacific States Marine Fisheries Commission | www.psmfc.org/efin
- International Pacific Halibut Commission | www.iphc.int

PACIFIC

Federal Agencies

- Northwest Fisheries Science Center, NOAA Fisheries | www.fisheries.noaa.gov/about/northwest-fisheries-science-center
- West Coast Regional Office, NOAA Fisheries | www.fisheries.noaa.gov/about/west-coast-regional-office
- Southwest Fisheries Science Center | www.fisheries.noaa.gov/about/southwest-fisheries-science-center
- Pacific Region, U.S. Fish and Wildlife Service | www.fws.gov/pacific
- California and Nevada, U.S. Fish and Wildlife Service | www.fws.gov/cno
- District 13, U.S. Coast Guard | www.pacificarea.uscg.mil/Our-Organization/District-13/

State Agencies

- California Department of Fish and Game | www.wildlife.ca.gov
- Oregon Department of Fish and Wildlife | www.dfw.state.or.us
- Washington Department of Fish and Wildlife | http://wdfw.wa.gov/

Councils and Commissions

- Pacific Fishery Management Council | www.pcouncil.org
- Pacific States Marine Fisheries Commission | www.psmfc.org
- Fisheries Economics Data Program - Pacific States Marine Fisheries Commission | www.psmfc.org/efin
- International Pacific Halibut Commission | www.iphc.int

WESTERN PACIFIC

Federal Agencies

- Pacific Islands Fisheries Science Center, NOAA Fisheries | www.fisheries.noaa.gov/about/pacific-islands-fisheries-science-center
- Pacific Islands Regional Office, NOAA Fisheries | www.fisheries.noaa.gov/about/pacific-islands-regional-office
- Pacific Region, U.S. Fish and Wildlife Service | www.fws.gov/pacific
- District 14, U.S. Coast Guard | www.pacificarea.uscg.mil/Our-Organization/District-14/

State Agencies

- Hawai'i Department of Land and Natural Resources | www.dlnr.hawaii.gov/
- Guam Office of the Governor | http://governor.guam.gov/
- Division of Fish and Wildlife, Commonwealth of the Northern Mariana Islands | http://www.dfw.gov.mp/Monument_Page.html

Councils and Commissions

- Western Pacific Fishery Management Council | www.wpcouncil.org

NEW ENGLAND

Federal Agencies

- Northeast Fisheries Science Center, NOAA Fisheries | www.fisheries.noaa.gov/about/northeast-fisheries-science-center
- Greater Atlantic Regional Fisheries Office, NOAA Fisheries | www.fisheries.noaa.gov/about/greater-atlantic-regional-fisheries-office
- Northeast Region, U.S. Fish and Wildlife Service | www.fws.gov/northeast
- District 1, U.S. Coast Guard | www.atlanticarea.uscg.mil/Our-Organization/District-1/

State Agencies

- Maine Department of Marine Resources | www.maine.gov/dmr/
- Rhode Island Department of Environmental Management | www.dem.ri.gov
- Massachusetts Division of Marine Fisheries | www.mass.gov/orgs/division-of-marine-fisheries
- Connecticut Department of Environmental Protection | www.ct.gov/deep/
- New Hampshire Fish and Game Department | www.wildlife.state.nh.us

Councils and Commissions

- New England Fishery Management Council | www.nefmc.org
- Atlantic States Marine Fisheries Commission | www.asmfc.org

MID-ATLANTIC

Federal Agencies

- Northeast Fisheries Science Center, NOAA Fisheries | www.fisheries.noaa.gov/about/northeast-fisheries-science-center
- Greater Atlantic Regional Fisheries Office, NOAA Fisheries | www.fisheries.noaa.gov/about/greater-atlantic-regional-fisheries-office
- Northeast Region, U.S. Fish and Wildlife Service | www.fws.gov/northeast
- District 5, U.S. Coast Guard | www.atlanticarea.uscg.mil/Our-Organization/District-5/

State Agencies

- Delaware Division of Fish and Wildlife | https://dnrec.alpha.delaware.gov/fish-wildlife/
- Pennsylvania Fish and Boat Commission | www.fishandboat.com/
- Fisheries and Boating Service, Maryland Department of Natural Resources | www.dnr.state.md.us/fisheries
- New Jersey Division of Fish and Wildlife | www.state.nj.us/dep/fgw
- Marine Resources Councils and Boards Bureau of Marine Resources, New York Department of Environmental Conservation | https://www.dec.ny.gov/outdoor/568.html
- Virginia Marine Resources Commission | www.dnr.maryland.gov/fisheries

Councils and Commissions

- Mid-Atlantic Fishery Management Council | www.mafmc.org
- Atlantic States Marine Fisheries Commission | www.asmfc.org

SOUTH ATLANTIC

Federal Agencies

- Southeast Fisheries Science Center, NOAA Fisheries | www.fisheries.noaa.gov/about/southeast-fisheries-science-center
- Southeast Regional Office, NOAA Fisheries | www.fisheries.noaa.gov/about/southeast-regional-office
- Southeast Region, U.S. Fish and Wildlife Service | www.fws.gov/southeast
- Southwest Region, U.S. Fish and Wildlife Service | www.fws.gov/southwest
- District 7, U.S. Coast Guard | www.atlanticarea.uscg.mil/Our-Organization/District-7/

State Agencies

- Florida Fish and Wildlife Conservation Commission | www.myfwc.com/
- Coastal Resources Division, Georgia Department of Natural Resources | www.coastalgadnr.org/
- Division of Marine Fisheries, North Carolina Department of Environment and Natural Resources | http://portal.ncdenr.org/web/mf/
- Marine Resources Division, South Carolina Department of Natural Resources | www.dnr.sc.gov

Councils and Commissions

- South Atlantic Fishery Management Council | www.safmc.net
- Atlantic States Marine Fisheries Commission | www.asmfc.org

GULF OF MEXICO

Federal Agencies

- Southeast Fisheries Science Center, NOAA Fisheries | www.fisheries.noaa.gov/about/southeast-fisheries-science-center
- Southeast Regional Office, NOAA Fisheries | www.fisheries.noaa.gov/about/southeast-regional-office
- Southeast Region, U.S. Fish and Wildlife Service | www.fws.gov/southeast
- Southwest Region, U.S. Fish and Wildlife Service | www.fws.gov/southwest
- District 8, U.S. Coast Guard | www.atlanticarea.uscg.mil/Our-Organization/District-8/

State Agencies

- Florida Fish and Wildlife Conservation Commission | www.myfwc.com/
- Marine Resources Division, Alabama Department of Conservation and Natural Resources | www.outdooralabama.com
- Mississippi Department of Marine Resources | www.dmr.ms.gov/
- Louisiana Department of Wildlife and Fisheries | www.wlf.louisiana.gov/
- Texas Parks and Wildlife Department | www.tpwd.texas.gov/

Councils and Commissions

- Gulf of Mexico Fishery Management Council | www.gulfcouncil.org
- Gulf States Marine Fisheries Commission | www.gsmfc.org

PROFESSIONAL ORGANIZATIONS

- North American Association of Fisheries Economists | https://naafe.oregonstate.edu/
- International Institute of Fisheries Economics and Trade | https://iifet.oregonstate.edu/

OTHER ORGANIZATIONS AND INFORMATION

- Organisation for Economic Co-operation and Development | www.oecd.org/
- Fisheries and Aquaculture Department, Food and Agriculture Organization of the United Nations | www.fao.org/fishery/capture/en
- Marine Stewardship Council | www.msc.org

Glossary

A woman hook and line fishing.
Photo: NOAA Fisheries

Angler[1] — A person catching fish with no intent to sell, including people releasing the catch. Also known as a recreational fisherman.

Annual Payroll[2] — Includes all forms of compensation such as salaries, wages, reported tips, commissions, bonuses, vacation allowances, sick-leave pay, employee contributions to qualified pension plans, and the value of taxable fringe benefits. For corporations, it includes amounts paid to officers and executives; for unincorporated businesses, it does not include profit or other compensation of proprietors or partners. Payroll is reported before deductions for Social Security, income tax, insurance, union dues, etc.

Annual Receipts[3] — Includes gross receipts, sales, commissions, and income from trades and businesses, as reported on annual business income tax returns. Business income consists of all payments received for services rendered by non-employer businesses, such as payments received as independent agents and contractors. The composition of non-employer receipts may differ from receipts data published for employer establishments. For example, for wholesale agents and brokers without payroll (non-employers), the receipts item contains commissions or earnings. In contrast, for wholesale agents and brokers with payroll (employers), the sales and receipts item published in the Economic Census represents the value of the goods involved in the transactions.

Buyback Program — A management tool available to fishery managers intended to ease fishing-related pressure on marine resources. Fishing vessels are purchased by the government or by the fishing industry itself. Then they are removed from a specific fishery where fish stocks or stock complexes are considered overfished or subject to overfishing.

Bycatch[1] — Species other than the primary target species that are caught incidental to the harvest of the primary species. Bycatch may be retained or discarded; discards may occur for regulatory or economic reasons.

Catch[1] — 1. To undertake any activity that results in taking fish out of its environment dead or alive, or to bring fish on board a vessel dead or alive; 2. The total number (or weight) of fish caught by fishing operations. Catch should include all fish killed by the act of fishing, not just those landed; For this report, recreational catch refers to the total number of individual fish released (thrown back into the sea) and harvested (not thrown back into the sea) by recreational fishermen (anglers).

Catch Share Program[4] — This is a generic term used to describe a fishery management program that allocates a specific portion of the total fishery catch to individuals, cooperatives, communities, or other entities, including sectors. The term encompasses more specific programs defined in legislation such as Limited Access Privilege Programs (LAPPs) and Individual Fishing Quotas (IFQs). Note that a catch share allocated to a sector is different from a general sectoral allocation or distribution to an entire segment of a fishery (such as a recreational sector allocation or a longline gear sector allocation). The two differ because the recipient of the catch share is responsible for terminating fishing activity when their specific share is reached.

Coastal County[5] — Counties with borders that are within 25 miles of the coast are considered coastal. All counties in Rhode Island, Connecticut, Delaware, and Florida are considered coastal.

Coastal County Angler — For this report, a coastal county angler refers to a recreational fisherman who lives within a given state and within a coastal county of that state.

Commercial Fisheries — In this report, commercial fisheries refer to fishing operations that sell their catch for profit. The term does not include subsistence fishermen or saltwater anglers who fish for sport. It also excludes the for-hire sector, which earns its revenue from selling recreational fishing trips to saltwater anglers. The commercial fisheries section reports on economic impacts, landings revenue, landings, and ex-vessel prices of key species/species groups.

Commercial Fishing Location Quotient (CFLQ)[6] — For this report, the CFLQ is calculated as the ratio of a state's distribution of employment in commercial fishing industries compared with the distribution of commercial fishing industries in the U.S. The CFLQ is calculated using the "Location Quotient Calculator" provided by the Bureau of Labor Statistics, U.S. Department of Labor.

Community Development Quota Program (CDQ)[1] — A program in western Alaska under which a percentage of the total allowable catch (TAC) of Bering Sea commercial fisheries is allocated to specific communities. Communities eligible for this program must be located within 50 miles of the Bering Sea coast or on an island within the Bering Sea; meet criteria established by the State of Alaska; be a village certified by the Secretary of the Interior pursuant to the Alaska Native Claims Settlement Act; and consist of residents who conduct more than half of their current commercial or subsistence fishing in the Bering Sea or waters surrounding the Aleutian Islands. Currently 7.5 percent of the TAC in the pollock, halibut, sablefish, crab and groundfish fisheries is allocated to the CDQ Program.

Dedicated Access Privileges (DAPs)[7] — As defined by the U.S. Commission on Ocean Policy, a DAP program assigns an individual or other entity access to a predetermined portion of the annual catch in a particular fishery. In some cases, the privilege is transferable and may be bought and sold, creating a market. The term encompasses a range of tools, including access privileges assigned to individuals (that is, individual transferable quotas), and to groups or communities (for example, community development quotas, cooperatives, and area-based quotas). DAP is often synonymous with Limited Access Privilege Programs (see "Limited Access Privilege Program") and are sometimes referred to as rights-based management. However, "rights-based management" implies granting an individual the "right" to fish. Apart from certain tribes, U.S. fishermen do not have inalienable rights to fish because the fishery resources of the U.S. belong to all people of the U.S. Under current law, fishermen are granted a "privilege" to fish, subject to certain conditions.

Discards[1] — To release or return a fish or other species to the sea, dead or alive, whether or not such fish or other species are brought fully on board a fishing vessel. Estimates of discards can be made in a variety of ways, including samples from observers and logbook records. Fish (or parts of fish) can be discarded for a variety of reasons such as having physical damage, being a non-target species for the trip, and compliance with management regulations like minimum size limits or quotas.

Durable Equipment Expenditures or Durable Goods Expenditures[8] — For this report, this term refers to expenses related to equipment used for recreational fishing activities. These expenses include the purchase of semi-durable goods (e.g., tackle, rods, reels, line); durable goods (e.g., motor boats and accessories, non-motorized boats, boating electronics, mooring, boat storage, boat insurance, vehicles, second homes); and angling accessories and multi-purpose items (e.g., magazines, club dues, saltwater angling-specific clothing, camping gear).

Ecolabel[9] — In fisheries, ecolabelling schemes entitle a fishery product to bear a distinctive logo or statement that certifies that the fish has been harvested in compliance with specified conservation and sustainability standards. The logo or statement is intended to facilitate informed decisions by purchasers whose choices may promote and stimulate the sustainable use of fishery resources.

Economic Impact Model[8,10,11] — Economic impact models capture how sales in a sector generate economic impacts directly in the sector in which the sale was made. The sales then ripple throughout the state and national economies as each dollar spent generates additional sales by other firms and consumers. The NOAA Fisheries Commercial Fishing & Seafood Industry Input/Output Model uses an IMPLAN platform to estimate the economic impacts associated with the harvesting of fish by U.S. commercial fishermen and other major components of the U.S. seafood industry. As used here, the term fish refers to the entire range of finfish, shellfish, and other life (that is, sea urchins, seaweed, kelp and worms) from marine and freshwaters that are included in the landings data maintained by the National Marine Fisheries Service. The NOAA Fisheries Recreational Economic Impact Model, which also uses an IMPLAN platform, estimates the economic impacts generated by expenditures made by marine (saltwater) anglers.

Economic Impacts[8,10,11] — For this report, the economic impacts of the commercial fishing sector and seafood industry refer to the employment (full-time and part-time jobs), personal income, and output (sales by U.S. businesses) generated by the commercial harvest sector and other major components of the U.S. seafood industry. These components include processors and dealers, wholesalers and distributors, grocers, and restaurants. Economic impacts of recreational fishing activities refer to the amount of sales generated, the number of jobs supported, labor income, and the contribution to gross domestic product (GDP) by state (also known as value-added impacts) from expenditures related to recreational fishing.

Effort — For this report, effort refers to the number of angler trips taken by recreational fishermen (anglers). An angler trip is defined as any part of a single day (24 hours) of marine recreational fishing.

Employee Compensation[12] — This is related to gross domestic product (GDP) by state and is an estimate of the sum of employee wages and salaries and supplements to wages and salaries. Wages and salaries are measured on an accrual, or "when earned" basis, which may be different from the measure of wages and salaries measured on a disbursement, or "when paid" basis. Wages and salaries and supplements of federal military and civilian government employees stationed abroad are excluded from the measure of GDP by state.

Employer Establishments[13] — Businesses with payroll and paid employees with a single physical location at which business is conducted or services or industrial operations are performed. An employee establishment is not necessarily identical to a company or enterprise, which may consist of one or more establishments. When two or more activities are carried on at a single location under a single ownership, all activities generally are grouped together as a single establishment. The entire establishment is classified on the basis of its major activity, and all data are included in that classification.

Employment Impacts — Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the purchases made by anglers or by the commercial harvest and seafood sector economic activity. This impact is measured in the number of full and part-time jobs.

Endangered Species[14] — As defined by the Endangered Species Act (ESA), an endangered species is any species which is in danger of extinction throughout all or a significant portion of its range. See also "Threatened Species."

Endangered Species Act (ESA)[14] — The ESA was signed on December 28, 1973 and provides for the conservation of species that are endangered or threatened throughout all or a significant portion of their range, and the conservation of the ecosystems on which they depend. The ESA replaced the Endangered Species Conservation Act of 1969. Congress has amended the ESA several times.

Exclusive Economic Zone (EEZ)[1] — The EEZ is the area that extends 200 nautical miles from the seaward boundary of the coastal states. The seaward boundary for most states is 3 nautical miles with the exceptions of Texas, Puerto Rico, and the Gulf Coast of Florida, which is 9 nautical miles. The U.S. claims and exercises sovereign rights and exclusive fishery management authority over all fish and continental shelf resources through this 200-nautical-mile boundary.

Expenditures[8,11] — For this report, expenditures are related to recreational fishing activities and described as being one of two types: 1) expenditures related to a specific fishing trip; or 2) durable equipment expenditures.

Fish Stock[1] — A fish stock refers to the living resources in the community or population from which catches are taken in a fishery. The term "fish stock" usually implies that the particular population is more or less isolated from other stocks of the same species and hence self-sustaining. In a particular fishery, the fish stock may be one or several species of fish. Here, it also includes commercial invertebrates and plants.

Fishery Management Council (FMC) or Regional Fishery Management Council[15] — A regional fisheries management body established by the Magnuson-Stevens Act to manage fishery resources in eight designated regions of the United States.

Fishery Management Plan (FMP)[15] — 1. A document prepared under supervision of the appropriate fishery management council (FMC) for the management of stocks of fish judged to require management. The plan generally must be formally approved. An FMP includes data, analyses, and management measures; 2. A plan containing conservation and management measures for fishery resources, and other provisions required by the Magnuson-Stevens Act, developed by fishery management councils or the Secretary of Commerce.

Fishing Cooperatives[15] — A market-based fisheries management tool where access to fisheries resources is limited to a specific group of fishermen. See also "Catch Share Program."

Fishing Day — For this report, a fishing day refers to a partial or full day spent in recreational fishing. This term is used in the Alaska recreational fishing tables.

Fishing Effort[1] — The amount of fishing gear of a specific type used on the fishing grounds over a given unit of time. For example, hours trawled per day, number of hooks set per day, or number of hauls of a beach seine per day. When two or more kinds of gear are used, the respective efforts must be adjusted to some standard type before being added. For recreational fishing activities, fishing effort refers to the number of fishing trips made by recreational anglers.

Fishing Mode — For this report, fishing mode refers to the type of recreational fishing a recreational fisherman (angler) engages in, such as fishing from shore, a private or rental boat, or a for-hire boat.

Fishing Trip — For this report, a fishing trip is defined as an angler trip. An angler trip is defined as any part of a single day (24 hours) of marine recreational fishing. Fishing trips are classified as occurring in one of three fishing modes: 1) a shore-based fishing trip; 2) by a private or rental boat; or 3) on a for-hire fishing boat.

For-Hire Mode — For this report, this fishing mode refers to trips taken by recreational fishermen (anglers) on a party (also referred to as a head boat) or charter boat. In the Gulf and South Atlantic, for-hire mode does not include head boats.

Gross Domestic Product (GDP) by State or Gross State Product (GSP)[12] — Previously known as the Gross State Product, the GDP by state is the value added in production by the labor and capital located in a state. GDP for a state is derived as the sum of the GDP originating in all industries in the state.

Harvest[1] — The total number or weight of fish caught and kept from an area over a period of time. Note that landings, catch, and harvest are different. However, in Hawai`i and the Gulf states, recreational harvest includes fish thrown back dead. See also "Catch" and "Release."

Income Impacts[8,10,11] — Income impacts include personal income (wages and salaries) and proprietors' income (income from self-employment).

Individual Fishing Quota (IFQ)[1] — A type of limited entry; an allocation to an individual (a person or a legal entity, for example, a vessel owner or company) of a right (privilege) to harvest a certain amount of fish in a certain period of time. It is also often expressed as an individual share of an aggregate quota, or total allowable catch (TAC). See also "Individual Transferable Quota" and "Catch Share Program."

Individual Transferable Quota (ITQ)[1] — A type of individual fishing quota (IFQ) allocated to individual fishermen or vessel owners that can be transferred (sold or leased) to others. See also "Individual Fishing Quota."

Industry Sector — For this report, fishing- and marine-related industries were combined into industry sectors. Two industry sectors were included in this report: 1) seafood sales and processing; and 2) transport, support, and marine operations. Fishing and marine-related industries were chosen from the County Business Patterns Data Series based on data availability and perceived relevance to fishing or marine activities. These industries were then combined into one of these two industry sectors.

Key Species or Species Groups — For this report, up to 10 species or species groups were chosen as "key" species or species groups due to their regional importance to commercial and recreational fisheries. The regional importance of these key species or species groups was chosen based on their economic and/or historical or cultural significance to a state or region.

Landing Revenues — The dollar value of commercial fisheries landings.

Landings[1] — 1. The number or poundage of fish unloaded by commercial fishermen or brought to shore by recreational fishermen for personal use. Landings are reported at the locations at which fish are brought to shore; 2. The part of the catch that is selected and kept during the sorting procedures on board vessels and successively discharged at dockside.

License Limitation Program or Limited Entry Program[1] — A management tool available to fishery managers where the number of commercial fishermen or vessels licensed to participate in a fishery is legally restricted. A management agency often uses this management tool to limit entry into a fishery.

Limited Access Privilege Program (LAPP) or Limited Access Privilege System[15] — As defined in the Magnuson-Stevens Act, LAPPs limit participation in a fishery to those satisfying certain eligibility criteria or requirements contained in a fishery management plan (FMP) or associated regulation. A limited access privilege is a federal permit, issued as part of a limited access system, to harvest a quantity of fish expressed by a unit or units representing a portion of the total allowable catch (TAC) of the fishery that may be received or held for exclusive use by a person. A LAPP includes an individual fishing quota (IFQ) or individual tradable quota (ITQ) but does not include community development quotas (CDQs). LAPPs are sometimes known as Dedicated Access Privileges (DAPs). However, unlike LAPPs, DAPs generally encompass CDQs as well as IFQs (see "Dedicated Access Privileges"). LAPPs are a type of catch share program. See also "Catch Share Program."

Limited Entry Program — Also known as a license limitation program; see "License Limitation Program."

Location Quotient[6] — Location Quotients (LQs) are ratios that allow an area's distribution of employment by industry to be compared to a reference or base area's distribution. The reference area is usually the U.S., but it can also be a state or metropolitan area. The reference or base industry is usually the all-industry total. LQs also allow areas to be easily compared with each other. If an LQ is equal to 1, then the industry has the same share of its area employment as it does in the reference area. An LQ greater than 1 indicates an industry with a greater share of the local area employment than in the reference area.

For example (assuming the U.S. as the reference area), Las Vegas will have an LQ greater than 1 in the Leisure and Hospitality industry, because this industry makes up a larger share of the Las Vegas employment total than it does for the country as a whole. LQs are calculated by first dividing local industry employment by the all-industry total of local employment. Next, reference area industry employment is divided by the all-industry total for the reference area. Finally, the local ratio is divided by the reference area ratio.

Magnuson-Stevens Fishery Conservation and Management Act or Magnuson-Stevens Act (MSA)[1] — Federal legislation responsible for establishing the Regional Fishery Management Councils (FMCs) and the mandatory and discretionary guidelines for federal fishery management plans (FMPs). This legislation was originally enacted in 1976 as the Fishery Management and Conservation Act. Its name was changed to the Magnuson Fishery Conservation and Management Act in 1980, and in 1996 it was renamed the Magnuson-Stevens Fishery Conservation and Management Act.

Market-based Management[15] — Market-based management is an umbrella term that encompasses approaches that provide economic incentives to protect fisheries from overharvest. These approaches contrast with conventional fisheries management approaches, such as buyback programs and license limitation programs (see "Buyback Program" and "License Limitation Program"). One example of a market-based management approach for fisheries is a limited access privilege program (LAPP; see "Limited Access Privilege Program") that includes an individual fishing quota. A LAPP provides individual fishermen an exclusive, market-based share of a harvest quota or total allowable catch (TAC) of a fishery.

Marine Coastal County — For this report, a marine coastal county is a coastal county that is adjacent to an ocean coastline. See also "Coastal County."

Marine Economy — For this report, the marine economy refers to the economic activity generated by fishing- and marine-related industries located in a coastal state. Fishing- and marine-related industries were chosen from industries defined in the County Business Patterns Data Series provided by the U.S. Census Bureau. Industries listed in this report were chosen based on that industry's direct contribution to fishing and marine activities, and whether data were available for that industry. Information such as the number of establishments, number of employees, and annual payroll for these fishing and marine-related industries was used to determine their relative levels of economic activity in a state. These industries were categorized into one of two industry sectors: 1) seafood sales and processing; and 2) transport, support, and marine operations. See also "Industry Sector."

Non-Coastal County Angler — For this report, a non-coastal county angler refers to a recreational fisherman who lives within a given state but not in a coastal county of that state.

Non-Employer Firms[3] — A non-employer business is one that has no paid employees, has annual business receipts of $1,000 or more ($1 or more in the construction industries), and is subject to federal income taxes. Most non-employers are self-employed individuals operating very small unincorporated businesses that may or may not be the owner's principal source of income.

Non-Resident Angler — For this report, a non-resident in the U.S. table refers to a recreational fisherman (angler) who resides outside the U.S.; a non-resident in the regional and state tables refers to an angler who did not reside in the state where they fished.

Out-of-State Angler — For this report, an out-of-state angler is a recreational fisherman (angler) who does not reside within a given coastal state.

Overcapacity[16] — When the harvesting capability within a given fishery exceeds the level of harvest allowed for that fishery.

Overcapitalization[9] — When the amount of harvesting capacity in a fishery exceeds the amount needed to harvest the desired amount of fish at least cost.

Overfished[1] — 1. An overfished stock or stock complex "whose size is sufficiently small that a change in management practices is required to achieve an appropriate level and rate of rebuilding." A stock or stock complex is considered overfished when its population size falls below the minimum stock size threshold (MSST). A rebuilding plan is required for stocks that are deemed overfished; 2. A stock is considered overfished when exploited beyond an explicit limit past which its abundance is considered "too low" to ensure safe reproduction. In many fisheries, the term is used when biomass has been estimated to be below a biological reference point that is used as the signpost defining an "overfished condition."

Overfishing[1] — 1. According to the National Standard Guidelines, "overfishing occurs whenever a stock or stock complex is subjected to a rate or level of fishing mortality that jeopardizes the capacity of a stock or stock complex to produce maximum sustainable yield (MSY) on a continuing basis." Overfishing is occurring if the maximum fishing mortality threshold (MFMT) is exceeded for 1 year or more; 2. In general, the action of exerting fishing pressure (fishing intensity) beyond the agreed optimum level. A reduction of fishing pressure would, in the medium term, lead to an increase in the total catch.

Protected Species[17] — Refers to any species that is protected by either the Endangered Species Act (ESA) or the Marine Mammal Protection Act (MMPA), and that is under the jurisdiction of NOAA Fisheries. This total includes all threatened, endangered, and candidate species, as well as all cetaceans and pinnipeds, excluding walruses.

Recreational Fisheries — Recreational fishing refers to fishing for leisure rather than to sell fish (commercial fishing) or for subsistence. The economic contributions or impacts of recreational fishing activities in the United States is based on spending by recreational anglers.

Regional Fishery Management Council or Fishery Management Council (FMC)[15] — The Magnuson-Stevens Act established eight Regional FMCs around the United States. Each council consists of voting and non-voting members who represent various federal, state, and tribal governments; fishing industry groups (commercial and/or recreational); and non-fishing groups (such as environmental organizations and academic institutions). Each council is tasked with creating fishery management plans for important fisheries within their regions.

Release — For this report, release refers to the number of individual fish caught by a recreational fisherman (angler) that are then returned to the sea (dead or alive). In Hawai`i and the Atlantic and Gulf states, release does not include fish returned to the sea that are dead. See also "Catch" and "Harvest."

Resident — For this report, a resident in the U.S. table refers to a recreational fisherman (angler) who resides inside the U.S.; a resident in the regional and state tables refers to an angler who resides in the state where they fished.

Sales Impacts[8,10,11] — Sales impacts refer to the gross value of all sales by regional businesses affected by an activity, such as recreational or commercial fishing. For example, it includes both the direct sales made by the angler (commercial fisherman) and sales made between businesses and households resulting from that original sale by the angler (commercial fisherman).

Sector Allocation Program[17] — A fisheries management tool where a group of fishermen are allocated a quota or share of a total allowable catch (TAC), in accordance with an approved plan. This program is considered a type of catch share program. See also "Catch Share Program."

Species[1] — A group of animals or plants having common characteristics that are able to breed together to produce fertile (capable of reproducing) offspring and maintain their "separateness" from other groups.

Species Group[1] — Group of species considered together because they are difficult to differentiate without detailed examination (very similar species), or because data for the separate species are not available (for example, in fishery statistics or commercial categories).

Threatened Species[14] — As defined by the Endangered Species Act (ESA), a threatened species is any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. See also "Endangered Species."

Total Annual Durable Expenditures — Total annual durable expenditures were estimated by multiplying mean durable expenditures by the estimated annual number of adult participants at the state level or the national level and adjusted by the Consumer Price Index to the current year.

Total Annual Trip Expenditures – Total annual trip expenditures are estimated at the state level by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore) and adjusted by the Consumer Price Index to the current year. The trip expenditures at the national level is the sum of state trip expenditures in each mode.

Trip Expenditures — For this report, trip expenditures refer to expenses incurred by recreational fishermen (anglers) on a fishing trip. Trip expenditures include expenditures made by residents (individuals who reside in a coastal or non-coastal county within a given state; a U.S. resident) and non-residents (individuals who do not reside within the United States).

Value-Added Impacts[8,10,11] — Value-Added impacts refer to the contribution made to the gross domestic product in a region from commercial fishing landings and recreational fishing expenditures.

GLOSSARY NOTES

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Shrimp trawlers in Bayou La Batre, Alabama.
Photo: NOAA Fisheries/Noelle Olsen