Fisheries Economics of the United States 2015

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-170
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Front cover: Trawler (photo credit: NOAA Fisheries Northeast Fisheries Science Center)
Inside cover: Red drum, Virginia (photo credit: Jason Willey)

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Economics and Social Analysis Division
Office of Science and Technology
National Marine Fisheries Service
1315 East-West Highway, 12th floor
Silver Spring, MD 20910

NOAA TECHNICAL MEMORANDUM NMFS-F/SPO-170
MAY 2017

U.S. Department of Commerce
Wilbur Ross, Jr., Secretary of Commerce

National Oceanic and Atmospheric Administration
Benjamin Friedman, Acting NOAA Administrator

National Marine Fisheries Service
Samuel Rauch III, Acting 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 2014 report shows that the number of stocks listed as subject to overfishing or overfished is at an all-time low. http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/

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. http://www.st.nmfs.noaa.gov/commercial-fisheries/fus/fus16/index

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 U.S. 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. Economic performance indicators for catch share programs are reported and will be extended to include non-catch share fisheries in the next edition. http://www.st.nmfs.noaa.gov/economics/publications/feus/fisheries_economics_2015/index

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Contents

Catching albacore in Astoria, OR
(photo credit: Craig D'Angelo)

Preface

Fisheries Economics of the United States, 2015

Fisheries Economics of the United States, 2015, is the ninth 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. This year's report covers the years 2006 to 2015 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 establishment, 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, and recreational fishing effort and participation data, were primarily obtained from the Fisheries Statistics Division, Office of Science and Technology, and NOAA Fisheries. Other data sources included the Alaska Fisheries Science Center, NOAA Fisheries; 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 Bureau of Labor Statistics.

Acknowledgments

Many people participated in the production of this report. Cameron Speir, Cara Mayo, and Gabrielle Ryan are the editors of this report series; Rita Curtis, Sabrina Lovell, and Cara Mayo were primary authors and analysts on this edition of Fisheries Economics of the United States. Key collaborators include Megan Strachura, Lauren Dolinger Few, Karen Greene, Laura Johansen, Jean Lee, Michael Lewis, Michael Liddel, Alan Lowther, and Eric Thunberg. The report's design and layout was done by Avi Litwack, Jacqui Fenner, and Cara Mayo.

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

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

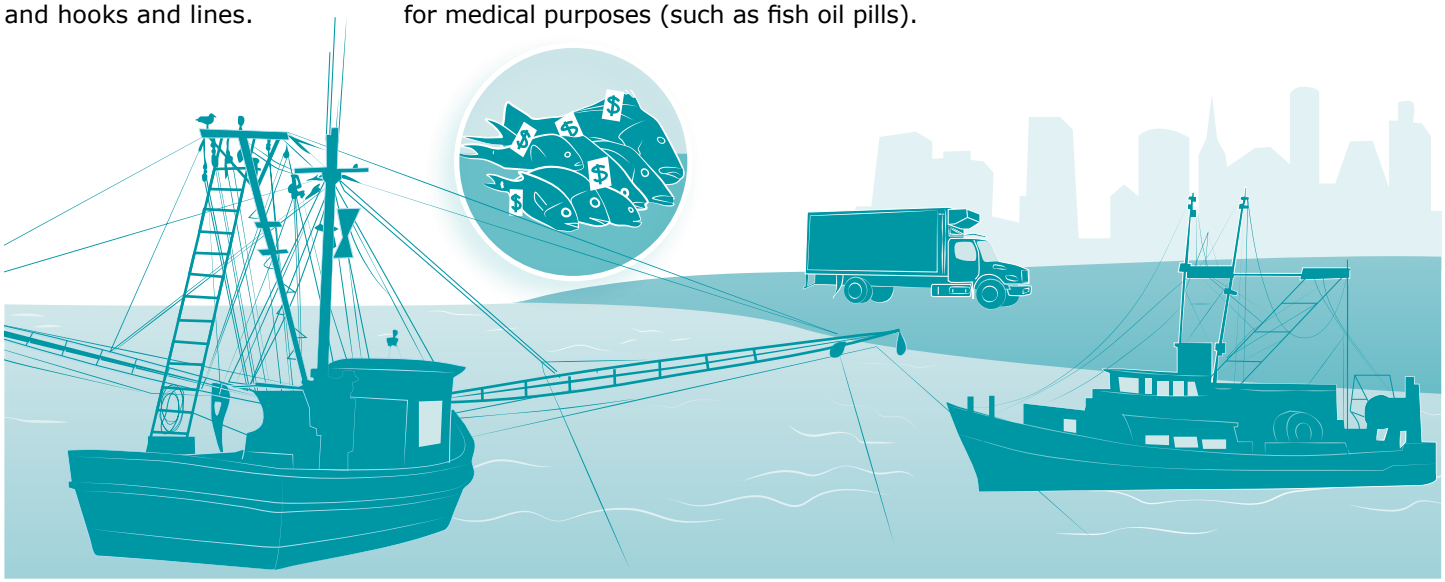
Ex-vessel Prices
The price received by a captain, at the point of landing, for the catch.

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[1]

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).

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.

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

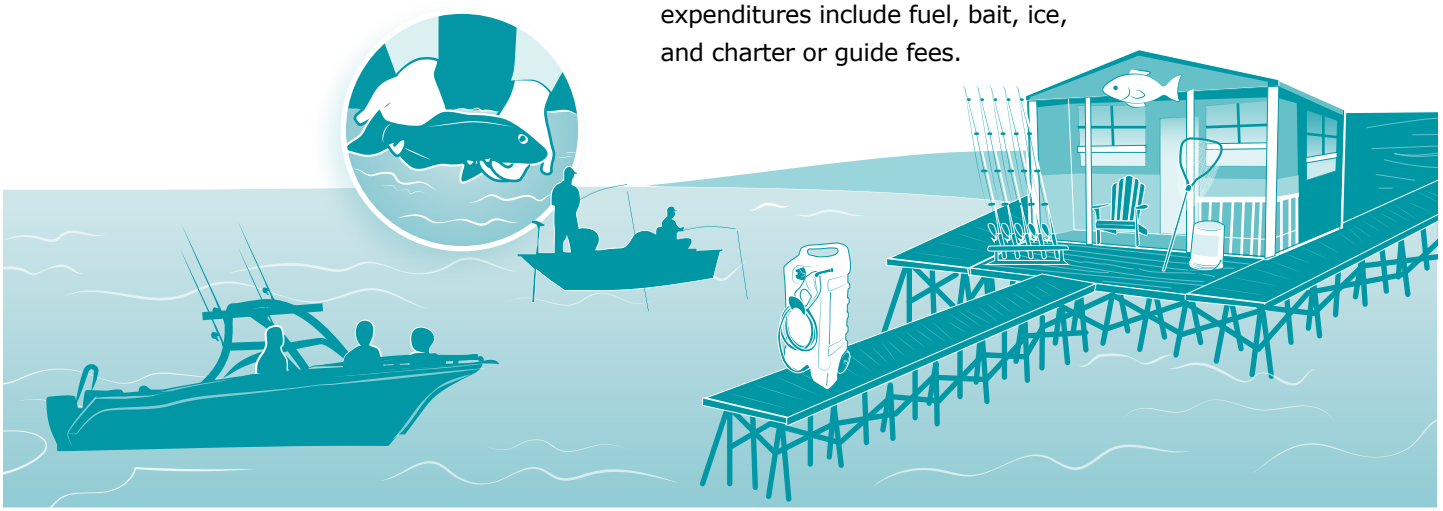
Harvest and Release
The total number or fish either: 1) caught and kept (**harvested**), or 2) caught and **released**, by recreational anglers from an area over a period of time. Total catch is the sum of the number of fish harvested and released.

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[1]

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?

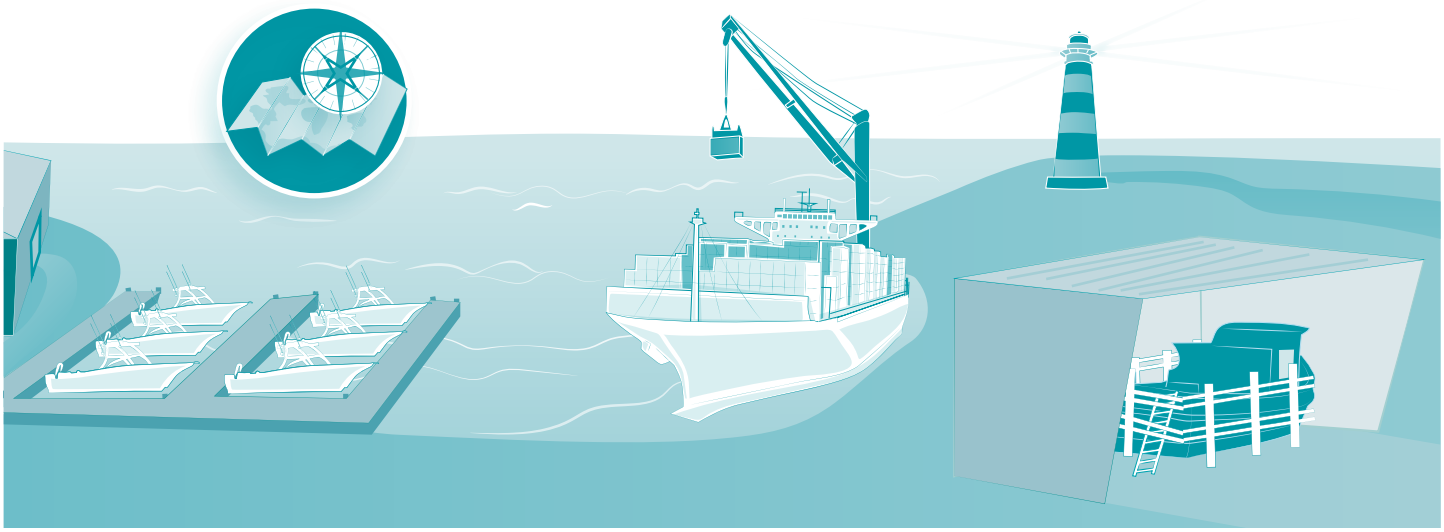
Yes, commercial and recreational fisheries contribute to the overall marine economy.

What marine economy sectors, featured in the report, are related to commercial and recreational fisheries?

The seafood product preparation & packaging and 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

Trawler
(photo credit: NOAA Fisheries Northeast Fisheries Science Center)

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 473 fish stocks and stock complexes.[1] These fishery management plans are developed by Regional Fishery Management Councils (FMCs) in eight regions nationwide: North Pacific, Pacific, Western Pacific, New England, Mid-Atlantic, South Atlantic, Gulf of Mexico and Caribbean Regions. After an FMP is developed, it must be approved by the Secretary of Commerce in consultation with NOAA Fisheries before it is implemented. Enough information exists to determine the overfishing status for 313 of the 473 stocks and stock complexes (66%): 28 are subject to overfishing (9% of stocks with known status). The overfished status of 233 stocks (49%) is known: 38 stocks (16% 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 to 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's) Code of Conduct for Responsible Fisheries established in 1995. Another 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. Experts estimate that global economic losses from IUU fishing range from $10 billion to $23.5 billion annually, representing between 11 and 26 million tons of fish.[3]

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 work together to implement measures outlined in an action plan developed by the Presidential Task Force on Combatting IUU Fishing and Seafood Fraud. The plan includes actions that will strengthen enforcement; create and expand partnerships with state and local

[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] Source: NOAA Fisheries Office of Sustainable Fisheries, Status of Stocks 2015. http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/archive/2015/2015_status_of_stocks_updated.pdf.
[3] Agnew DJ, Pearce J, Pramod G, Peatman T, Watson R, Beddington JR, et al. (2009) Estimating the Worldwide Extent of Illegal Fishing. PLoS ONE 4(2): e4570. doi:10.1371/journal.pone.0004570.

governments, industry, and non-governmental organizations; and create a risk-based traceability program to track seafood from harvest to entry into U.S. commerce. The plan also highlights ways in which the United States will work with our foreign partners to strengthen international governance, enhance cooperation, and build capacity to combat IUU fishing and seafood fraud.

Regional Fishery Management Organizations
NOAA Fisheries participates in eight RFMOs globally. Each RMFO is listed by ocean basin below.[4]

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

Saltwater Recreational Fisheries Policy

In February 2015, NOAA Fisheries established a formal National Saltwater Recreational Fisheries Policy to broadly guide future actions and better integrate recreational fishing with NOAA Fisheries' mission. The Policy focuses on six guiding principles: 1) support ecosystem conservation and enhancement; 2) promote public access to quality recreational fishing opportunities; 3) coordinate with state and federal management entities; 4) advance innovative solutions to evolving science, management and environmental challenges; 5) provide scientifically sound and trusted social, cultural, economic and ecological information; and 6) communicate and engage with the recreational fishing public.

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 143 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
Marine and Anadromous Fish	66
Marine Mammals	31
Sea Turtles	26
Marine Invertebrates	27
Plants	1
Total Threatened and Endangered Marine Species	151

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, 13 candidate species and 12 proposed species are under consideration for listing.

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

[4] Source: http://www.nmfs.noaa.gov/ia/agreements/regional_agreements/intlagree.html.
[5] See NOAA Fisheries Office of Protected Resources (http://www.nmfs.noaa.gov/pr/species/esa/) for current and proposed ESA species listings.
[6] The U.S. Fish and Wildlife Service protects walrus, manatees, otters and polar bears.

Essential Fish Habitats

Sustainable commercial and recreational fisheries depend on healthy habitats. These habitats include rivers, estuaries 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 or restrictions to an area, but helps to focus EFH conservation, management and research priorities. HAPC designation is a valuable way to acknowledge areas where detailed information exists on ecological function and habitat vulnerability, indicating a greater need for conservation and management. To date, approximately 100 HAPCs have been designated including specific coral, seamount and spawning areas. A recent effort undertaken by NOAA Fisheries was the creation of a Habitat Assessment Improvement Plan.[7] The goal of this plan is to advance NOAA Fisheries' ability to identify EFH and HAPCs and provide the information needed to assess impacts to EFH.

Catch Share Programs

Market-based management tools are used by fishery managers to reduce over-capitalization, increase the economic viability of fisheries, and promote individual accountability for harvest and harvesting practices. A variety of market-based tools are available to fishery managers, including catch share programs. Catch share programs 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 16 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 five programs established in the 1990s and six programs established since 2010 (see Table 2). 10 programs manage a single species or, in some cases, two species but as separate management units; the other six programs manage multiple species. Most of the programs (six) operate in the Alaska Region.

Table 2. Existing Catch Share Programs in Federal Fisheries

Region	Program	Year Implemented
Mid-Atlantic	Mid-Atlantic Surfclam & Ocean Quahog ITQ	1990
	Mid-Atlantic Golden Tilefish IFQ	2009
New England	Northeast Multispecies Sectors	2010
	Northeast General Category Atlantic Sea Scallop IFQ	2010
North Pacific	Western Alaska Community Development Quota	1992
	Alaska Halibut and Sablefish IFQ	1995
	American Fisheries Act (AFA) Pollock Cooperatives	1999
	Bering Sea and Aleutian Island (BSAI) Crab Rationalization	2005
	Central Gulf of Alaska (GOA) Rockfish *(pilot implemented in 2007)*	2011
	Non-Pollock Trawl Catcher/ Processor Groundfish Cooperatives (Amendment 80)	2008
South Atlantic	South Atlantic Wreckfish ITQ	1991
Gulf of Mexico	Red Snapper IFQ	2007
	Grouper-Tilefish IFQ	2010
Pacific	Pacific Coast Sablefish Permit Stacking	2001
	Pacific Groundfish Trawl Rationalization Program (Whiting and Non-Whiting trawl)	2011
Atlantic	Highly Migratory Species Individual Bluefin Quota Program	2015

[7] The Habitat Assessment Improvement Plan is available at: http://www.st.nmfs.noaa.gov/st4/documents/habitatAssesmentImprovement-Plan_052110.PDF.
[8] See http://www.nmfs.noaa.gov/sfa/management/catch_shares/about/documents/noaa_cs_policy.pdf.
[9] See Section 303A of the Magnuson-Stevens Act for more information on LAPP requirements.

Table 3. Economic Performance Indicators for U.S. Federal Catch Share Programs (2014 dollars)[10]

Management Context			Participation		Economic Benefit			
	ACL Exceeded		Active Vessels		Total Revenue from Catch Share Species		Revenue per Active Vessel	
	Baseline	2014	Baseline	2014	Baseline	2014	Baseline	2014
Gulf of Mexico								
Grouper-Tilefish	Y	N	630	435	$22,771,411	$30,775,799	$36,145	$70,749
Red Snapper	Y	N	482	401	$13,958,514	$22,694,038	$28,960	$56,594
Mid-Atlantic								
Golden Tilefish	-	N	14	11	$4,707,700	$5,557,814	$336,264	$505,256
Ocean Quahog	N	N	67	16	$29,406,847	$22,834,970	$438,908	$1,427,186
Surfclam	-	N	137	39	$39,625,107	$28,048,549	$289,234	$719,194
New England								
General Category Scallop	-	-	271	146	$28,366,002	$27,923,644	$104,672	$191,258
Multispecies Sectors	Y	N	417	217	$86,215,202	$57,771,632	$206,751	$266,229
North Pacific								
Alaska Halibut	Y	Y	3432	921	$91,801,359	$95,612,949	$26,749	$103,814
Alaska Sablefish	Y	N	1139	315	$60,484,901	$74,167,575	$53,104	$235,453
AFA Pollock Cooperatives	Y	N	147	102	$182,982,099	$372,028,962	$1,244,776	$3,647,343
BSAI Crab Rationalization	Y	N	264	78	$174,706,605	$211,496,791	$661,767	$2,711,497
Amendment 80	-	N	22	18	$244,617,707	$217,790,708	$11,118,987	$12,099,484
Central GOA Rockfish	-	N	42	50	$4,691,355	$10,765,067	$111,698.93	$215,301.35
Pacific								
Paicfic Sablefish	-	N	135	87	$6,701,698	$6,768,532	$49,642	$77,799
Whiting and Non-Whiting Directed	-	N	124	101	$39,979,907	$51,510,476	$322,419	$510,005

In 2010, NOAA Fisheries initiated an effort to track catch share program performance.[11] 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 revenue from catch share species increased in 10 of the 15 programs and/or sub-components of the programs since their implementation. In addition, the number of active vessels decreased in all but one program (Central GOA Rockfish), while inflation-adjusted revenue per active vessel increased in all programs since their implementation. Further, results show that the annual catch limit (ACL) was exceeded for only one stock (Alaska halibut) in 2014.

Policy Updates

The Atlantic Highly Migratory Species pelagic longline fishery in the Western Atlantic and Gulf of Mexico targets swordfish, yellowfin and bigeye tunas, and catches Atlantic bluefin tuna as bycatch. The fishery had substantial regulatory dead discards of bluefin tuna prior to 2015. For example, from 2012 to 2014, the estimate of dead discards ranged from 206 to 139 mt annually. In 2015, NOAA Fisheries implemented an Individual Bluefin Quota Catch Share Program in the fishery to reduce bluefin dead discards and increase accountability. During the first two years of operating under the new regulations, the fishery successfully accounted for bluefin tuna bycatch using allocated quota; leased quota among participants using an online system; and recorded pelagic longline hauls using electronic monitoring (video camera) systems. In 2015, the amount of estimated dead discards in the fishery was reduced substantially (88 %; from 139 mt in 2014 to 17 mt in 2015).

Other Market-Based Management Tools

Vessel or permit buyback programs are another market-based tool used by fishery managers. Under these

[10] The South Atlantic Wreckfish ITQ is not included due to confidentiality restrictions. The Western Alaska CDQ program was excluded because it is the only CDQ and thus 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, "na" indicates that the question of whether the ACL was exceeded is not applicable.
[11] See http://www.st.nmfs.noaa.gov/economics/fisheries/commercial/catch-share-program/index.

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 CP Non-Pollock Groundfish, Southeast Alaska Purse Seine Salmon, and AFA Pollock.

License limitation programs (LLPs), 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. LLPs 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, 21 of which are U.S. fisheries (see Table 4). Fisheries obtaining MSC certification for the first time in 2015 include the SSLLC US North Atlantic swordfish longline fishery.

NATIONAL OVERVIEW

In 2015, commercial and recreational fisheries in the United States generated 1.6 million jobs throughout the national economy. In addition, commercial and recreational fishing together generated $207.6 billion in sales impacts, $62.4 billion in income impacts, and $96.6 billion in value-added impacts throughout the economy. Florida (176,500 jobs) supported the greatest number of fishing-related jobs overall. Florida also generated the greatest sales ($28.7 billion), income ($7.5 billion), and value-added ($12.5 billion) impacts from the commercial and recreational fishing industries combined.

Table 4. U.S. Fisheries with MSC Certificatio [12]

Region	Fishery	Certifie
North Pacific	Alaska flatfish - Bering Sea & Aleutian Islands	2010
	Alaska flatfish - Gulf of Alaska	2010
	Alaska Pacific cod - Bering Sea & Aleutian Islands	2010
	Alaska Pacific cod - Gulf of Alaska	2010
	Alaska pollock - Bering Sea & Aleutian Islands	2010
	Alaska pollock - Gulf of Alaska	2010
	American Western Fish Boat Owners Association albacore tuna North Pacific	2010
	U.S. North Pacific halibut	2006
	U.S. North Pacific sablefish	2006
	Alaska salmon	2000
Pacific	American Albacore Fishing Association Pacific albacore tuna - north	2007
	American Albacore Fishing Association Pacific albacore tuna - south	2007
	Oregon pink shrimp	2011
	Pacific hake mid-water trawl	2009
	U.S. West Coast limited entry groundfish trawl	2014
Gulf	Louisiana blue crab	2012
North-east	Maine lobster trap fishery	2013
	U.S. Atlantic spiny dogfish	2012
	U.S. North Atlantic swordfish	2013
	U.S. Atlantic sea scallop	2013
	SSLLC US North Atlantic swordfish longline	2015

COMMERCIAL FISHERIES

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. It does not include saltwater anglers that 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/species groups.

Key U.S. Commercial Species

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

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

[12] For more information about these fisheries and the Marine Stewardship Council certification process, see https://www.msc.org/.

species in the top 10. Results show that commercial fishermen in Alaska caught the most salmon (6 billion pounds) and earned $1.7 billion for their catch in 2015. Tuna was caught in large numbers in Hawaii (23 million pounds) and generated $82 million in landings revenue. Maine fishermen contributed the most to American lobster landings (122 million pounds) and earned $498 million for their catch in 2015. In Massachusetts, sea scallopers harvested 22 million pounds landed and earned $265 million for their catch. More blue crab was caught in Louisiana (41 million pounds) than in any other state, earning more than $58 million. Louisiana accounted for the greatest quantity of menhaden landed in 2015, with fishermen landing 894 million pounds worth $85 million in dockside revenue. Sea scallop garnered the highest average ex-vessel price per pound ($12.32) from among the key species and species groups in 2015, with state-specific prices ranging from $11.15 in North Carolina to $12.89 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 respent on additional goods or services. If those dollars are respent on other goods and services in the regional economy, this spending generates additional economic activity in the region. 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 seafood businesses and its full supply chain are included). That is, impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

Four different measures are commonly used to show commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. Sales refer to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. It includes both the direct sales of fish landed and sales made between businesses and households resulting from the original sale. Income includes

Graph 1. Jobs supported by the U.S. Seafood Industry (With and Without Imports)

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 types of measures are calculated in terms of dollars, whereas employment impacts are measured in terms of 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.[13]

In 2015, the seafood industry supported 1.2 million full- and part-time jobs and generated $144.2 billion in sales, $39.7 billion in income, and $60.6 billion in value-added impacts nationwide. The retail sector generated the largest employment impacts across sectors at 573,000 jobs. The importers sector generated the largest sales impacts ($58.3 billion), the retail sector generated the largest income impacts ($13.3 billion), and the retail sector

[13] The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates (see NMFS Commercial Fishing & Seafood Industry Input/Output Model, available at www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf).

Table 6. Sales, Income, and Value-Added Impacts Generated by the U.S. Seafood Industry, 2015 ($ millions)

State	Sales	Income	Value Added
U.S.	$144,194	$39,744	$60,566
California	$21,315	$4,530	$7,553
Florida	$17,713	$3,319	$5,931
Massachusetts	$7,308	$1,906	$2,904
Alaska	$4,421	$1,877	$2,354
New Jersey	$5,969	$1,273	$2,102
New York	$5,374	$1,153	$1,905
Maine	$2,434	$803	$1,161
Washington	$1,702	$694	$942
Louisiana	$1,840	$673	$921
Virginia	$1,170	$407	$566
Texas	$1,017	$361	$510
Oregon	$1,058	$356	$504
New Hampshire	$1,559	$355	$571
Maryland	$1,330	$351	$532
Georgia	$1,416	$320	$523
North Carolina	$1,027	$286	$427
Hawaii	$814	$247	$362
Alabama	$502	$189	$251
Mississippi	$465	$186	$240
Rhode Island	$347	$117	$167
Connecticut	$493	$104	$173
South Carolina	$75	$30	$41
Delaware	$132	$24	$43

generated the largest value-added and the retail sector generated the largest value-added impacts ($18.2 billion); see Table 5.

The largest state-level employment impacts generated by the seafood industry occurred in California (114,000 jobs), followed by Massachusetts (83,000 jobs) and Florida (80,000 jobs); see Graph 1. The highest income impacts

Table 5. U.S. Seafood Industry Economic Impacts Trends ($ billions)

	2012	2013	2014	2015
Jobs	1,270,141	1,350,627	1,394,833	1,179,848
Sales	$140.70	$142.20	$153.30	144.19
Income	$38.70	$39.80	$42.00	39.74
Value-Added	$59.00	$60.30	$64.10	60.57
Total Revenue	$5.10	$5.60	$5.50	5.17

were generated in California ($4.5 billion), followed by Florida and Massachusetts. The highest sales impacts were generated by the seafood industry in California ($21.3 billion), followed by Florida and Massachusetts. The highest value-added impacts were generated in California ($7.6 billion), followed by Florida and Massachusetts (Table 6).

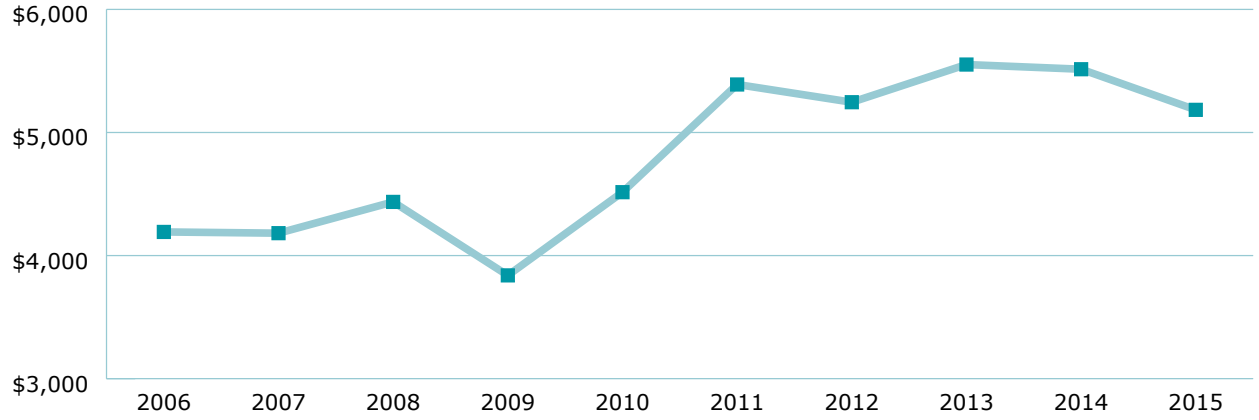
Landings Trends

Landings revenue in the United States totaled $5.2 billion in 2015 (Table 7). This was a 24% increase in nominal value from 2006 levels (a 17% increase in real terms after adjusting for inflation) and a year-over-year decrease of 6% from 2014 (Graph 2). Finfish landings revenue accounted for 45% of all landings revenue. American lobster had the highest landings revenue in 2015.

Landings Revenue

Landings revenue in the United States totaled $5.2 billion in 2015 (Table 7). This was a 24% increase in nominal value from 2006 levels (a 17% increase in real terms after adjusting for inflation) and a year-over-year decrease of 6% from 2014 (Graph 2). Finfish landings revenue accounted for 45% of all landings revenue. American lobster had the highest landings revenue in 2015.

Graph 2. U.S. Commercial Fisheries Landings Revenue (nominal values, $ millions)



Landings Revenue: Largest Increases

From 2006:
- Menhaden (154%, 120% in real terms)
- Blue crab (75%, 51% in real terms)
- Tunas (58%, 37% in real terms)

From 2014:
- Menhaden (57%)
- Walleye pollock (21%)
- American lobster (9%)

Landings Revenue: Largest Decreases

From 2006:
- Pacific halibut (-41%, -49% in real terms)

From 2014:
- Shrimp (-30%)
- Pacific salmon (-25%)

Landings: Largest Increases

From 2006:
- Pacific salmon (61%)
- American lobster (52%)
- Menhaden (25%)

From 2014:
- Pacific salmon (48%)
- Menhaden (32%)
- Blue crab (15%)

Landings: Largest Decreases

From 2006:
- Pacific halibut (-66%)
- Sea scallop (-41%)
- Sablefish (-29%)

From 2014:
- Tunas (-2%)
- American lobster (-1%)

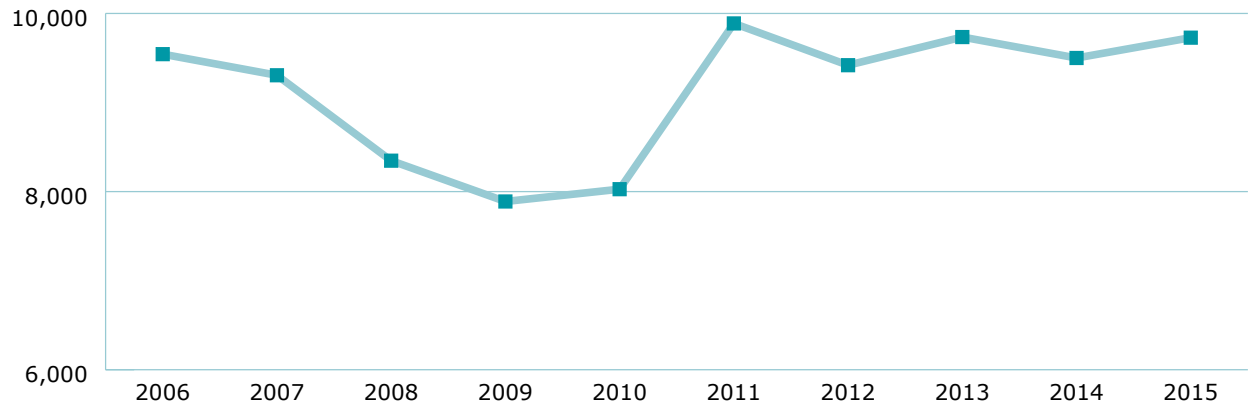
Table 7. Commercial Fisheries Landings Revenue by Region, 2015 ($ millions)

Region	Landings Revenue	Region	Landings Revenue
U.S.	$5,184	Pacific	$558
North Pacific	$1,733	Mid-Atlantic	$512
New England	$1,238	South Atlantic	$182
Gulf of Mexico	$858	Western Pacific	$103

From 2006 to 2015, menhaden (154%, 120% in real terms); blue crab (75%, 51% in real terms); and tunas (58%, 37% in real terms) had the largest revenue increases, while Pacific halibut (-41%, -49% in real terms) had the largest decreases. From 2014 to 2015, menhaden (57%), walleye pollock (21%), and American lobster (9%) had the largest revenue increases, while shrimp (-30%) and Pacific salmon (-25%) had the largest decreases.

Alaska earned the greatest share of landings revenue in 2015 ($1.7 billion), contributing 34% of the national total (Table 8). Maine ($539 million, or 19% of U.S. shellfish revenue) and Massachusetts ($425 million, or

Graph 3. U.S. Commercial Fisheries Landings (millions of pounds)



15% of U.S. shellfish revenue) earned the most ex-vessel revenue from shellfish landings.

Landings

Landings volume in the United States totaled 9.7 billion pounds in 2015 (Table 8). This was a 2% increase from 2006 levels and a year-over-year increase of 2% from 2014 (Graph 3). Finfish landings accounted for 88% of all landed weight. Walleye pollock had the highest landings volume in 2015.

Table 8. Commercial Fisheries Landings by Region, 2015 (millions of pounds)

Region	Landings	Region	Landings
U.S.	9,728	Mid-Atlantic	649
North Pacific	6,038	New England	599
Gulf of Mexico	1,555	South Atlantic	106
Pacific	747	Western Pacific	35

From 2006 to 2015, Pacific salmon (61%), American lobster (52%), and menhaden (25%) had the largest landings increases, while Pacific halibut (-66%), sea scallop (-41%), and sablefish (-29%) had the largest decreases. From 2014 to 2015, Pacific salmon (48%), menhaden (32%), and blue crab (15%) had the largest landings increases, while tunas (-2%) and American lobster (-1%) had the largest decreases.

Alaska earned the greatest share of landings volume in 2015 (6 billion pounds), contributing 63% of the national total (see Table 8). Louisiana (153 million pounds, or 14% of U.S. shellfish landings) and Maine (138 million pounds, or 12%) had the highest shellfish landings by volume.

Price

Of all key species or species groups, sea scallop ($12.32 per pound) had the highest national ex-vessel price. Menhaden ($0.11 per pound) had the lowest ex-vessel price of all key species nationally. From 2006 to 2015, menhaden (104%, 80% in real terms); sea scallop (92%, 69% in real terms); and blue crab (80%, 59% in real terms) had the largest price increases, while Pacific salmon (-8%, -21% in real terms) had the largest decrease. From 2014 to 2015, menhaden (19%), walleye pollock (16%), and American lobster (10%) had the largest price increases, while Pacific salmon (-50%), shrimp (-32%), and blue crab (-10%) had the largest decreases.

RECREATIONAL FISHERIES

In this report, recreational fisheries refer to fishing for fun rather than to resell fish (commercial fishing) or for subsistence. The recreational fisheries section reports on angler participation, trips, economic impacts and expenditures, and catch of key species/species groups.

Key U.S. Recreational Species

- Atlantic croaker and spot
- Little tunny and Atlantic bonito
- Pacific halibut
- Rockfishes and scorpionfishes
- Pacific Salmon
- Seatrout
- Sharks
- Striped bass
- Summer flounder
- Tunas

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 2015, recreational anglers in West Florida took the most trips (13.4 million trips) and spent the most on trips ($663 million). California spent the second most on trips ($399 million). West Florida also had the most recreational anglers participate in fishing in their state, with 3.8 million anglers. Of these participants, 63% were from out of state. West Florida caught the most drum (seatrouts, 9.5 million fish), Virginia caught the most drum (Atlantic croaker and spot, 7.5 million fish), and New Jersey caught the most summer flounder (5.2 million fish). Alaska caught the most Pacific halibut (691 million fish), and more striped bass (3.5 million fish) was caught in Maryland than any other state.

Economic Impacts and Expenditures

The contribution of recreational fishing activities in the United States are reported in terms of economic impacts from angler expenditures.[14,15] Total annual trip expenditures are estimated by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore). Total annual durable expenditures are estimated by multiply

[14] Trip expenditure estimates were generated from the 2011 National Marine Recreational Fishing Expenditure Survey. Durable good expenditure impacts were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (see http://www.st.nmfs.noaa.gov/economics/fisheries/recreational/Marine-Angler-Durable-Expenditures/2014-durable-expenditures-survey). Economic impacts from recreational fishing activities were generated using the NMFS Recreational Economic Impact Model (see The Economic Contribution of Marine Angler Expenditures in the United States, 2011, available at http://www.st.nmfs.noaa.gov/economics/publications/marine-angler-expenditures/marine-angler-2011).

[15] Economic impacts from recreational fishing activities were generated using the NMFS Recreational Economic Impact Model (see The Economic Contribution of Marine Angler Expenditures in the United States, 2011, available at http://www.st.nmfs.noaa.gov/economics/publications/marine-angler-expenditures/marine-angler-2011) and IMPLAN version 3.1.1001.12.

Table 9. Recreational Economic Impacts Trends for the United States ($ billions)

	2012	2013	2014	2015
Number of Jobs	425,321	420,191	438,590	439,242
Sales	$58.80	$58.10	$60.60	$63.44
Income	$21.40	$21.10	$22.00	$22.68
Value-Added	$34.40	$34.00	$35.50	$36.08
Total Trips (millions)	72	71.9	68	60.9

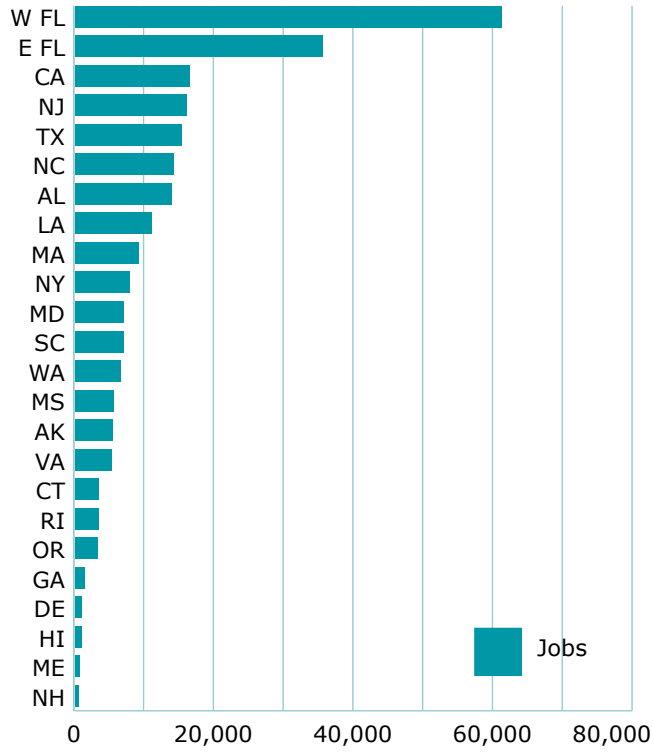
Table 10. Sales, Income, and Value-Added Impacts Generated by the Recreational Fishing Industry, 2015 ($ millions)

State	Sales	Income	Value Added
U.S.	$63,440	$22,679	$36,082
West Florida	$6,948	$2,620	$4,185
East Florida	$4,020	$1,515	$2,427
California	$2,079	$797	$1,271
Texas	$1,938	$726	$1,202
New Jersey	$1,839	$786	$1,225
North Carolina	$1,450	$560	$871
Louisiana	$1,286	$474	$784
Alabama	$1,245	$532	$889
Massachusetts	$986	$455	$657
New York	$874	$377	$587
Washington	$775	$297	$483
Maryland	$724	$301	$470
South Carolina	$676	$245	$397
Mississippi	$656	$218	$354
Alaska	$619	$223	$362
Virginia	$521	$213	$337
Connecticut	$367	$159	$248
Rhode Island	$332	$141	$217
Oregon	$314	$139	$202
Georgia	$142	$59	$93
Hawaii	$119	$37	$60
Delaware	$100	$40	$65
Maine	$65	$24	$39
New Hampshire	$50	$21	$30

ing mean durable expenditures by the estimated annual number of adult participants in a given state.

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. Sales refer 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. 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

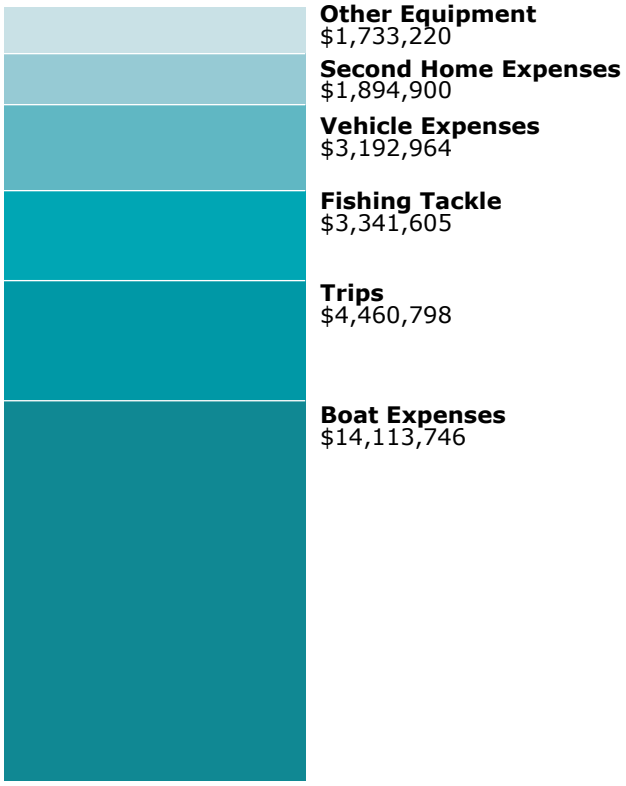
Graph 4. Jobs Supported by the U.S. Recreational Fishing Industry



directly or indirectly by the purchases made by anglers. The first three types of measures are calculated in terms of dollars, whereas employment impacts are measured in terms of 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 439,000 jobs across the United States in 2015 (see Table 9). Recreational fishing also generated more than $63 billion in sales impacts, $23 billion in income impacts, and $36 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 85% of total job impacts, 84% of sales impacts, 86% of income impacts, and 85% of value-added impacts. Of the three fishing trip modes, private-boat-based fishing trips had the greatest economic impact, accounting for 5% of employment, 6% of sales, 5% of income impacts, and 5% of value-added impacts. The greatest employment impacts from saltwater recreational fishing were generated in West Florida, followed by East Florida and California (see Graph 4).

Graph 5. Recreational Fishing Trip and Durable Expenditures, 2015 ($ millions)



The highest sales impacts were generated in West Florida, followed by East Florida and California (see Table 10).

In 2015, expenditures for fishing trips and durable equipment in the United States totaled $28.7 billion. Approximately $4.5 billion of these expenditures were related to trip expenses. Total trip expenditures consisted of expenses on trips in the private boat (40%), shore (31%), and for-hire (29%) sectors. Durable goods expenditures totaled $24.3 billion in 2015, with the largest portion coming from boat expenses ($14.1 billion).

Fishing Trips

Nationwide, anglers took approximately 60.9 million saltwater fishing trips around the country (see Table 11).[16] This number was a 27% decrease from 2006 and a 10% decrease from 2014 (Graph 6). The private boat mode accounted for 48% of fishing trips. The largest percentage increase in trips from 2006 occurred in the for-hire mode (15%). West Florida took the most fishing trips (13.4 million trips), followed by East Florida and North Carolina (see Table 12).

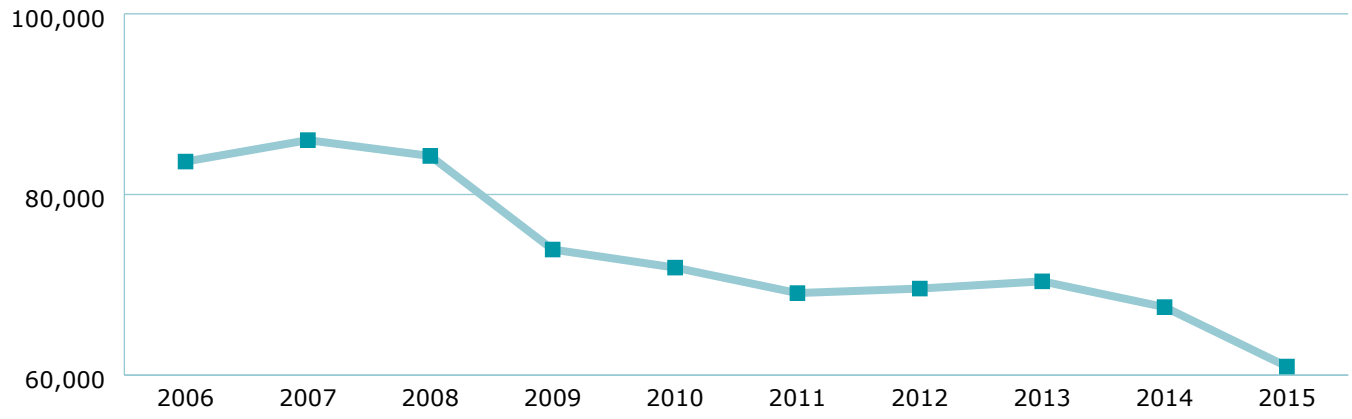
Table 11. Recreational Fishing Trips by Region, 2015 (millions of fishing trips)

Region	Trips
U.S.	60.9
Gulf of Mexico	19.7
South Atlantic	16.5
Mid-Atlantic	12.4
Pacific	5.8
New England	5.0
Hawai'i	1.4

Participation

Nationwide, 8.9 million recreational saltwater anglers fished in their home states in 2015.[17] This number was a 33% decrease from 2006 and a 14% decrease from 2014 (Graph 6). Coastal county residents made up 86%

Graph 6. Recreational Fishing Trips, 2006-2015 (thousands of angler trips)



[16] Trip estimates do not include Puerto Rico, Alaska, or Texas. Hawai'i trip estimates are available only for the shore and private boat mode.
[17] Participation estimates include do not include Puerto Rico, Alaska, or Texas. Hawai'i is included for 2004-2006 only.

of this total while non-coastal county residents made up 14%. West Florida had the highest participation of anglers (3.8 million anglers), followed by East Florida (1.8 million anglers) and North Carolina (1.5 million anglers).

Table 12. Recreational Fishing Trips by State, 2015 (thousands of trips)

State	Trips	State	Trips
West Florida	13,425	Virginia	2,083
EastFlorida	8,634	Mississippi	1,551
North Carolina	4,646	Hawaii	1,431
New Jersey	4,287	Washington	1,342
California	3,741	Connecticut	1,341
New York	3,235	Rhode Island	879
South Carolina	2,670	Oregon	711
Louisiana	2,426	Georgia	590
Alabama	2,324	Delaware	495
Maryland	2,319	Maine	414
Massachusetts	2,181	New Hampshire	221

Harvest and Release

In 2015, drum (seatrouts, 28 million fish), drum (Atlantic croaker and spot, 25.6 million fish), and summer flounder (12.2 million fish) were most frequently caught by recreational anglers in the United States.[18] From 2006 to 2015, rockfishes & scorpionfishes (43%), Pacific salmon (15%), and tunas (Thunnus species, 11%) had the largest increases in catch, while striped bass (-62%), summer flounder (-44%), and drum (seatrouts) (-43%) had the largest decreases. From 2014 to 2015, drum (seatrouts, 13%); Pacific salmon (8%); and striped bass (7%) had the largest increases in catch, while little tunny & Atlantic bonito (-38%), summer flounder (-36%), and drum (Atlantic croaker & spot) (-24%) had the largest decreases.

Harvest and Release: Largest Increases

From 2006:
- Rockfishes & scorpionfishes (43%)
- Pacific salmon (15%)
- Tunas (Thunnus species) (11%)

From 2014:
- Drum (seatrouts) (13%)
- Pacific salmon (8%)
- Striped bass (7%)

Harvest and Release: Largest Decreases

From 2006:
- Striped bass (-62%)
- Summer flounder (-44%)
- Drum (seatrouts) (-43%)

From 2014:
- Little tunny & Atlantic bonito (-38%)
- Summer flounder (-36%)
- Drum (Atlantic croaker & spot) (-24%)

MARINE ECONOMY

For this report, the marine economy refers to the economic activity generated by 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) transport, support, and marine operations (employer establishments). These sectors include several different marine-related industries. Note that Census Bureau data for the Marine Economy section of this report is available only through 2014. Percentage changes in inflation-adjusted (real dollar) terms are calculated using the annual implicit price deflator GDP time series published by the U.S. Bureau of Economic Analysis and the Federal Reserve Bank of St. Louis.[19]

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.[20] 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 2014, 7.6 million establishments operated throughout the entire U.S. economy, including marine and non-marine related establishments.[21] These establishments employed more than 121 million workers and had a total annual payroll of $5.9 trillion. The nation's gross domestic product was approximately $17 trillion in 2014.

[18] Harvest and release estimates do not include Puerto Rico or Alaska. For Hawai'i, these estimates are available only for shore and private boat mode.
[19] U.S. Bureau of Economic Analysis, "Table 1.1.5 Gross Domestic Product" and "Table SA6N Compensation of Employees by NAICS Industry," http://www.bea.gov/iTable/index_nipa.cfm (accessed May 31, 2016).
[20] U.S. Bureau of Labor Statistics, "Location Quotient Calculator," http://data.bls.gov/location_quotient/ (accessed May 31, 2016).
[21] Unless otherwise stated, data is from the U.S. Census Bureau, http://censtats.census.gov/ (accessed May 31, 2016).

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2014, there were 1,947 non-employer firms (a 70% increase from 2006) and annual receipts totaled $147 million (a 60% increase from 2006 in real terms). More of these firms were located in Florida (315), New York (181), and California (164) than any other state. There were 640 employer establishments (a 4% decrease from 2006) in 2014. These establishments employed approximately 32,180 workers (a 10% decrease from 2006) and had a total annual payroll of $1.3 billion (a 5% decrease from 2006 in real terms). More of these establishments were located in Alaska (108) and Washington (90) than any other state.

Seafood Sales, Retail: In 2014, there were 2,557 non-employer firms engaged in retail seafood sales (a 22% increase from 2006) and annual receipts totaled $203 million (a 16% decrease from 2006 in real terms). More of these firms were located in Florida (346), California (227), and Texas (199) than in any other state.

There were 2,015 employer establishments (a 5% decrease from 2006) in 2014. These establishments employed 11,037 workers (a 5% increase from 2006) and had a total annual payroll of $272 million (a 18% increase from 2006 in real terms). More of these establishments were located in New York (401), California (167), and Florida (166) than any other state.

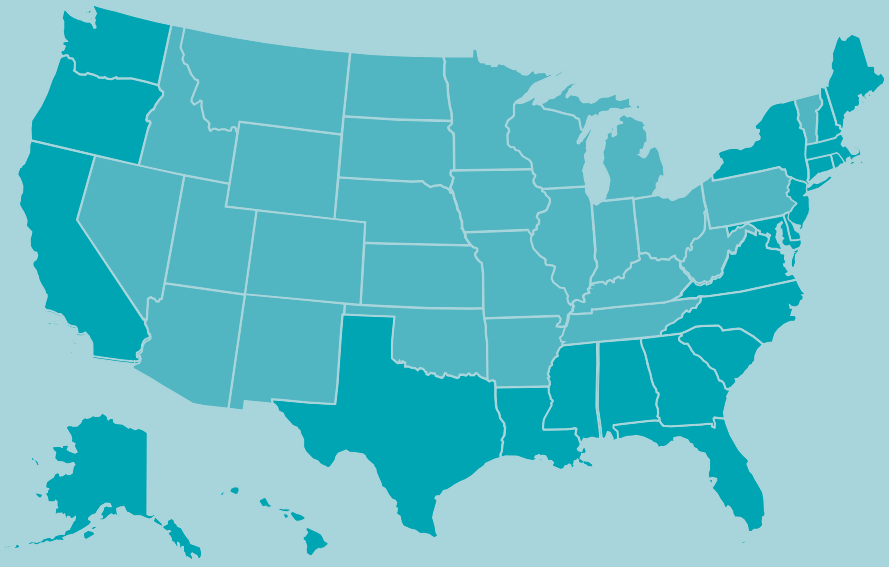
Seafood Sales, Wholesale: There were 2,100 establishments (a 5% decrease from 2006) in 2014. These establishments employed 21,155 workers (a 4% decrease from 2006) and had a total annual payroll of $911 million (a 4% decrease from 2006 in real terms). More seafood wholesalers were located in California (341), New York (270), and Florida (233) than any other state.

Transport, Support, and Marine Operations

In the U.S. transport, support, and marine operations industry sector, marinas had the highest number of establishments (3,811; a 5% decrease from 2006) in 2014. More marinas were located in Florida (464), New York (427), and California (249) than any other state.

Ship and boat building employed the highest number of workers (138,687; a 2% decrease from 2006) and had the highest annual payroll ($7.9 billion; a 17% increase from 2006 in real terms).

Tables | National Overview



2015 Economic Impacts of the United States Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	1,179,848	144,194,119	39,743,521	60,565,501	695,794	51,905,330	18,997,595	26,958,135
Commercial Harvesters	164,047	13,894,494	4,617,433	7,190,601	164,047	13,894,494	4,617,433	7,190,601
Seafood Processors & Dealers	200,919	30,922,511	9,758,943	13,566,022	52,972	8,152,699	2,572,939	3,576,672
Importers	188,385	58,271,127	9,339,060	17,763,591	0	0	0	0
Seafood Wholesalers & Distributors	53,548	8,166,237	2,683,482	3,839,697	24,666	3,761,719	1,236,127	1,768,729
Retail	572,949	32,939,750	13,344,602	18,205,590	454,109	26,096,417	10,571,096	14,422,133

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	4,192	4,182	4,436	3,839	4,515	5,390	5,246	5,552	5,514	5,184
Finfish & Other	2,068	2,048	2,301	1,789	2,161	2,606	2,539	2,667	2,427	2,357
Shellfish	2,125	2,135	2,135	2,051	2,354	2,785	2,707	2,885	3,087	2,826
Key Species										
American lobster	404	369	325	311	404	423	431	463	564	618
Blue crab	126	149	161	163	205	184	188	193	213	220
Menhaden	71	93	91	90	93	133	124	125	114	180
Pacific halibut	202	227	217	140	207	213	152	117	115	118
Pacific salmon	311	382	396	370	555	619	489	757	617	461
Sablefish	108	109	119	122	133	185	148	102	111	115
Sea scallop	386	386	370	376	456	585	559	467	424	439
Shrimp	453	430	445	379	409	538	488	597	699	489
Tunas	86	94	107	96	108	136	164	146	135	137
Walleye pollock	381	344	436	254	280	402	453	447	421	509

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	9,543	9,306	8,347	7,889	8,027	9,888	9,419	9,735	9,500	9,728
Finfish & Other	8,348	8,228	7,292	6,618	6,719	8,516	8,121	8,466	8,241	8,605
Shellfish	1,195	1,078	1,056	1,270	1,308	1,372	1,298	1,269	1,258	1,123
Key Species										
American lobster	96	81	88	101	118	126	150	150	147	146
Blue crab	166	157	162	176	199	202	180	135	140	161
Menhaden	1,307	1,484	1,344	1,407	1,259	1,899	1,573	1,341	1,232	1,632
Pacific halibut	72	70	67	60	56	43	34	30	23	24
Pacific salmon	664	886	660	705	788	780	636	1,070	721	1,067
Sablefish	49	48	46	45	42	43	43	39	35	35
Sea scallop	60	58	53	58	58	59	57	41	34	36
Shrimp	332	274	249	305	249	312	293	293	325	333
Tunas	50	51	48	49	48	50	59	56	58	57
Walleye pollock	3,404	3,068	2,278	1,869	1,947	2,811	2,872	3,003	3,146	3,263

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
American lobster	4.21	4.55	3.71	3.09	3.44	3.35	2.87	3.08	3.83	4.23
Blue crab	0.76	0.95	0.99	0.93	1.03	0.91	1.04	1.43	1.52	1.37
Menhaden	0.05	0.06	0.07	0.06	0.07	0.07	0.08	0.09	0.09	0.11
Pacific halibut	2.81	3.25	3.25	2.35	3.67	4.98	4.48	3.92	4.97	4.88
Pacific salmon	0.47	0.43	0.60	0.52	0.70	0.79	0.77	0.71	0.86	0.43
Sablefish	2.18	2.29	2.62	2.72	3.17	4.30	3.45	2.59	3.16	3.27
Sea scallop	6.43	6.60	6.93	6.48	7.92	9.89	9.82	11.39	12.52	12.32
Shrimp	1.36	1.57	1.79	1.24	1.64	1.72	1.67	2.04	2.15	1.47
Tunas	1.73	1.85	2.23	1.96	2.25	2.74	2.75	2.62	2.31	2.40
Walleye pollock	0.11	0.11	0.19	0.14	0.14	0.14	0.16	0.15	0.13	0.16

2015 Economic Impacts of Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	22,277	3,368,650	1,164,376	1,804,912
	Private Boat	23,006	3,933,637	1,113,361	1,965,919
	Shore	21,575	3,142,064	955,865	1,649,549
Total Durable Expenditures		372,384	52,995,455	19,445,424	30,661,136
Total Impacts		439,242	63,439,806	22,679,026	36,081,516

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)[1]

Fishing Mode	Trip Expenditures
For-Hire	1,296,632
Private Boat	1,798,645
Shore	1,365,521
Total	4,460,798

Equipment	Durable Goods Expenditures
Fishing Tackle	3,341,605
Other Equipment	1,733,220
Boat Expenses	14,113,746
Vehicle Expenses	3,192,964
Second Home Expenses	1,894,900
Total Durable Expenditures	24,276,434

Total State Trip and Durable Goods Expenditures	28,737,232

Recreational Anglers by Residential Area (thousands of anglers)[2,3]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	11,779	12,307	10,479	9,398	9,494	9,086	9,377	9,309	9,046	7,672
Non-Coastal	1,585	1,609	1,508	1,466	1,474	1,348	1,425	1,384	1,390	1,270
Total Anglers	13,364	13,916	11,987	10,864	10,968	10,434	10,801	10,692	10,437	8,942

Recreational Fishing Effort by Mode (thousands of angler trips)[4]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	3,600	4,078	3,305	3,229	2,588	3,210	3,202	3,875	4,170	4,137
Private	42,518	46,054	44,652	37,977	37,701	35,265	34,619	34,032	32,523	29,115
Shore	37,527	35,888	36,308	32,699	31,613	30,605	31,759	32,475	30,835	27,694
Total Trips	83,645	86,020	84,265	73,905	71,902	69,081	69,580	70,382	67,529	60,946

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Drum (Atlantic croaker & spot)	H	22,934	26,569	24,016	15,766	13,355	13,323	11,951	17,604	17,617	13,165
	R	19,386	21,377	24,987	20,379	15,983	18,120	18,621	25,493	16,056	12,445
Drum (seatrouts)[6]	H	18,897	17,562	21,075	20,189	16,736	22,232	20,874	17,557	9,612	11,654
	R	30,288	28,962	32,340	25,795	23,823	28,643	31,543	26,966	15,214	16,325
Little tunny & Atlantic bonito	H	303	292	202	233	185	283	386	345	384	428
	R	866	1,221	722	806	599	702	855	651	1,137	517
Pacific halibut	H	463	585	516	440	398	394	388	454	408	420
	R	353	438	359	321	304	311	324	324	251	271
Pacific salmon	H	784	1,008	650	922	661	738	667	988	969	927
	R	419	567	358	458	286	366	281	497	303	453
Rockfishes & scorpionfishes	H	2,687	2,456	2,080	2,340	2,436	2,989	3,381	3,912	4,138	3,996
	R	899	694	663	662	724	954	1,239	1,395	1,352	1,143
Sharks[7]	H	204	312	185	178	210	187	158	256	210	133
	R	5,475	5,185	5,017	4,208	4,187	3,108	3,926	4,545	4,133	3,711
Striped Bass	H	2,725	2,425	2,325	1,961	1,968	2,219	1,494	2,195	1,772	1,261
	R	23,388	16,186	12,677	8,094	6,347	6,120	5,369	8,638	7,365	8,543
Summer Flounder	H	4,036	3,110	2,362	1,830	1,511	1,848	2,278	2,532	2,460	1,624
	R	17,515	17,631	20,550	22,308	22,240	19,726	14,259	13,585	16,514	10,538
Tunas (Thunnus species)	H	542	723	790	512	589	436	708	700	647	687
	R	138	103	92	63	55	71	69	45	61	66

[1] All anglers reported in this table are U.S. residents.
[2] Participation estimates do not include Puerto Rico, Alaska, or Texas. Hawai'i is included for 2004-2006 only.
[3] Includes Louisiana resident participation estimated from historical Marine Recreational Information Program (MRIP) data and a state creel survey.
[4] Effort estimates do not include Puerto Rico, Alaska, or Texas. Hawai'i effort estimates are available only for the shore and private boat modes.
[5] Harvest and release estimates do not include Puerto Rico or Alaska. For Hawai'i, these estimates are available only for the shore and private boat modes.
[6] Drum (seatrouts) include spotted seatrout, silver seatrout, sand seatrout, weakfish and other species in the Cynoscion genus.
[7] Sharks include species within the requiem shark family, blacktip sharks, Atlantic sharpnose sharks, and unidentified sharks.

2014 United States Economy (% of national total)[1]

	#Establishments (millions)	#Employees (millions)	Annual Payroll ($ trillions)	Employee Compensation ($ trillions)	Gross Domestic Product ($ trillions)	Commercial Location Quotient[2]
Totals	7.56	121.08	5.94	9.24	17.23	1

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	1,142	1,303	1,308	1,395	1,617	1,757	1,766	1,812	1,947
	Receipts	80,066	88,230	89,670	95,219	104,990	110,745	115,167	128,927	146,626
Seafood sales, retail	Firms	2,089	2,610	2,522	2,455	2,513	2,514	2,657	2,497	2,557
	Receipts	211,186	231,776	233,002	207,139	199,810	212,679	217,702	205,555	203,459

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	670	685	663	645	638	620	589	604	640
	Employees	35,894	33,169	33,323	30,894	31,789	31,261	30,988	31,390	32,180
	Payroll	1,205,890	1,196,086	1,161,637	1,091,727	1,116,305	1,200,263	1,196,207	1,228,826	1,311,910
Seafood sales, wholesale	Establishments	2,222	2,438	2,063	2,099	2,183	2,287	1,954	2,098	2,100
	Employees	22,013	24,232	20,116	19,290	19,386	20,622	20,030	20,367	21,155
	Payroll	826,720	924,654	782,178	758,332	798,794	848,454	867,179	884,645	910,527
Seafood sales, retail	Establishments	2,115	2,094	2,044	1,967	1,982	1,972	1,957	1,995	2,015
	Employees	10,545	10,380	9,732	9,439	9,857	10,006	10,293	10,631	11,037
	Payroll	200,971	209,404	205,423	211,264	219,045	222,508	237,619	253,490	271,732

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	579	573	513	513	547	549	496	497	598
	Employees	22,172	22,568	21,019	20,919	17,528	18,590	19,099	18,659	20,884
	Payroll	1,376,033	1,552,467	1,694,613	1,470,159	1,288,001	1,400,267	1,467,709	1,512,053	1,835,024
Deep sea freight transportation	Establishments	456	427	365	376	372	378	375	305	332
	Employees	11,473	11,308	10,231	11,180	10,288	10,362	12,375	8,704	8,646
	Payroll	825,752	855,683	852,063	863,363	867,797	921,990	1,073,529	703,003	683,281
Deep sea passenger transportation	Establishments	87	92	71	78	56	55	58	62	56
	Employees	11,387	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	667,949	ds	ds	ds	ds	ds	ds	ds	ds
Marinas	Establishments	4,025	4,085	3,972	3,891	3,937	3,896	3,782	3,844	3,811
	Employees	28,339	28,788	28,686	26,643	26,657	26,557	25,764	26,373	26,709
	Payroll	894,097	945,355	954,032	905,488	927,499	953,497	913,140	951,123	995,248
Marine cargo handling	Establishments	540	552	532	541	507	545	343	458	482
	Employees	61,905	62,941	63,736	56,386	57,275	59,517	43,824	66,301	69,830
	Payroll	3,261,953	3,428,126	3,272,723	2,776,791	3,026,861	3,159,964	2,601,146	4,086,182	4,406,525
Navigational services to shipping	Establishments	802	830	868	846	847	836	850	847	881
	Employees	12,043	12,997	13,419	12,689	13,529	13,441	12,532	12,485	12,148
	Payroll	699,375	756,552	847,938	826,384	937,980	893,889	838,959	929,419	907,763
Port & harbor operations	Establishments	229	223	268	258	287	255	525	383	351
	Employees	7,002	6,573	5,608	5,100	4,844	4,933	25,396	7,000	6,769
	Payroll	323,554	318,608	282,671	250,358	290,467	306,882	1,345,857	420,664	399,502
Ship & boat building	Establishments	1,764	1,771	1,782	1,615	1,540	1,497	1,560	1,514	1,524
	Employees	142,057	148,864	157,512	137,759	127,691	127,522	136,365	135,287	138,687
	Payroll	5,877,830	6,405,570	7,269,306	6,674,187	6,529,523	6,845,322	7,543,402	7,556,373	7,882,846

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 = these data are suppressed.

North Pacific Region

- Alaska

Scientific survey on a commercial fishing vessel
(photo credit: Kimberly Rand)

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 is listed as overfished. No stocks or stock complexes in this region are subject to overfishing.

Catch Share Programs

The North Pacific Region has six catch share programs, more than any other region. These are the: 1) Western Alaska Community Development Quota (CDQ) Program; 2) Alaska Halibut and Sablefish Individual Fishing Quota (IFQ) Program; 3) American Fisheries Act (AFA) Pollock Cooperatives; 4) Bering Sea and Aleutian Islands (BSAI) Crab Rationalization Program; 5) Bering Sea and Aleutian Islands (BSAI) Non-Pollock Trawl Catcher/ Processor Groundfish Cooperatives (Amendment 80); and 6) Central Gulf of Alaska Rockfish Program. The landings revenues for these programs totaled $981.9 million in 2014, exceeding the total landings revenue of any other state. Following are descriptions of these catch share programs and their performance.

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 performance results of the halibut fishery show that, relative to its baseline period (3-year period prior to implementation), the following indicators decreased: 2014 quota, landings, and active vessels. However, inflation-adjusted halibut revenue and revenue per vessel increased. The 2014 performance results for the sablefish fishery show that quota, landings, inflation-adjusted revenue, and number of active vessels 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. Key performance indicators of this program show that relative to its baseline, the 2014 quota, landings, inflation-adjusted revenue, and revenue per vessel increased. However, the number of active vessels decreased.

Bering Sea and Aleutian Islands (BSAI) 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 protect community interests. The key 2014 performance indicators of this program show that, relative to its baseline, the quota, landings, and number of active vessels decreased. However, inflation-adjusted revenue and revenue per active vessel increased.

BSAI Non-Pollock Trawl Catcher/Processor Groundfish Cooperatives: 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. Key 2014 performance indicators of this program show that, relative to its baseline, quota, landings, and inflation-adjusted revenue per vessel increased. However, the number of active vessels and inflation-adjusted revenue declined.

Central Gulf of Alaska Rockfish Program: The program was initially established as a 2-year (2007–2008) pilot program by the U.S. Congress and was later extended to 5 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. Results show that in 2014, the quota, landings, number of active vessels, inflation-adjusted revenue, and revenue per active vessel increased relative to the baseline.

Policy Updates

Salmon bycatch in the Bering Sea pollock fishery is an important management challenge in the North Pacific. On one hand, this challenge involves the largest fishery in the United States with approximately 25% of total landings. On the other hand, salmon, especially Chinook in Western Alaska rivers, is arguably the most important subsistence fishery in the United States. Prior to 2011, fixed salmon time-area closures and dynamic "rolling hot spot" closures were used to protect salmon. However, the council concluded that these measures were not reducing bycatch sufficiently. In 2011, Amendment 91 to the BSAI Fishery Management Plan established Chinook catch limits ("hard caps") that were allocated at the cooperative and vessel level. These and other vessel-level incentives were implemented to encourage bycatch reduction at lower levels of salmon encounters and abundance when the hard cap might not strongly constrain the fishery. In 2015, the council passed additional measures to reduce Chinook and chum bycatch, including penalties for vessels with high bycatch rates, salmon excluder device requirements, seasonal reallocation of pollock quota, and hard cap reductions in years of low Chinook in-river abundance.

In June 2015, the NPFMC also recommended the reduction of halibut bycatch limits in the BSAI groundfish fisheries. The bycatch limits were reduced 21%, from 4,426 metric tons to 3,515 metric tons. The new limits were apportioned among sector and gear types and different reductions were applied to each. The Gulf of Alaska halibut bycatch limits incorporate measures to minimize adverse economic impacts on fishing industry sectors and will be phased in during a 3-year period that started in 2014.

Also in 2015, NOAA Fisheries proposed regulations to implement a cost-recovery fee program for the Western Alaska CDQ Program for groundfish and three limited access privilege programs (LAPPs; AFA, Aleutian Islands Pollock, and Amendment 80 fisheries). The cost-recovery fees will make up for the actual costs directly related to the management, data collection efforts, and enforcement of the programs. However, the fees cannot exceed 3% of the annual ex-vessel value of fish harvested by a program that is subject to the cost-recovery fee. The cost-recovery programs were subsequently implemented in February 2016.

COMMERCIAL FISHERIES

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. It does not include saltwater anglers that 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/species groups.

Key North Pacific Commercial Species

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

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 walleye 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.

In this report, the United States seafood industry includes the commercial harvest sector, seafood processors and dealers, seafood wholesalers and distributors, importers, and seafood retailers.

Economic Impacts

The premise behind economic impact modeling is that every dollar spent in a regional economy (direct impact) is either saved or respent on additional goods or services. If those dollars are respent on other goods and services in the regional economy, this spending generates additional economic activity in the region. 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 seafood businesses and its full supply chain are included). That is, impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

Four different measures are commonly used to show commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. Sales refer to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. It 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 types of measures are calculated in terms of dollars, whereas employment impacts are measured in terms of 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.[1]

In 2015, Alaska's commercial fishing and seafood industry generated $4.4 billion in sales impacts, $1.9 billion in income impacts, $2.4 billion in value-added impacts, and 53,400 full- and part-time jobs. The commercial harvesters sector generated the largest employment impacts across sectors with 38,000 jobs. The commercial harvesters sector generated the largest sales impacts ($3.1 billion), the largest income impacts ($1.3 billion), and the largest value-added impacts ($1.6 billion).

Landings Trends

While total landings revenue were unchanged from 2014, at the species/species group level there was considerable variation. Most notably salmon landings revenue was down $133 million (24%) from 2014 levels despite records landings, which almost doubled from 2014 levels. Market reports attributed landings revenue declines to a strong dollar, which weakened demand in Japan and the European Union (EU), as well as the Russian import ban on food products from the US, Canada, Norway and the EU. Surging supplies of pink salmon (up 95%), which is consistent with the biennial cycle of pink salmon runs, and chum salmon

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Landings Revenue: Largest Increases

From 2006:
- Crab (157%, 122% in real terms)
- Atka mackerel (106%, 78% in real terms)
- Rockfish (62%, 40% in real terms)

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Landings Revenue: Largest Decreases

From 2006:
- Pacific halibut (-43%, -50% in real terms)
- Pacific herring (-6%, -18% in real terms)

From 2014:
- Pacific herring (-39%)
- Salmon (-24%)
- Flatfish (-23%)

Landings: Largest Increases

From 2006:
- Rockfish (90%)
- Crab (76%)
- Salmon (64%)

From 2014:
- Atka mackerel (69%)
- Salmon (52%)
- Crab (42%)

Landings: Largest Decreases

From 2006:
- Pacific halibut (-67%)
- Sablefish (-33%)
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From 2014:
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(up 49%) coupled with significant increases in sockeye salmon landings (up 18%) in an already weak market only served to further dampen prices. With the Russia ban also covering farmed salmon, the market for wild caught salmon faced further pressure from that source. The USDA purchase of $30 million of canned sockeye salmon helped reduce inventories but was not sufficient to prevent sockeye prices falling from $1.39 per pound in 2014 to $0.69 in 2015.

Pacific herring landings revenue was down 39% ($4.5 million) during this period. A soft market, in part due to the Russia import ban, had an effect on both landings and price. In addition, a reduction in the harvest limit for the Sitka Sound sac roe fishery of almost 50% (7,600 tons) also contributed to the decline in landings revenue.

After adjusting for inflation, crab landings revenue ($284 million) was at its highest level since 1999. Southern tanner crab landings revenue ($41 million) increased $20 million from 2014; snow crab landings revenue ($133 million) was up $18 million; and king crab ($99 million) was up $13 million. Only dungeness crab landings revenue fell relative to 2014, which had been a somewhat anomalous year for that species that included near record high prices (second highest on record after adjusting for inflation) and landings that exceeded the most recent 5-year average by 51%.

Walleye pollock landings revenue ($509 million), up 21% or $87 million from 2014, was also a bright spot for 2015. An uptick in landings revenue largely attributable to the 3.39% increase in the BSAI TAC and slightly higher prices drove pollock landings revenue up. Also noteworthy in 2015, the legal market name of "Alaska pollock" was changed to "pollock." This change prevents pollock caught elsewhere such as in Russia from being labeled "Alaska pollock" and thus provides greater clarity to consumers on where their seafood was harvested.

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In 2015, landings revenue totaled about $1.7 billion, a 32% increase from 2006 (a 25% increase in real terms after adjusting for inflation) and remained unchanged from 2014. Finfish landings revenue accounted for 83% of all landings revenue. In 2015, walleye pollock ($509 million), salmon ($413 million), and crab ($284 million) dominated landings revenue. From 2006 to 2015, crab (157%, 122% in real terms); Atka mackerel (106%, 78% in real terms); and rockfish (62%, 40% in real terms) had the largest revenue increases, while Pacific halibut (-43%, -50% in real terms) and Pacific herring

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Landings

In 2015, commercial fishermen in the North Pacific Region landed more than 6 billion pounds of finfish and shellfish, an 11% increase from 2006 and a 6% increase from 2014. Walleye pollock contributed the most to landings, accounting for 54% of total volume. From 2006 to 2015, rockfish (90%), crab (76%), and salmon (64%) had the largest landings increases, while Pacific halibut (-67%), sablefish (-33%), and Pacific herring (-14%) had the largest decreases. From 2014 to 2015, Atka mackerel (69%), salmon (52%), and crab (42%) had the largest landings increases, while Pacific herring (-29%), flatfish (-23%), and sablefish (-7%) had the largest decreases.

Price

In 2015, Pacific halibut ($4.85 per pound) received the highest ex-vessel price in the North Pacific Region. Landings of Pacific herring ($0.1 per pound) had the lowest ex-vessel price. From 2006 to 2015, Atka mackerel (129%, 98% in real terms); Pacific halibut (74%, 50% in real terms); and sablefish (52%, 32% in real terms) had the largest price increases, while flatfish (-24%, -35% in real terms); rockfish (-15%, -26% in real terms); and Pacific cod (-10%, -22% in real terms) had the largest decreases. From 2104 to 2015, walleye pollock (16%), Pacific cod (16%), and sablefish (7%) had the largest price increases, while salmon (-50%), Atka mackerel (-27%), and crab (-16%) had the largest decreases.

RECREATIONAL FISHERIES

In this report, recreational fisheries refer to fishing for fun rather than to resell fish (commercial fishing) or for subsistence. The recreational fisheries section reports on economic impacts and expenditures, angler participation, trips, and catch of key species/species groups.

Key North Pacific Recreational Species

- Chinook salmon
- Chum salmon
- Coho salmon
- Greenlings (lingcod)
- Pacific halibut
- Pink salmon
- Razor clams
- Rockfish
- Sockeye salmon

Economic Impacts and Expenditures

The contribution of recreational fishing activities[2] in the United States are reported in terms of economic impacts from angler expenditures. Total annual trip expenditures are estimated by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore). Total annual durable expenditures are estimated by multiplying mean durable expenditures by the estimated annual number of adult participants in a given state.

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. Sales refer 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. 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- 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 terms of 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.

Economic impacts from recreational fishing activities in Alaska totaled 5,407 jobs in 2015 and generated $619 million in sales, $223 million in income, and $362 million in value-added impacts. Impacts from durable

[2] Trip expenditure estimates were generated from the 2011 National Marine Recreational Fishing Expenditure Survey. Durable good expenditure impacts were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (see http://www.st.nmfs.noaa.gov/economics/fisheries/recreational/Marine-Angler-Durable-Expenditures/2014-durable-expenditures-survey). Economic impacts from recreational fishing activities were generated using the NMFS Recreational Economic Impact Model (see The Economic Contribution of Marine Angler Expenditures in the United States, 2011, available at http://www.st.nmfs.noaa.gov/economics/publications/marine-angler-expenditures/marine-angler-2011).

equipment expenditures (e.g., rods and reels, fishing-related equipment, boats, vehicles, and second homes) accounted for 29% of employment, 19% of sales, 21% of income, and 20% of value-added impacts. Of the three fishing trip modes, trips in the for-hire mode had the greatest economic impact, accounting for 37% of employment impacts.

Expenditures for fishing trips and durable equipment across Alaska in 2015 totaled more than $469 million. Approximately $347 million of these expenditures were related to trip expenses, with a large portion coming from trips in the private boat (48%) and for-hire (47%) sectors. In 2015, durable goods expenditures were more than $122 million, with the largest portion coming from boat expenses ($57 million).

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 975,000 days fishing in 2015.[3] This number was a 4% increase from the days spent fishing in 2006. From 2014 to 2015, there was a 2% increase in the number of days fished.

Participation

In 2015, 309,000 recreational saltwater anglers fished in Alaska. This number was a 3% decrease from 2006 and an 8% increase from 2014. These anglers are categorized as either residents of coastal/non-coastal counties (41%) or out-of-state anglers (59%).

Harvest and Release

Of Alaska's key species and species groups, Pacific halibut (691,000 fish), coho salmon (578,000 fish), and rockfish species (475,000 fish) were most frequently caught by recreational anglers. From 2006 to 2015, sockeye salmon (50%), rockfish species (41%), and pink salmon (35%) had the largest increases in catch, while razor clams (-92%), lingcod (-38%), and chum salmon (-21%) had the largest decreases. From 2014 to 2015, pink salmon (68%), coho salmon (28%), and chum salmon (23%) had the largest increases in catch, while razor clams (-58%), sockeye salmon (-11%), and lingcod (-10%) had the largest decreases.

Recreational Catch: Largest Increases

From 2006:
- Sockeye salmon (50%)
- Rockfish species (41%)
- Pink salmon (35%)

From 2014:
- Pink salmon (68%)
- Coho salmon (28%)
- Chum salmon (23%)

Recreational Catch: Largest Decreases

From 2006:
- Razor clams (-92%)
- Lingcod (-38%)
- Chum salmon (-21%)

From 2014:
- Razor clams (-58%)
- Sockeye salmon (-11%)
- Lingcod (-10%)

MARINE ECONOMY

For this report, the marine economy refers to the economic activity generated by 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) transport, support, and marine operations (employer establishments). These sectors include several different marine-related industries.[4,5]

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[6], researchers use an index called the Commercial Fishing Location Quotient (CFLQ). 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's CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state's CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average. The Bureau of Labor Statistics did not disclose CFLQ data for Alaska for 2014.

[3] In Alaska, recreational fishing data is collected in terms of the number of days spent fishing rather than the number of fishing trips taken.
[4] Unless otherwise stated, data is from the U.S. Census Bureau, http://censtats.census.gov/ (accessed May 31, 2016).
[5] U.S. Bureau of Economic Analysis, "Table 1.1.5 Gross Domestic Product" and "Table SA6N Compensation of Employees by NAICS Industry," http://www.bea.gov/iTable/index_nipa.cfm (accessed May 31, 2016).
[6] U.S. Bureau of Labor Statistics, "Location Quotient Calculator," http://data.bls.gov/location_quotient/ (accessed May 31, 2016).

In 2014, 21,000 establishments operated throughout Alaska, including marine and non-marine-related establishments. These establishments employed 267,000 workers and had a total annual payroll of more than $15 billion. The region's gross domestic product was approximately $57 billion in 2014.

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2014 there were 31 non-employer firms (a 41% increase from 2006) and annual receipts totaled $2.5 million (a 104% increase from 2006 in real terms). There were 108 employer establishments (a 4% decrease from 2006) in 2014. These establishments employed approximately 9,115 workers (a 33% increase from 2006) and had a total annual payroll of $337 million (a 20% increase from 2006 in real terms).

Seafood Sales, Retail: In 2014 there were 17 non-employer firms (a 42% increase from 2006) and annual receipts totaled $1.5 million (a 107% increase from 2006 in real terms).

There were 14 employer establishments (a 100% increase from 2006) in 2014. These establishments had a total annual payroll of $2.7 million. Data on the number of employees were suppressed for confidentiality purposes for this section.

Seafood Sales, Wholesale: There were 43 establishments (a 44% decrease from 2006) in 2014. These establishments employed 120 workers (a 46% decrease from 2006) and had a total annual payroll of $7 million (a 28% decrease from 2006 in real terms).

Transport, Support, and Marine Operations

Data for the Transport, Support, and Marine Operations sector 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, the Coastal and Great Lakes Freight Transportation sector accounted for $89 million in payroll in 2014.

North Pacific Region

- Alaska

Scientific survey on a commercial fishing vessel
(photo credit: Kimberly Rand)

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 is listed as overfished. No stocks or stock complexes in this region are subject to overfishing.

Catch Share Programs

The North Pacific Region has six catch share programs, more than any other region. These are the: 1) Western Alaska Community Development Quota (CDQ) Program; 2) Alaska Halibut and Sablefish Individual Fishing Quota (IFQ) Program; 3) American Fisheries Act (AFA) Pollock Cooperatives; 4) Bering Sea and Aleutian Islands (BSAI) Crab Rationalization Program; 5) Bering Sea and Aleutian Islands (BSAI) Non-Pollock Trawl Catcher/ Processor Groundfish Cooperatives (Amendment 80); and 6) Central Gulf of Alaska Rockfish Program. The landings revenues for these programs totaled $981.9 million in 2014, exceeding the total landings revenue of any other state. Following are descriptions of these catch share programs and their performance.

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 performance results of the halibut fishery show that, relative to its baseline period (3-year period prior to implementation), the following indicators decreased: 2014 quota, landings, and active vessels. However, inflation-adjusted halibut revenue and revenue per vessel increased. The 2014 performance results for the sablefish fishery show that quota, landings, inflation-adjusted revenue, and number of active vessels 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. Key performance indicators of this program show that relative to its baseline, the 2014 quota, landings, inflation-adjusted revenue, and revenue per vessel increased. However, the number of active vessels decreased.

Bering Sea and Aleutian Islands (BSAI) 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 protect community interests. The key 2014 performance indicators of this program show that, relative to its baseline, the quota, landings, and number of active vessels decreased. However, inflation-adjusted revenue and revenue per active vessel increased.

BSAI Non-Pollock Trawl Catcher/Processor Groundfish Cooperatives: 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. Key 2014 performance indicators of this program show that, relative to its baseline, quota, landings, and inflation-adjusted revenue per vessel increased. However, the number of active vessels and inflation-adjusted revenue declined.

Central Gulf of Alaska Rockfish Program: The program was initially established as a 2-year (2007–2008) pilot program by the U.S. Congress and was later extended to 5 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. Results show that in 2014, the quota, landings, number of active vessels, inflation-adjusted revenue, and revenue per active vessel increased relative to the baseline.

Policy Updates

Salmon bycatch in the Bering Sea pollock fishery is an important management challenge in the North Pacific. On one hand, this challenge involves the largest fishery in the United States with approximately 25% of total landings. On the other hand, salmon, especially Chinook in Western Alaska rivers, is arguably the most important subsistence fishery in the United States. Prior to 2011, fixed salmon time-area closures and dynamic "rolling hot spot" closures were used to protect salmon. However, the council concluded that these measures were not reducing bycatch sufficiently. In 2011, Amendment 91 to the BSAI Fishery Management Plan established Chinook catch limits ("hard caps") that were allocated at the cooperative and vessel level. These and other vessel-level incentives were implemented to encourage bycatch reduction at lower levels of salmon encounters and abundance when the hard cap might not strongly constrain the fishery. In 2015, the council passed additional measures to reduce Chinook and chum bycatch, including penalties for vessels with high bycatch rates, salmon excluder device requirements, seasonal reallocation of pollock quota, and hard cap reductions in years of low Chinook in-river abundance.

In June 2015, the NPFMC also recommended the reduction of halibut bycatch limits in the BSAI groundfish fisheries. The bycatch limits were reduced 21%, from 4,426 metric tons to 3,515 metric tons. The new limits were apportioned among sector and gear types and different reductions were applied to each. The Gulf of Alaska halibut bycatch limits incorporate measures to minimize adverse economic impacts on fishing industry sectors and will be phased in during a 3-year period that started in 2014.

Also in 2015, NOAA Fisheries proposed regulations to implement a cost-recovery fee program for the Western Alaska CDQ Program for groundfish and three limited access privilege programs (LAPPs; AFA, Aleutian Islands Pollock, and Amendment 80 fisheries). The cost-recovery fees will make up for the actual costs directly related to the management, data collection efforts, and enforcement of the programs. However, the fees cannot exceed 3% of the annual ex-vessel value of fish harvested by a program that is subject to the cost-recovery fee. The cost-recovery programs were subsequently implemented in February 2016.

COMMERCIAL FISHERIES

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. It does not include saltwater anglers that 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/species groups.

Key North Pacific Commercial Species

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

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 walleye 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.

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Economic Impacts

The premise behind economic impact modeling is that every dollar spent in a regional economy (direct impact) is either saved or respent on additional goods or services. If those dollars are respent on other goods and services in the regional economy, this spending generates additional economic activity in the region. 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 seafood businesses and its full supply chain are included). That is, impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

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Landings

In 2015, commercial fishermen in the North Pacific Region landed more than 6 billion pounds of finfish and shellfish, an 11% increase from 2006 and a 6% increase from 2014. Walleye pollock contributed the most to landings, accounting for 54% of total volume. From 2006 to 2015, rockfish (90%), crab (76%), and salmon (64%) had the largest landings increases, while Pacific halibut (-67%), sablefish (-33%), and Pacific herring (-14%) had the largest decreases. From 2014 to 2015, Atka mackerel (69%), salmon (52%), and crab (42%) had the largest landings increases, while Pacific herring (-29%), flatfish (-23%), and sablefish (-7%) had the largest decreases.

Price

In 2015, Pacific halibut ($4.85 per pound) received the highest ex-vessel price in the North Pacific Region. Landings of Pacific herring ($0.1 per pound) had the lowest ex-vessel price. From 2006 to 2015, Atka mackerel (129%, 98% in real terms); Pacific halibut (74%, 50% in real terms); and sablefish (52%, 32% in real terms) had the largest price increases, while flatfish (-24%, -35% in real terms); rockfish (-15%, -26% in real terms); and Pacific cod (-10%, -22% in real terms) had the largest decreases. From 2104 to 2015, walleye pollock (16%), Pacific cod (16%), and sablefish (7%) had the largest price increases, while salmon (-50%), Atka mackerel (-27%), and crab (-16%) had the largest decreases.

RECREATIONAL FISHERIES

In this report, recreational fisheries refer to fishing for fun rather than to resell fish (commercial fishing) or for subsistence. The recreational fisheries section reports on economic impacts and expenditures, angler participation, trips, and catch of key species/species groups.

Key North Pacific Recreational Species

- Chinook salmon
- Chum salmon
- Coho salmon
- Greenlings (lingcod)
- Pacific halibut
- Pink salmon
- Razor clams
- Rockfish
- Sockeye salmon

Economic Impacts and Expenditures

The contribution of recreational fishing activities[2] in the United States are reported in terms of economic impacts from angler expenditures. Total annual trip expenditures are estimated by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore). Total annual durable expenditures are estimated by multiplying mean durable expenditures by the estimated annual number of adult participants in a given state.

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. Sales refer 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. 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- 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 terms of 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.

Economic impacts from recreational fishing activities in Alaska totaled 5,407 jobs in 2015 and generated $619 million in sales, $223 million in income, and $362 million in value-added impacts. Impacts from durable

[2] Trip expenditure estimates were generated from the 2011 National Marine Recreational Fishing Expenditure Survey. Durable good expenditure impacts were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (see http://www.st.nmfs.noaa.gov/economics/fisheries/recreational/Marine-Angler-Durable-Expenditures/2014-durable-expenditures-survey). Economic impacts from recreational fishing activities were generated using the NMFS Recreational Economic Impact Model (see The Economic Contribution of Marine Angler Expenditures in the United States, 2011, available at http://www.st.nmfs.noaa.gov/economics/publications/marine-angler-expenditures/marine-angler-2011).

equipment expenditures (e.g., rods and reels, fishing-related equipment, boats, vehicles, and second homes) accounted for 29% of employment, 19% of sales, 21% of income, and 20% of value-added impacts. Of the three fishing trip modes, trips in the for-hire mode had the greatest economic impact, accounting for 37% of employment impacts.

Expenditures for fishing trips and durable equipment across Alaska in 2015 totaled more than $469 million. Approximately $347 million of these expenditures were related to trip expenses, with a large portion coming from trips in the private boat (48%) and for-hire (47%) sectors. In 2015, durable goods expenditures were more than $122 million, with the largest portion coming from boat expenses ($57 million).

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 975,000 days fishing in 2015.[3] This number was a 4% increase from the days spent fishing in 2006. From 2014 to 2015, there was a 2% increase in the number of days fished.

Participation

In 2015, 309,000 recreational saltwater anglers fished in Alaska. This number was a 3% decrease from 2006 and an 8% increase from 2014. These anglers are categorized as either residents of coastal/non-coastal counties (41%) or out-of-state anglers (59%).

Harvest and Release

Of Alaska's key species and species groups, Pacific halibut (691,000 fish), coho salmon (578,000 fish), and rockfish species (475,000 fish) were most frequently caught by recreational anglers. From 2006 to 2015, sockeye salmon (50%), rockfish species (41%), and pink salmon (35%) had the largest increases in catch, while razor clams (-92%), lingcod (-38%), and chum salmon (-21%) had the largest decreases. From 2014 to 2015, pink salmon (68%), coho salmon (28%), and chum salmon (23%) had the largest increases in catch, while razor clams (-58%), sockeye salmon (-11%), and lingcod (-10%) had the largest decreases.

Recreational Catch: Largest Increases

From 2006:
- Sockeye salmon (50%)
- Rockfish species (41%)
- Pink salmon (35%)

From 2014:
- Pink salmon (68%)
- Coho salmon (28%)
- Chum salmon (23%)

Recreational Catch: Largest Decreases

From 2006:
- Razor clams (-92%)
- Lingcod (-38%)
- Chum salmon (-21%)

From 2014:
- Razor clams (-58%)
- Sockeye salmon (-11%)
- Lingcod (-10%)

MARINE ECONOMY

For this report, the marine economy refers to the economic activity generated by 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) transport, support, and marine operations (employer establishments). These sectors include several different marine-related industries.[4,5]

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[6], researchers use an index called the Commercial Fishing Location Quotient (CFLQ). 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's CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state's CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average. The Bureau of Labor Statistics did not disclose CFLQ data for Alaska for 2014.

[3] In Alaska, recreational fishing data is collected in terms of the number of days spent fishing rather than the number of fishing trips taken.
[4] Unless otherwise stated, data is from the U.S. Census Bureau, http://censtats.census.gov/ (accessed May 31, 2016).
[5] U.S. Bureau of Economic Analysis, "Table 1.1.5 Gross Domestic Product" and "Table SA6N Compensation of Employees by NAICS Industry," http://www.bea.gov/iTable/index_nipa.cfm (accessed May 31, 2016).
[6] U.S. Bureau of Labor Statistics, "Location Quotient Calculator," http://data.bls.gov/location_quotient/ (accessed May 31, 2016).

In 2014, 21,000 establishments operated throughout Alaska, including marine and non-marine-related establishments. These establishments employed 267,000 workers and had a total annual payroll of more than $15 billion. The region's gross domestic product was approximately $57 billion in 2014.

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2014 there were 31 non-employer firms (a 41% increase from 2006) and annual receipts totaled $2.5 million (a 104% increase from 2006 in real terms). There were 108 employer establishments (a 4% decrease from 2006) in 2014. These establishments employed approximately 9,115 workers (a 33% increase from 2006) and had a total annual payroll of $337 million (a 20% increase from 2006 in real terms).

Seafood Sales, Retail: In 2014 there were 17 non-employer firms (a 42% increase from 2006) and annual receipts totaled $1.5 million (a 107% increase from 2006 in real terms).

There were 14 employer establishments (a 100% increase from 2006) in 2014. These establishments had a total annual payroll of $2.7 million. Data on the number of employees were suppressed for confidentiality purposes for this section.

Seafood Sales, Wholesale: There were 43 establishments (a 44% decrease from 2006) in 2014. These establishments employed 120 workers (a 46% decrease from 2006) and had a total annual payroll of $7 million (a 28% decrease from 2006 in real terms).

Transport, Support, and Marine Operations

Data for the Transport, Support, and Marine Operations sector 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, the Coastal and Great Lakes Freight Transportation sector accounted for $89 million in payroll in 2014.

Tables | Alaska

2015 Economic Impacts of the Alaska Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	53,441	4,420,929	1,877,131	2,354,239	53,131	4,387,825	1,864,729	2,338,087
Commercial Harvesters	37,762	3,102,617	1,306,980	1,642,776	37,762	3,102,617	1,306,980	1,642,776
Seafood Processors & Dealers	12,384	1,118,501	488,109	605,159	12,109	1,093,619	477,227	591,688
Importers	24	7,351	1,178	2,241	0	0	0	0
Seafood Wholesalers & Distributors	365	42,771	14,645	19,123	360	42,260	14,470	18,895
Retail	2,905	149,689	66,220	84,941	2,899	149,329	66,052	84,729

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	1,314,856	1,485,703	1,759,670	1,259,446	1,592,775	1,930,551	1,839,324	1,926,853	1,730,807	1,732,545
Finfish & Other	1,190,460	1,304,790	1,507,952	1,063,867	1,386,142	1,663,708	1,553,063	1,686,719	1,482,338	1,438,799
Shellfish	124,396	180,912	251,718	195,579	206,633	266,843	286,261	240,134	248,469	293,746
Key Species										
Atka mackerel	14,816	17,506	21,688	29,734	30,535	30,031	30,638	16,647	24,803	30,582
Crab	110,572	168,195	240,747	180,264	189,553	248,693	275,745	230,139	237,813	284,283
Flatfish	68,200	74,507	96,326	69,233	79,518	109,661	123,319	103,456	89,553	68,932
Pacific cod	144,678	181,325	241,933	98,507	145,907	163,424	171,192	190,015	155,150	174,380
Pacific halibut	192,905	217,399	208,983	134,603	200,454	205,211	144,801	111,483	106,674	110,709
Pacific herring	7,455	14,817	22,912	29,294	23,026	12,305	19,430	16,280	11,492	7,040
Rockfish	18,003	17,422	16,755	14,446	21,576	33,628	33,240	27,157	31,590	29,125
Sablefish	85,023	88,500	92,205	87,236	97,262	139,741	120,163	82,291	87,373	86,436
Salmon	276,512	347,625	368,219	344,655	505,695	564,788	441,284	679,528	546,022	413,199
Walleye pollock	380,510	344,170	436,074	254,295	279,999	401,912	453,172	446,558	421,087	508,560

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	5,430,208	5,323,296	4,538,906	4,069,788	4,348,788	5,354,950	5,345,454	5,791,752	5,671,323	6,038,170
Finfish & Other	5,351,184	5,244,927	4,431,960	3,973,816	4,262,927	5,269,122	5,229,228	5,700,699	5,580,283	5,908,919
Shellfish	79,023	78,369	106,946	95,972	85,861	85,828	116,226	91,053	91,040	129,251
Key Species										
Atka mackerel	130,840	126,962	127,030	156,888	145,205	112,594	103,994	51,425	69,512	117,678
Crab	69,002	70,699	99,445	89,531	79,875	80,463	111,914	87,089	85,106	121,204
Flatfish	383,194	423,340	599,585	506,166	563,837	649,451	646,680	659,799	663,893	510,860
Pacific cod	521,047	491,020	494,975	491,073	538,761	663,115	716,882	681,407	716,564	697,161
Pacific halibut	69,154	67,242	64,639	57,749	54,857	41,291	32,422	28,696	21,616	22,850
Pacific herring	79,845	67,137	83,787	86,951	108,116	98,600	75,058	85,076	96,789	68,461
Rockfish	74,631	86,569	89,761	83,987	100,070	106,287	114,581	122,950	133,320	141,854
Sablefish	35,719	36,103	32,540	28,960	27,026	28,847	31,427	30,150	25,679	23,845
Salmon	634,227	861,253	640,070	671,181	756,825	738,122	611,163	1,012,612	683,318	1,040,772
Walleye pollock	3,403,895	3,068,211	2,277,527	1,869,214	1,947,456	2,810,728	2,872,187	3,003,183	3,145,639	3,262,568

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Atka mackerel	0.11	0.14	0.17	0.19	0.21	0.27	0.29	0.32	0.36	0.26
Crab	1.60	2.38	2.42	2.01	2.37	3.09	2.46	2.64	2.79	2.35
Flatfish	0.18	0.18	0.16	0.14	0.14	0.17	0.19	0.16	0.13	0.13
Pacific cod	0.28	0.37	0.49	0.20	0.27	0.25	0.24	0.28	0.22	0.25
Pacific halibut	2.79	3.23	3.23	2.33	3.65	4.97	4.47	3.89	4.93	4.85
Pacific herring	0.09	0.22	0.27	0.34	0.21	0.12	0.26	0.19	0.12	0.10
Rockfish	0.24	0.20	0.19	0.17	0.22	0.32	0.29	0.22	0.24	0.21
Sablefish	2.38	2.45	2.83	3.01	3.60	4.84	3.82	2.73	3.40	3.62
Salmon	0.44	0.4	0.58	0.51	0.67	0.77	0.72	0.67	0.80	0.40
Walleye pollock	0.11	0.11	0.19	0.14	0.14	0.14	0.16	0.15	0.13	0.16

2015 Economic Impacts of Alaska Recreational Fishing Expenditures (thousands of dollars)[1]

		#Jobs	Sales	Income	Value-Added
Trip Impacts by Fishing Mode	For-Hire	2,015	268,617	100,752	149,990
	Private Boat	1,458	191,178	60,520	114,574
	Shore	351	40,963	14,035	24,399
Total Durable Expenditures		1,583	118,101	47,803	72,988
Total State Economic Impacts		5,407	618,859	223,110	361,951

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	162,503
Private Boat	165,809
Shore	19,017
Total	347,329

Equipment	Durable Goods Expenditures
Fishing Tackle	26,351
Other Equipment	33,992
Boat Expenses	57,278
Vehicle Expenses	4,637
Second Home Expenses	0
Total Durable Expenditures	122,258

Total State Trip and Durable Goods Expenditures	469,587

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Out-of-State	120	127	119	127	122	124	118	121	118	181
Coastal/Non-Coastal	197	205	190	158	159	161	160	176	169	128
Total Anglers	317	332	309	284	281	286	278	298	287	309

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Days Fished	941	1,052	935	914	811	811	808	980	960	975

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Lingcod	H	35	42	37	32	32	33	33	34	32	28
	R	53	70	65	46	39	36	36	33	29	27
Pacific halibut	H	463	585	516	440	398	394	388	454	408	420
	R	353	438	359	321	304	311	324	324	251	271
Razor clams	H	483	389	593	556	357	436	NA	291	90	39
	R	0	0	0	0	0	0	NA	3	3	0
Rockfish species	H	173	198	226	209	224	211	230	256	335	332
	R	165	178	171	149	151	122	121	121	148	143
Chinook salmon	H	117	110	71	89	78	85	63	81	111	111
	R	104	110	80	96	66	95	62	120	94	116
Chum salmon	H	14	18	12	22	11	21	11	25	12	13
	R	34	34	28	34	19	38	20	39	19	25
Coho salmon	H	395	506	403	418	350	386	263	493	390	479
	R	107	122	89	94	74	88	50	122	60	99
Pink salmon	H	65	133	88	117	82	72	78	113	69	110
	R	167	280	151	224	121	135	141	203	118	204
Sockeye salmon	H	21	32	29	34	28	31	28	40	35	33
	R	7	21	10	10	6	10	8	13	12	9

[1] Data reported in this table includes saltwater fishing activities only.
[2] Information reported in this table is from the Sport Fish Division of the Alaska Department of Fish and Game (ADF&G) and includes saltwater fishing activities only.
[3] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.
[4] NA = data not available

2014 Alaska State Economy (% of national total)[1,3]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	20,752 (0.3%)	266,886 (0.2%)	15.28 (0.3%)	27.26 (0.3%)	56.65 (0.3%)	ds

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	22	33	31	32	28	26	25	35	31
	Receipts	1,055	1,837	1,455	1,693	2,482	2,882	2,708	3,268	2,472
Seafood sales, retail	Firms	12	12	13	16	23	15	15	11	17
	Receipts	649	1,358	1,431	1,350	1,595	903	1,626	1,458	1,539

Seafood Sales & Processing - Employer Establishments (thousands of dollars)[3]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	113	114	122	121	119	122	116	115	108
	Employees	6,866	6,506	7,707	7,572	8,074	8,578	8,289	8,638	9,115
	Payroll	246,067	262,127	254,894	255,403	268,208	296,851	297,284	308,961	337,171
Seafood sales, wholesale	Establishments	77	68	57	54	52	48	47	43	43
	Employees	224	167	143	ds	ds	159	143	102	120
	Payroll	8,509	8,528	8,389	8,445	9,141	9,985	10,943	7,205	7,024
Seafood sales, retail	Establishments	7	7	9	10	10	10	15	14	14
	Employees	ds	ds	37	44	ds	ds	ds	ds	ds
	Payroll	ds	ds	1,839	1,824	1,986	2,487	2,019	2,337	2,687

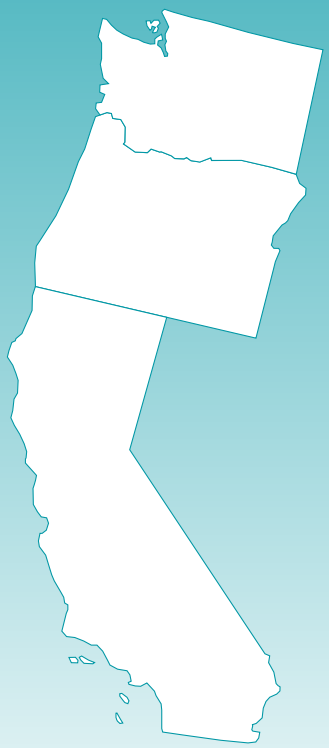
Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	46	46	49	50	55	63	47	53	72
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	27,357	33,888	33,132	ds	ds	ds	82,692	89,020
Deep sea freight transportation	Establishments	5	3	3	3	3	1	2	3	6
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Deep sea passenger transportation	Establishments	1	6	1	1	0	1	1	2	1
	Employees	ds	ds	ds	ds	NA	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	NA	ds	ds	ds	ds
Marinas	Establishments	21	13	14	13	14	14	13	12	11
	Employees	ds	48	66	56	ds	ds	ds	ds	ds
	Payroll	ds	1,763	2,303	2,181	1,932	2,053	1,613	1,449	ds
Marine cargo handling	Establishments	11	17	12	13	13	14	8	9	9
	Employees	503	677	ds	ds	ds	ds	334	ds	ds
	Payroll	22,876	35,345	ds	ds	ds	ds	26,481	ds	ds
Navigational services to shipping	Establishments	31	31	25	23	25	22	21	22	25
	Employees	ds	ds	296	312	303	321	97	103	138
	Payroll	ds	25,058	23,233	25,630	27,543	27,156	9,938	10,805	13,015
Port & harbor operations	Establishments	2	2	7	8	9	8	18	13	12
	Employees	ds	ds	ds	ds	ds	ds	582	ds	ds
	Payroll	ds	ds	ds	ds	ds	1,790	25,545	ds	ds
Ship & boat building	Establishments	17	16	17	21	22	23	23	20	27
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	335
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	15,845

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 les commercial fishing occurs in this state than the national average.
[3] ds = these data are suppressed.
[4] NA = not applicable.

Pacific Region

- California
- Oregon
- Washington



Fileting yellowfin tuna off of San Diego, CA
(photo credit: Stephen Stohs)

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

Three of the stocks or stock complexes covered in these FMPs were listed as overfished in 2015: Pacific ocean perch, yelloweye rockfish, and Pacific bluefin tuna. Seven stock complexes were subject to overfishing in 2015: Chinook salmon (three stocks), coho salmon, Pacific bluefin tuna, bigeye tuna, and swordfish.

Conservative management techniques are employed in the Pacific Region's fisheries. For example, the Pacific 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 comingle in the ocean. These weaker stocks include seven rebuilding groundfish stocks, salmon (listed under the Endangered Species Act), and other non-listed stocks that constrain the fishery.

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 by the drift gillnet fishery for swordfish and thresher shark. HMS is 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 Sablefish Permit Stacking Program; and 2) the Pacific Groundfish Trawl Rationalization Program. The landings revenues for these programs totaled more than $58.3 million in 2014. Following are descriptions of these catch share programs and their performance.

Pacific 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. Results for this program show that in 2014, the number of active vessels and landings decreased compared with the baseline period (average of the 3-year period prior to the start of the program). However, inflation-adjusted revenue and inflation-adjusted revenue per vessel increased during 2014.

Pacific Trawl Rationalization Program: 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 economic performance of the program has been strong. Net revenue per active catcher vessel increased 65% relative to the pre-catch share period (2009–2010) for the non-whiting groundfish fishery, and 400% for the whiting fishery. Meanwhile, motherships experienced a 62% increase and catcher–processors experienced a 7% decrease in net revenue. Results for this program show that in 2014, inflation-adjusted revenue and landings increased compared to the baseline period. However, the number of active vessels decreased during this period. 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 also contributed, to varying degrees, to improved fishery performance. For example, in the first 3 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 the previous 3 years.

Policy Updates

In April 2015, after reviewing the best available science and hearing from fishery participants and environmental groups, the PFMC closed the Pacific sardine fishery for the 2015–2016 season. The fishery was scheduled to open on July 1, 2015, but the biomass was estimated to fall well below the 150,000 metric ton threshold for a directed fishery. Although commercial fishing is closed, the PFMC allowed up to 7,000 tons of sardine to be harvested to account for small amounts taken as incidental catch in other fisheries, live bait harvest, tribal harvest, and research. Only days after closing the 2015-16 season, the NMFS and the PFMC closed the 2014-15 fishery early because the harvest forecast indicated the fishery would reach its harvest allocation prior to the end of the fishing season (June 30). Since 2006 Pacific sardine biomass, which is prone to significant natural fluctuation due to large-scale changes in oceanic temperature, has declined 90% from approximately1 million metric tons in 2006 to 97,000 metric tons in 2015.

The U.S. pelagic longline fishery for bigeye tuna was temporarily shut down in August 2015 for vessels 24 meters in overall length in the eastern Pacific Ocean (EPO) through December 31, 2015, because the 2015 catch limit of 500 metric tons was expected to be reached.

Closures and delays in the Pacific crab and razor clam fisheries in 2015 were due to elevated levels of domoic acid, a naturally occurring bio-toxin produced by marine algae of the genus Psuedo-nitzschia. A massive pool of warm water, termed "the blob" by scientists, in the Pacific Ocean coupled with El Nino contributed to higher than average water temperatures that brought on the harmful algal bloom. Unsafe levels of domoic acid shut down razor clam fisheries in both Oregon and Washington in May 2015 followed by the June closure of Washington's recreational and commercial dungeness crab fisheries. In November, California delayed the start of its recreational and

commercial dungeness crab and rock crab fisheries when testing revealed unsafe levels of domoic acid. Oregon and Washington also delayed the start of its 2015-16 dungeness crab season in November due to unsafe domoic acid levels.

In June 2015, the PFMC announced that two important West Coast groundfish stocks—canary rockfish and petrale sole—were rebuilt. These stocks had been subject to strict rebuilding plans that severely constrained West Coast fisheries for more than a decade. The canary rockfish was declared overfished in 2000, and a rebuilding plan was put in place in 2001. Under the rebuilding plan, catch quotas were dramatically reduced and large area closures put in place, and the stock was expected to rebuild by 2057. However, the new 2015 canary rockfish assessment showed that the coast-wide canary stock is already rebuilt. Petrale sole was declared overfished in 2010, and a rebuilding plan was put in place in 2011 to rebuild the stock by 2016. The petrale sole harvest limit was cut by half; fisheries in which petrale sole could be caught were reduced. Area closures were also implemented. The 2015 stock assessment showed that the rebuilding plan was successful and the stock had increased over the target level.

In November 2015, the council discussed management of the swordfish drift gillnet fishery. The Council reiterated its recommendation to NOAA Fisheries to issue an exempted fishing permit (EFP) to test the use of modified large-mesh drift gillnet gear for fishing by two boats inside the Pacific Leatherback Conservation Area. Fishing would occur when and where bycatch was likely to be low and swordfish abundance high. The EFP tested generally whether "eco-set triggered fishing" could result in substantially higher swordfish catch with far less bycatch. Four exempted fishing permit EFP applications were submitted for council consideration in November.

COMMERCIAL FISHERIES

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. It does not include saltwater anglers that 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/species groups.

Key Pacific Region Commercial Species

- Albacore tuna
- Crab
- Flatfish
- Hake
- Other shellfish
- 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 respent on additional goods or services. If those dollars are respent on other goods and services in the regional economy, this spending generates additional economic activity in the region. 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 seafood businesses and its full supply chain are included). That is, impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

Four different measures are commonly used to show commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. Sales refer to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. It 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 types of

Landings Revenue: Largest Increases

From 2006:
- Shrimp (604%, 508% in real terms)
- Rockfish (56%, 34% in real terms)
- Salmon (38%, 20% in real terms)

From 2014:
- Shrimp (43%)
- Sablefish (19%)
- Rockfish (7%)

Landings Revenue: Largest Decreases

From 2006:
- Hake (-30%, -41% in real terms)
- Crab (-27%, -37% in real terms)
- Squid (-9%, -22% in real terms)

From 2014:
- Squid (-66%)
- Hake (-59%)
- Crab (-47%)

Landings: Largest Increases

From 2006:
- Shrimp (419%)
- Rockfish (86%)

From 2014:
- Sablefish (18%)
- Shrimp (13%)
- Rockfish (11%)

Landings: Largest Decreases

From 2006:
- Crab (-73%)
- Hake (-40%)
- Other shellfish (-38%)

From 2014:
- Squid (-65%)
- Crab (-56%)
- Hake (-42%)

measures are calculated in terms of dollars, whereas employment impacts are measured in terms of 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.[1]

In 2015, commercial fishing in California generated the largest employment impacts in the region with 113,900 jobs. California also had the largest income impacts ($4.5 billion), sales impacts ($21.3 billion), and value-added impacts ($7.6 billion).

The importers sector in California generated the highest employment impacts of any state-level sector with 52,600 jobs. The importers sector in California generated the highest state-level income impacts ($2.6 billion), the highest state-level sales impacts ($16.3 billion), and the highest state-level value-added impacts in the region ($5 billion).

Landings Trends

Landings revenue declined in all three states (California, -49%; Oregon, -28% and Washington, -9%) from 2014-2015. Crab landings revenue had significant declines in all three states from 2014 – 2015 due to the marine toxin closures, which sharply reduced landings. Crab landings revenue fell $50 million (-71%) in California; $36 million (-75%) in Oregon; and $8 million (-10%) in Washington. Pacific sardine landings revenue was down significantly in California (-83%, $2 million) and Oregon (-77%, $3 million) for this period due fishery closures based on low stock abundance; lower sardine prices in both states also negatively impacted landings revenues.

Squid, which had been California's largest fishery by value and volume in 2014, fell $48 million (-66%) in 2015 due to the large decline in landings (148 million pounds, -65%). The $50 million and $48 million declines in California landings revenue of crab and squid accounted for almost 80% of the state's overall decline in landings revenue from 2014-15.

Sharply lower landings and landings revenue of hake and salmon, major fisheries in both Oregon and Washington, may have been attributed to the "warm blob" effects. Hake landings revenues in 2015 were down $11 million (-61%) in Oregon, down $3 million (-53%) in Washington from 2014 levels, and down $21 million for at sea processors (-59%); salmon landings

[1] The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates (see NMFS Commercial Fishing & Seafood Industry Input/Output Model, available at: www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf).

revenue fell $8 million (-41%) in Oregon and $11 million (-28%) in Washington from 2014 levels.

Sablefish and shrimp landings revenue were the two bright spots for Oregon fishermen in 2015. Landings revenues were up $5 million and $11 million, respectively, from 2014 levels driven by both higher landings and higher prices. In Washington, 2015 shrimp landings revenue were also up from 2014 levels, increasing $13 million (68%) from 2014 levels.

Landings Revenue

Landings revenue in the Pacific Region totaled $558 million in 2015. This number represented a 18% increase from 2006 (a 2% increase in real terms after adjusting for inflation) and a 28% decrease from 2014. Landings revenue was highest in Washington ($300 million), followed by California ($129 million). Shellfish landings revenue made up 65% of total revenue. Other shellfish ($137 million) and crab ($105 million) had the highest landings revenue in the Pacific Region in 2015. Together they accounted for 45% of total landings revenue.

From 2006 to 2015, shrimp (604%, 508% in real terms); rockfish (56%, 34% in real terms); and salmon (38%, 20% in real terms) had the largest revenue increases, while hake (-30%, -41% in real terms); crab (-27%, -37% in real terms); and squid (-9%, -22% in real terms) had the largest decreases. From 2014 to 2015, shrimp (43%), sablefish (19%), and rockfish (7%) had the largest revenue increases, while squid (-66%), hake (-59%), and crab (-47%) had the largest decreases.

Landings

In 2015, commercial fishermen in the Pacific Region landed 747 million pounds of finfish and shellfish, a 36% decrease from 2006 and a 38% decrease from 2014. Landings volume was highest in California (186 million pounds), followed by Washington (154 million pounds). Hake had the highest landings volume in the Pacific Region, accounting for 45% of landed weight.

From 2006 to 2015, shrimp (419%) and rockfish (86%) had the largest landings increases, while crab (-73%), hake (-40%), and other shellfish (-38%) had the largest decreases. From 2014 to 2015, sablefish (18%), shrimp (13%), and rockfish (11%) had the largest revenue increases, while squid (-65%), crab (-56%), and hake (-42%) had the largest decreases.

Price

In 2015, other shellfish ($11.61 per pound) received the highest ex-vessel price in the Pacific Region. Landings of hake ($0.08 per pound) had the lowest ex-vessel price. From 2006 to 2015, crab (174%, 137% in real terms); other shellfish (101%, 74% in real terms); and salmon (57%, 35% in real terms) had the largest price increases, while rockfish (-16%, -28% in real terms); squid (21%, 5% in real terms); and flatfish (23%, 6% in real terms) had the largest decreases. From 2014 to 2015, shrimp (27%), crab (21%), and other shellfish (12%) had the largest price increases, while hake (-29%), squid (-5%), and salmon (-4%) had the largest decreases.

RECREATIONAL FISHERIES

In this report, recreational fisheries refer to fishing for fun rather than to resell fish (commercial fishing) or for subsistence. The recreational fisheries section reports on economic impacts and expenditures, angler participation, trips, and catch of key species/species groups.

Key Pacific Region Recreational Species

- Albacore & other tunas
- Barracuda, bass & bonito
- Croakers
- Flatfishes
- Greenlings
- Rockfishes & scorpionfishes
- Salmon
- Sculpins
- Surfperches

Economic Impacts and Expenditures

The contribution of recreational fishing activities[2] in the United States is reported in terms of economic impacts from angler expenditures. Total annual trip expenditures are estimated by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore). Total annual durable expenditures are estimated by multiplying mean durable expenditures by the estimated annual number of adult participants in a given state.

[2] Trip expenditure estimates were generated from the 2011 National Marine Recreational Fishing Expenditure Survey. Durable good expenditure impacts were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (see http://www.st.nmfs.noaa.gov/economics/fisheries/recreational/Marine-Angler-Durable-Expenditures/2014-durable-expenditures-survey). Economic impacts from recreational fishing activities were generated using the NMFS Recreational Economic Impact Model (see The Economic Contribution of Marine Angler Expenditures in the United States, 2011, available at http://www.st.nmfs.noaa.gov/economics/publications/marine-angler-expenditures/marine-angler-2011).

Recreational Catch: Largest Increases

From 2006:
- Albacore and other tunas (179%)
- Greenlings (60%)
- Rockfishes and scorpionfishes (44%)

From 2014:
- Greenlings (8%)
- Albacore and other tunas (4%)

Recreational Catch: Largest Decreases

From 2006:
- Croakers (-77%)
- Barracuda, bass, and bonito (-30%)
- Flatfishes (-24%)

From 2014:
- Flatfishes (-52%)
- Salmon (-49%)
- Croakers (-27%)

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. Sales refer 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. 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- 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 terms of 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 greatest employment impacts from expenditures on saltwater recreational fishing in the Pacific Region were generated in California (16,500 jobs), followed by Washington (6,500 jobs). The largest sales impacts were observed in California ($2.1 billion), followed by Washington ($775 million). The biggest income impacts were generated in California ($797 million), followed by Washington ($297 million). The greatest value-added impacts were in California ($1.3 billion), followed by Washington ($483 million).

Recreational fishing expenditures (on both fishing trips and durable equipment purchases) across the Pacific Region in 2015 totaled about $2.5 billion. Trip expenditures totaled more than $640 million, with a large portion coming from trips in the private boat (37%) and for-hire (33%) sectors. Durable goods expenditures totaled $1.8 billion, with the largest portion coming from boat expenses ($946 million).

Fishing Trips

In 2015, recreational anglers took 5.8 million fishing trips in the Pacific Region. This number was a 9% decrease from 2006 and a 10% decrease from 2014. The largest proportions of trips were taken in the shore mode (53%) and private boat mode (32%). States with the highest number of recorded trips were California (3.7 million trips) and Washington (1.3 million trips).

Participation

In 2015, 1.2 million recreational anglers who fished in the Pacific Region. This number was a 32% decrease from 2006 and a 15% decrease from 2014. These anglers were Pacific Region residents from either a coastal county (74%) or non-coastal county (26%).

Harvest and Release

Of the Pacific Region's key species and species groups, rockfishes and scorpionfishes (4.7 million fish), surfperches (2.4 million fish), and barracuda, bass, and bonito (1.6 million fish) were most frequently caught by recreational anglers. From 2006 to 2015, albacore and other tunas (179%), greenlings (60%), and rockfishes and scorpionfishes (44%) had the largest increases in catch, while croakers (-77%), barracuda, bass, and bonito (-30%), and flatfishes (-24%) had the largest decreases. From 2014 to 2015, greenlings (8%) and albacore and other tunas (4%) had the largest increases in catch, while flatfishes (-52%), salmon (-49%), and croakers (-27%) had the largest decreases.

MARINE ECONOMY

For this report, the marine economy refers to the economic activity generated by 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) transport, support, and marine operations (employer establishments). These sectors include several different marine-related industries.[3,4]

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).[5] 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's CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state's CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average.

The Bureau of Labor Statistics did not disclose CFLQ data for Washington for 2014. In 2014, the CFLQ for Oregon was the highest for the remaining states in the region at 3.99. Oregon's CFLQ suggests that the level of employment in commercial fishing-related industries in this state is approximately 3.99 times higher than the level of employment in these industries nationwide.

In 2014, 1.2 million establishments operated throughout the Pacific Region (including marine and non-marine-related establishments). These establishments employed 18 million workers and had a total annual payroll of $1 trillion. The region's gross domestic product was approximately $2.9 trillion.

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2014, there were 226 non-employer firms (a 50% increase from 2006) and annual receipts totaled $17 million (an 18% increase from 2006 in real terms). The greatest number of firms was located in California (164).

There were 163 employer establishments (a 1% decrease from 2006) in 2014. These establishments employed approximately 8,724 workers (a 5% decrease from 2006) and had a total annual payroll of $430 million (a 4% increase from 2006 in real terms). The greatest number of establishments was located in Washington (90).

Seafood Sales, Retail: In 2014, there were 279 non-employer firms (a 37% increase from 2006) and annual receipts totaled $21 million (a 20% decrease from 2006 in real terms). The greatest number of firms was located in California (227).

There were 223 employer establishments (a 13% decrease from 2006) in 2014. These establishments employed 1,570 workers (a 4% decrease from 2006) and had a total annual payroll of $42 million (a 15% increase from 2006 in real terms). The greatest number of establishments was located in California (167).

Seafood Sales, Wholesale: There were 482 establishments (a 26% increase from 2006) in 2014. These establishments employed 5,202 workers (a 2% increase from 2006) and had a total annual payroll of $237 million (a 10% increase from 2006 in real terms). The greatest number of establishments was located in California (341).

Transport, Support, and Marine Operations

The size of the Transport, Support, and Marine Operations sectors in the Pacific Region is difficult to assess because much of the state-level data is suppressed for confidentiality purposes. It is clear, however, that these sectors play an important role in the regional economy. For example, the Ship and Boatbuilding sector contributed more than 300 jobs and more than $800 million in payroll to the region in 2014.

[3] Unless otherwise stated, data is from the U.S. Census Bureau, http://censtats.census.gov/ (accessed May 31, 2016).
[4] U.S. Bureau of Economic Analysis, "Table 1.1.5 Gross Domestic Product" and "Table SA6N Compensation of Employees by NAICS Industry," http://www.bea.gov/iTable/index_nipa.cfm (accessed May 31, 2016).
[5] U.S. Bureau of Labor Statistics, "Location Quotient Calculator," http://data.bls.gov/location_quotient/ (accessed May 31, 2016).

Tables | Pacific Region

2015 Economic Impacts of the Pacific Seafood Industry (thousands of dollars)

	Landings Revenue	With Imports				Without Imports			
		#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
California	129,143	113,896	21,314,558	4,530,035	7,552,746	9,105	747,849	281,375	386,989
Oregon	113,990	13,624	1,057,899	355,933	503,606	11,347	646,466	271,563	361,303
Washington	299,952	23,197	1,702,330	693,619	941,845	22,887	1,648,356	681,162	921,935

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	471,764	459,763	500,435	501,935	566,576	729,775	674,457	814,817	776,081	557,650
Finfish & Other	159,425	158,772	175,040	162,664	188,560	238,497	225,466	248,722	230,250	188,988
Shellfish	312,388	301,009	325,419	339,276	378,021	491,297	449,007	566,129	545,866	368,700
Key Species										
Albacore tuna	23,767	21,612	28,845	27,541	28,780	43,347	45,827	41,930	32,792	29,387
Crab	143,758	121,136	107,107	123,865	132,843	182,085	176,880	249,579	199,222	105,053
Flatfish	15,602	16,266	18,015	16,716	12,824	13,369	13,490	17,408	15,655	16,736
Hake	34,425	32,603	58,492	14,104	27,316	52,869	47,054	61,321	58,630	24,109
Other shellfish	110,464	114,639	122,904	133,940	134,460	172,541	141,221	166,551	177,487	137,035
Rockfish	6,705	7,406	8,986	8,819	9,033	9,305	9,329	9,739	9,728	10,439
Sablefish	22,986	20,975	27,273	34,480	35,962	44,850	28,096	19,530	24,118	28,697
Salmon	34,786	34,508	27,548	25,549	49,534	54,267	48,197	77,754	71,416	48,157
Shrimp	12,433	17,298	25,132	16,594	21,941	40,638	40,326	42,614	61,100	87,556
Squid	26,974	29,160	26,573	56,926	71,171	66,547	63,886	73,703	72,915	24,472

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	1,169,814	1,109,184	1,091,565	899,035	1,065,423	1,176,695	1,069,945	1,255,299	1,208,639	746,986
Finfish & Other	633,029	627,532	509,534	423,694	418,068	476,563	514,800	563,071	452,625	313,816
Shellfish	536,968	481,728	582,247	475,358	647,506	700,302	555,386	692,818	756,357	433,425
Key Species										
Albacore tuna	28,117	25,483	24,507	27,055	25,477	24,284	30,638	28,471	27,247	24,821
Crab	85,301	51,888	45,075	59,158	61,668	66,518	52,860	87,157	52,133	22,745
Flatfish	28,291	33,825	37,844	41,190	33,762	25,911	24,768	29,062	24,147	24,718
Hake	558,078	454,533	531,277	253,053	355,216	496,363	347,171	505,614	574,921	333,290
Other shellfish	19,115	17,513	17,357	17,513	16,446	17,072	14,819	16,509	17,107	11,805
Rockfish	6,308	7,121	8,887	10,152	10,607	9,608	10,180	10,521	10,505	11,703
Sablefish	13,714	11,624	12,975	15,822	15,047	14,130	11,571	9,137	9,598	11,352
Salmon	29,564	25,050	19,503	34,132	31,107	42,224	24,619	56,892	37,187	26,134
Shrimp	20,290	26,497	35,799	33,456	46,191	66,686	66,319	71,505	93,150	105,324
Squid	108,470	109,426	85,092	205,635	288,603	267,898	214,867	230,070	229,493	81,000

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albacore tuna	0.85	0.85	1.18	1.02	1.13	1.78	1.5	1.47	1.20	1.18
Crab	1.69	2.33	2.38	2.09	2.15	2.74	3.35	2.86	3.82	4.62
Flatfish	0.55	0.48	0.48	0.41	0.38	0.52	0.54	0.60	0.65	0.68
Hake	0.06	0.07	0.11	0.06	0.08	0.11	0.14	0.12	0.10	0.07
Other shellfish	5.78	6.55	7.08	7.65	8.18	10.11	9.53	10.09	10.38	11.61
Rockfish	1.06	1.04	1.01	0.87	0.85	0.97	0.92	0.93	0.93	0.89
Sablefish	1.68	1.80	2.10	2.18	2.39	3.17	2.43	2.14	2.51	2.53
Salmon	1.18	1.38	1.41	0.75	1.59	1.29	1.96	1.37	1.92	1.84
Shrimp	0.61	0.65	0.70	0.50	0.48	0.61	0.61	0.60	0.66	0.83
Squid	0.25	0.27	0.31	0.28	0.25	0.25	0.30	0.32	0.32	0.30

2015 Economic Impacts of the Pacific Recreational Fishing Expenditures (thousands of dollars, trips)

	Trips	#Jobs	Sales	Income	Value Added
California	3,741	16,451	2,079,006	797,296	1,271,261
Oregon	711	3,185	313,559	138,900	202,277
Washington	1,342	6,499	774,736	297,032	482,748

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	213,038
Private Boat	236,628
Shore	191,161
Total	640,827

Equipment	Durable Goods Expenditures
Fishing Tackle	421,750
Other Equipment	212,966
Boat Expenses	946,265
Vehicle Expenses	251,416
Second Home Expenses	4,043
Total Durable Expenditures	1,836,438

Total State Trip and Durable Goods Expenditures	2,477,265

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	1,392	1,272	1,011	1,266	1,166	1,056	1,174	1,121	1,050	885
Non-Coastal	381	372	302	357	356	310	335	349	358	313
Out-of-State	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Anglers	1,773	1,644	1,313	1,623	1,522	1,366	1,509	1,470	1,408	1,198

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	514	515	416	442	446	686	674	751	1,084	880
Private	1,993	1,872	1,524	2,087	1,686	1,794	1,929	2,037	1,958	1,828
Shore	3,891	3,297	3,357	3,757	3,467	2,935	3,896	3,727	3,413	3,085
Total Trips	6,398	5,684	5,297	6,286	5,600	5,415	6,499	6,516	6,455	5,794

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albacore & other tunas	H	45	105	48	78	79	49	133	85	126	126
	R	3	8	2	8	1	1	17	13	3	7
Barracuda, bass & bonito	H	668	537	436	412	373	435	371	215	453	376
	R	1,660	1,408	1,103	1,209	991	738	775	1,112	1,658	1,254
Croakers	H	455	427	322	427	173	128	256	173	136	91
	R	553	630	275	360	340	98	231	257	181	139
Flatfishes	H	326	261	346	328	362	537	499	601	676	304
	R	518	338	374	294	333	326	356	571	668	338
Greenlings	H	256	216	195	221	239	332	340	390	405	460
	R	222	165	154	207	226	332	343	309	305	304
Rockfishes & scorpionfishes	H	2,514	2,258	1,854	2,131	2,212	2,778	3,151	3,656	3,803	3,664
	R	734	516	492	513	573	832	1,118	1,274	1,204	1,000
Salmon[3]	H	172	209	47	242	112	143	224	236	352	181
	R	0	0	0	0	0	0	0	0	0	0
Sculpins	H	57	50	60	60	54	91	68	70	60	61
	R	222	208	227	198	198	239	229	297	200	188
Surfperches	H	1,165	861	833	752	638	1,018	1,143	1,033	1,125	1,284
	R	1,676	863	818	704	452	931	1,280	1,006	1,282	1,122

[1] NA = data are not available because out-of-state resident information is collected for individual states, but whether an angler is a resident of a region is not specified.

[2] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.

[3] Salmon harvest estimates exclude release mortality.

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2015 Economic Impacts of the California Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	113,896	21,314,558	4,530,035	7,552,746	9,105	747,849	281,375	386,989
Commercial Harvesters	2,455	261,266	89,313	131,262	2,455	261,266	89,313	131,262
Seafood Processors & Dealers	3,800	437,036	162,056	215,033	1,055	121,325	44,988	59,695
Importers	52,554	16,255,810	2,605,304	4,955,483	0	0	0	0
Seafood Wholesalers & Distributors	10,322	1,636,243	530,716	741,447	340	53,882	17,477	24,416
Retail	44,766	2,724,202	1,142,646	1,509,521	5,255	311,376	129,597	171,616

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	129,907	127,580	120,861	159,253	187,263	222,160	243,963	266,488	253,768	129,143
Finfish & Other	43,765	51,037	48,671	47,738	45,558	59,289	57,103	66,416	61,163	54,526
Shellfish	86,142	76,543	72,190	111,515	141,704	162,871	186,860	200,071	192,605	74,617
Key Species										
Crab	46,483	28,626	24,227	32,508	43,016	53,762	88,207	91,851	70,563	20,467
Pacific sardine	5,100	8,218	7,575	5,544	4,366	4,398	4,249	1,510	2,003	343
Rockfish	4,630	4,924	5,781	5,330	5,453	5,644	5,170	5,748	5,604	5,797
Sablefish	4,892	4,873	6,224	9,765	11,491	15,121	8,988	7,047	8,945	8,870
Salmon	5,261	7,835	6	NA	1,215	5,096	12,850	22,957	12,127	8,058
Sea urchins	5,145	5,400	6,550	7,806	7,413	8,102	8,320	9,832	9,057	6,879
Shrimp	4,213	4,064	5,696	5,462	4,951	8,598	8,492	9,520	11,791	13,769
Spiny lobster	8,111	6,916	8,008	7,934	11,386	12,972	13,749	13,842	18,238	15,806
Squid	26,959	29,131	26,477	56,877	71,165	66,546	63,886	73,701	72,903	24,458
Swordfish	2,695	3,127	2,365	1,932	2,203	3,350	2,090	2,699	3,049	3,628

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)[1]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	341,661	384,826	323,884	376,053	439,440	409,837	353,875	364,790	361,290	186,418
Finfish & Other	203,581	259,139	224,763	148,478	120,700	108,999	102,261	90,128	98,771	89,788
Shellfish	138,079	125,687	99,121	227,575	318,740	300,838	251,614	274,661	262,518	96,630
Key Species										
Crab	27,391	12,393	9,845	16,660	23,352	22,206	27,589	33,094	20,888	5,412
Pacific sardine	102,683	178,480	126,945	82,842	73,814	60,993	50,660	15,636	17,112	3,724
Rockfish	3,252	3,136	3,933	3,984	3,949	3,450	3,457	3,862	3,555	3,239
Sablefish	3,617	3,240	3,507	5,089	5,501	5,646	3,916	3,291	3,960	4,033
Salmon	1,184	1,743	1	NA	255	1,133	2,862	4,337	2,558	1,339
Sea urchins	10,664	11,131	10,283	12,205	11,230	11,465	11,443	12,945	11,833	8,106
Shrimp	1,197	2,015	3,011	3,596	4,522	8,217	7,255	9,712	9,873	9,443
Spiny lobster	886	663	741	706	716	751	876	764	951	768
Squid	108,410	109,150	84,071	205,278	288,497	267,890	214,867	230,061	229,466	80,968
Swordfish	1,187	1,210	1,168	898	815	1,365	887	1,174	1,252	1,358

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Crab	1.70	2.31	2.46	1.95	1.84	2.42	3.20	2.78	3.38	3.78
Pacific sardine	0.05	0.05	0.06	0.07	0.06	0.07	0.08	0.10	0.12	0.09
Rockfish	1.42	1.57	1.47	1.34	1.38	1.64	1.50	1.49	1.58	1.79
Sablefish	1.35	1.50	1.77	1.92	2.09	2.68	2.29	2.14	2.26	2.20
Salmon	4.44	4.50	4.16	NA	4.76	4.50	4.49	5.29	4.74	6.02
Sea urchins	0.48	0.49	0.64	0.64	0.66	0.71	0.73	0.76	0.77	0.85
Shrimp	3.52	2.02	1.89	1.52	1.09	1.05	1.17	0.98	1.19	1.46
Spiny lobster	9.15	10.44	10.8	11.24	15.91	17.27	15.69	18.11	19.17	20.59
Squid	0.25	0.27	0.31	0.28	0.25	0.25	0.30	0.32	0.32	0.30
Swordfish	2.27	2.58	2.03	2.15	2.70	2.46	2.36	2.30	2.44	2.67

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

2015 Economic Impacts of California Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	2,091	308,634	116,635	176,829
	Private Boat	714	123,816	37,976	66,728
	Shore	1,584	229,657	75,491	131,276
Total Durable Expenditures		12,062	1,416,899	567,194	896,428
Total State Economic Impacts		16,451	2,079,006	797,296	1,271,261

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	163,126
Private Boat	83,098
Shore	151,589
Total	397,813

Equipment	Durable Goods Expenditures
Fishing Tackle	301,224
Other Equipment	149,836
Boat Expenses	481,902
Vehicle Expenses	153,618
Second Home Expenses	0
Total Durable Expenditures	1,086,579

Total State Trip and Durable Goods Expenditures	1,484,392

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	1,087	967	740	879	870	733	849	772	718	551
Non-Coastal	230	216	160	199	208	161	181	190	195	152
Out-of-State	106	85	203	223	176	207	74	80	101	96
Total Anglers	1,423	1,268	1,103	1,301	1,254	1,101	1,104	1,042	1,014	799

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	371	371	305	308	324	561	544	613	929	727
Private	978	843	640	681	690	683	799	797	803	673
Shore	3,147	2,553	2,613	3,013	2,723	2,191	3,152	2,983	2,669	2,341
Total Trips	4,496	3,767	3,558	4,002	3,737	3,435	4,495	4,393	4,401	3,741

Harvest (H) & Release (R) of Key Species/Species Groups (thousands of fish)[1,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albacore & other tunas	H	8	21	2	10	10	4	19	9	3	12
	R	2	7	2	8	< 1	1	17	13	3	7
Barracuda, bass & bonito[2]	H	668	537	436	412	373	435	371	215	453	376
	R	1,660	1,408	1,103	1,209	991	738	775	1,112	1,658	1,254
Croakers	H	455	427	322	427	173	128	256	173	136	91
	R	553	630	275	360	340	98	231	257	181	139
Flatfishes	H	242	188	275	259	297	471	430	530	606	233
	R	470	292	326	242	287	280	310	523	621	291
Greenlings	H	117	84	65	88	90	163	159	188	232	281
	R	121	76	63	107	113	206	226	192	207	198
Rockfishes & scorpionfishes	H	1,898	1,675	1,328	1,526	1,613	2,243	2,567	2,976	3,077	2,773
	R	669	457	427	440	495	765	1,052	1,198	1,126	894
Salmon[3]	H	98	48	0	< 1	15	50	124	116	75	37
	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sculpins	H	25	19	29	27	21	58	37	40	32	32
	R	74	58	78	49	46	86	77	144	48	36
Surfperches	H	913	610	580	501	387	766	892	782	873	1,033
	R	1,515	703	658	544	292	771	1,119	846	1,121	962

[1] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.
[2] This species may not be equivalent to species with similar names listed in the commercial tables.
[3] Salmon harvest estimates exclude release mortality.
[4] NA = not available.

2014 California State Economy (% of national total)[1]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	889,646 (11.8%)	13,838,702 (11.4%)	797.05 (13.4%)	1,232.91 (13.3%)	2,305.92 (13.4%)	0.71

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	91	121	139	159	184	187	151	157	164
	Receipts	8,298	10,842	11,460	10,852	9,695	9,788	9,283	9,866	11,112
Seafood sales, retail	Firms	163	222	210	202	203	209	236	218	227
	Receipts	19,875	19,703	19,892	17,095	19,021	18,006	18,238	18,581	17,055

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	47	49	45	47	48	48	41	44	53
	Employees	2,592	2,229	2,024	2,167	1,820	1,842	1,668	1,871	1,799
	Payroll	78,065	75,886	65,215	69,529	62,480	60,411	52,977	57,603	60,762
Seafood sales, wholesale	Establishments	252	300	278	289	314	404	275	320	341
	Employees	4,063	4,429	3,321	3,183	3,223	3,505	3,441	3,671	3,912
	Payroll	144,758	159,672	132,139	128,813	137,810	149,302	173,959	181,698	175,927
Seafood sales, retail	Establishments	184	182	161	153	158	157	149	155	167
	Employees	1,031	1,004	932	976	985	1,088	1,043	1,119	1,124
	Payroll	19,900	21,224	20,585	21,785	22,718	25,168	24,221	26,702	28,044

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	22	29	28	30	25	21	22	24	30
	Employees	ds	ds	ds	ds	554	395	ds	ds	ds
	Payroll	ds	ds	ds	ds	30,431	24,708	ds	ds	ds
Deep sea freight transportation	Establishments	54	51	43	41	54	51	45	34	43
	Employees	957	1,643	ds	ds	2,562	2,464	2,431	2,073	2,467
	Payroll	84,199	116,628	ds	ds	236,235	256,962	236,423	218,054	187,383
Deep sea passenger transportation	Establishments	16	13	5	5	3	2	2	4	5
	Employees	1,552	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	72,119	ds	ds	ds	ds	ds	ds	ds	ds
Marinas	Establishments	268	276	277	276	270	269	251	250	249
	Employees	2,457	2,680	2,652	2,514	2,390	2,401	2,237	2,199	2,332
	Payroll	74,778	80,216	85,315	78,890	80,631	82,958	71,777	72,737	79,840
Marine cargo handling	Establishments	52	56	61	62	63	71	38	64	64
	Employees	20,975	22,395	22,086	17,428	18,449	18,812	18,759	ds	ds
	Payroll	1,448,623	1,484,308	1,453,281	1,211,572	1,273,268	1,333,805	1,351,874	ds	ds
Navigational services to shipping	Establishments	36	39	40	39	41	45	35	36	37
	Employees	817	858	815	804	765	760	800	805	634
	Payroll	63,893	63,610	65,225	61,720	58,899	62,065	61,166	67,665	59,927
Port & harbor operations	Establishments	20	18	17	19	21	19	59	31	33
	Employees	582	443	256	345	435	508	ds	651	535
	Payroll	32,523	30,001	23,316	26,889	37,560	41,688	ds	52,401	33,599
Ship & boat building	Establishments	132	136	136	123	117	108	120	113	108
	Employees	9,801	9,250	11,630	10,483	9,720	9,165	12,681	12,651	9,814
	Payroll	453,255	433,846	477,300	460,239	448,338	434,449	544,819	537,438	534,787

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 les commercial fishing occurs in this state than the national average.
[3] ds = these data are suppressed.
[4] NA = not applicable.

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2015 Economic Impacts of the Oregon Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	13,624	1,057,899	355,933	503,606	11,347	646,466	271,563	361,303
Commercial Harvesters	3,654	212,855	91,644	126,545	3,654	212,855	91,644	126,545
Seafood Processors & Dealers	1,298	123,581	47,463	62,013	1,197	114,016	43,789	57,213
Importers	1,081	334,341	53,584	101,922	0	0	0	0
Seafood Wholesalers & Distributors	466	62,497	21,201	28,436	275	36,842	12,498	16,763
Retail	7,125	324,625	142,041	184,691	6,221	282,752	123,632	160,782

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	106,093	97,298	103,042	106,959	106,378	148,354	128,222	179,215	158,080	113,990
Finfish & Other	46,326	47,589	56,912	52,750	58,730	76,718	72,329	81,445	78,214	60,860
Shellfish	59,767	49,709	46,130	54,210	47,648	71,636	55,893	97,770	79,866	53,130
Key Species										
Albacore tuna	8,067	9,468	10,666	10,191	12,425	18,766	15,168	16,085	11,023	9,212
Crab	53,810	38,208	29,168	42,413	32,757	44,696	29,189	71,208	48,149	11,935
Flatfish	7,547	7,930	9,163	8,468	6,861	6,779	7,315	9,854	8,651	9,765
Hake (whiting)	7,974	6,501	6,830	3,783	5,414	16,518	14,611	20,405	18,274	7,146
Oysters	1,163	1,847	2,748	4,506	3,317	1,869	1,661	1,798	1,774	NA
Pacific sardine	3,743	4,551	5,665	5,291	5,252	3,192	8,979	6,299	3,522	813
Rockfish	1,564	2,002	2,610	2,500	2,520	2,473	2,661	3,023	3,246	3,744
Sablefish	9,787	9,494	13,737	15,919	15,069	17,351	11,530	7,595	8,076	12,807
Salmon	4,940	4,647	4,166	3,546	7,698	6,737	6,950	12,422	20,115	11,864
Shrimp	4,618	9,488	14,056	6,994	11,313	24,901	24,848	24,430	29,605	40,634

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)[1]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	282,846	253,543	195,688	199,458	201,974	274,533	296,091	339,589	291,655	194,575
Finfish & Other	236,998	216,134	155,837	154,147	153,588	208,445	237,822	265,454	227,318	138,601
Shellfish	45,848	37,410	39,851	45,310	48,386	66,088	58,269	74,136	64,337	55,974
Key Species										
Albacore tuna	8,534	10,468	8,876	10,082	10,703	9,682	9,938	10,209	8,767	7,574
Crab	33,291	17,007	13,875	21,848	15,817	17,240	8,681	26,016	11,910	2,284
Flatfish	16,385	19,697	23,842	26,047	22,226	15,957	15,322	18,965	15,955	16,722
Hake (whiting)	122,804	81,481	55,511	53,466	57,017	142,092	102,651	160,098	161,589	88,728
Oysters	255	197	162	1,127	829	467	415	449	443	NA
Pacific sardine	74,669	90,037	49,298	45,902	44,743	23,479	91,459	57,022	16,938	4,688
Rockfish	1,967	2,905	3,820	4,207	4,533	3,819	3,918	4,745	5,293	6,628
Sablefish	5,838	5,349	6,514	7,219	6,269	5,074	4,739	3,840	3,293	5,002
Salmon	1,810	1,370	1,860	2,311	2,765	2,386	1,918	3,505	6,373	3,142
Shrimp	12,167	20,027	25,433	22,085	31,516	48,276	49,054	47,535	51,835	53,457

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albacore tuna	0.95	0.90	1.20	1.01	1.16	1.94	1.53	1.58	1.26	1.22
Crab	1.62	2.25	2.10	1.94	2.07	2.59	3.36	2.74	4.04	5.22
Flatfish	0.46	0.40	0.38	0.33	0.31	0.42	0.48	0.52	0.54	0.58
Hake (whiting)	0.06	0.08	0.12	0.07	0.09	0.12	0.14	0.13	0.11	0.08
Oysters	4.56	9.40	16.96	4.00	4.00	4.00	4.00	4.00	4.00	NA
Pacific sardine	0.05	0.05	0.11	0.12	0.12	0.14	0.10	0.11	0.21	0.17
Rockfish	0.80	0.69	0.68	0.59	0.56	0.65	0.68	0.64	0.61	0.56
Sablefish	1.68	1.78	2.11	2.21	2.40	3.42	2.43	1.98	2.45	2.56
Salmon	2.73	3.39	2.24	1.53	2.78	2.82	3.62	3.54	3.16	3.78
Shrimp	0.38	0.47	0.55	0.32	0.36	0.52	0.51	0.51	0.57	0.76

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

2015 Economic Impacts of Oregon Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	298	36,509	13,975	19,859
	Private Boat	413	41,105	15,343	24,530
	Shore	153	15,098	5,538	8,970
Total Durable Expenditures		2,321	220,847	104,044	148,918
Total State Economic Impacts		3,185	313,559	138,900	202,277

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	22,289
Private Boat	47,356
Shore	15,960
Total	85,605

Equipment	Durable Goods Expenditures
Fishing Tackle	47,064
Other Equipment	26,239
Boat Expenses	79,617
Vehicle Expenses	63,005
Second Home Expenses	4,043
Total Durable Expenditures	219,967

Total State Trip and Durable Goods Expenditures	305,572

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	82	86	78	85	82	81	84	88	91	89
Non-Coastal	125	130	120	128	124	123	128	132	136	134
Out-of-State	15	15	14	15	15	14	15	16	16	16
Total Anglers	222	231	212	228	221	218	227	236	243	239

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	56	61	48	55	51	51	57	63	67	71
Private	373	399	353	396	378	369	389	413	431	407
Shore	232	232	232	232	232	232	232	232	232	232
Total Trips	662	693	634	684	662	653	679	709	731	711

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Baitfishes	H	220	221	221	221	223	221	220	220	221	221
	R	125	125	125	125	125	125	125	125	125	125
Flatfishes	H	20	22	20	16	14	15	17	18	15	17
	R	6	6	8	9	4	5	5	6	5	5
Greenlings	H	102	99	98	96	109	120	132	154	124	136
	R	76	69	72	75	86	92	90	95	77	87
Rockfishes	H	295	284	270	326	343	258	284	364	380	521
	R	28	26	35	38	42	33	32	41	39	69
Salmon[3]	H	27	68	14	91	23	24	35	45	118	38
	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sculpins	H	15	15	16	16	16	16	15	14	12	13
	R	57	59	58	58	61	61	61	63	60	60
Sturgeon	H	12	12	12	12	12	12	12	12	12	12
	R	25	25	25	25	25	25	25	25	25	25
Surfperches	H	118	118	118	118	118	118	118	118	118	118
	R	39	39	39	39	39	39	39	39	39	39

[1] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.
[2] NA = not available.
[3] Salmon estimates exclude release mortality.

2014 Oregon State Economy (% of national total)[1]

	Establishments	Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	109,875 (1.5%)	1,444,041 (1.2%)	65.71 (1.1%)	104.78 (1.1%)	212.81 (1.2%)	3.99

Seafood Sales & Processing - Non-Employer Firms (thousands of dollars)[3]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	7	ds	19	15	15	16	14	11	11
	Receipts	54	ds	957	466	510	467	346	319	484
Seafood sales, retail	Firms	11	11	16	12	15	16	11	ds	16
	Receipts	914	1,210	2,101	1,140	1,907	1,896	1,600	ds	1,036

Seafood Sales & Processing - Employer Establishments (thousands of dollars)[3]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	21	22	23	20	21	22	18	19	20
	Employees	896	819	850	812	806	805	934	907	980
	Payroll	25,881	27,394	27,616	26,202	27,007	32,438	31,970	37,265	39,290
Seafood sales, wholesale	Establishments	16	18	18	19	22	27	21	19	22
	Employees	ds	ds	ds	ds	ds	ds	180	189	192
	Payroll	ds	ds	ds	ds	ds	ds	7,602	8,065	8,601
Seafood sales, retail	Establishments	22	23	21	23	21	20	18	20	23
	Employees	306	171	178	151	162	163	126	147	170
	Payroll	3,294	3,185	3,370	3,515	3,651	3,613	2,851	4,238	4,440

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	9	13	8	9	8	8	8	7	8
	Employees	ds	476	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	25,206	ds	ds	ds	ds	ds	ds	ds
Deep sea freight transportation	Establishments	6	5	4	3	3	3	3	3	2
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Deep sea passenger transportation	Establishments	0	2	0	0	0	0	0	0	0
	Employees	NA	ds	NA	NA	NA	NA	NA	NA	NA
	Payroll	NA	ds	NA	NA	NA	NA	NA	NA	NA
Marinas	Establishments	37	38	37	33	30	33	32	34	34
	Employees	ds	138	106	109	102	102	119	104	113
	Payroll	ds	3,754	2,178	2,602	2,290	2,382	3,034	3,148	3,584
Marine cargo handling	Establishments	9	9	13	13	12	13	5	8	7
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Navigational services to shipping	Establishments	20	17	20	17	18	18	20	15	15
	Employees	ds	183	200	189	144	152	176	81	67
	Payroll	ds	11,331	11,808	10,154	9,577	9,592	12,219	6,534	3,958
Port & harbor operations	Establishments	0	2	1	1	3	3	10	5	5
	Employees	NA	ds	ds	ds	ds	ds	90	ds	ds
	Payroll	NA	ds	ds	ds	ds	ds	6,512	ds	ds
Ship & boat building	Establishments	41	40	41	35	34	34	33	32	30
	Employees	1,230	1,441	1,692	1,886	980	1,179	1,504	1,406	ds
	Payroll	43,416	47,950	74,583	90,446	42,004	55,068	77,718	79,913	ds

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 les commercial fishing occurs in this state than the national average.
[3] ds = these data are suppressed.
[4] NA = not applicable.

Tables | Washington

2015 Economic Impacts of the Washington Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	50,859	6,855,269	1,818,420	2,778,187	22,887	1,648,356	681,162	921,935
Commercial Harvesters	6,469	597,359	254,216	358,232	6,469	597,359	254,216	358,232
Seafood Processors & Dealers	12,997	1,385,108	520,226	688,440	2,548	271,576	102,000	134,981
Importers	11,578	3,581,160	573,949	1,091,694	0	0	0	0
Seafood Wholesalers & Distributors	2,192	315,783	105,800	144,347	774	111,573	37,381	51,001
Retail	18,757	961,950	414,726	544,615	13,095	667,848	287,565	377,721

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	217,030	216,119	232,841	227,773	255,332	329,785	275,585	335,450	329,109	299,952
Finfish & Other	69,309	60,137	69,445	62,173	84,269	102,481	96,026	100,844	90,855	73,583
Shellfish	147,721	155,981	163,396	165,600	171,063	227,305	179,560	234,606	238,254	226,368
Key Species										
Clams	55,786	56,428	64,142	72,647	73,625	88,774	69,445	83,788	83,643	75,342
Crab	43,464	54,302	53,712	48,944	57,070	83,627	59,485	86,520	80,509	72,651
Hake (Whiting)	7,296	7,121	7,249	2,334	4,105	7,183	5,882	7,452	5,431	2,563
Halibut	8,303	8,842	7,525	4,879	5,764	6,740	6,122	4,929	6,985	6,199
Mussels	6,564	3,820	5,293	4,851	4,318	4,740	6,065	9,253	6,830	7,704
Oysters	38,302	37,437	34,794	34,993	30,370	43,021	37,576	46,378	47,555	37,507
Sablefish	8,307	6,608	7,312	8,796	9,402	12,378	7,578	4,888	7,098	7,020
Salmon	24,586	22,026	23,376	22,003	40,622	42,434	28,398	42,376	39,174	28,235
Shrimp	3,602	3,746	5,380	4,139	5,677	7,140	6,986	8,664	19,704	33,152
Tuna, albacore	15,176	10,439	17,225	16,390	14,575	22,253	28,440	24,745	21,177	19,961

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	241,606	194,449	173,176	163,937	189,486	210,282	213,578	263,639	191,391	153,568
Finfish & Other	192,358	152,221	128,825	121,060	143,705	159,034	174,597	207,194	126,364	85,300
Shellfish	49,248	42,228	44,351	42,877	45,782	51,248	38,982	56,445	65,027	68,268
Key Species										
Clams	4,618	3,363	4,071	4,267	3,876	4,038	3,677	3,978	4,320	4,262
Crab	24,619	22,487	21,355	20,651	22,500	27,072	16,590	28,046	19,335	15,048
Hake (Whiting)	120,058	91,272	67,159	36,378	58,900	73,494	38,524	58,696	49,654	32,977
Halibut	2,451	2,428	2,055	1,731	1,371	1,301	1,295	1,065	1,284	1,157
Mussels	774	475	593	568	589	547	559	734	579	600
Oysters	12,306	11,189	10,258	9,386	8,650	9,389	8,143	9,420	9,329	5,911
Sablefish	4,259	3,035	2,954	3,514	3,277	3,410	2,916	2,006	2,345	2,317
Salmon	26,570	21,938	17,641	31,821	28,086	38,706	19,839	49,050	28,256	21,654
Shrimp	6,926	4,455	7,355	7,775	10,153	10,193	10,009	14,259	31,441	42,423
Tuna, albacore	19,133	13,129	14,801	16,112	13,148	13,209	19,275	17,552	18,039	17,133

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Clams	12.08	16.78	15.76	17.03	18.99	21.98	18.89	21.06	19.36	17.68
Crab	1.77	2.41	2.52	2.37	2.54	3.09	3.59	3.08	4.16	4.83
Hake (Whiting)	0.06	0.08	0.11	0.06	0.07	0.10	0.15	0.13	0.11	0.08
Halibut	3.39	3.64	3.66	2.82	4.20	5.18	4.73	4.63	5.44	5.36
Mussels	8.48	8.05	8.93	8.54	7.33	8.66	10.85	12.6	11.79	12.85
Oysters	3.11	3.35	3.39	3.73	3.51	4.58	4.61	4.92	5.10	6.34
Sablefish	1.95	2.18	2.48	2.50	2.87	3.63	2.60	2.44	3.03	3.03
Salmon	0.93	1.00	1.33	0.69	1.45	1.10	1.43	0.86	1.39	1.30
Shrimp	0.52	0.84	0.73	0.53	0.56	0.70	0.70	0.61	0.63	0.78
Tuna, albacore	0.79	0.80	1.16	1.02	1.11	1.68	1.48	1.41	1.17	1.17

2015 Economic Impacts of Washington Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	306	46,490	17,734	26,573
	Private Boat	766	129,638	36,630	64,766
	Shore	206	30,034	9,516	16,245
Total Durable Expenditures		5,221	568,574	233,152	375,164
Total State Economic Impacts		6,499	774,736	297,032	482,748

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	27,623
Private Boat	106,174
Shore	23,612
Total	157,409

Equipment	Durable Goods Expenditures
Fishing Tackle	73,462
Other Equipment	36,891
Boat Expenses	384,746
Vehicle Expenses	34,793
Second Home Expenses	0
Total Durable Expenditures	529,892

Total State Trip and Durable Goods Expenditures	687,301

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	223	219	193	302	214	242	241	261	241	245
Non-Coastal	26	26	22	30	24	26	26	27	27	27
Out-of-State	20	20	17	23	19	20	20	21	21	21
Total Anglers	269	265	232	355	257	288	287	309	289	293

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	86	83	62	79	71	74	73	75	87	81
Private	642	630	531	1,010	618	742	741	827	724	748
Shore	512	512	512	512	512	512	512	512	512	512
Total Trips	1,240	1,224	1,105	1,601	1,201	1,327	1,326	1,414	1,323	1,342

Harvest (H) & Release (R) of Key Species Species Groups (thousands of fish)[1,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Baitfishes	H	2,486	2,486	2,486	2,486	2,486	2,486	2,486	2,486	2,486	2,486
	R	126	126	126	126	126	126	126	126	126	126
Flatfishes	H	64	51	51	53	50	51	52	53	55	54
	R	42	40	40	43	41	41	41	42	42	42
Greenlings	H	38	32	32	37	39	49	50	48	49	44
	R	25	21	20	25	27	34	27	21	21	19
Rockfishes	H	277	254	210	235	211	231	255	271	301	324
	R	21	16	13	18	20	17	17	18	23	20
Salmon[3]	H	47	93	33	150	73	69	65	75	159	106
	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sculpins	H	17	16	16	17	16	17	16	16	16	16
	R	91	91	91	91	91	91	91	91	91	91
Sharks & Skates	H	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	R	10	5	7	5	3	1	3	2	4	4
Sturgeon[3]	H	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Surfperches	H	134	133	134	133	133	133	134	134	134	133
	R	122	121	121	121	121	121	121	121	121	121

[1] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.
[2] This species may not be equivalent to species with similar names listed in the commercial tables
[3] Data on sturgeon harvest not available for 2006-2015; Salmon harvest estimates exclude release mortality.
[4] NA = not available.

2014 Washington State Economy (% of national total)[1,3]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	179,012 (2.4%)	2,528,874 (2.1%)	141.28 (2.4%)	224.43 (2.4%)	422.88 (2.5%)	ds

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	53	63	44	47	39	37	42	42	51
	Receipts	4,149	4,698	5,167	5,022	4,228	3,859	4,377	4,094	5,270
Seafood sales, retail	Firms	29	32	33	42	30	34	42	41	36
	Receipts	1,727	1,458	1,807	2,462	1,273	2,370	1,871	3,017	2,559

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	96	98	96	86	93	90	90	86	90
	Employees	5,705	5,249	5,893	4,860	5,296	5,387	6,118	6,224	5,945
	Payroll	255,129	275,662	306,213	232,543	254,592	293,112	326,827	315,379	329,739
Seafood sales, wholesale	Establishments	115	127	107	108	105	107	101	116	119
	Employees	1,015	1,086	996	1,103	970	911	1,085	999	1,098
	Payroll	42,934	46,085	48,251	48,044	45,871	45,543	51,508	49,683	52,761
Seafood sales, retail	Establishments	49	50	44	43	47	44	40	35	33
	Employees	292	244	247	239	282	253	256	266	276
	Payroll	8,998	8,001	7,947	8,324	9,098	7,786	8,210	9,069	9,938

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	43	37	24	24	30	28	28	35	38
	Employees	2,353	1,903	2,222	2,245	1,731	1,684	1,557	2,186	2,020
	Payroll	145,144	136,543	168,832	168,783	130,398	132,068	126,401	170,003	163,075
Deep sea freight transportation	Establishments	23	30	21	25	20	14	12	8	8
	Employees	197	227	263	305	209	ds	ds	200	204
	Payroll	14,390	19,692	24,843	28,897	24,711	ds	14,014	14,892	14,991
Deep sea passenger transportation	Establishments	3	3	4	5	4	2	2	5	4
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	1,412
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	54,346
Marinas	Establishments	103	114	116	110	117	114	100	110	106
	Employees	466	485	573	570	560	517	479	529	530
	Payroll	14,269	15,623	18,931	18,811	18,783	18,364	18,038	18,914	20,348
Marine cargo handling	Establishments	29	28	25	27	26	32	13	30	29
	Employees	3,764	4,913	4,821	2,953	ds	3,910	ds	ds	ds
	Payroll	303,375	334,601	334,193	239,490	ds	323,286	ds	ds	ds
Navigational services to shipping	Establishments	56	61	76	69	79	78	72	73	71
	Employees	942	950	1,213	1,168	1,225	1,207	ds	ds	1,297
	Payroll	72,120	72,912	100,542	102,934	102,766	94,781	ds	ds	101,251
Port & harbor operations	Establishments	5	6	11	11	9	9	48	28	27
	Employees	53	129	111	118	74	75	1,509	181	304
	Payroll	3,436	4,631	6,359	6,437	4,662	4,937	85,042	11,894	16,449
Ship & boat building	Establishments	164	167	169	162	152	135	141	138	131
	Employees	7,669	7,742	8,067	6,710	5,406	5,232	5,294	5,387	5,060
	Payroll	313,230	354,084	402,253	312,240	284,759	276,402	290,400	273,825	262,730

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 les commercial fishing occurs in this state than the national average.
[3] ds = these data are suppressed.
[4] NA = not applicable.

Western Pacific Region

- Hawai‘i

Long-tail Red Snapper (Onaga) and Redfin Jobfish (Lehi)
(photo credit: Allen Shimada, NOAA Fisheries Office of Science and Technology)

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

Because fishery data are limited in most of these areas, only information for the Hawai'i and Western Pacific Pelagics fisheries is reported here. No catch share programs operate 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, bigeye tuna, Pacific bluefin tuna, swordfish, and the Central Western Pacific striped marlin stock are considered subject to overfishing. The Central Western 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) have 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.

Policy Updates

The Hawai'i-based pelagic longline fleet accounts for most of the U.S. longline catch of bigeye tuna in the WCPO. The 2015 bigeye catch limit for U.S. longline vessels was set at 3,502 metric tons. NOAA Fisheries projected that the fishery would reach the limit on August 5, 2015, after which the fleet would no longer be able to retain and land bigeye tuna unless NOAA Fisheries authorized specified fishing agreements with U.S. Territories before the end of the year. On October 9, 2015, the U.S. longline vessels that signed onto a specified fishing agreement with CNMI could collectively fish up to 1,000 metric tons and attribute the catch to CNMI. The U.S. longline vessels that signed onto a specified fishing agreement with Guam could fish up to 1,000 metric tons and attribute that catch to Guam, effective November 6, 2015.

On February 3, 2016, NOAA Fisheries published a final rule allowing large federally permitted U.S. longline vessels to fish in certain areas of the American Samoa Large Vessel Prohibited Area (LVPA). The LVPA was established in 2002 to prevent the potential for gear conflicts and catch competition between large and small fishing vessels. However, the American Samoa pelagic fisheries had changed so that the conditions that led to the establishment of the LVPA appeared to no longer exist. This action had allowed fishing in an additional 16,817 nm2 of federal waters. On March 20, 2017, a U.S. federal judge in American Samoa v. National Marine Fisheries Service,

16-cv-00095 (D.Haw) issued an order that vacates and sets aside the regulations at 50 CFR 665.818(b), therefore, disallowing large federally permitted U.S. longline vessels to fish within the LVPA.

COMMERCIAL FISHERIES

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. It does not include saltwater anglers that 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/species groups.

Key Western Pacific Commercial Species

- Lobsters
- Mahimahi
- Marlin
- Moonfish
- Pomfret
- Scad
- Snappers
- Swordfish
- Tunas
- Wahoo

Economic Impacts

The premise behind economic impact modeling is that every dollar spent in a regional economy (direct impact) is either saved or respent on additional goods or services. If those dollars are respent on other goods and services in the regional economy, this spending generates additional economic activity in the region. 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 seafood businesses and its full supply chain are included). That is, impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

Four different measures are commonly used to show commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. Sales refer to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. It 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 types of measures are calculated in terms of dollars, whereas employment impacts are measured in terms of 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.[1]

In 2015, the commercial fishing and seafood industry in the state of Hawai'i generated $814 million in sales impacts, $247 million in income impacts, $362 million in value-added impacts, and 9,000 full- and part-time jobs. The retail sector generated the largest employment impacts across sectors (3,700 jobs). The importers sector generated the largest sales impacts ($323 billion), the retail sector generated the largest income impacts ($91 million), and the retail sector generated the largest value-added impacts ($118 million).

Landings Trends

Landings and landings revenue trends for the 2006 to 2015 period can be understood only after considering the growth of the tuna fishery. Hawai'i accounted for 61 percent of all tuna landings revenue in the U.S. in 2015, earning $84 million for its catch. From 2006 to 2015, tuna revenue increased $39 million, increasing 88 percent. Bigeye tuna dominated Hawai'i's landings revenue in 2015 at $11 million, an increase of $25 million from 2006 and a $10 million increase from 2014. Bigeye tuna accounted for at least 50 percent of Hawai'i's landings revenue each year from 2006 to 2015.

Landings Revenue

In 2015, landings revenue totaled about $111 million, a

Landings Revenue: Largest Increases

From 2006:
- Pomfret (123%, 87% in real terms)
- Tunas (88%, 58% in real terms)
- Moonfish (opah) (65%, 43% in real terms)

From 2014:
- Pomfret (20%)
- Scad (18%)
- Tunas (14%)

Landings Revenue: Largest Decreases

From 2006:
- Lobster (-20%, -91% in real terms)
- Swordfish (-12%, -44% in real terms)

From 2014:
- Lobster (-54%)
- Swordfish (-14%)
- Snappers (-8%)

Landings: Largest Increases

From 2006:
- Pomfret (133%)
- Moonfish (opah) (89%)
- Tunas (60%)

From 2014:
- Tunas (16%)
- Marlin (15%)
- Scad (15%)

Landings: Largest Decreases

From 2006:
- Lobster (-33%)
- Swordfish (-21%)
- Snappers (-11%)

From 2014:
- Lobster (-60%)
- Swordfish (-18%)
- Mahi-mahi (dolphin) (-18%)

66% increase from 2006 (a 47% increase in real terms after adjusting for inflation) and a 10% increase from 2014. Finfish landings revenue accounted for more than 99% of all landings revenue. In 2015, tunas ($84 million), swordfish ($5 million), and mahi-mahi (dolphin, $5 million) dominated landings revenue. From 2006 to 2015, pomfret (123%, 87% in real terms); tunas (88%, 58% in real terms); and moonfish (opah, 65%, 43% in real terms) had the largest revenue increases, while lobster (-20%, -91% in real terms) and swordfish (-12%, -24% in real terms) had the largest decreases. From 2014 to 2015, pomfret (20%), scad (18%), and tunas (14%) had the largest revenue increases, while lobster (-54%), swordfish (-14%), and snappers (-8%) had the largest decreases.

Landings

In 2015, commercial fishermen in the Western Pacific Region landed more than 36 million pounds of finfish and shellfish in the state of Hawai'i. This represents a 41% increase from 2006 and a 9% increase from 2014. Tunas contributed the most to landings, accounting for 64% of total landings. From 2006 to 2015, pomfret (133%); moonfish (opah, 89%); and tunas (60%) had the largest landings increases, while lobster (-33%), swordfish (-21%), and snappers (-11%) had the largest decreases. From 2014 to 2015, tunas (16%), marlin (15%), and scad (15%) had the largest landings increases, while lobster (-60%), swordfish (-18%), and mahi-mahi (dolphin, -18%) had the largest decreases.

Price

In 2015, snappers ($6.31 per pound) received the highest ex-vessel price in Hawai'i. Landings of marlin ($1.16 per pound) had the lowest ex-vessel price. From 2006 to 2015, scad (41%, 18% in real terms); snappers (31%, 12% in real terms); and mahi-mahi (dolphin, 23%, 2% in real terms) had the largest price increases, while moonfish (opah, -13%, -24% in real terms); pomfret (-4%, -22% in real terms); and wahoo (-3%, -19% in real terms) had the largest decreases. From 2014 to 2015, mahi-mahi (dolphin, 27%); pomfret (10%); and lobster (7%) had the largest price increases, while marlin (-16%), wahoo (-5%), and tunas (-2%) had the largest decreases.

RECREATIONAL FISHERIES

In this report, recreational fisheries refer to fishing for fun rather than to resell fish (commercial fishing) or for subsistence. The recreational fisheries section reports on

Key Western Pacific Recreational Species

- Blue marlin
- Dolphinfish
- Goatfishes
- Trevallys and other jacks
- Bigeye and mackerel scad
- Skipjack tuna
- Smallmouth bonefish
- Snappers
- Wahoo
- Yellowfin tuna

economic impacts and expenditures, angler participation, trips, and catch of key species/species groups.

Economic Impacts and Expenditures

The contribution of recreational fishing activities[2] in the United States are reported in terms of economic impacts from angler expenditures. Total annual trip expenditures are estimated by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore). Total annual durable expenditures are estimated by multiplying mean durable expenditures by the estimated annual number of adult participants in a given state.

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. Sales refer 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. 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- 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 terms of 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.

Note that no information is available for durable goods expenditures related to recreational fishing in Hawai'i.

Economic impacts from recreational fishing activities in Hawai'i totaled 934 jobs in 2015 and generated $119 million in sales, $37 million in income, and $60 million in value-added impacts. Of the three fishing trip modes, trips in the shore fishing mode had the greatest economic impact, accounting for 49% of employment impacts.

Expenditures for fishing trips in Hawai'i in 2015 totaled more than $97 million. A large portion of these trip expenditures came from trips in the shore (48%) and private boat (28%) sectors.

Fishing Trips

In 2015, recreational fishermen took 1.4 million saltwater fishing trips in the state of Hawai'i. This number was a 46% decrease from 2006 and a 4% increase from 2015. Of this total, 81% of fishing trips were taken from the shore sector.

Participation

The state of Hawai'i has not kept track of participation in recreational fisheries since 2006.

Harvest and Release

Of Hawai'i's key species and species groups, scads (bigeye and mackerel, 1.2 million fish), goatfishes (829,000 fish), and jacks (trevallys and other jacks, 485,000 fish) were most frequently caught by recreational anglers. From 2006 to 2015, yellowfin tuna (136%); scads (bigeye and mackerel, 53%); and blue marlin (47%) had the largest increases in catch, while dolphinfish (mahi-mahi, -64%); snappers (-43%); and smallmouth bonefish (-34%) had the largest decreases. From 2014 to 2015, blue marlin (80%); goatfishes (73%); and scads (bigeye and mackerel, 39%) had the largest increases in catch, while snappers (-50%); dolphinfish (mahi-mahi, -15%); and smallmouth bonefish (-10%) had the largest decreases.

MARINE ECONOMY

For this report, the marine economy refers to the economic activity generated by fishing and marine-

[2] Trip expenditure estimates were generated from the 2011 National Marine Recreational Fishing Expenditure Survey. Durable good expenditure impacts were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (see http://www.st.nmfs.noaa.gov/economics/fisheries/recreational/Marine-Angler-Durable-Expenditures/2014-durable-expenditures-survey). Economic impacts from recreational fishing activities were generated using the NMFS Recreational Economic Impact Model (see The Economic Contribution of Marine Angler Expenditures in the United States, 2011, available at http://www.st.nmfs.noaa.gov/economics/publications/marine-angler-expenditures/marine-angler-2011).

Recreational Catch: Largest Increases

From 2006:
- Yellowfin tuna (136%)
- Scads (bigeye and mackerel) (53%)
- Blue marlin (47%)

From 2014:
- Blue marlin (80%)
- Goatfishes (73%)
- Scads (bigeye and mackerel) (39%)

Recreational Catch: Largest Decreases

From 2006:
- Dolphinfish (mahi-mahi) (-64%)
- Snappers (-43%)
- Smallmouth bonefish (-34%)

From 2014:
- Snappers (-50%)
- Dolphinfish (mahi-mahi) (-15%)
- Smallmouth bonefish (-10%)

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) transport, support, and marine operations (employer establishments). These sectors include several different marine-related industries.[3,4]

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[5], researchers use an index called the Commercial Fishing Location Quotient (CFLQ). 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's CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state's CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average.

In 2014, the CFLQ for Hawai'i was 4.28. Hawai'i's CFLQ suggests that the level of employment in industries related to commercial fishing in this state is approximately 4.28 times higher than the level of employment in these industries nationwide.
In 2014, 32,000 establishments operated throughout Hawai'i (including marine and non-marine-related establishments). These establishments employed 519,000 workers and had a total annual payroll of almost $21 billion. The region's gross domestic product was approximately $76 billion in 2014.

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2014, there were 14 non-employer firms (a 27% increase from 2006) and annual receipts totaled $1 million (a 10% decrease from 2006 in real terms).

There were 2 employer establishments (a 33% decrease from 2006) in 2014. The number of employees and payroll was suppressed for confidentiality purposes for this sector.

Seafood Sales, Retail: In 2014, there were 38 non-employer firms (a 23% increase from 2006) and annual receipts totaled $3.7 million (a 10% decrease from 2006 in real terms).

There were 26 employer establishments (a 4% decrease from 2006) in 2014. These establishments employed 305 workers (a 3% decrease from 2006) and had a total annual payroll of $7.1 million (a 12% increase from 2006 in real terms).

Seafood Sales, Wholesale: There were 30 establishments (a 9% decrease from 2006) in 2014. These establishments employed 567 workers (a 23% increase from 2006) and had a total annual payroll of $21 million (an 11% increase from 2006 in real terms).

Transport, Support, and Marine Operations

Data for the Transport, Support, and Marine Operations sector of Hawai'i'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, Marine Cargo Handling contributed 700 jobs and more than $66 million in payroll to the regional economy in 2014.

[3] Unless otherwise stated, data is from the U.S. Census Bureau, http://censtats.census.gov/ (accessed May 31, 2016).
[4] U.S. Bureau of Economic Analysis, "Table 1.1.5 Gross Domestic Product" and "Table SA6N Compensation of Employees by NAICS Industry," http://www.bea.gov/iTable/index_nipa.cfm (accessed May 31, 2016).
[5] U.S. Bureau of Labor Statistics, "Location Quotient Calculator," http://data.bls.gov/location_quotient/ (accessed May 31, 2016).

Tables | Hawai‘i

2015 Economic Impacts of the Hawai'i Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	8,957	814,120	247,107	362,087	6,802	411,129	162,717	221,055
Commercial Harvesters	3,218	180,060	65,574	94,329	3,218	180,060	65,574	94,329
Seafood Processors & Dealers	528	51,667	20,452	26,378	374	36,531	14,461	18,650
Importers	1,044	322,907	51,752	98,436	0	0	0	0
Seafood Wholesalers & Distributors	502	53,106	18,626	24,777	283	29,941	10,501	13,969
Retail	3,665	206,380	90,703	118,167	2,928	164,597	72,181	94,107

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	66,780	75,690	84,877	71,202	84,044	91,565	112,300	107,979	101,249	110,885
Finfish & Other	66,569	75,426	84,556	70,856	83,700	91,274	111,865	107,413	100,754	110,607
Shellfish	211	264	321	347	343	291	435	567	495	278
Key Species										
Lobsters	60	93	120	136	117	104	98	95	105	48
Mahimahi (dolphin)	3,630	3,483	3,174	2,853	3,303	4,314	5,309	4,130	4,412	4,596
Marlin	2,581	2,028	2,072	2,142	1,756	2,375	2,888	2,802	3,197	3,103
Moonfish (opah)	1,906	2,171	2,198	2,409	2,591	2,853	3,163	3,203	2,910	3,151
Pomfret	1,328	1,461	1,662	1,381	1,549	1,449	2,097	2,576	2,466	2,968
Scad	999	1,094	889	1,198	1,251	964	1,181	1,147	1,128	1333
Snappers	1,750	1,690	1,715	1,860	1,681	1,415	1,738	2,003	2,223	2,046
Swordfish	5,237	7,730	7,177	7,336	7,303	6,669	6,693	4,493	5,405	4,633
Tunas	44,630	51,171	60,863	47,710	59,775	66,628	83,298	81,819	73,657	83,742
Wahoo	2,330	2,085	2,225	1,673	1,746	1,806	2,330	2,375	2,800	2,795

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	26,021	28,934	30,652	26,906	28,069	29,289	31,048	32,447	33,474	36,643
Finfish & Other	25,983	28,890	30,599	26,849	28,007	29,240	30,968	32,346	33,387	36,605
Shellfish	38	44	52	57	62	49	79	101	86	38
Key Species										
Lobsters	6	8	10	11	9	10	8	9	10	4
Mahimahi (dolphin)	1,337	1,388	1,250	1,287	1,518	1,423	1,746	1,515	1,689	1,385
Marlin	2,477	1,375	1,952	1,677	1,221	1,826	1,459	1,935	2,318	2,675
Moonfish (opah)	1,093	1,226	1,313	1,884	1,824	1,564	1,549	2,072	2,004	2,067
Pomfret	584	593	671	627	593	427	731	1,142	1,243	1,361
Scad	432	461	318	405	460	323	383	361	356	410
Snappers	378	381	378	391	342	269	308	357	369	338
Swordfish	2,602	3,643	3,835	3,881	3,153	2,592	2,381	1,674	2,480	2,046
Tunas	14,799	17,594	18,295	14,594	16,706	18,519	20,147	20,900	20,296	23,613
Wahoo	893	715	849	605	600	564	652	744	1,056	1,103

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Lobsters	9.63	11.84	12.14	12.37	12.36	10.39	11.84	10.71	10.21	10.97
Mahimahi (dolphin)	2.71	2.51	2.54	2.22	2.18	3.03	3.04	2.73	2.61	3.32
Marlin	1.04	1.47	1.06	1.28	1.44	1.30	1.98	1.45	1.38	1.16
Moonfish (opah)	1.74	1.77	1.67	1.28	1.42	1.82	2.04	1.55	1.45	1.52
Pomfret	2.27	2.46	2.48	2.20	2.61	3.39	2.87	2.25	1.98	2.18
Scad	2.31	2.37	2.80	2.95	2.72	2.98	3.08	3.18	3.17	3.25
Snappers	4.62	4.44	4.54	4.76	4.92	5.26	5.65	5.60	6.03	6.06
Swordfish	2.01	2.12	1.87	1.89	2.32	2.57	2.81	2.68	2.18	2.26
Tunas	3.02	2.91	3.33	3.27	3.58	3.60	4.13	3.91	3.63	3.55
Wahoo	2.61	2.92	2.62	2.77	2.91	3.20	3.57	3.19	2.65	2.53

2015 Economic Impacts of Hawai'i Recreational Fishing Expenditures (thousands of dollars)[1]

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	291	36,020	13,088	21,149
	Private Boat	183	29,750	7,519	12,478
	Shore	460	53,494	15,897	26,794
Total Durable Expenditures		0	0	0	0
Total State Economic Impacts		934	119,264	36,504	60,421

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)[1]

Fishing Mode	Trip Expenditures
For-Hire	23,164
Private Boat	27,244
Shore	47,173
Total	97,581

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	97,581

Recreational Anglers by Residential Area (thousands of anglers)[2, 3]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	173									
Non-Coastal	0									
Out-of-State	224									
Total Anglers	397									

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Private	570	475	564	441	484	224	325	297	324	273
Shore	2,074	2,102	1,966	1,722	1,907	1,158	1,195	1,216	1,051	1,158
Total Trips	2,644	2,577	2,531	2,163	2,390	1,382	1,519	1,513	1,374	1,431

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Blue marlin	H	3	2	11	3	1	2	3	4	3	5
	R	0	< 1	0	< 1	0	0	0	0	< 1	0
Dolphinfish (mahimahi)	H	219	136	184	103	164	63	163	94	92	78
	R	< 1	< 1	0	0	0	0	0	0	< 1	0
Goatfishes[5]	H	783	265	457	686	236	141	148	826	458	815
	R	11	9	5	6	12	13	13	3	22	14
Jacks (trevallys and other jacks)[6]	H	208	169	199	123	138	97	107	140	150	168
	R	210	130	120	85	126	59	129	126	263	317
Scads (bigeye and mackerel)	H	812	1,089	402	1,102	840	662	608	889	899	1,245
	R	0	0	0	0	0	0	0	2	0	< 1
Skipjack tuna	H	201	228	568	230	289	125	197	380	199	268
	R	1	5	2	0	0	< 1	0	0	0	< 1
Smallmouth bonefish	H	63	20	50	37	55	13	27	23	29	26
	R	2	13	4	2	13	2	8	10	20	17
Snappers[7]	H	126	83	112	125	295	86	137	127	184	84
	R	36	38	7	19	25	3	14	8	3	8
Wahoo	H	62	57	78	61	41	15	32	37	43	55
	R	0	< 1	0	0	0	0	0	0	< 1	< 1
Yellowfin tuna	H	124	273	461	198	302	141	182	150	220	292
	R	< 1	2	0	1	1	0	0	0	< 1	1

[1] NA = not available.
[2] Participation (number of anglers) data are not available for 2007 through 2014.
[3] Data is not available because all Hawai'i residents are considered coastal county residents.
[4] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.
[5] Goatfishes include yellowstripe, yellowfin, pfulgers, bandtail, doublebar, diespot, whitesaddle, manybar, blue and 'Goastfish famil/genus'.
[6] Trevallys & other jacks includes bluefin trevally, giant trevally, bigeye trevally, black trevally, African pompano, greater amberjack, island jack, and other species in the jack family.
[7] Snappers include bluestip, blacktail, ruby, longtailed, pink, VonSiebolds, Binghams, green jobfish, ironjaw and smalltooth jobfish.

2014 Hawai'i State Economy (% of national total)[1]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	31,801 (0.4%)	519,130 (0.4%)	20.85 (0.4%)	42.57 (0.5%)	76.17 (0.4%)	4.28

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	11	10	9	7	11	14	14	16	14
	Receipts	1,011	1,023	1,020	712	741	866	965	821	1,048
Seafood sales, retail	Firms	31	41	37	35	37	39	42	40	38
	Receipts	3,627	4,353	4,394	3,666	4,124	3,558	4,086	3,764	3,727

Seafood Sales & Processing - Employer Establishments (thousands of dollars)[3]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	3	1	1	1	1	1	2	2	2
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Seafood sales, wholesale	Establishments	33	36	37	38	37	40	33	32	30
	Employees	462	550	695	538	531	538	483	542	567
	Payroll	16,786	18,932	20,665	19,347	19,290	19,416	19,413	20,039	21,369
Seafood sales, retail	Establishments	27	25	25	25	24	25	24	25	26
	Employees	315	393	173	158	177	187	303	318	305
	Payroll	5,564	7,209	3,674	3,559	3,533	3,521	6,493	7,366	7,142

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	13	11	5	5	2	2	5	5	6
	Employees	543	557	478	475	ds	ds	431	ds	ds
	Payroll	36,941	36,635	34,544	34,367	ds	ds	34,538	ds	ds
Deep sea freight transportation	Establishments	0	0	1	0	1	1	2	1	1
	Employees	NA	NA	ds	NA	ds	ds	ds	ds	ds
	Payroll	NA	NA	ds	NA	ds	ds	ds	ds	ds
Deep sea passenger transportation	Establishments	2	1	1	1	1	1	1	1	1
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Marinas	Establishments	9	11	9	10	13	13	9	11	9
	Employees	152	167	156	164	189	208	162	166	153
	Payroll	3,719	4,151	4,317	4,368	5,362	5,237	3,779	4,003	3,304
Marine cargo handling	Establishments	7	8	11	11	14	14	11	10	10
	Employees	ds	1,048	1,098	1,075	1,236	1,278	664	709	700
	Payroll	ds	87,770	89,104	87,833	109,059	109,134	54,309	61,651	66,034
Navigational services to shipping	Establishments	6	8	11	11	11	8	8	9	9
	Employees	ds	ds	105	120	90	105	97	100	80
	Payroll	ds	3,340	5,846	5,258	5,113	5,310	5,567	6,518	5,416
Port & harbor operations	Establishments	2	2	4	3	2	2	2	1	1
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	3,218	2,031	ds	ds	ds	ds	ds
Ship & boat building	Establishments	14	13	14	13	15	15	18	18	14
	Employees	545	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	23,134	ds	ds	ds	ds	ds	ds	ds	ds

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[2] The US Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ less than (greater than) 1 implies that there is less (more) commercial fishing in this state than the national average.
[3] ds = these data are suppressed.
[4] NA = not applicable.

New England Region

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

Pigeon Cove, Rockport, MA
(photo credit: Denise Johnson)

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

Fourteen of the stocks or stock complexes covered in these FMPs were listed as overfished in 2015: Atlantic cod (two stocks), Atlantic halibut, Atlantic salmon, Atlantic wolffish, ocean pout, thorny skate, windowpane flounder, winter flounder (two stocks), witch flounder, and yellowtail flounder (three stocks). Seven stocks or stock complexes are currently subject to overfishing: Atlantic cod (two stocks), witch flounder, yellowtail flounder (three stocks), and winter flounder (Georges Bank stock).

Catch Share Programs

Two catch share programs operate in the New England Region: 1) Northeast Multi-Species Sectors; and 2) Northeast General Category Atlantic Sea Scallop Individual Fishing Quota (IFQ) Program. Following are descriptions of these catch share programs and their performance.

Northeast Multi-species 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 key performance indicators of this program show that compared with the baseline period (the 3-year period prior to implementation), the following 2014 metrics decreased: quotas, landings, number of active vessels, and inflation-adjusted revenue for catch share species. On the other hand, inflation-adjusted revenue per vessel increased during this period.

Northeast General Category Atlantic 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 key performance indicators of this program show that 2014 inflation-adjusted revenue and revenue per vessel increased. However, landings, quota, and the number of active vessels decreased compared with the baseline period.

Policy Updates

In January 2015, NOAA Fisheries approved a final rule that implements conservation measures for the Southern New England stock of American lobster, as recommended by the Atlantic States Marine Fisheries Commission. These measures were taken to conserve the severely depleted stock and included increasing the minimum carapace size increase to 3 17/32 inches in fishing year (FY) 2015, seasonal closures and a fishing trap reduction schedule. Beginning in FY 2016, the number of allowable traps will be reduced 25% in Area 2 (Southern New England waters primarily off Rhode Island and Southern Massachusetts) and 5% in offshore Area 3 (offshore fishery from Maine to North Carolina) and then ratcheted down 5% each year through FY2020 in Area 3 and through FY2021 in Area 2. In June 2015, NOAA Fisheries announced a lobster trap transfer program that applies to Area 2, the Outer Cape Cod Area, and Area 3. This program allows qualified vessels to buy and sell individual traps to a specified maximum in these areas, giving lobster permit holders more flexibility. Federal lobster permit holders from other areas may also "buy in" to these areas by purchasing traps through this program. The new trap allocations became effective for the start of the 2016 fishing year on May 2, 2016.

Also in 2015, the NEFMC finalized recommendations for Amendment 18 to the Northeast Multispecies Fishery Management Plan. Measures of this amendment focus on creating permit caps and on limiting the holdings of individuals, permit banks, and other "entities." This amendment would also constrain an individual's potential sector contribution, or PSC—the proportion of the total landings of a particular groundfish stock (live pounds) associated with the history of each limited access permit and other detailed information. The specifics voted on at the meeting are as follows: Accumulation Limits, Handgear A Permits, Data Confidentiality, Inshore/Offshore Gulf of Maine, and Redfish Exemption Area.

In early 2016, Framework 55 was approved and implemented in the Northeast Multispecies Fishery Management Plan. The framework incorporates status changes for groundfish stocks; sets specifications for all groundfish stocks, including catch limits for the U.S./Canada Resource Sharing Understanding and the distribution of allowable catch limits to various components of the fishery; updates fishery program administration; and adjusts management measures for commercial and recreational fisheries that catch groundfish stocks. These actions are needed to prevent overfishing, ensure rebuilding of overfished stocks, and help with achieving optimum yield in the fishery consistent with the status of stocks and the requirements of the Magnuson-Stevens Act of 2006. These actions will also help improve the enforcement of conservation gear, and provide additional flexibility within the sector system and recreational fishery in the face of changing regulations and legal circumstances.

COMMERCIAL FISHERIES

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. It does not include saltwater anglers that 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/species groups.

Economic Impacts

The premise behind economic impact modeling is that every dollar spent in a regional economy (direct impact) is either saved or respent on additional goods or services. If those dollars are respent on other goods and services in the regional economy, this spending generates additional economic activity in the region. 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 seafood businesses and its full supply chain are included). That is, impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

Key New England Region Commercial Species

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

Four different measures are commonly used to show commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. Sales refer to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. It 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 types of measures are calculated in terms of dollars, whereas employment impacts are measured in terms of 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.[1]

[1] The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates (see NMFS Commercial Fishing & Seafood Industry Input/Output Model, available at: www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf).

Landings Revenue: Largest Increases

From 2006:
- American lobster (55%, 34% in real terms)
- Sea scallop (8%, -6% in real terms)

From 2014:
- Softshell clam (13%)
- Squid (13%)
- Quahog clam (12%)

Landings Revenue: Largest Decreases

From 2006:
- Atlantic herring (-85%, -87% in real terms)
- Atlantic mackerel (-77%, -80% in real terms)
- Quahog clam (-60%, -66% in real terms)

From 2014:
- Atlantic herring (-13%)
- Cod and haddock (-8%)
- Flounders (-8%)

Landings: Largest Increases

From 2006:
- American lobster (54%)

From 2014:
- Goosefish (5%)
- Cod and haddock (1%)

Landings: Largest Decreases

From 2006:
- Atlantic mackerel (-90%)
- Quahog clam (-76%)
- Softshell clam (-57%)

From 2014:
- Atlantic mackerel (-23%)
- Squid (-18%)
- Flounders (-14%)

In 2015, commercial fishing in Massachusetts generated the largest employment impacts in the New England Region with 83,000 jobs. Massachusetts had the largest income impacts ($1.9 billion), sales impacts ($7.3 billion), and value-added impacts ($2.9 billion).

The retail sector in Massachusetts generated the highest employment impacts of any state-level sector with 50,700 jobs. The importers sector in Massachusetts generated the highest state-level income impacts ($0.6 billion), the highest state-level sales impacts ($3.8 billion), and the highest state-level value-added impacts in the region ($1.2 billion).

Landings Trends

The lobster fishery, New England's largest fishery in terms of landings revenue, continued its strong performance, with revenues up 55 percent since 2006 due to higher landings and higher prices (up 54% and 101%, respectively) and up 10 percent since 2014 due to higher prices (up 10%). The higher landings trend is due to unprecedented abundance levels of Gulf of Maine lobsters, which have comprised between 85-90% of landings in recent years. Indeed, average annual landings the past five years are three times the average annual landings for the previous 60 years. On average, Maine has accounted for 79% of New England's lobster landings revenue since 2006.

Sea scallop landings declined 44 percent over this 10-year period primarily due to a 35 percent reduction in the catch limit that was implemented in 2012 to protect young sea scallops and prevent localized overfishing. Significantly higher prices (up 192% from 2006 but down 3% from 2014) has helped to offset the lower landings.

Landings Revenue

Landings revenue in the New England Region totaled $1.2 billion in 2015. This number represents a 9% increase from 2006 (a 6% decrease in real terms after adjusting for inflation) and a 4% increase from 2014. Landings revenue was highest in Maine ($588 million) followed by Massachusetts ($525 million). Shellfish landings revenue made up 85% of total revenue. American lobster ($615 million) and sea scallop ($287 million) had the highest landings revenue in the New England Region in 2015. Together they accounted for 73% of total landings revenue.

From 2006 to 2015, American lobster (55%, 34% in real terms) and sea scallop (8%, -6% in real terms) had the largest revenue increases, while Atlantic herring (-85%, -87% in real terms); Atlantic mackerel (-77%, -80% in

real terms); and quahog clam (-60%, -66% in real terms) had the largest decreases. From 2014 to 2015, softshell clam (13%), squid (13%), and quahog clam (12%) had the largest revenue increases, while Atlantic herring (-13%), cod and haddock (-8%), and flounders (-8%) had the largest decreases.

Landings

In 2015, commercial fishermen in the New England Region landed about 599 million pounds of finfish and shellfish, a 20% decrease from 2006 and a 7% decrease from 2014. Landings volume was highest in Massachusetts (261million pounds), followed by Maine (242 million pounds). Atlantic herring had the highest landings volume in the New England Region, accounting for 29% of landed weight.

From 2006 to 2015, American lobster (54%) had the largest landings increase, while Atlantic mackerel (-90%), quahog clam (-76%), and softshell clam (-57%) had the largest decreases. From 2014 to 2015, goosefish (5%) and cod and haddock (1%) had the largest landings increases, while Atlantic mackerel (-23%), squid (-18%), and flounders (-14%) had the largest decreases.

Price

In 2015, sea scallop ($12.31 per pound) received the highest ex-vessel price in the New England Region. Landings of Atlantic herring ($0.14 per pound) had the lowest ex-vessel price. From 2006 to 2015, Atlantic mackerel (129%, 98% in real terms); sea scallop (92%, 66% in real terms); and softshell clam (86%, 58% in real terms) had the largest price increases, while Atlantic herring (-79%, -82% in real terms) and cod and haddock (-22%, -33% in real terms) had the largest decreases. From 2014 to 2015, Atlantic mackerel (38%), squid (38%), and quahog clam (21%) had the largest price increases, while cod and haddock (-9%), and sea scallop (-3%) had the largest decreases.

RECREATIONAL FISHERIES

In this report, recreational fisheries refer to fishing for fun rather than to resell fish (commercial fishing) or for subsistence. The recreational fisheries section reports on economic impacts and expenditures, angler participation, trips, and catch of key species/species groups.

Key New England Recreational Species

- Atlantic cod
- Atlantic mackerel
- Bluefin tuna
- Bluefish
- Little tunny
- Scup
- Striped bass
- Summer flounder
- Winter flounder
- Tautog

Economic Impacts and Expenditures

The contribution of recreational fishing activities[2] in the United States is reported in terms of economic impacts from angler expenditures. Total annual trip expenditures are estimated by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore). Total annual durable expenditures are estimated by multiplying mean durable expenditures by the estimated annual number of adult participants in a given state.

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. Sales refer 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. 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- 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 terms of 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 greatest employment impacts from expenditures on saltwater recreational fishing in the New England Region

[2] Trip expenditure estimates were generated from the 2011 National Marine Recreational Fishing Expenditure Survey. Durable good expenditure impacts were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (see http://www.st.nmfs.noaa.gov/economics/fisheries/recreational/Marine-Angler-Durable-Expenditures/2014-durable-expenditures-survey). Economic impacts from recreational fishing activities were generated using the NMFS Recreational Economic Impact Model (see The Economic Contribution of Marine Angler Expenditures in the United States, 2011, available at http://www.st.nmfs.noaa.gov/economics/publications/marine-angler-expenditures/marine-angler-2011).

were generated in Massachusetts (9,100 jobs), followed by Connecticut (3,400 jobs). The largest sales impacts were observed in Massachusetts ($1 billion), followed by Connecticut ($367 million). The biggest income impacts were generated in Massachusetts ($455 million), followed by Connecticut ($159 million). The greatest value-added impacts were in Massachusetts ($657 million), followed by Connecticut ($248 million).

Recreational fishing expenditures (on both fishing trips and durable equipment purchases) across the New England Region in 2015 totaled about $1.7 billion. Trip expenditures totaled more than $260 million, with a large portion coming from trips in the private boat (47%) and for-hire (28%) sectors. Durable goods expenditures totaled $1.4 billion, with the largest portion coming from boat expenses ($870 million).

Fishing Trips

In 2015, recreational fishermen took 5 million fishing trips in the New England Region. This number was a 45% decrease from 2006 and a 24% decrease from 2014. The largest proportions of trips were taken in the private boat mode (53%) and shore mode (40%). States with the highest number of recorded trips were Massachusetts (2.2 million trips) and Connecticut (1.3 million trips).

Participation

In 2015, there were 1 million recreational anglers who fished in the New England Region. This number was a 36% decrease from 2006 and a 14% decrease from 2014. These anglers were New England Region residents from either a coastal county (91%) or non-coastal county (9%).

Harvest and Release

Of New England's key species and species groups, Atlantic mackerel (6.1 million fish), porgies (scup, 4.4 million fish), and striped bass (3.3 million fish) were most frequently caught by recreational anglers. From 2006 to 2015, little tunny (433%), Atlantic mackerel (30%), and winter flounder (27%) had the largest increases in catch, while striped bass (-78%), bluefish (-70%), and summer flounder (-64%) had the largest decreases. From 2014 to 2015, Atlantic mackerel (31%) and striped bass (5%) had the largest increases in catch, while little tunny (-67%), wrasses (tautog) (-62%), and bluefish (-56%) had the largest decreases.

Recreational Catch: Largest Increases

From 2006:
- Little tunny (433%)
- Atlantic mackerel (30%)
- Winter flounder (27%)

From 2014:
- Atlantic mackerel (31%)
- Striped bass (5%)

Recreational Catch: Largest Decreases

From 2006:
- Striped bass (-78%)
- Bluefish (-70%)
- Summer flounder (-64%)

From 2014:
- Little tunny (-67%)
- Wrasses (tautog) (-62%)
- Bluefish (-56%)

MARINE ECONOMY

For this report, the marine economy refers to the economic activity generated by 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) transport, support, and marine operations (employer establishments). These sectors include several different marine-related industries.[3,4]

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[5], researchers use an index called the Commercial Fishing Location Quotient (CFLQ). 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's CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state's CFLQ is greater than 1, then more commercial

[3] Unless otherwise stated, data is from the U.S. Census Bureau, http://censtats.census.gov/ (accessed May 31, 2016).
[4] U.S. Bureau of Economic Analysis, "Table 1.1.5 Gross Domestic Product" and "Table SA6N Compensation of Employees by NAICS Industry," http://www.bea.gov/iTable/index_nipa.cfm (accessed May 31, 2016).
[5] U.S. Bureau of Labor Statistics, "Location Quotient Calculator," http://data.bls.gov/location_quotient/ (accessed May 31, 2016).

fishing occurs in this state than the national average.

The Bureau of Labor Statistics did not disclose CFLQ data for Connecticut, Massachusetts, and New Hampshire for 2014. In 2014, the CFLQ for Maine was the highest for the remaining states in the region at 19.79. Maine's CFLQ suggests that the level of employment in industries related to commercial fishing in this state is approximately 19.79 times higher than the level of employment in these industries nationwide.

In 2014, 368,000 establishments operated throughout the New England Region (including marine and non-marine-related establishments). These establishments employed 6 million workers and had a total annual payroll of $339 billion. The region's gross domestic product was $885 billion in 2014.

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2014, there were 110 non-employer firms (a 3% decrease from 2006) and annual receipts totaled $13 million (a 25% decrease from 2006 in real terms). The greatest number of firms was located in Maine (37).

There were 82 employer establishments (a 14% decrease from 2006) in 2014. These establishments employed approximately 2,365 workers (a 34% decrease from 2006) and had a total annual payroll of $118 million (a 28% decrease from 2006 in real terms). The greatest number of establishments was located in Massachusetts (42).

Seafood Sales, Retail: In 2014, there were 162 non-employer firms (a 4% increase from 2006) and annual receipts totaled $16 million (a 30% decrease from 2006 in real terms). The greatest number of firms was located in Maine (57).

There were 239 employer establishments (a 4% decrease from 2006) in 2014. These establishments employed 1,240 workers (a 8% increase from 2006) and had a total annual payroll of $39 million (a 13% increase from 2006 in real terms). The greatest number of establishments was located in Massachusetts (114).

Seafood Sales, Wholesale: There were 327 establishments (a 12% decrease from 2006) in 2014. These establishments employed 3,372 workers (a 17% increase from 2006) and had a total annual payroll of $163 million (a 19% increase from 2006 in real terms). The greatest number of establishments was located in Maine (142).

Transport, Support, and Marine Operations

The size of the Transport, Support, and Marine Operations sectors in the New England Region is difficult to assess because so much of the state-level data is suppressed for confidentiality purposes. It is clear, however, that these sectors play an important role in the regional economy. For example, 484 establishments in the Marinas sector contributed more than 3,300 jobs and more than $160 million in payroll to the regional economy in 2014.

Tables | New England Region

2015 Economic Impacts of the New England Seafood Industry (thousands of dollars)

		With Imports				Without Imports			
	Landings Revenue	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Connecticut	15,454	2,792	493,031	104,101	173,105	827	54,624	18,722	26,102
Maine	588,261	39,155	2,434,412	802,606	1,161,224	37,346	2,136,641	738,608	1,056,070
Massachusetts	524,785	83,037	7,308,054	1,905,547	2,903,689	52,710	2,208,920	810,487	1,106,061
New Hampshire	27,788	9,897	1,559,399	354,693	571,090	2,153	133,891	49,547	67,756
Rhode Island	81,836	4,831	347,115	116,581	166,677	4,522	289,923	104,827	146,909

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	1,132,841	895,381	808,816	787,206	960,090	1,103,010	1,192,900	1,163,328	1,195,545	1,238,124
Finfish & Other	329,226	178,819	190,526	176,399	189,803	212,059	243,355	204,318	193,491	182,441
Shellfish	803,615	716,562	618,290	610,806	770,288	890,951	949,546	959,010	1,002,054	1,055,683
Key Species										
American lobster	395,289	359,783	317,909	305,195	397,768	417,931	425,562	458,779	560,618	614,585
Atlantic herring	163,416	18,591	20,507	24,459	20,692	24,759	28,545	31,388	27,947	24,303
Atlantic mackerel	14,491	6,000	5,265	7,892	3,459	295	3,480	1,738	3,111	3,332
Clam, Softshell	34,434	22,586	20,903	19,117	19,767	20,911	22,177	22,841	24,339	27,420
Cod and haddock	31,856	39,326	47,166	38,745	49,710	48,775	29,972	16,350	20,681	19,052
Flounders	37,778	33,658	30,654	27,286	27,685	30,851	35,155	32,092	30,609	28,198
Goosefish	26,603	21,209	19,945	14,321	14,064	19,792	19,693	13,576	14,094	14,654
Quahog clam	28,356	30,026	8,901	9,002	9,713	8,314	9,276	9,383	10,121	11,295
Sea scallop	264,226	237,299	203,124	209,168	265,493	352,632	389,501	366,007	296,983	286,547
Squid	25,850	17,711	19,848	16,696	14,788	22,887	18,187	15,547	21,411	24,261

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	748,637	584,849	602,950	648,988	580,145	612,952	665,778	634,766	646,106	598,816
Finfish & Other	496,204	376,334	400,732	422,141	334,220	357,225	380,850	358,155	376,330	333,508
Shellfish	252,433	208,514	202,219	226,848	245,925	255,728	284,928	276,610	269,776	265,308
Key Species										
American lobster	94,347	79,435	86,229	99,199	116,024	125,167	148,906	149,116	146,454	145,413
Atlantic herring	240,596	156,602	167,709	210,784	140,789	174,338	190,532	203,763	197,908	171,822
Atlantic mackerel	99,752	50,760	38,359	39,398	16,904	913	9,680	9,049	12,934	10,016
Clam, Softshell	5,415	3,494	3,252	3,050	3,329	3,228	3,241	2,981	2,503	2,315
Cod and haddock	19,785	24,856	33,122	32,470	39,261	30,108	14,800	9,072	15,133	15,258
Flounders	19,542	16,093	15,501	16,232	14,531	17,913	18,353	16,320	14,270	12,305
Goosefish	26,146	19,968	17,757	14,256	12,378	14,700	16,422	14,321	14,552	15,267
Quahog clam	6,195	4,630	1,468	1,628	1,790	1,513	1,570	1,594	1,584	1,465
Sea scallop	41,229	35,390	28,867	31,604	32,884	35,285	39,209	32,103	23,482	23,278
Squid	43,652	26,421	28,615	28,014	21,722	27,907	16,153	14,575	28,781	23,697

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
American lobster	4.19	4.53	3.69	3.08	3.43	3.34	2.86	3.08	3.83	4.23
Atlantic herring	0.68	0.12	0.12	0.12	0.15	0.14	0.15	0.15	0.14	0.14
Atlantic mackerel	0.15	0.12	0.14	0.20	0.20	0.32	0.36	0.19	0.24	0.33
Clam, Softshell	6.36	6.46	6.43	6.27	5.94	6.48	6.84	7.66	9.73	11.85
Cod and haddock	1.61	1.58	1.42	1.19	1.27	1.62	2.03	1.80	1.37	1.25
Flounders	1.93	2.09	1.98	1.68	1.91	1.72	1.92	1.97	2.15	2.29
Goosefish	1.02	1.06	1.12	1.00	1.14	1.35	1.20	0.95	0.97	0.96
Quahog clam	4.58	6.49	6.06	5.53	5.43	5.50	5.91	5.89	6.39	7.71
Sea scallop	6.41	6.71	7.04	6.62	8.07	9.99	9.93	11.40	12.65	12.31
Squid	0.59	0.67	0.69	0.60	0.68	0.82	1.13	1.07	0.74	1.02

2015 Economic Impacts of the New England Recreational Fishing Expenditures (thousands of dollars, trips)

	Trips	#Jobs	Sales	Income	Value Added
Connecticut	1,341	3,357	366,636	159,322	247,998
Maine	414	713	65,390	24,387	38,564
Massachusetts	2,181	9,127	986,062	455,207	657,392
New Hampshire	221	465	49,684	21,478	30,486
Rhode Island	879	3,354	331,518	141,407	216,643

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	72,359
Private Boat	122,221
Shore	66,352
Total	260,933

Equipment	Durable Goods Expenditures
Fishing Tackle	314,070
Other Equipment	113,845
Boat Expenses	869,523
Vehicle Expenses	121,144
Second Home Expenses	1,098
Total Durable Expenditures	1,419,679

Total State Trip and Durable Goods Expenditures	1,680,612

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	1,408	1,408	1,389	1,222	1,317	1,156	1,171	1,043	1,080	924
Non-Coastal	188	205	187	165	169	131	144	100	99	95
Out-of-State	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Anglers	1,596	1,614	1,576	1,387	1,486	1,288	1,316	1,143	1,179	1,018

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	457	518	512	464	321	367	345	516	487	354
Private	4,651	4,820	4,894	3,374	3,967	3,161	3,132	3,459	3,226	2,677
Shore	4,106	3,951	3,735	3,321	2,926	2,532	2,687	2,313	2,939	2,004
Total Trips	9,213	9,289	9,141	7,160	7,213	6,060	6,164	6,287	6,652	5,036

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Atlantic cod	H	202	305	385	391	509	530	337	392	264	22
	R	722	966	954	833	1,071	915	472	642	667	509
Atlantic mackerel	H	4,180	1,886	3,358	2,464	3,471	5,335	3,276	3,712	3,263	5,138
	R	559	116	452	343	381	535	484	283	1,420	1,002
Bluefin tuna	H	3	11	9	9	1	2	9	< 1	8	3
	R	7	10	2	5	< 1	5	4	< 1	< 1	6
Bluefish	H	1,647	1,512	1,461	674	1,183	658	1,503	1,682	863	680
	R	3,638	2,906	2,995	1,435	1,848	1,931	1,951	1,954	2,753	913
Little tunny	H	< 1	5	< 1	1	2	0	11	1	9	51
	R	26	65	16	16	20	44	103	14	427	92
Porgies (scup)	H	1,428	3,049	1,944	1,498	2,411	2,286	2,953	3,800	3,171	2,216
	R	2,637	2,802	4,048	3,278	3,586	2,376	3,530	3,091	3,275	2,199
Striped bass	H	595	595	602	547	527	458	530	697	492	292
	R	14,092	8,366	7,713	4,164	2,771	2,041	1,780	3,796	2,655	3,010
Summer flounder	H	641	426	582	167	199	267	241	429	417	336
	R	2,851	1,045	2,112	908	818	1,252	939	1,456	1,393	910
Winter flounder	H	50	51	180	112	105	100	56	44	96	57
	R	46	44	71	102	85	60	27	24	56	65
Wrasses (tautog)	H	362	569	305	196	359	78	323	298	487	264
	R	638	1,425	514	395	562	385	909	966	2,213	749

[1] NA = data are not available because out-of-state resident information is collected for individual states but does not specify whether an angler resides in a region.
[2] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.

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2015 Economic Impacts of the Connecticut Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	2,792	493,031	104,101	173,105	827	54,624	18,722	26,102
Commercial Harvesters	413	27,406	7,517	11,582	413	27,406	7,517	11,582
Seafood Processors & Dealers	117	13,504	5,157	6,667	51	5,932	2,265	2,928
Importers	1,202	371,706	59,573	113,312	0	0	0	0
Seafood Wholesalers & Distributors	177	31,663	10,364	13,925	16	2,881	943	1,267
Retail	884	48,751	21,490	27,619	347	18,406	7,997	10,325

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	36,892	42,053	17,206	15,007	17,626	20,032	21,132	14,632	14,144	15,454
Finfish & Other	3,709	3,270	3,962	3,108	5,229	4,817	5,467	5,123	4,428	5,072
Shellfish	33,183	38,782	13,243	11,899	12,397	15,215	15,665	9,509	9,716	10,382
Key Species										
American lobster	4,031	3,222	2,102	1,763	1,894	943	1,057	577	608	1,073
Goosefish	346	512	551	591	564	976	1,040	1,022	510	673
Other flounders	245	232	172	87	42	33	65	184	89	164
Red hake	104	110	181	137	76	89	88	115	104	112
Scups or Porgies	302	311	383	196	272	408	837	705	573	818
Sea scallop	7,229	8,605	10,032	8,952	9,458	13,007	12,005	7,219	7,219	7,040
Silver hake	1,515	1,115	1,436	1,011	1,341	1,617	1,380	1,301	1,586	1,164
Squid, loligo	954	744	546	260	473	694	1,861	1,257	1,354	1,631
Summer flounder	783	648	680	649	850	1,005	940	902	921	1,078
Whelks and Conchs	533	312	453	796	449	159	616	295	336	487

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)[1]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	11,750	10,050	7,131	6,568	6,698	7,403	8,940	7,957	7,523	9,383
Finfish & Other	5,745	3,845	4,520	4,155	4,409	5,218	5,756	5,875	5,221	7,103
Shellfish	6,005	6,205	2,611	2,414	2,288	2,186	3,184	2,082	2,302	2,280
Key Species										
American lobster	793	569	426	412	442	199	248	127	127	205
Goosefish	496	460	424	546	358	630	765	967	493	600
Other flounders	141	140	88	58	26	27	40	142	60	86
Red hake	264	266	284	310	176	158	185	173	167	146
Scups or Porgies	298	256	282	204	324	644	907	1,195	811	981
Sea scallop	1,104	1,313	1,407	1,386	1,260	1,318	1,231	640	609	577
Silver hake	2,348	1,565	2,178	1,881	1,973	2,041	1,848	1,647	2,037	1,320
Squid, loligo	1,157	811	523	256	366	498	1,518	1,098	1,318	1,317
Summer flounder	317	205	221	251	308	401	316	284	253	287
Whelks and Conchs	101	117	174	229	113	28	91	81	98	81

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
American lobster	5.08	5.67	4.93	4.27	4.29	4.74	4.26	4.53	4.78	5.23
Goosefish	0.70	1.11	1.30	1.08	1.58	1.55	1.36	1.06	1.04	1.12
Other flounders	1.73	1.66	1.96	1.50	1.60	1.23	1.60	1.29	1.49	1.91
Red hake	0.39	0.41	0.64	0.44	0.43	0.56	0.47	0.66	0.62	0.77
Scups or Porgies	1.01	1.22	1.36	0.96	0.84	0.63	0.92	0.59	0.71	0.83
Sea scallop	6.55	6.55	7.13	6.46	7.51	9.87	9.75	11.29	11.85	12.2
Silver hake	0.65	0.71	0.66	0.54	0.68	0.79	0.75	0.79	0.78	0.88
Squid, loligo	0.82	0.92	1.04	1.01	1.29	1.39	1.23	1.15	1.03	1.24
Summer flounder	2.47	3.16	3.08	2.59	2.76	2.50	2.98	3.18	3.63	3.76
Whelks and Conchs	5.28	2.66	2.61	3.47	3.98	5.63	6.75	3.65	3.43	6.04

2015 Economic Impacts of Connecticut Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	132	22,227	10,311	13,943
	Private Boat	134	14,660	6,230	9,423
	Shore	91	7,766	3,357	4,782
Total Durable Expenditures		3,000	321,983	139,424	219,850
Total State Economic Impacts		3,357	366,636	159,322	247,998

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	12,745
Private Boat	19,469
Shore	7,789
Total	40,003

Equipment	Durable Goods Expenditures
Fishing Tackle	60,840
Other Equipment	16,525
Boat Expenses	187,132
Vehicle Expenses	13,795
Second Home Expenses	0
Total Durable Expenditures	278,291

Total State Trip and Durable Goods Expenditures	318,294

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	336	302	381	438	402	420	397	198	209	252
Non-Coastal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Out-of-State	44	61	123	93	112	98	67	43	64	57
Total Anglers	380	363	504	531	514	518	464	240	273	309

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	49	63	74	43	41	46	27	63	62	80
Private	868	1,097	1,292	711	871	863	825	830	865	671
Shore	571	559	609	665	614	399	475	316	437	590
Total Trips	1,488	1,719	1,975	1,419	1,526	1,309	1,326	1,210	1,365	1,341

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Atlantic cod	H	< 1	0	0	0	0	0	1	0	0	0
	R	< 1	0	0	0	0	0	0	0	0	0
Bluefish	H	507	451	623	262	591	307	480	893	288	365
	R	1,167	888	1,144	295	715	997	679	727	425	401
Hickory shad	H	63	35	0	0	1	16	39	8	73	0
	R	144	4	5	< 1	0	0	0	1	67	< 1
Little tunny	H	0	0	0	0	1	0	< 1	0	1	0
	R	0	< 1	0	9	8	14	57	0	13	1
Porgies (scup)	H	532	925	549	289	1,088	933	868	937	561	477
	R	740	1,006	974	1,204	1,192	539	1,049	1,218	1,413	764
Striped bass	H	115	119	108	61	93	63	65	140	84	75
	R	987	985	3,105	1,161	671	612	265	775	310	667
Summer flounder	H	138	112	146	45	35	47	63	270	120	93
	R	1,111	297	991	428	373	345	306	866	638	408
White perch	H	0	0	7	60	0	0	10	0	14	< 1
	R	15	18	52	72	0	< 1	48	2	7	< 1
Winter flounder	H	0	0	0	12	14	19	9	0	< 1	12
	R	21	15	0	7	12	< 1	7	4	< 1	31
Wrasses (tautog)	H	201	353	167	86	116	26	194	104	318	126
	R	108	745	250	112	257	36	599	453	1,668	272

[1] NA = data are not available because out-of-state resident information is collected for individual states but does not specify whether an angler resides in a region.
[2] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.

2014 Connecticut State Economy (% of national total)[1,3]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	88,555 (1.2%)	1,485,426 (1.2%)	87.87 (1.5%)	133.25 (1.4%)	250.57 (1.5%)	ds

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	11	ds	18	17	17	14	13	25	26
	Receipts	3,206	ds	2,375	2,550	1,518	1,066	882	3,058	3,969
Seafood sales, retail	Firms	15	26	25	23	25	21	21	20	18
	Receipts	2,915	4,436	3,247	2,142	2,473	2,165	1,388	1,543	1,655

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	4	3	3	2	2	2	1	1	1
	Employees	119	ds	59	ds	ds	ds	ds	ds	ds
	Payroll	4,242	ds	1,040	ds	ds	ds	ds	ds	ds
Seafood sales, wholesale	Establishments	19	20	24	25	23	24	16	17	19
	Employees	ds	183	185	212	216	212	187	178	172
	Payroll	ds	8,347	8,551	8,842	9,219	9,224	8,237	7,920	8,174
Seafood sales, retail	Establishments	35	36	35	36	39	37	37	36	35
	Employees	196	177	203	205	204	171	233	218	244
	Payroll	4,937	5,252	5,248	5,551	5,563	4,824	6,349	6,344	7,380

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	4	4	5	5	6	5	10	9	9
	Employees	ds	ds	ds	ds	ds	95	256	ds	ds
	Payroll	ds	ds	ds	ds	8,148	7,856	32,789	ds	ds
Deep sea freight transportation	Establishments	14	14	12	12	10	11	14	11	11
	Employees	235	228	243	222	225	225	297	184	ds
	Payroll	47,845	48,110	46,595	45,045	29,407	41,302	37,711	28,513	26,891
Deep sea passenger transportation	Establishments	1	2	1	1	1	1	1	0	0
	Employees	ds	ds	ds	ds	ds	ds	ds	NA	NA
	Payroll	ds	ds	ds	ds	ds	ds	ds	NA	NA
Marinas	Establishments	119	124	125	126	129	128	130	130	128
	Employees	1,024	1,224	1,352	1,261	1,284	1,283	1,257	1,265	1,174
	Payroll	44,829	50,809	60,016	58,065	58,877	59,851	60,803	63,211	59,054
Marine cargo handling	Establishments	3	5	4	3	3	3	0	1	1
	Employees	ds	ds	ds	ds	ds	ds	NA	ds	ds
	Payroll	ds	5,925	ds	ds	ds	ds	NA	ds	ds
Navigational services to shipping	Establishments	9	6	6	6	6	5	2	2	4
	Employees	69	ds	ds	5	ds	5	ds	ds	3
	Payroll	2,423	432	338	696	242	898	ds	ds	185
Port & harbor operations	Establishments	4	4	8	8	6	5	4	5	5
	Employees	ds	ds	179	166	122	34	ds	ds	ds
	Payroll	ds	ds	6,136	5,787	2,162	848	1,414	ds	ds
Ship & boat building	Establishments	17	22	15	13	12	11	8	7	9
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 = these data are suppressed.
[4] NA = not applicable.

Tables | Maine

2015 Economic Impacts of the Maine Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	39,155	2,434,412	802,606	1,161,224	37,346	2,136,641	738,608	1,056,070
Commercial Harvesters	17,572	1,129,007	309,204	505,360	17,572	1,129,007	309,204	505,360
Seafood Processors & Dealers	2,962	231,387	92,899	118,704	2,678	209,217	83,998	107,331
Importers	749	231,751	37,142	70,648	0	0	0	0
Seafood Wholesalers & Distributors	1,216	129,719	46,532	60,549	1,048	111,843	40,119	52,205
Retail	16,656	712,549	316,829	405,963	16,048	686,574	305,286	391,173

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	391,293	344,022	308,233	292,315	380,435	411,983	450,926	476,423	547,333	588,261
Finfish & Other	38,552	37,507	37,440	30,367	30,196	43,816	77,546	72,857	50,692	49,110
Shellfish	352,742	306,515	270,793	261,948	350,240	368,168	373,380	403,566	496,641	539,151
Key Species										
American lobster	305,443	280,634	245,146	237,519	318,304	334,577	341,861	370,207	459,183	498,375
Atlantic herring	10,729	9,173	8,396	7,867	8,643	14,404	14,490	15,514	16,212	13,534
Bloodworms	5,177	6,051	5,913	6,196	5,893	5,847	5,191	5,644	6,085	6,335
Blue mussel	2,716	1,934	1,627	2,203	2,071	1,969	1,919	2,341	2,153	2,458
Cod & haddock	3,982	3,728	5,257	1,752	1,528	1,666	1,362	976	1,267	1,069
Goosefish	3,238	2,402	1,478	526	393	578	1,059	773	566	615
Ocean quahog clam	3,919	3,194	2,195	1,821	1,721	2,117	1,737	1,378	1,238	1,311
Pollock	2,309	2,160	2,321	2,047	1,503	1,929	2,527	2,562	2,878	1,966
Sea urchins	4,741	4,367	5,410	5,866	5,490	5,113	5,024	5,781	5,325	4,950
Softshell clam	26,940	12,574	12,826	11,686	12,960	15,852	15,655	18,102	20,232	22,816

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	216,657	186,324	186,696	188,388	200,876	249,496	263,421	266,413	265,182	241,955
Finfish & Other	117,637	99,230	98,951	82,505	79,375	122,944	121,322	120,555	127,687	104,285
Shellfish	99,020	87,094	87,745	105,883	121,501	126,552	142,099	145,859	137,495	137,670
Key Species										
American lobster	75,346	63,959	69,863	81,179	96,246	104,923	127,237	127,756	124,218	121,729
Atlantic herring	97,843	74,817	67,731	64,606	57,557	97,116	92,506	98,859	103,530	86,485
Bloodworms	462	549	537	574	534	526	457	470	448	401
Blue mussel	3,435	2,643	2,289	2,760	2,582	2,810	2,399	2,282	2,270	2,401
Cod & haddock	2,448	2,345	2,455	1,401	876	842	549	418	685	658
Goosefish	3,669	2,376	1,178	603	404	533	1,075	874	633	740
Ocean quahog clam	1,214	1,011	669	556	549	645	698	557	438	416
Pollock	3,678	4,245	4,064	3,040	1,640	2,325	2,666	2,227	2,319	1,382
Sea urchins	3,372	2,761	2,900	3,487	2,592	2,407	1,904	1,988	1,981	1,775
Softshell clam	3,918	1,948	1,998	1,902	2,077	2,365	2,257	2,297	2,080	1,890

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
American lobster	4.05	4.39	3.51	2.93	3.31	3.19	2.69	2.90	3.70	4.09
Atlantic herring	0.11	0.12	0.12	0.12	0.15	0.15	0.16	0.16	0.16	0.16
Bloodworms	11.2	11.02	11.01	10.79	11.03	11.12	11.36	12.00	13.59	15.8
Blue mussel	0.79	0.73	0.71	0.80	0.80	0.70	0.80	1.03	0.95	1.02
Cod & haddock	1.63	1.59	2.14	1.25	1.74	1.98	2.48	2.33	1.85	1.62
Goosefish	0.88	1.01	1.25	0.87	0.97	1.09	0.99	0.88	0.89	0.83
Ocean quahog clam	3.23	3.16	3.28	3.27	3.13	3.28	2.49	2.47	2.82	3.15
Pollock	0.63	0.51	0.57	0.67	0.92	0.83	0.95	1.15	1.24	1.42
Sea urchins	1.41	1.58	1.87	1.68	2.12	2.12	2.64	2.91	2.69	2.79
Softshell clam	6.88	6.46	6.42	6.14	6.24	6.70	6.93	7.88	9.73	12.07

2015 Economic Impacts of Maine Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	84	8,781	2,984	4,553
	Private Boat	42	4,991	1,388	2,288
	Shore	84	7,964	2,577	4,360
Total Durable Expenditures		503	43,654	17,438	27,363
Total State Economic Impacts		713	65,390	24,387	38,564

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	5,338
Private Boat	4,869
Shore	6,107
Total	16,314

Equipment	Durable Goods Expenditures
Fishing Tackle	12,185
Other Equipment	4,480
Boat Expenses	22,680
Vehicle Expenses	197
Second Home Expenses	0
Total Durable Expenditures	39,542

Total State Trip and Durable Goods Expenditures	55,856

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	182	174	121	117	122	85	116	102	79	67
Non-Coastal	22	13	9	12	9	7	6	4	5	4
Out-of-State	285	260	180	324	159	107	126	129	129	74
Total Anglers	489	447	310	453	290	198	248	235	213	145

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	32	33	26	26	23	22	20	29	24	21
Private	548	460	408	334	327	265	212	313	188	192
Shore	497	531	421	544	366	240	405	254	327	201
Total Trips	1,076	1,024	854	904	716	527	637	596	539	414

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
American Shad	H	1	0	< 1	< 1	0	0	0	0	< 1	1
	R	7	4	5	18	9	4	18	< 1	0	14
Atlantic cod	H	14	19	41	45	14	39	26	61	22	3
	R	49	73	50	36	45	99	80	75	50	100
Atlantic mackerel	H	450	806	837	1,111	1,093	1,544	1,028	709	706	883
	R	103	80	265	194	177	304	163	62	1,165	136
Blue shark	H	0	0	0	0	0	0	0	0	0	0
	R	0	< 1	0	< 1	0	9	2	13	10	11
Bluefin tuna	H	0	0	0	0	0	0	0	0	0	0
	R	0	0	< 1	0	0	0	0	0	0	0
Bluefish	H	7	49	30	3	14	< 1	4	20	< 1	< 1
	R	50	74	56	26	10	8	126	22	0	0
Haddock	H	9	12	20	10	4	12	4	6	3	26
	R	4	11	2	1	3	4	8	47	55	72
Pollock	H	66	50	68	61	58	57	49	141	136	66
	R	23	23	135	35	105	135	88	296	178	109
Striped bass	H	75	54	59	62	17	18	12	23	21	5
	R	4,000	1,115	465	264	194	143	214	422	277	214
Winter flounder	H	0	0	0	0	0	0	0	0	0	0
	R	< 1	0	1	5	0	0	0	< 1	4	0

[1] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.

2014 Maine State Economy (% of national total)[1]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	40,369 (0.5%)	492,690 (0.4%)	19.63 (0.3%)	32.2 (0.3%)	54.32 (0.3%)	19.79

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	54	65	64	63	59	51	51	36	37
	Receipts	6,463	7,177	4,261	6,605	4,480	3,077	3,294	2,757	4,142
Seafood sales, retail	Firms	45	55	46	48	47	48	46	49	57
	Receipts	7,115	5,905	4,035	4,882	5,835	4,608	4,492	4,200	4,664

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	27	27	29	25	27	28	29	28	30
	Employees	616	536	490	545	594	500	492	376	546
	Payroll	12,304	9,351	9,288	10,427	12,851	10,353	12,011	11,797	18,713
Seafood sales, wholesale	Establishments	167	170	168	164	164	152	136	150	142
	Employees	996	1,015	1,210	1,126	1,153	1,109	1,047	1,340	1,047
	Payroll	32,192	32,005	36,185	37,687	39,915	38,412	40,734	46,782	40,392
Seafood sales, retail	Establishments	55	50	45	49	51	51	48	51	54
	Employees	179	181	148	152	176	177	215	243	235
	Payroll	4,753	4,635	4,148	4,481	5,126	5,108	6,902	7,618	7,558

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	3	3	5	4	4	4	3	3	3
	Employees	ds	ds	ds	22	28	ds	ds	ds	ds
	Payroll	ds	ds	1,058	1,037	1,067	1,105	ds	ds	ds
Deep sea freight transportation	Establishments	1	0	1	1	1	0	0	0	0
	Employees	ds	NA	ds	ds	ds	NA	NA	NA	NA
	Payroll	ds	NA	ds	ds	ds	NA	NA	NA	NA
Deep sea passenger transportation	Establishments	1	2	1	1	1	1	0	0	0
	Employees	ds	ds	ds	ds	ds	ds	NA	NA	NA
	Payroll	ds	ds	ds	ds	ds	ds	NA	NA	NA
Marinas	Establishments	84	86	87	89	86	84	80	79	79
	Employees	417	464	411	376	395	349	428	403	435
	Payroll	15,353	18,600	15,206	14,654	14,699	15,426	17,102	17,476	19,694
Marine cargo handling	Establishments	3	3	3	3	2	2	1	2	2
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Navigational services to shipping	Establishments	12	15	15	14	13	13	13	14	14
	Employees	93	105	138	93	68	63	65	86	75
	Payroll	6,260	6,737	6,148	5,369	4,928	4,776	4,730	5,660	5,243
Port & harbor operations	Establishments	1	2	2	1	1	1	6	3	3
	Employees	ds	ds	ds	ds	ds	ds	ds	2	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	130	113
Ship & boat building	Establishments	89	94	90	82	75	76	76	79	84
	Employees	6,808	6,751	6,930	ds	ds	ds	ds	ds	ds
	Payroll	320,288	345,036	354,899	ds	ds	ds	ds	ds	ds

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 = these data are suppressed.
[4] NA = not applicable.

Tables | Massachusetts

2015 Economic Impacts of the Massachusetts Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	83,037	7,308,054	1,905,547	2,903,689	52,710	2,208,920	810,487	1,106,061
Commercial Harvesters	10,923	960,771	302,583	445,507	10,923	960,771	302,583	445,507
Seafood Processors & Dealers	6,383	921,546	351,348	456,814	1,509	217,931	83,088	108,029
Importers	12,385	3,831,016	613,993	1,167,862	0	0	0	0
Seafood Wholesalers & Distributors	2,631	465,517	152,123	206,408	955	168,934	55,205	74,905
Retail	50,714	1,129,203	485,498	627,098	39,323	861,284	369,611	477,620

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	586,320	420,004	399,822	400,473	478,691	571,583	616,466	565,739	523,410	524,785
Finfish & Other	252,181	109,089	121,567	113,973	126,262	132,388	126,152	93,961	103,615	99,478
Shellfish	334,139	310,915	278,254	286,500	352,430	439,195	490,314	471,779	419,795	425,307
Key Species										
American lobster	55,901	51,258	45,418	42,731	50,330	53,302	53,357	61,662	68,376	78,275
Atlantic herring	149,733	8,265	11,342	15,062	10,251	8,802	11,529	10,750	9,432	8,805
Atlantic mackerel	10,320	4,736	4,265	4,528	1,487	137	654	1,223	2,421	1,926
Clams, all other	14,045	15,680	15,255	16,745	17,966	19,154	37,294	28,311	26,484	27,985
Cod & haddock	25,397	32,043	38,696	33,684	45,210	43,397	26,123	14,083	18,440	17,588
Eastern oyster	4,864	4,559	5,496	6,432	8,225	9,066	12,071	13,896	19,575	22,735
Flounders	24,574	22,095	20,924	19,645	19,975	22,025	25,058	20,612	17,949	17,436
Goosefish	17,712	14,380	14,035	9,902	9,922	13,431	13,596	8,870	10,028	10,285
Ocean quahog clam	8,297	10,100	9,575	10,710	8,981	7,995	NA	10,229	9,814	9,063
Sea scallop	234,796	218,292	189,891	197,280	252,253	330,944	364,864	334,205	271,373	264,941

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)[1]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	396,910	304,774	326,632	356,105	283,025	264,991	296,037	262,256	272,601	260,755
Finfish & Other	304,512	227,208	255,603	278,908	200,844	179,757	193,481	163,944	181,680	169,292
Shellfish	92,398	77,566	71,029	77,197	82,181	85,233	102,556	98,312	90,921	91,463
Key Species										
American lobster	12,100	10,145	10,600	11,782	12,760	13,373	14,485	15,260	15,323	16,447
Atlantic herring	119,547	73,268	94,266	133,531	71,922	66,970	81,781	74,992	77,873	70,888
Atlantic mackerel	89,535	46,240	35,406	30,199	12,156	515	4,131	7,279	10,755	6,935
Clams, all other	7,071	4,135	4,376	6,552	10,242	13,352	35,053	22,495	20,725	20,507
Cod & haddock	15,833	20,298	28,537	28,515	36,461	27,164	13,164	8,123	13,977	14,394
Eastern oyster	87	123	138	159	215	231	310	329	444	593
Flounders	13,175	10,977	11,609	12,405	11,159	13,692	14,250	11,517	9,018	8,294
Goosefish	17,495	13,597	12,680	10,015	8,887	10,143	11,583	9,498	10,533	11,084
Ocean quahog clam	16,830	20,158	18,126	18,691	15,646	12,479	NA	14,476	13,422	13,340
Sea scallop	36,666	32,540	27,011	29,782	31,156	33,092	36,725	29,287	21,392	21,516

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
American lobster	4.62	5.05	4.28	3.63	3.94	3.99	3.68	4.04	4.46	4.76
Atlantic herring	1.25	0.11	0.12	0.11	0.14	0.13	0.14	0.14	0.12	0.12
Atlantic mackerel	0.12	0.10	0.12	0.15	0.12	0.27	0.16	0.17	0.23	0.28
Clams, all other	1.99	3.79	3.49	2.56	1.75	1.43	1.06	1.26	1.28	1.36
Cod & haddock	1.60	1.58	1.36	1.18	1.24	1.60	1.98	1.73	1.32	1.22
Eastern oyster	56.1	37.00	39.77	40.36	38.3	39.25	38.96	42.28	44.12	38.34
Flounders	1.87	2.01	1.80	1.58	1.79	1.61	1.76	1.79	1.99	2.10
Goosefish	1.01	1.06	1.11	0.99	1.12	1.32	1.17	0.93	0.95	0.93
Ocean quahog clam	0.49	0.50	0.53	0.57	0.57	0.64	NA	0.71	0.73	0.68
Sea scallop	6.40	6.71	7.03	6.62	8.10	10.00	9.93	11.41	12.69	12.31

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

2015 Economic Impacts of Massachusetts Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	434	56,424	23,850	32,911
	Private Boat	500	58,868	25,359	37,359
	Shore	516	56,327	23,210	36,559
Total Durable Expenditures		7,677	814,443	382,788	550,563
Total State Economic Impacts		9,127	986,062	455,207	657,392

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	33,686
Private Boat	75,472
Shore	46,513
Total	155,671

Equipment	Durable Goods Expenditures
Fishing Tackle	168,872
Other Equipment	69,515
Boat Expenses	486,887
Vehicle Expenses	88,627
Second Home Expenses	542
Total Durable Expenditures	814,443

Total State Trip and Durable Goods Expenditures	970,114

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	623	664	655	489	586	490	502	546	582	428
Non-Coastal	151	179	170	144	152	115	130	77	82	85
Out-of-State	484	465	469	421	433	293	309	275	532	199
Total Anglers	1,258	1,309	1,293	1,054	1,171	897	941	898	1,196	711

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	231	234	255	240	154	189	203	259	243	116
Private	2,411	2,440	2,338	1,760	2,148	1,319	1,471	1,621	1,568	1,223
Shore	1,938	1,947	1,929	1,451	1,186	1,305	1,151	1,058	1,586	842
Total Trips	4,579	4,622	4,522	3,450	3,489	2,813	2,825	2,939	3,397	2,181

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Atlantic bonito	H	13	4	7	5	1	5	5	0	18	8
	R	38	12	9	< 1	3	0	< 1	< 1	8	6
Atlantic cod	H	119	231	261	214	413	360	229	216	185	2
	R	424	658	672	581	884	542	240	411	479	137
Atlantic mackerel	H	3,603	952	2,024	471	2,083	1,649	1,132	2,274	1,926	4,019
	R	423	27	152	68	186	42	161	178	225	815
Bluefish	H	653	683	519	343	474	225	337	447	438	245
	R	1,844	1,240	1,302	953	1,028	598	714	580	2,213	254
Haddock	H	121	293	233	155	143	52	89	105	115	56
	R	63	56	158	36	33	12	68	310	403	113
Porgies (scup)	H	425	1,770	762	1,069	925	785	1,587	2,043	1,634	1,197
	R	1,096	1,183	1,687	1,741	1,858	1,174	1,806	1,257	1,283	822
Striped bass	H	315	315	378	344	341	256	378	299	277	171
	R	7,810	5,331	3,649	2,283	1,671	973	990	1,691	1,826	1,546
Summer flounder	H	239	138	232	50	45	58	76	31	113	79
	R	610	135	273	96	215	183	250	62	337	90
Winter flounder	H	43	41	169	87	86	69	46	44	92	43
	R	20	19	62	84	67	58	18	17	46	30
Wrasses (tautog)	H	80	91	34	25	46	33	25	58	100	40
	R	332	413	77	96	118	210	96	231	423	185

[1] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.

2014 Massachusett State Economy (% of national total)[1,3]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	173,575 (2.3%)	3,087,030 (2.5%)	185.35 (3.1%)	270.28 (2.9%)	455.73 (2.6%)	ds

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	36	24	26	22	27	36	25	28	33
	Receipts	2,525	908	1,250	1,943	2,082	2,433	1,699	1,857	2,356
Seafood sales, retail	Firms	62	57	64	64	61	66	65	51	56
	Receipts	4,905	4,421	7,982	7,686	6,287	7,640	5,213	3,842	5,782

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	47	52	44	44	44	44	39	40	42
	Employees	2,607	2,684	2,355	2,396	2,159	2,214	1,638	1,755	1,819
	Payroll	120,912	113,580	109,747	119,282	107,635	112,399	74,541	87,153	99,445
Seafood sales, wholesale	Establishments	139	160	141	144	149	141	140	142	130
	Employees	1,706	1,803	1,442	1,542	1,591	2,013	1,841	1,910	1,859
	Payroll	77,106	81,863	68,898	70,864	83,467	94,105	100,801	104,637	101,512
Seafood sales, retail	Establishments	115	126	118	115	112	106	114	114	114
	Employees	692	737	549	542	584	576	576	708	647
	Payroll	18,165	19,267	15,017	15,261	16,495	16,037	15,776	18,304	19,516

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	12	14	14	12	12	10	14	8	12
	Employees	623	283	169	166	ds	ds	ds	22	25
	Payroll	38,421	18,620	11,701	10,011	ds	ds	3,266	1,352	1,478
Deep sea freight transportation	Establishments	11	12	8	10	8	7	9	8	9
	Employees	509	ds	361	ds	313	381	ds	ds	ds
	Payroll	38,982	ds	38,908	35,473	36,069	38,797	ds	ds	ds
Deep sea passenger transportation	Establishments	4	1	0	1	0	0	0	0	0
	Employees	ds	ds	NA	ds	NA	NA	NA	NA	NA
	Payroll	ds	ds	NA	ds	NA	NA	NA	NA	NA
Marinas	Establishments	141	173	175	177	175	176	172	178	177
	Employees	1,064	1,154	1,138	1,188	1,150	1,125	977	1,054	1,161
	Payroll	45,894	51,705	53,694	56,663	57,002	58,251	48,657	55,053	57,797
Marine cargo handling	Establishments	4	5	3	2	2	2	4	3	3
	Employees	ds	69	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	2,867	2,271	ds	ds	ds	ds	ds	ds
Navigational services to shipping	Establishments	11	9	8	11	9	9	8	11	9
	Employees	ds	65	75	71	150	139	120	94	83
	Payroll	ds	4,540	4,355	4,342	9,413	6,980	5,965	6,578	6,645
Port & harbor operations	Establishments	4	3	4	4	8	6	5	3	1
	Employees	ds	69	63	66	86	95	35	ds	ds
	Payroll	ds	647	1,289	1,323	2,662	3,035	1,519	ds	ds
Ship & boat building	Establishments	47	49	43	38	37	37	40	41	43
	Employees	ds	588	603	579	535	445	446	463	623
	Payroll	ds	26,445	28,402	20,685	20,196	22,066	23,195	23,615	31,451

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 = these data are suppressed.
[4] NA = not applicable.

Tables | New Hampshire

2015 Economic Impacts of the New Hampshire Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	9,897	1,559,399	354,693	571,090	2,153	133,891	49,547	67,756
Commercial Harvesters	744	48,737	13,775	21,391	744	48,737	13,775	21,391
Seafood Processors & Dealers	1,072	129,892	51,040	65,812	171	20,662	8,119	10,469
Importers	3,579	1,107,178	177,446	337,516	0	0	0	0
Seafood Wholesalers & Distributors	655	93,384	32,918	43,320	66	9,433	3,325	4,376
Retail	3,846	180,207	79,514	103,049	1,173	55,059	24,328	31,520

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	18,970	17,021	17,471	17,754	20,599	23,483	23,241	20,163	24,313	27,788
Finfish & Other	5,122	4,151	4,824	5,569	5,122	6,147	5,579	2,908	2,932	2,733
Shellfish	13,848	12,870	12,647	12,186	15,477	17,336	17,662	17,256	21,381	25,055
Key Species										
American lobster	12,582	12,517	12,267	11,919	14,836	16,343	17,169	16,601	20,741	24,517
Atlantic cod	1,732	1,972	2,311	2,587	2,187	2,500	1,750	546	571	93
Atlantic herring	3	147	134	271	375	208	349	216	NA	584
Goosefish	783	375	290	280	212	207	153	186	NA	351
Haddock	128	123	89	68	29	35	95	22	18	8
Hake	165	244	167	215	237	445	474	374	NA	263
Pollock	1,502	902	1,093	1,283	839	1,355	1,224	1,135	860	356
Sea scallop	126	30	16	4	3	26	143	287	346	400
Spiny dogfish	76	NA	419	557	293	451	420	96	NA	NA

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)[1]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	10,295	8,430	10,464	13,886	11,809	12,315	12,148	8,254	9,115	11,088
Finfish & Other	7,463	5,174	7,180	10,093	7,026	7,144	7,546	3,995	4,302	6,148
Shellfish	2,832	3,256	3,284	3,793	4,783	5,171	4,603	4,259	4,813	4,940
Key Species										
American lobster	2,357	2,469	2,567	2,985	3,648	3,919	4,229	3,818	4,373	4,716
Atlantic cod	1,024	1,168	1,479	1,984	1,227	1,286	726	230	263	45
Atlantic herring	22	936	1,198	3,120	2,830	1,514	2,391	1,579	NA	3,999
Goosefish	621	325	250	250	172	153	126	162	NA	314
Haddock	73	61	53	45	18	19	45	10	10	6
Hake	157	313	222	423	322	587	1,135	393	NA	309
Pollock	2,566	2,025	2,456	2,017	1,042	1,732	1,049	983	629	270
Sea scallop	21	4	2	1	0	3	12	25	27	31
Spiny dogfish	242	NA	1,370	2,073	1,214	1,646	1,789	515	NA	NA

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
American lobster	5.34	5.07	4.78	3.99	4.07	4.17	4.06	4.35	4.74	5.20
Atlantic cod	1.69	1.69	1.56	1.30	1.78	1.94	2.41	2.38	2.17	2.08
Atlantic herring	0.12	0.16	0.11	0.09	0.13	0.14	0.15	0.14	NA	0.15
Goosefish	1.26	1.15	1.16	1.12	1.23	1.36	1.21	1.15	NA	1.12
Haddock	1.76	2.01	1.70	1.52	1.57	1.91	2.13	2.16	1.74	1.41
Hake	1.05	0.78	0.75	0.51	0.74	0.76	0.42	0.95	NA	0.85
Pollock	0.59	0.45	0.45	0.64	0.81	0.78	1.17	1.15	1.37	1.32
Sea scallop	5.92	8.26	7.68	7.22	8.84	10.35	11.68	11.54	12.71	12.89
Spiny dogfish	0.32	NA	0.31	0.27	0.24	0.27	0.23	0.19	NA	NA

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

2015 Economic Impacts of New Hampshire Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	147	18,053	6,900	9,721
	Private Boat	24	2,580	1,129	1,599
	Shore	14	1,312	529	810
Total Durable Expenditures		280	27,739	12,920	18,356
Total State Economic Impacts		465	49,684	21,478	30,486

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	10,849
Private Boat	3,506
Shore	1,141
Total	15,497

Equipment	Durable Goods Expenditures
Fishing Tackle	11,093
Other Equipment	3,403
Boat Expenses	13,398
Vehicle Expenses	1,336
Second Home Expenses	0
Total Durable Expenditures	29,230

Total State Trip and Durable Goods Expenditures	44,727

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	90	97	63	67	46	56	58	68	50	54
Non-Coastal	15	13	8	9	7	10	9	19	11	6
Out-of-State	82	63	46	58	33	30	54	66	58	54
Total Anglers	187	172	118	134	86	96	121	153	120	115

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	92	114	90	98	61	71	55	116	105	86
Private	182	233	139	147	90	178	163	107	113	79
Shore	227	155	103	155	92	48	81	89	34	57
Total Trips	501	502	333	401	243	297	299	313	252	221

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Atlantic cod	H	65	53	81	128	80	127	64	115	44	1
	R	247	235	232	209	130	259	150	156	132	260
Atlantic mackerel	H	115	128	497	882	295	2,142	1,116	707	628	233
	R	33	9	35	81	18	188	160	14	29	47
Bluefin tuna	H	0	0	< 1	< 1	0	0	< 1	0	0	0
	R	0	0	0	< 1	< 1	2	0	0	0	0
Bluefish	H	9	34	6	< 1	2	2	9	0	< 1	2
	R	23	18	3	2	< 1	1	5	< 1	2	0
Haddock	H	167	97	90	100	48	76	74	72	76	140
	R	109	44	18	28	11	20	114	258	424	322
Pollock	H	76	70	52	40	52	101	65	118	101	93
	R	47	17	20	50	75	104	147	237	154	320
Striped bass	H	14	6	5	9	6	33	14	17	6	2
	R	461	257	77	57	52	99	64	82	79	56
Winter flounder	H	7	9	11	10	2	12	< 1	0	4	3
	R	3	7	6	5	5	1	1	3	5	4

[1] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.

2014 New Hampshire State Economy (% of national total)[1,3]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	37,396 (0.5%)	563,323 (0.5%)	26.94 (0.5%)	40.69 (0.4%)	70.36 (0.4%)	ds

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	4	5	ds	ds	3	7	7	6	6
	Receipts	1,087	927	ds	ds	687	856	1,166	1,239	1,019
Seafood sales, retail	Firms	10	11	17	14	11	11	12	15	15
	Receipts	1,496	1,540	1,894	1,870	1,502	2,152	2,096	1,861	2,419

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	10	7	7	8	8	8	8	7	6
	Employees	ds	ds	ds	115	292	231	229	225	ds
	Payroll	ds	ds	ds	3,234	10,971	12,010	12,181	13,751	ds
Seafood sales, wholesale	Establishments	9	8	8	8	8	7	8	9	8
	Employees	ds	92	101	88	80	84	99	113	106
	Payroll	ds	3,360	4,142	4,268	4,171	4,123	5,738	4,562	4,271
Seafood sales, retail	Establishments	15	15	14	14	12	16	9	9	9
	Employees	78	93	83	95	102	88	48	45	ds
	Payroll	2,201	2,077	2,011	2,299	2,296	1,934	870	966	1,699

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	1	1	0	0	0	0	1	0	0
	Employees	ds	ds	NA	NA	NA	NA	ds	NA	NA
	Payroll	ds	ds	NA	NA	NA	NA	ds	NA	NA
Deep sea freight transportation	Establishments	2	1	1	1	1	1	1	1	1
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Deep sea passenger transportation	Establishments	0	0	0	0	0	0	0	0	0
	Employees	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Payroll	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marinas	Establishments	35	35	37	37	35	34	31	35	35
	Employees	ds	171	173	146	135	139	131	155	144
	Payroll	ds	7,774	8,114	7,022	6,920	7,090	6,927	8,031	8,043
Marine cargo handling	Establishments	0	1	0	0	0	0	0	0	0
	Employees	NA	ds	NA	NA	NA	NA	NA	NA	NA
	Payroll	NA	ds	NA	NA	NA	NA	NA	NA	NA
Navigational services to shipping	Establishments	4	2	2	2	2	2	3	3	3
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Port & harbor operations	Establishments	0	0	0	0	0	0	2	2	1
	Employees	NA	NA	NA	NA	NA	NA	ds	ds	ds
	Payroll	NA	NA	NA	NA	NA	NA	ds	ds	ds
Ship & boat building	Establishments	6	8	9	8	7	7	7	7	8
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 = these data are suppressed.
[4] NA = not applicable.

Tables | Rhode Island

2015 Economic Impacts of the Rhode Island Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	4,831	347,115	116,581	166,677	4,522	289,923	104,827	146,909
Commercial Harvesters	2,016	141,159	42,555	66,406	2,016	141,159	42,555	66,406
Seafood Processors & Dealers	295	34,563	13,393	17,405	284	33,222	12,874	16,729
Importers	151	46,689	7,483	14,233	0	0	0	0
Seafood Wholesalers & Distributors	140	18,834	6,673	8,781	115	15,498	5,491	7,226
Retail	2,228	105,871	46,477	59,852	2,107	100,044	43,908	56,548

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	99,365	72,282	66,085	61,657	62,739	75,929	81,136	86,371	86,344	81,836
Finfish & Other	29,662	24,802	22,732	23,383	22,995	24,891	28,611	29,470	31,824	26,048
Shellfish	69,703	47,480	43,353	38,274	39,744	51,038	52,525	56,901	54,521	55,788
Key Species										
All other flounders	3,503	3,585	2,171	1,455	593	806	1,025	2,124	2,945	1,771
American lobster	17,333	12,151	12,976	11,264	12,404	12,765	12,119	9,732	11,709	12,345
Atlantic herring	2,947	982	631	1,260	1,423	1,343	2,174	4,907	2,303	1,373
Atlantic mackerel	4,138	1,182	882	3,301	1,886	100	2,804	339	309	1,074
Goosefish	4,525	3,540	3,590	3,022	2,973	4,600	3,844	2,725	2,990	2,730
Quahog clam	3,529	4,010	3,273	2,849	3,293	3,920	5,169	5,033	5,099	5,449
Scups or porgies	2,927	2,767	2,324	2,640	2,833	3,312	3,904	3,666	4,118	4,283
Sea scallop	20,822	8,963	2,170	2,342	2,156	6,834	9,191	18,639	10,273	7,885
Squid	22,601	15,339	17,687	15,249	12,590	20,380	12,744	13,208	17,718	20,287
Summer flounder	5,093	4,346	4,485	4,502	5,534	6,408	6,937	6,751	7,298	6,107

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	113,025	75,271	72,027	84,041	77,738	78,747	85,232	89,886	91,684	75,635
Finfish & Other	60,847	40,878	34,478	46,479	42,566	42,162	52,745	63,787	57,440	46,681
Shellfish	52,179	34,393	37,549	37,562	35,172	36,585	32,487	26,099	34,245	28,954
Key Species										
All other flounders	1,850	1,871	1,144	1,027	358	615	664	1,368	2,158	1,057
American lobster	3,752	2,293	2,772	2,840	2,929	2,754	2,706	2,156	2,413	2,316
Atlantic herring	23,150	7,537	4,504	9,528	8,479	8,729	13,839	28,330	16,505	10,431
Atlantic mackerel	10,143	4,242	2,385	9,057	4,356	162	5,497	714	539	1,906
Goosefish	3,864	3,209	3,225	2,841	2,556	3,242	2,873	2,818	2,893	2,529
Quahog clam	385	610	556	511	599	666	903	818	764	683
Scups or porgies	3,643	3,932	2,151	3,619	4,299	6,335	6,309	7,346	6,949	6,797
Sea scallop	3,283	1,357	310	356	267	690	944	1,646	841	661
Squid	39,617	23,718	26,417	26,452	19,799	25,996	11,689	12,609	24,938	20,495
Summer flounder	2,123	1,516	1,473	1,794	2,289	2,824	2,409	2,193	2,056	1,716

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
All other flounders	1.89	1.92	1.90	1.42	1.66	1.31	1.54	1.55	1.36	1.68
American lobster	4.62	5.30	4.68	3.97	4.24	4.64	4.48	4.51	4.85	5.33
Atlantic herring	0.13	0.13	0.14	0.13	0.17	0.15	0.16	0.17	0.14	0.13
Atlantic mackerel	0.41	0.28	0.37	0.36	0.43	0.62	0.51	0.47	0.57	0.56
Goosefish	1.17	1.10	1.11	1.06	1.16	1.42	1.34	0.97	1.03	1.08
Quahog clam	9.16	6.57	5.88	5.58	5.50	5.89	5.72	6.15	6.67	7.98
Scups or porgies	0.80	0.70	1.08	0.73	0.66	0.52	0.62	0.50	0.59	0.63
Sea scallop	6.34	6.61	7.00	6.58	8.07	9.90	9.73	11.32	12.21	11.93
Squid	0.57	0.65	0.67	0.58	0.64	0.78	1.09	1.05	0.71	0.99
Summer flounder	2.40	2.87	3.04	2.51	2.42	2.27	2.88	3.08	3.55	3.56

2015 Economic Impacts of Rhode Island Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	128	16,345	6,215	9,010
	Private Boat	145	15,823	6,314	10,133
	Shore	36	4,000	1,599	2,579
Total Durable Expenditures		3,045	295,350	127,279	194,921
Total State Economic Impacts		3,354	331,518	141,407	216,643

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	9,741
Private Boat	18,905
Shore	4,802
Total	33,448

Equipment	Durable Goods Expenditures
Fishing Tackle	61,080
Other Equipment	19,922
Boat Expenses	159,426
Vehicle Expenses	17,189
Second Home Expenses	556
Total Durable Expenditures	258,173

Total State Trip and Durable Goods Expenditures	291,621

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	177	171	169	111	161	105	99	129	160	123
Non-Coastal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Out-of-State	291	229	297	209	225	190	169	255	304	175
Total Anglers	468	401	465	320	387	296	268	383	464	298

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	53	74	67	56	41	39	40	48	52	52
Private	642	590	716	423	531	536	461	587	491	513
Shore	874	759	673	507	667	539	575	595	556	314
Total Trips	1,568	1,423	1,456	986	1,239	1,114	1,077	1,229	1,099	879

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Atlantic bonito	H	0	5	< 1	< 1	< 1	0	< 1	4	2	< 1
	R	0	4	1	0	0	0	0	4	6	2
Atlantic cod	H	4	< 1	2	4	2	4	16	< 1	13	16
	R	2	< 1	< 1	7	12	14	1	< 1	5	12
Black seabass	H	41	44	52	36	160	50	103	75	214	234
	R	161	118	128	134	212	221	766	684	859	752
Bluefish	H	471	295	282	65	103	124	673	323	136	67
	R	554	686	491	160	94	328	427	625	114	258
Porgies (scup)	H	470	353	633	140	398	568	498	820	976	542
	R	801	613	1,386	333	536	662	675	616	579	614
Striped bass	H	76	101	51	71	70	89	62	217	104	40
	R	835	678	416	399	183	214	247	826	163	527
Summer flounder	H	264	176	204	72	118	161	103	128	185	164
	R	1,129	612	848	382	230	724	382	528	417	413
Winter flounder	H	< 1	< 1	< 1	4	2	0	0	0	< 1	< 1
	R	0	3	1	1	< 1	< 1	1	0	< 1	0
Wrasses (tautog)	H	82	125	104	85	197	19	104	136	69	98
	R	198	267	187	187	187	139	214	281	122	292
Yellowfin tuna	H	0	0	0	0	0	0	0	6	< 1	4
	R	0	0	0	0	0	0	0	0	0	6

[1] NA = not applicable because all Rhode Island residents are considered coastal county residents.
[2] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.

2014 Rhode Island's State Economy (% of national total)[1]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	28,132 (0.4%)	421,578 (0.3%)	19.51 (0.3%)	30.64 (0.3%)	54.49 (0.3%)	3.77

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	8	8	7	9	6	9	10	8	8
	Receipts	1,662	2,291	1,376	1,045	907	1,168	1,441	1,393	1,418
Seafood sales, retail	Firms	24	23	19	16	17	25	20	22	16
	Receipts	3,266	3,536	2,748	2,821	2,769	3,033	2,536	2,501	1,331

Seafood Sales & Processing - Employer Establishments (thousands of dollars)[3]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	7	6	8	7	5	4	3	3	3
	Employees	231	196	270	275	193	178	ds	ds	ds
	Payroll	6,137	6,876	6,354	5,821	6,096	5,544	ds	ds	ds
Seafood sales, wholesale	Establishments	36	35	29	34	32	34	32	31	28
	Employees	188	224	226	202	204	230	278	182	188
	Payroll	10,209	11,447	10,505	9,534	9,815	10,264	13,064	8,412	8,763
Seafood sales, retail	Establishments	28	27	23	24	26	23	24	24	27
	Employees	ds	109	94	127	113	109	111	113	114
	Payroll	ds	2,207	2,027	2,398	2,309	2,232	2,388	2,610	2,608

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	1	1	2	1	1	2	1	1	1
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Deep sea freight transportation	Establishments	2	2	2	2	2	2	2	1	1
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Deep sea passenger transportation	Establishments	0	1	1	1	1	1	1	2	3
	Employees	NA	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	NA	ds	ds	ds	ds	ds	ds	ds	ds
Marinas	Establishments	63	68	73	70	72	71	67	71	65
	Employees	457	463	476	459	428	460	424	466	449
	Payroll	18,748	22,029	23,204	21,372	22,227	22,618	20,811	24,214	24,876
Marine cargo handling	Establishments	2	2	5	5	5	5	4	4	3
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Navigational services to shipping	Establishments	7	7	8	8	8	8	7	7	6
	Employees	ds	ds	ds	ds	ds	107	ds	ds	ds
	Payroll	ds	ds	5,904	3,728	3,955	4,002	3,272	ds	ds
Port & harbor operations	Establishments	2	2	2	1	1	1	5	2	3
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Ship & boat building	Establishments	38	37	39	33	29	30	37	33	33
	Employees	1,325	1,374	1,342	1,085	954	916	717	768	939
	Payroll	52,682	55,788	54,225	41,246	40,004	33,316	32,070	34,483	42,200

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 = these data are suppressed.
[4] NA = not applicable.

Mid-Atlantic Region

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

Gillnetters in Barnegat Light, NJ
(photo credit: Joanne Pellegrino)

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 squids 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 listed as experiencing overfishing in 2015.

Catch Share Programs

Two catch share programs operate in the Mid-Atlantic: 1) Atlantic Surfclam and Ocean Quahog Individual Transferable Quota (ITQ) Program; and 2) Golden Tilefish Individual Fishing Quota (IFQ) Program. Following is a description of these catch share programs and their performance. Each program is described separately because the surfclam and ocean quahog fisheries are prosecuted as independent fisheries despite being in the same ITQ program.

Atlantic Surfclam ITQ Program: This program was implemented in 1990 to conserve the surfclam 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 key performance indicators of this program show that compared with the baseline period (the 3-year period prior to implementation), the 2014 quota and inflation-adjusted revenue per vessel increased. However, landings, the number of active vessels, and inflation-adjusted total revenue decreased.

Atlantic Ocean Quahog ITQ Program: This program was implemented in 1990 to conserve the 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 key performance indicators of this program show that relative to the baseline period (the 3-year period prior to implementation), the 2014 inflation-adjusted revenue per vessel increased. However, quota, landings, number of active vessels, and inflation-adjusted total revenue decreased.

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 key performance indicators of this program show that relative to the baseline period (the 3-year period prior to implementation), the 2014 quota, landings, inflation-adjusted revenue, and inflation-adjusted revenue per vessel increased. However, the number of active vessels decreased.

Policy Updates

In June 2015, the MAFMC approved an amendment to the mackerel, squid, and butterfish FMP to protect deep sea corals from the impacts of bottom-tending fishing gear in the Mid-Atlantic. If approved by the Secretary of Commerce, the amendment will create "deep sea coral zones" in areas where corals have been observed or where they are likely to occur. Within these zones, fishermen will not be allowed to use any type of bot-

tom-tending fishing gear such as trawls, dredges, bottom longlines, and traps. In total, the areas proposed for designation as deep sea coral zones encompass more than 38,000 square miles.

The measures approved by the MAFMC include the designation of 15 "discrete coral zones," which are areas of known or highly likely coral presence and fall within the broad zones. Most of these areas are located around underwater canyons or slope areas along the continental shelf edge. In addition, the MAFMC voted to establish a "broad coral zone" encompassing a much larger area beginning around the 450-meter depth contour and extending out to the 200-mile limit of the U.S. exclusive economic zone (EEZ).

The MAFMC also approved an exemption from gear restrictions for the red crab fishery. This exemption would apply indefinitely in the broad zones and for at least 2 years in the discrete zones. The MAFMC also approved a provision that would allow vessel transit through or across all deep sea coral zones with a requirement that the vessel's fishing gear be stowed during transit. The amendment would also require the use of vessel monitoring systems for all Illex squid moratorium vessels regardless of whether fishing activity is occurring within or outside any proposed deep sea coral zones.
The MAFMC recommended a substantial cut in the commercial quota for spiny dogfish for 2016. The council's decision was driven by the recent update to the spiny dogfish stock assessment, which estimated the stock's biomass to be at 87% of the rebuilt target in 2015. Although the stock was found to be neither overfished nor subject to overfishing, the new estimate of stock biomass was a marked decrease from the 2013 update, which indicated that the stock's biomass was at 135% of the target. Following a review of the most recent scientific information, public comments, and advice from the Scientific and Statistical Committee (SSC) and Spiny Dogfish Advisory Panel, the council voted to set the 2016 commercial quota at 25.3 million pounds, a 50% reduction from the 2015 quota of 50.6 million pounds. If approved by NOAA Fisheries, the new measure would have been in effect as of May 1, 2016.

In the Northeastern United States, butterfish and longfin squid are often found in the same areas, and as a result, butterfish is often caught as bycatch in the squid fishery. Because there are caps on butterfish bycatch, the squid fishery can be forced to close early if the limit is exceeded. Scientists at Cornell University's Cooperative Extension Marine Program used funding from NOAA Fisheries' Bycatch Reduction Engineering Program to expand their successful real-time bycatch avoidance network. So far, 61 vessels send and receive "hot spot" locations of river herring, shad, and butterfish through their vessel monitoring system. The fleet then uses this information to avoid fishing in these locations and avoid bycatch. From 2012 to 2015, butterfish bycatch was reduced by more than 65 percent. The outstanding reduction of butterfish bycatch is a direct result of coordination and collaboration between commercial fishermen and scientists.

COMMERCIAL FISHERIES

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. It does not include saltwater anglers that 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/species groups.

Key Mid-Atlantic Region Commercial Species

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

Economic Impacts

The premise behind economic impact modeling is that every dollar spent in a regional economy (direct impact) is either saved or respent on additional goods or services. If those dollars are respent on other goods and services in the regional economy, this spending generates additional economic activity in the region. This report provides estimates of total economic impacts for the Nation and for each of the 23 coastal states. Total

Landings Revenue: Largest Increases

From 2006:
- Eastern oyster (805%, 682% in real terms)
- Quahog clam (98%, 71% in real terms)
- Blue crab (80%, 55% in real terms)

From 2014:
- Menhaden (21%)
- Sea scallop (20%)
- Blue crab (12%)

Landings Revenue: Largest Decreases

From 2006:
- American lobster (-65%, -70% in real terms)
- Atlantic surfclam (-56%, -62% in real terms)

From 2014:
- Striped bass (-24%)
- American lobster (-14%)
- Atlantic surfclam (-6%)

Landings: Largest Increases

From 2006:
- Eastern oyster (517%)
- Quahog clam (44%)
- Blue crab (11%)

From 2014:
- Blue crab (27%)
- Sea scallop (19%)
- Menhaden (15%)

Landings: Largest Decreases

From 2006:
- American lobster (-64%)
- Atlantic surfclam (-57%)
- Sea scallop (-35%)

From 2014:
- Striped bass (-25%)
- American lobster (-23%)
- Atlantic surfclam (-6%)

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 seafood businesses and its full supply chain are included). That is, impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

Four different measures are commonly used to show commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. Sales refer to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. It 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 types of measures are calculated in terms of dollars, whereas employment impacts are measured in terms of 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.[1]

In 2015, commercial fishing in New York generated the largest employment impacts in the Mid-Atlantic Region with 39,900 jobs. New Jersey had the largest income impacts ($1.3 billion), sales impacts ($6 billion), and value-added impacts ($2.1 billion).

The retail sector in New York generated the highest employment impacts of any state-level sector with 20,200 jobs. The importers sector in New Jersey generated the highest state-level income impacts ($0.7 billion), the highest state-level sales impacts ($4.5 billion), and the highest state-level value-added impacts in the region ($1.4 billion).

Landings Trends

Both landings and landings revenue increased in the Mid Atlantic Region from 2014 to 2015. Scallops, blue crab and menhaden experienced the largest year over year increase in landings revenue – up $25 million, $11

[1] The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates (see NMFS Commercial Fishing & Seafood Industry Input/Output Model, available at www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf).

million and $7 million, respectively, from 2014 to 2015. Blue crab landings revenue was up due to high landings (up 27%); blue crab prices were down 12% year over year, reflecting the national trend (blue crab prices were down 10% nationally). Oyster landings revenue was up $2.8 million from 2014 to 2015. Both oyster harvest and oyster revenue has been up each year since 2009 with surging aquaculture production in Virginia accounting for the majority of the growth.

Landings Revenue

Landings revenue in the Mid-Atlantic Region totaled $512 million in 2015. This number represents a 37% increase from 2006 (an 18% increase in real terms after adjusting for inflation) and a 7% increase from 2014. Landings revenue was highest in Virginia ($199 million) followed by New Jersey ($166 million). Shellfish landings revenue made up 77% of total revenue. Sea scallop ($151 million) and blue crab ($100 million) had the highest landings revenue in the Mid-Atlantic Region in 2015. Together they accounted for 49% of total landings revenue.

From 2006 to 2015, eastern oyster (805%, 682% in real terms); quahog clam (98%, 71% in real terms); and blue crab (80%, 55% in real terms) had the largest revenue increases, while American lobster (-65%, -70% in real terms) and Atlantic surfclam (-56%, -62% in real terms) had the largest decreases. From 2014 to 2015, menhaden (21%), sea scallop (20%), and blue crab (12%) had the largest revenue increases, while striped bass (-24%), American lobster (-14%), and Atlantic surfclam (-6%) had the largest decreases.

Landings

In 2015, Mid-Atlantic Region commercial fishermen landed more than 648 million pounds of finfish and shellfish, a 6% decrease from 2006 and a 9% increase from 2014. Landings volume was highest in Virginia (417 million pounds), followed by New Jersey (148 million pounds). Menhaden had the highest landings volume in the Mid-Atlantic Region, accounting for 67% of landed weight.

From 2006 to 2015, eastern oyster (517%), quahog clam (44%), and blue crab (11%) had the largest landings increases, while American lobster (-64%), Atlantic surfclam (-57%), and sea scallop (-35%) had the largest decreases. From 2014 to 2015, blue crab (27%), sea scallop (19%), and menhaden (15%) had the largest landings increases, while striped bass (-25%), American lobster (-23%), and Atlantic surfclam (-6%) had the largest decreases.

Price

In 2015, sea scallop ($12.35 per pound) received the highest ex-vessel price in the Mid-Atlantic Region. Landings of menhaden ($0.09 per pound) had the lowest ex-vessel price. From 2006 to 2015, sea scallop (91%, 65% in real terms), blue crab (62%, 40% in real terms), and striped bass (58%, 37% in real terms) had the largest price increases, while American lobster (-2%, -15% in real terms) had the largest decrease. From 2014 to 2015, American lobster (11%), summer flounder (8%), and menhaden (5%) had the largest price increases, while blue crab (-11%) and eastern oyster (-3%) had the largest decreases.

RECREATIONAL FISHERIES

In this report, recreational fisheries refer to fishing for fun rather than to resell fish (commercial fishing) or for subsistence. The recreational fisheries section reports on economic impacts and expenditures, angler participation, trips, and catch of key species/species groups.

Key Mid-Atlantic Region Recreational Species

- Atlantic croaker
- Black sea bass
- Bluefish
- Scup
- Spot
- Striped bass
- Summer flounder
- Tautog
- Weakfish drum
- Winter flounder

Economic Impacts and Expenditures

The contribution of recreational fishing activities[2] in the United States is reported in terms of economic impacts from angler expenditures. Total annual trip expenditures are estimated by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore). Total annual durable expenditures were estimated by multiplying mean

[2] Trip expenditure estimates were generated from the 2011 National Marine Recreational Fishing Expenditure Survey. Durable good expenditure impacts were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (see http://www.st.nmfs.noaa.gov/economics/fisheries/recreational/Marine-Angler-Durable-Expenditures/2014-durable-expenditures-survey). Economic impacts from recreational fishing activities were generated using the NMFS Recreational Economic Impact Model (see The Economic Contribution of Marine Angler Expenditures in the United States, 2011, available at http://www.st.nmfs.noaa.gov/economics/publications/marine-angler-expenditures/marine-angler-2011).

durable expenditures by the estimated annual number of adult participants in a given state.

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. Sales refer 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. 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- 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 terms of 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 greatest employment impacts from expenditures on saltwater recreational fishing in the Mid-Atlantic Region were generated in New Jersey (16,100 jobs), followed by New York (7,800 jobs). The largest sales impacts were observed in New Jersey ($1.8 billion), followed by New York ($874 million). The biggest income impacts were generated in New Jersey ($786 million), followed by New York ($377 million). The greatest value-added impacts were in New Jersey ($1.2 billion), followed by New York ($587 million).

Recreational fishing expenditures (on both fishing trips and durable equipment purchases) across the Mid-Atlantic Region in 2015 totaled about $3.5 billion. Trip expenditures totaled more than $686 million, with a large portion coming from trips in the private boat (48%) and for-hire (28%) sectors. Durable goods expenditures totaled $2.8 billion, with the largest portion coming from boat expenses ($1.7 billion).

Trips

In 2015, recreational fishermen took 12.4 million fishing trips in the Mid-Atlantic Region. This number was a 40% decrease from 2006 and a 13% decrease from 2014. The largest proportions of trips were taken in the private boat mode (49%) and shore mode (40%). States with the highest number of recorded trips were New Jersey (4.3 million trips) and New York (3.2 million trips).

Recreational Catch: Largest Increases

From 2006:
- There were no increases in catch from 2006.

From 2014:
- Drum (weakfish) (131%)
- Porgies (scup) (42%)
- Striped bass (8%)

Recreational Catch: Largest Decreases

From 2006:
- Winter flounder (-94%)
- Drum (weakfish) (-79%)
- Drum (spot) (-77%)

From 2014:
- Drum (spot) (-69%)
- Winter flounder (-50%)
- Bluefish (-42%)

Participation

In 2015, 2 million recreational anglers fished in the Mid-Atlantic Region. This number was a 36% decrease from 2006 and an 11% decrease from 2014. These anglers were Mid-Atlantic Region residents from either a coastal county (94%) or non-coastal county (6%).

Harvest and Release

Of the Mid-Atlantic Region's key species and species groups, summer flounder (10.9 million fish), drum (Atlantic croaker, 8 million fish), and striped bass (6.4 million fish) were most frequently caught by recreational anglers. From 2006 to 2015, there were no increases in catch, while winter flounder (-94%), drum (weakfish) (-79%), and drum (spot) (-77%) had the largest decreases. From 2014 to 2015, drum (weakfish) (131%), porgies (scup) (42%), and striped bass (8%) had the largest increases in catch, while drum (spot) (-69%), winter flounder (-50%), and bluefish (-42%) had the largest decreases.

MARINE ECONOMY

For this report, the marine economy refers to the economic activity generated by 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) transport, support, and marine operations (employer establishments). These sectors include several different marine-related industries.[3,4]

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[5], researchers use an index called the Commercial Fishing Location Quotient (CFLQ). 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's CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state's CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average.

The Bureau of Labor Statistics did not disclose CFLQ data for Delaware for 2014. In 2014, the CFLQ for New Jersey was the highest for the remaining states in the region at 1.01. New Jersey's CFLQ suggests that the level of employment in industries related to commercial fishing in this state is approximately 1.01 times higher than the level of employment in these industries nationwide.

In 2006, 1.1 million establishments operated throughout the Mid-Atlantic Region (including marine and non-marine-related establishments). These establishments employed 17 million workers and had a total annual payroll of $990 billion. The region's gross domestic product was approximately $2.8 trillion in 2014.

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2014, there were 369 non-employer firms (a 68% increase from 2006) and annual receipts totaled $25 million (a 59% increase from 2006 in real terms). The greatest number of firms was located in New York (181).

There were 69 employer establishments (a 18% decrease from 2006) in 2014. These establishments employed approximately 1,735 workers (a 40% decrease from 2006) and had a total annual payroll of $88 million (a 20% decrease from 2006 in real terms). The greatest number of establishments was located in Virginia (20).

Seafood Sales, Retail: In 2014, there were 452 non-employer firms (a 1% increase from 2006) and annual receipts totaled $37 million (a 35% decrease from 2006 in real terms). The greatest number of firms was located in New York (188).

There were 666 employer establishments (a 5% decrease from 2006) in 2014. These establishments employed 3,326 workers (an 8% increase from 2006) and had a total annual payroll of $85 million (a 22% increase from 2006 in real terms). The greatest number of establishments was located in New York (401).

Seafood Sales, Wholesale: There were 479 establishments (a 1% decrease from 2006) in 2014. These establishments employed 3,924 workers (a 9% decrease from 2006) and had a total annual payroll of $173 million (a 13% decrease from 2006 in real terms). The greatest number of establishments was located in New York (270).

Transport, Support, and Marine Operations

The size of the Transport, Support, and Marine Operations sectors in the Mid-Atlantic Region is difficult to assess because much of the state-level data is suppressed for confidentiality purposes. It is clear, however, that these sectors play an important role in the regional economy. For example, the Marine Cargo Handling sector contributed over 8,500 jobs and $700 million in payroll to the region's economy in 2014. These totals do not include Virginia (for which data is suppressed) and the state's Hampton Roads/Norfolk port complex.

[3] Unless otherwise stated, data is from the U.S. Census Bureau, http://censtats.census.gov/ (accessed May 31, 2016).
[4] U.S. Bureau of Economic Analysis, "Table 1.1.5 Gross Domestic Product" and "Table SA6N Compensation of Employees by NAICS Industry," http://www.bea.gov/iTable/index_nipa.cfm (accessed May 31, 2016).
[5] U.S. Bureau of Labor Statistics, "Location Quotient Calculator," http://data.bls.gov/location_quotient/ (accessed May 31, 2016).

Tables | Mid-Atlantic Region

2015 Economic Impacts of the Mid-Atlantic Seafood Industry (thousands of dollars)

		With Imports				Without Imports			
	Landings Revenue	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Delaware	6,842	630	131,510	24,365	42,523	263	33,505	7,096	11,380
Maryland	90,763	12,339	1,329,810	350,829	532,134	7,465	435,685	160,640	218,656
New Jersey	165,564	31,537	5,968,691	1,272,691	2,102,337	292	26,170	8,697	12,488
New York	49,412	39,867	5,374,448	1,152,780	1,904,988	3,514	181,429	63,039	88,176
Virginia	199,500	16,581	1,169,888	406,602	565,803	15,439	946,687	362,035	489,812

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	374,180	423,232	452,636	435,847	521,140	552,315	510,297	435,977	476,778	512,081
Finfish & Other	106,059	103,372	91,280	101,445	111,451	119,630	130,357	124,379	119,146	116,461
Shellfish	268,121	319,861	361,356	334,403	409,690	432,685	379,941	311,598	357,633	395,620
Key Species										
American lobster	9,105	8,744	7,213	5,989	6,265	4,692	5,271	4,063	3,731	3,194
Atlantic surfclam	27,241	32,479	30,019	26,426	19,940	18,737	16,501	13,688	12,792	12,051
Blue crab	55,628	69,498	80,912	80,019	127,737	101,630	101,942	86,787	88,992	100,106
Eastern oyster	6,343	9,039	11,205	9,356	12,038	13,043	20,231	37,230	54,577	57,416
Menhaden	25,104	29,918	24,457	28,581	40,315	39,666	40,043	33,780	33,332	40,336
Quahog clam	20,230	23,601	35,853	23,022	28,880	27,607	29,502	35,902	38,153	40,092
Sea scallop	121,121	147,053	165,916	161,814	184,288	227,443	168,921	100,411	125,680	150,726
Squid	7,937	7,443	7,724	7,158	12,031	20,646	17,819	12,078	8,294	8,526
Striped bass	9,958	10,993	10,671	11,459	9,450	10,520	14,622	19,792	16,553	12,512
Summer flounder	13,432	10,855	9,693	9,980	12,849	15,614	17,194	17,131	13,195	14,460

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	690,884	749,980	687,788	694,960	812,857	797,355	759,928	582,307	595,351	648,528
Finfish & Other	510,252	555,560	481,567	489,221	578,227	574,674	568,026	444,182	455,886	505,901
Shellfish	180,632	194,420	206,221	205,739	234,630	222,681	191,901	138,125	139,464	142,627
Key Species										
American lobster	1,772	1,604	1,520	1,576	1,549	1,086	1,271	980	818	631
Atlantic surfclam	46,631	53,952	48,099	41,692	30,946	30,272	26,535	22,788	21,430	20,186
Blue crab	61,862	65,070	67,975	76,097	119,286	104,414	88,964	55,424	54,407	68,885
Eastern oyster	962	2,388	1,778	1,438	1,770	2,038	2,749	4,311	5,456	5,937
Menhaden	400,662	472,086	397,537	395,469	499,578	496,829	492,532	366,343	379,997	436,490
Quahog clam	3,568	4,115	5,246	3,255	3,685	3,551	3,730	4,586	5,016	5,151
Sea scallop	18,747	22,793	24,355	25,646	23,998	23,385	17,627	8,855	10,256	12,203
Squid	10,520	8,607	8,241	8,310	26,822	33,333	26,069	14,549	8,142	7,967
Striped bass	4,741	5,477	5,693	5,852	5,582	5,461	5,589	4,709	5,045	3,766
Summer flounder	6,608	4,725	4,260	5,137	6,384	8,672	7,795	8,010	4,901	4,995

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
American lobster	5.14	5.45	4.75	3.80	4.04	4.32	4.15	4.14	4.56	5.06
Atlantic surfclam	0.58	0.60	0.62	0.63	0.64	0.62	0.62	0.60	0.60	0.60
Blue crab	0.90	1.07	1.19	1.05	1.07	0.97	1.15	1.57	1.64	1.45
Eastern oyster	6.60	3.79	6.30	6.51	6.80	6.40	7.36	8.64	10.00	9.67
Menhaden	0.06	0.06	0.06	0.07	0.08	0.08	0.08	0.09	0.09	0.09
Quahog clam	5.67	5.74	6.83	7.07	7.84	7.77	7.91	7.83	7.61	7.78
Sea scallop	6.46	6.45	6.81	6.31	7.68	9.73	9.58	11.34	12.25	12.35
Squid	0.75	0.86	0.94	0.86	0.45	0.62	0.68	0.83	1.02	1.07
Striped bass	2.10	2.01	1.87	1.96	1.69	1.93	2.62	4.20	3.28	3.32
Summer flounder	2.03	2.30	2.28	1.94	2.01	1.80	2.21	2.14	2.69	2.89

2015 Economic Impacts of the Mid-Atlantic Recreational Fishing Expenditures (thousands of dollars, trips)

	Trips	#Jobs	Sales	Income	Value Added
Delaware	495	968	100,498	40,261	65,387
Maryland	2,319	6,999	723,669	300,832	470,291
New Jersey	4,287	16,096	1,838,756	785,623	1,225,361
New York	3,235	7,844	873,940	376,697	586,816
Virginia	2,083	5,263	520,947	212,751	336,869

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	191,586
Private Boat	326,533
Shore	168,407
Total	686,527

Equipment	Durable Goods Expenditures
Fishing Tackle	725,506
Other Equipment	248,284
Boat Expenses	1,677,501
Vehicle Expenses	172,119
Second Home Expenses	13,910
Total Durable Expenditures	2,837,322

Total State Trip and Durable Goods Expenditures	3,523,849

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	2,876	3,234	2,823	2,437	2,598	2,244	2,093	2,080	2,111	1,860
Non-Coastal	224	212	197	187	178	145	175	139	130	124
Out-of-State	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Anglers	3,100	3,446	3,020	2,623	2,776	2,389	2,268	2,219	2,241	1,984

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	1,337	1,690	1,143	1,111	873	1,050	951	1,365	1,258	1,316
Private	11,862	12,371	11,566	9,708	9,366	8,512	7,676	6,851	7,633	6,082
Shore	7,370	8,125	8,005	6,196	6,346	6,413	5,805	6,000	5,455	5,022
Total Trips	20,569	22,186	20,714	17,015	16,585	15,976	14,432	14,216	14,346	12,420

Harvest (H) & Release (R) of Key Species/Species Groups (thousands of fish)

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Black sea bass	H	1,117	1,302	926	1,335	1,317	532	1,134	786	1,049	1,306
	R	5,739	6,403	8,475	6,273	6,458	3,203	7,666	5,110	4,997	5,026
Bluefish	H	3,901	4,947	3,515	2,933	2,560	2,467	2,640	2,167	3,210	1,635
	R	5,699	8,011	7,211	4,457	3,936	4,242	4,269	2,463	4,049	2,612
Drum (Atlantic croaker)	H	9,251	8,583	9,978	7,308	6,019	3,993	4,788	6,571	5,165	4,406
	R	7,418	11,025	12,910	9,405	6,232	5,390	8,429	10,516	5,638	3,567
Drum (spot)	H	6,659	11,998	6,557	4,346	3,698	4,032	2,849	5,791	5,444	1,402
	R	2,885	3,940	4,490	2,238	2,575	2,610	2,642	5,798	1,845	839
Drum (weakfish)	H	553	332	372	38	15	8	157	49	21	38
	R	2,052	1,037	1,987	180	459	469	955	211	217	509
Porgies (scup)	H	2,006	1,699	1,543	1,637	2,736	770	714	1,242	1,228	1,991
	R	3,542	2,500	3,171	2,292	2,413	1,041	1,628	1,967	1,765	2,260
Striped bass	H	2,028	1,775	1,683	1,387	1,407	1,653	951	1,478	1,271	944
	R	9,227	7,730	4,787	3,802	3,467	3,781	3,410	4,706	4,609	5,414
Summer flounder	H	3,197	2,543	1,724	1,564	1,226	1,513	1,968	2,048	1,995	1,245
	R	14,547	16,577	18,433	21,371	21,400	18,466	13,317	12,128	15,117	9,621
Winter flounder	H	325	108	44	76	56	92	44	6	37	6
	R	190	43	32	138	102	126	36	33	20	23
Wrasses (tautog)	H	679	728	669	692	761	352	165	236	547	278
	R	2,007	2,202	1,979	1,911	2,317	1,531	1,110	1,219	1,852	1,823

[1] NA = data are not available because out-of-state resident information is collected for individual states but does not specify whether an angler resides in a region.

Tables | Delaware

2015 Economic Impacts of the Delaware Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	630	131,510	24,365	42,523	263	33,505	7,096	11,380
Commercial Harvesters	129	12,536	2,983	4,039	129	12,536	2,983	4,039
Seafood Processors & Dealers	32	6,418	1,129	2,171	24	4,853	854	1,642
Importers	269	83,102	13,319	25,333	0	0	0	0
Seafood Wholesalers & Distributors	61	9,104	3,462	4,127	16	2,452	932	1,111
Retail	139	20,351	3,472	6,854	94	13,664	2,327	4,588

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	5,692	7,931	6,900	7,543	7,845	7,092	8,464	7,422	7,220	6,842
Finfish & Other	1,262	1,303	1,092	1,004	1,047	1,248	1,012	1,493	1,219	1,071
Shellfish	4,429	6,628	5,808	6,538	6,798	5,844	7,452	5,929	6,001	5,771
Key Species										
American eel	275	292	190	134	206	274	159	244	156	127
Black sea bass	190	198	156	25	8	2	0	2	NA	305
Blue crab	2,961	5,329	4,605	5,435	5,957	4,819	6,664	4,576	4,379	4,498
Eastern oyster	459	490	410	334	404	347	345	407	420	358
Quahog clam	193	181	127	117	110	143	123	177	133	97
Sea scallop	99	NA	256	173	NA	NA	NA	NA	NA	NA
Spot	7	57	40	49	50	66	16	64	104	3
Striped bass	380	300	403	327	400	412	470	766	496	461
Weakfish	32	31	18	5	4	2	56	16	7	3
Whelks	601	540	352	389	272	361	83	414	577	436

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)[1]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	4,380	5,346	4,706	5,011	5,214	4,921	5,640	4,048	3,727	3,528
Finfish & Other	815	899	630	773	718	881	628	774	853	657
Shellfish	3,566	4,448	4,076	4,238	4,496	4,040	5,012	3,274	2,874	2,871
Key Species										
American eel	120	131	80	60	69	91	54	83	62	45
Black sea bass	87	73	61	6	3	4	0	4	NA	112
Blue crab	2,856	3,799	3,508	3,414	4,110	3,502	4,571	2,488	2,000	2,124
Eastern oyster	75	80	67	67	71	62	60	71	73	61
Quahog clam	60	44	36	31	30	39	32	43	41	30
Sea scallop	16	NA	38	25	NA	NA	NA	NA	NA	NA
Spot	8	62	32	61	60	82	18	73	107	3
Striped bass	137	143	189	184	185	185	190	187	167	144
Weakfish	18	25	11	3	2	1	29	9	4	1
Whelks	203	288	217	313	138	131	29	156	229	177

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
American eel	2.28	2.22	2.38	2.24	3.00	3.03	2.93	2.94	2.50	2.83
Black sea bass	2.18	2.73	2.57	4.31	2.63	0.50	0.85	0.50	NA	2.73
Blue crab	1.04	1.40	1.31	1.59	1.45	1.38	1.46	1.84	2.19	2.12
Eastern oyster	6.10	6.14	6.09	4.97	5.67	5.56	5.76	5.71	5.71	5.85
Quahog clam	3.22	4.09	3.57	3.79	3.69	3.72	3.84	4.07	3.25	3.26
Sea scallop	6.27	NA	6.81	6.80	NA	NA	NA	NA	NA	NA
Spot	0.97	0.92	1.24	0.81	0.84	0.81	0.89	0.88	0.97	0.93
Striped bass	2.78	2.09	2.13	1.77	2.16	2.22	2.47	4.09	2.98	3.20
Weakfish	1.76	1.27	1.75	1.93	1.56	2.01	1.95	1.85	1.87	1.92
Whelks	2.96	1.88	1.62	1.24	1.97	2.76	2.89	2.66	2.51	2.46

[1] NA = these data are confidential thus not disclosable.

2015 Economic Impacts of Delaware Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	62	8,401	3,162	4,663
	Private Boat	62	7,536	1,901	3,510
	Shore	124	12,104	3,604	6,518
Total Durable Expenditures		720	72,457	31,594	50,696
Total State Economic Impacts		968	100,498	40,261	65,387

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	5,287
Private Boat	7,484
Shore	10,599
Total	23,370

Equipment	Durable Goods Expenditures
Fishing Tackle	23,274
Other Equipment	7,922
Boat Expenses	44,564
Vehicle Expenses	4,836
Second Home Expenses	0
Total Durable Expenditures	80,597

Total State Trip and Durable Goods Expenditures	103,967

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	137	150	134	114	128	129	111	82	93	67
Non-Coastal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Out-of-State	205	224	182	173	165	190	151	97	146	84
Total Anglers	342	374	315	287	293	318	262	179	239	151

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	62	71	55	44	21	18	20	37	40	38
Private	595	721	528	487	408	511	481	349	363	195
Shore	427	459	444	379	391	397	374	378	464	262
Total Trips	1,084	1,251	1,028	911	819	926	875	765	867	495

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Atlantic mackerel	H	< 1	0	0	0	0	0	0	< 1	0	< 1
	R	0	0	0	2	0	0	< 1	< 1	0	0
Black sea bass	H	114	93	23	37	21	43	40	37	24	23
	R	329	584	464	293	231	211	204	249	229	167
Bluefish	H	97	153	69	98	32	46	36	25	128	59
	R	289	538	167	167	57	128	118	70	324	132
Drum (Atlantic croaker)	H	763	359	369	452	75	92	88	232	413	145
	R	937	673	602	538	229	89	447	770	665	119
Drum (weakfish)	H	10	4	4	6	< 1	< 1	4	8	3	< 1
	R	96	23	61	4	13	7	85	22	23	16
Striped bass	H	20	8	27	20	16	18	25	20	9	3
	R	248	249	261	146	65	110	110	83	185	44
Summer Flounder	H	88	108	35	87	54	67	45	58	93	51
	R	445	1,072	605	964	619	616	253	238	292	156
White perch	H	69	34	40	64	187	112	70	119	106	34
	R	194	191	243	121	397	272	187	369	65	106
Wrasses (tautog)	H	111	100	102	120	57	45	47	38	50	7
	R	193	267	164	224	196	88	107	99	77	27
Yellowfin tuna	H	6	< 1	1	< 1	< 1	< 1	< 1	< 1	1	< 1
	R	0	0	0	< 1	0	< 1	0	< 1	< 1	< 1

[1] Data is not available because all Delaware residents are considered coastal county residents.
[2] In this table, '<1' = 0-999 ish and '1' = 1,000-1,499 fish.

2014 Delaware State Economy (% of national total)[1,3]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	24,312 (0.3%)	391,636 (0.3%)	20.92 (0.4%)	29.48 (0.3%)	63.40 (0.4%)	ds

Seafood Sales & Processing - Non-Employer Firms (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	3	ds	3	NA	ds	ds	ds	ds	ds
	Receipts	214	ds	27	NA	ds	ds	ds	ds	ds
Seafood sales, retail	Firms	9	12	9	10	9	9	11	8	13
	Receipts	835	1,025	418	813	1,107	1,226	1,333	520	452

Seafood Sales & Processing - Employer Establishments (thousands of dollars)[1]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	1	1	1	1	1	1	1	1	2
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Seafood sales, wholesale	Establishments	3	3	6	7	7	7	7	9	8
	Employees	9	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	337	ds	ds	ds	ds	ds	ds	3,020	2,381
Seafood sales, retail	Establishments	17	19	18	16	15	18	16	17	17
	Employees	135	105	ds	50	47	49	ds	60	52
	Payroll	3,133	2,997	1,498	1,348	1,414	1,493	1,545	1,396	1,261

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	3	3	2	2	1	0	0	0	0
	Employees	ds	ds	ds	ds	ds	NA	NA	NA	NA
	Payroll	ds	ds	ds	ds	ds	NA	NA	NA	NA
Deep sea freight transportation	Establishments	0	0	4	4	5	2	1	1	2
	Employees	NA	NA	ds	ds	120	ds	ds	ds	ds
	Payroll	NA	NA	ds	ds	10,768	ds	ds	ds	ds
Deep sea passenger transportation	Establishments	0	0	0	0	1	0	0	2	2
	Employees	NA	NA	NA	NA	ds	NA	NA	ds	ds
	Payroll	NA	NA	NA	NA	ds	NA	NA	ds	ds
Marinas	Establishments	18	17	19	16	19	17	18	19	18
	Employees	ds	88	65	ds	65	ds	67	64	95
	Payroll	ds	2,540	1,738	1,877	2,342	3,106	1,963	2,196	2,293
Marine cargo handling	Establishments	4	3	3	3	3	3	2	3	3
	Employees	597	527	629	ds	434	511	ds	565	541
	Payroll	18,812	19,027	19,204	16,952	16,835	19,203	ds	20,698	22,789
Navigational services to shipping	Establishments	8	8	9	8	8	8	8	8	10
	Employees	75	76	79	85	76	78	ds	82	92
	Payroll	4,783	4,961	5,360	5,672	5,176	5,096	3,111	5,330	5,350
Port & harbor operations	Establishments	3	2	2	2	3	3	4	3	2
	Employees	ds	ds	ds	ds	29	44	ds	ds	ds
	Payroll	ds	ds	ds	ds	1,182	1,512	ds	ds	ds
Ship & boat building	Establishments	1	1	2	2	2	3	4	4	6
	Employees	ds	ds	ds	ds	ds	ds	50	61	55
	Payroll	ds	ds	ds	ds	ds	ds	2,313	2,516	2,174

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 = these data are suppressed.
[4] NA = not applicable.

Tables | Maryland

2015 Economic Impacts of the Maryland Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	12,339	1,329,810	350,829	532,134	7,465	435,685	160,640	218,656
Commercial Harvesters	2,990	160,054	45,816	71,375	2,990	160,054	45,816	71,375
Seafood Processors & Dealers	1,362	135,020	52,616	67,188	676	66,982	26,102	33,331
Importers	2,246	694,859	111,364	211,823	0	0	0	0
Seafood Wholesalers & Distributors	578	85,336	29,008	38,517	213	31,489	10,704	14,213
Retail	5,162	254,541	112,025	143,230	3,586	177,159	78,018	99,737

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	53,597	65,329	73,196	75,893	103,825	82,567	85,069	75,860	91,051	90,763
Finfish & Other	9,901	12,252	11,264	11,691	13,012	13,126	15,724	17,217	18,846	16,167
Shellfish	43,696	53,077	61,933	64,202	90,813	69,441	69,345	58,643	72,205	74,596
Key Species										
Atlantic croaker	359	335	442	415	482	482	663	450	492	341
Black sea bass	118	454	445	451	590	507	421	702	834	1,085
Blue crab	31,141	41,690	50,115	52,049	79,055	60,326	60,467	49,956	52,848	54,092
Clams or bivalves	4,889	5,074	5,436	4,403	5,400	4,173	2,259	362	1,253	1,910
Eastern oyster	1,238	3,146	2,277	3,849	4,385	3,691	5,710	7,357	15,687	15,081
Menhaden	650	1,379	915	884	729	685	1,669	861	1,380	1,222
Sea scallop	6,201	2,809	3,758	3,160	1,188	551	202	8	1,328	3,077
Striped bass	4,591	5,333	5,232	5,180	5,425	5,623	6,933	9,931	8,092	6,159
Summer flounder	550	546	578	551	541	463	380	519	598	661
White perch	569	619	776	942	1,154	1,493	1,430	1,029	1,360	1,219

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	51,212	61,585	63,534	66,819	101,739	76,258	75,416	43,374	49,922	54,606
Finfish & Other	12,610	21,644	18,732	20,038	27,229	18,582	27,350	16,904	21,201	20,941
Shellfish	38,602	39,942	44,802	46,781	74,510	57,675	48,066	26,470	28,721	33,664
Key Species										
Atlantic croaker	738	576	778	550	589	804	1,041	855	504	340
Black sea bass	43	171	159	126	203	167	141	219	252	349
Blue crab	29,446	30,778	34,872	38,801	66,262	51,163	43,737	24,179	24,690	29,672
Clams or bivalves	7,756	7,947	8,600	6,292	6,971	5,412	2,962	609	1,955	1,983
Eastern oyster	274	317	249	498	432	356	618	788	1,196	1,190
Menhaden	5,192	13,751	9,615	9,419	15,467	8,016	16,383	7,298	8,363	8,794
Sea scallop	931	450	569	521	153	58	20	1	110	248
Striped bass	2,485	2,640	2,655	2,812	2,510	2,343	2,541	2,018	2,353	1,695
Summer flounder	248	229	208	214	261	259	165	178	192	208
White perch	688	973	858	1,301	1,700	2,059	1,956	1,244	1,516	1,571

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Atlantic croaker	0.49	0.58	0.57	0.75	0.82	0.60	0.64	0.53	0.98	1.00
Black sea bass	2.73	2.66	2.79	3.59	2.90	3.04	2.99	3.20	3.31	3.11
Blue crab	1.06	1.35	1.44	1.34	1.19	1.18	1.38	2.07	2.14	1.82
Clams or bivalves	0.63	0.64	0.63	0.70	0.77	0.77	0.76	0.59	0.64	0.96
Eastern oyster	4.52	9.92	9.13	7.73	10.15	10.37	9.24	9.34	13.11	12.67
Menhaden	0.13	0.10	0.10	0.09	0.05	0.09	0.10	0.12	0.17	0.14
Sea scallop	6.66	6.25	6.60	6.06	7.77	9.53	10.23	12.27	12.11	12.43
Striped bass	1.85	2.02	1.97	1.84	2.16	2.40	2.73	4.92	3.44	3.63
Summer flounder	2.22	2.39	2.78	2.58	2.07	1.78	2.30	2.92	3.11	3.17
White perch	0.83	0.64	0.90	0.72	0.68	0.73	0.73	0.83	0.90	0.78

2015 Economic Impacts of Maryland Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	556	60,668	23,365	34,523
	Private Boat	477	50,031	18,277	28,554
	Shore	379	36,226	13,260	21,749
Total Durable Expenditures		5,587	576,744	245,930	385,465
Total State Economic Impacts		6,999	723,669	300,832	470,291

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	40,284
Private Boat	61,539
Shore	32,903
Total	134,726

Equipment	Durable Goods Expenditures
Fishing Tackle	124,798
Other Equipment	56,233
Boat Expenses	356,158
Vehicle Expenses	40,759
Second Home Expenses	3,447
Total Durable Expenditures	581,395

Total State Trip and Durable Goods Expenditures	716,121

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	733	850	643	514	552	415	374	404	413	364
Non-Coastal	84	78	50	43	54	49	40	36	41	31
Out-of-State	447	528	507	327	462	372	258	329	338	352
Total Anglers	1,264	1,456	1,200	884	1,068	836	672	769	792	748

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	239	270	194	203	139	161	151	154	211	180
Private	1,836	2,352	1,891	1,608	1,643	1,453	1,281	1,576	1,388	1,477
Shore	1,145	1,082	1,273	1,082	1,150	1,206	817	1,005	874	662
Total Trips	3,220	3,704	3,358	2,893	2,932	2,819	2,249	2,735	2,473	2,319

Harvest (H) & Release (R) of Key Species Species Groups (thousands of fish)[1]

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Black sea bass	H	121	39	26	33	36	47	33	30	68	58
	R	645	577	674	454	669	353	290	350	501	302
Bluefish	H	420	676	551	591	273	259	114	54	160	102
	R	778	1,172	1,631	670	161	408	138	259	142	194
Drum (Atlantic croaker)	H	755	873	620	1,335	1,137	554	979	1,140	1,080	815
	R	1,784	1,258	2,127	1,138	1,011	366	1,731	2,937	1,146	627
Drum (spot)	H	2,896	3,615	1,892	2,064	1,164	913	766	936	1,254	524
	R	1,355	1,619	1,738	633	1,155	297	920	2,622	566	243
Striped bass	H	669	765	415	502	458	445	262	477	583	406
	R	3,711	3,065	1,339	1,423	1,509	1,128	2,207	2,387	2,415	3,118
Summer flounder	H	37	104	58	65	25	15	23	53	80	44
	R	252	1,018	923	816	1,225	473	214	280	631	244
Weakfish drum	H	< 1	7	2	4	5	< 1	11	2	1	3
	R	47	64	37	8	163	18	25	10	5	118
White perch	H	2,561	2,890	1,511	551	2,613	1,572	1,534	2,258	808	710
	R	3,953	5,424	3,853	1,137	2,891	2,348	4,143	6,295	2,164	2,125
Wrasses (tautog)	H	15	43	19	38	57	12	5	4	< 1	3
	R	186	178	151	133	361	76	110	53	2	79
Yellowfin tuna	H	8	4	< 1	5	1	< 1	0	2	10	5
	R	< 1	< 1	0	2	< 1	0	0	4	1	0

[1] In this table, '<1' = 0-999 ish and '1' = 1,000-1,499 fish.

2014 Maryland State Economy (% of national total)[1]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	136,501 (1.8%)	2,216,867 (1.8%)	114.34 (1.9%)	194.1 (2.1%)	346.86 (2%)	0.47

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	55	56	56	42	43	55	67	49	60
	Receipts	2,751	3,940	3,310	2,268	2,138	2,374	3,030	3,158	3,230
Seafood sales, retail	Firms	73	99	84	94	85	86	96	95	87
	Receipts	7,755	10,493	9,010	8,819	6,177	7,396	6,454	6,147	8,437

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	19	22	22	19	18	17	16	16	17
	Employees	1,053	1,296	1,003	245	273	264	266	309	284
	Payroll	28,852	32,386	39,328	13,049	12,652	12,773	13,587	12,455	13,131
Seafood sales, wholesale	Establishments	59	62	60	61	63	57	60	58	58
	Employees	694	978	851	777	795	775	724	636	630
	Payroll	32,943	50,353	42,296	39,055	39,067	38,971	34,194	30,119	31,503
Seafood sales, retail	Establishments	97	102	94	87	87	88	87	87	83
	Employees	617	613	590	485	526	562	575	574	562
	Payroll	14,190	14,777	11,510	11,499	11,810	12,883	13,027	13,623	13,907

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	10	8	6	7	8	6	4	4	8
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	538	ds
Deep sea freight transportation	Establishments	14	14	13	15	15	16	14	10	11
	Employees	ds	244	250	255	390	329	245	139	135
	Payroll	ds	14,905	19,765	20,722	24,185	25,071	17,938	10,041	11,600
Deep sea passenger transportation	Establishments	1	1	3	2	1	0	0	1	0
	Employees	ds	ds	ds	ds	ds	NA	NA	ds	NA
	Payroll	ds	ds	ds	ds	ds	NA	NA	ds	NA
Marinas	Establishments	179	183	179	176	175	172	159	170	166
	Employees	1,260	1,326	1,383	1,289	1,275	1,294	1,276	1,328	1,366
	Payroll	40,866	48,752	45,965	45,483	43,508	43,330	43,531	45,540	47,443
Marine cargo handling	Establishments	13	15	15	16	17	17	6	12	12
	Employees	1,659	1,791	1,572	1,599	2,742	1,924	ds	1,519	1,132
	Payroll	73,367	85,328	48,382	46,727	95,182	86,680	ds	60,500	60,962
Navigational services to shipping	Establishments	9	8	9	11	10	11	10	11	10
	Employees	ds	157	92	77	84	84	ds	245	131
	Payroll	ds	4,882	3,968	3,807	4,015	4,259	ds	17,066	6,345
Port & harbor operations	Establishments	11	8	3	4	5	5	22	16	17
	Employees	ds	323	ds	ds	ds	ds	1,875	962	1,220
	Payroll	ds	13,427	ds	ds	ds	ds	93,001	44,436	57,543
Ship & boat building	Establishments	55	48	46	38	35	35	34	31	35
	Employees	1,119	874	677	416	ds	633	378	371	449
	Payroll	33,463	29,500	22,363	16,238	ds	36,675	14,619	16,822	18,130

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 = these data are suppressed.
[4] NA = not applicable.

Tables | New Jersey

2015 Economic Impacts of the New Jersey Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	31,537	5,968,691	1,272,691	2,102,337	292	26,170	8,697	12,488
Commercial Harvesters	104	13,635	3,582	5,810	104	13,635	3,582	5,810
Seafood Processors & Dealers	4,728	491,655	186,200	243,028	27	2,773	1,050	1,371
Importers	14,695	4,545,544	728,510	1,385,681	0	0	0	0
Seafood Wholesalers & Distributors	2,122	379,587	121,999	165,895	8	1,372	441	600
Retail	9,887	538,269	232,399	301,922	154	8,390	3,624	4,708

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	146,346	151,509	168,508	151,539	178,572	220,377	187,707	132,860	149,301	165,564
Finfish & Other	33,680	24,234	19,936	24,074	23,031	26,808	28,639	25,951	24,911	29,135
Shellfish	112,666	127,275	148,572	127,465	155,540	193,569	159,068	106,909	124,390	136,429
Key Species										
American lobster	2,522	4,056	3,215	2,278	2,895	3,039	3,938	2,797	2,380	2,249
Atlantic herring	3,297	562	548	1,507	422	415	147	401	615	308
Atlantic mackerel	9,324	668	1,568	1,539	848	53	589	18	12	544
Blue crab	6,359	5,471	7,284	184	12,030	9,422	10,009	8,111	4,145	8,043
Eastern oyster	2,255	NA	2,547	NA	NA	NA	NA	NA	NA	NA
Goosefish	4,501	4,486	4,005	3,018	2,752	3,654	3,301	2,453	2,428	2,364
Ocean quahog & surfclams	25,107	26,547	30,838	27,496	23,889	25,301	25,453	22,962	11,455	10,889
Quahog clam	7,615	968	6,254	NA	NA	NA	NA	NA	NA	NA
Sea scallop	58,538	77,359	91,317	90,150	109,118	142,505	110,560	65,190	87,746	97,856
Summer flounder	5,091	3,988	3,461	3,376	4,552	5,461	5,434	4,899	4,862	5,057

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)[1]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	175,777	153,848	162,308	162,029	162,164	187,539	180,505	119,912	125,114	148,418
Finfish & Other	89,289	65,166	62,821	73,623	74,881	94,678	104,174	61,790	64,901	94,219
Shellfish	86,487	88,683	99,487	88,406	87,282	92,861	76,331	58,122	60,213	54,198
Key Species										
American lobster	471	680	633	585	689	687	919	660	526	445
Atlantic herring	25,486	6,038	6,539	13,692	4,140	2,385	1,114	2,344	4,087	3,428
Atlantic mackerel	24,977	5,384	9,426	10,255	4,692	107	2,017	46	17	2,188
Blue crab	5,981	4,636	5,816	257	9,461	9,600	7,393	4,391	3,233	7,247
Eastern oyster	343	NA	550	NA	NA	NA	NA	NA	NA	NA
Goosefish	3,842	4,231	3,698	2,692	2,024	2,274	2,212	2,231	2,172	1,903
Ocean quahog & surfclams	43,644	44,791	51,597	45,306	38,538	41,281	38,921	35,960	19,447	18,283
Quahog clam	1,844	240	1,516	NA	NA	NA	NA	NA	NA	NA
Sea scallop	8,457	11,808	13,282	14,045	14,171	14,545	11,379	5,640	7,133	7,847
Summer flounder	2,380	1,697	1,541	1,799	2,165	2,831	2,269	2,004	1,826	1,681

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
American lobster	5.36	5.96	5.08	3.89	4.20	4.42	4.28	4.23	4.52	5.05
Atlantic herring	0.13	0.09	0.08	0.11	0.10	0.17	0.13	0.17	0.15	0.09
Atlantic mackerel	0.37	0.12	0.17	0.15	0.18	0.50	0.29	0.40	0.73	0.25
Blue crab	1.06	1.18	1.25	0.72	1.27	0.98	1.35	1.85	1.28	1.11
Eastern oyster	6.57	NA	4.63	NA	NA	NA	NA	NA	NA	NA
Goosefish	1.17	1.06	1.08	1.12	1.36	1.61	1.49	1.1	1.12	1.24
Ocean quahog & surfclams	0.58	0.59	0.60	0.61	0.62	0.61	0.65	0.64	0.59	0.60
Quahog clam	4.13	4.04	4.12	NA	NA	NA	NA	NA	NA	NA
Sea scallop	6.92	6.55	6.88	6.42	7.70	9.80	9.72	11.56	12.3	12.47
Summer flounder	2.14	2.35	2.25	1.88	2.10	1.93	2.39	2.44	2.66	3.01

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

2015 Economic Impacts of New Jersey Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	562	88,203	38,232	53,348
	Private Boat	910	128,156	45,130	72,805
	Shore	651	81,888	30,506	49,362
Total Durable Expenditures		13,973	1,540,509	671,755	1,049,846
Total State Economic Impacts		16,096	1,838,756	785,623	1,225,361

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	51,945
Private Boat	114,835
Shore	67,342
Total	234,122

Equipment	Durable Goods Expenditures
Fishing Tackle	317,241
Other Equipment	93,701
Boat Expenses	732,637
Vehicle Expenses	75,654
Second Home Expenses	4,365
Total Durable Expenditures	1,223,597

Total State Trip and Durable Goods Expenditures	1,457,719

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	693	890	765	656	776	687	662	581	607	515
Non-Coastal	25	19	26	35	36	23	27	20	17	24
Out-of-State	481	518	456	454	449	357	431	330	566	448
Total Anglers	1,199	1,427	1,246	1,145	1,261	1,067	1,121	931	1,189	987

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	633	605	449	434	320	383	369	550	514	466
Private	3,721	3,614	3,595	2,671	3,265	2,446	2,580	1,914	2,508	1,877
Shore	2,682	2,979	2,857	2,234	2,278	2,334	2,072	1,900	1,846	1,945
Total Trips	7,036	7,198	6,901	5,339	5,863	5,163	5,020	4,364	4,868	4,287

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Black sea bass	H	531	725	580	583	687	148	735	345	468	310
	R	2,083	2,423	4,432	3,138	3,870	1,302	3,818	2,546	2,243	2,053
Bluefin tuna	H	4	7	3	14	6	2	< 1	9	5	< 1
	R	98	< 1	1	2	7	6	0	0	< 1	< 1
Bluefish	H	1,183	1,654	1,028	814	910	1,150	1,190	792	1,343	827
	R	1,804	2,735	1,477	1,476	1,886	1,911	1,996	884	1,853	1,055
Drum (weakfish)	H	489	230	298	12	2	3	114	31	7	30
	R	1,335	613	1,436	79	103	100	732	94	80	246
Red hake	H	141	1	152	240	124	206	58	82	177	19
	R	12	0	20	23	24	13	15	55	13	6
Striped bass	H	510	290	309	283	320	393	169	401	226	284
	R	1,890	1,789	1,309	801	690	884	406	1,073	1,051	859
Summer flounder	H	1,556	1,067	762	825	552	737	1,130	1,232	1,175	497
	R	6,740	6,192	8,959	10,414	10,565	8,096	6,981	6,427	9,513	4,677
Winter flounder	H	64	97	3	7	24	28	< 1	5	13	< 1
	R	113	28	15	27	38	25	2	29	9	22
Wrasses (tautog)	H	201	300	173	127	375	137	38	111	170	157
	R	604	1,290	902	856	1,063	843	510	461	778	683
Yellowfin tuna	H	35	58	7	7	25	17	69	95	7	7
	R	< 1	0	1	16	< 1	< 1	9	7	0	9

[1] In this table, '<1' = 0-999 ish and '1' = 1,000-1,499 fish.

2014 New Jersey State Economy (% of national total)[1]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	230,600 (3.1%)	3,526,716 (2.9%)	202.66 (3.4%)	298.71 (3.2%)	551.83 (3.2%)	1.01

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	27	25	22	33	47	29	35	48	45
	Receipts	3,027	2,399	1,851	3,670	3,613	3,447	3,565	4,981	5,736
Seafood sales, retail	Firms	72	90	92	86	66	68	77	74	74
	Receipts	8,916	11,320	11,196	11,131	8,265	8,049	8,972	8,257	7,135

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	16	16	14	13	11	12	11	13	13
	Employees	667	628	566	661	482	518	404	671	647
	Payroll	22,097	18,403	18,703	22,025	17,427	17,940	13,747	22,764	21,933
Seafood sales, wholesale	Establishments	89	101	81	83	90	91	82	80	78
	Employees	941	978	856	858	848	935	1,058	765	795
	Payroll	41,506	41,994	37,462	37,348	38,065	40,103	44,033	37,405	36,773
Seafood sales, retail	Establishments	127	124	118	106	108	109	114	114	108
	Employees	493	472	368	332	332	332	382	419	434
	Payroll	11,373	10,352	9,372	9,126	9,094	9,264	11,561	11,657	12,520

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	18	23	18	19	18	20	16	16	13
	Employees	1,040	778	645	594	600	508	402	367	365
	Payroll	68,096	56,017	48,911	41,925	44,246	40,587	32,007	32,431	33,308
Deep sea freight transportation	Establishments	39	31	27	26	26	26	25	20	21
	Employees	648	566	1,115	1,045	ds	ds	390	225	212
	Payroll	45,940	44,133	75,848	66,547	78,898	81,936	27,481	12,263	11,271
Deep sea passenger transportation	Establishments	4	2	2	3	2	2	2	0	2
	Employees	ds	ds	ds	ds	ds	ds	ds	NA	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	NA	ds
Marinas	Establishments	204	216	211	214	212	206	210	206	190
	Employees	940	1,045	916	784	781	773	811	787	737
	Payroll	39,154	41,624	39,596	35,811	35,475	34,675	35,760	37,606	36,583
Marine cargo handling	Establishments	25	23	21	22	21	22	15	20	21
	Employees	4,599	4,781	4,244	3,479	3,292	3,744	2,582	6,912	6,082
	Payroll	345,784	350,690	278,189	230,886	260,894	273,636	203,148	538,991	563,746
Navigational services to shipping	Establishments	19	26	20	19	16	17	18	18	18
	Employees	ds	227	191	133	75	110	96	106	92
	Payroll	ds	11,403	7,776	6,638	6,125	5,619	5,983	6,057	5,597
Port & harbor operations	Establishments	6	8	6	6	11	7	25	18	18
	Employees	ds	271	143	54	124	163	ds	ds	ds
	Payroll	ds	12,197	12,446	5,548	10,463	16,933	139,276	5,995	6,334
Ship & boat building	Establishments	34	31	30	25	24	23	21	24	24
	Employees	2,307	2,305	2,019	1,188	1,056	864	901	917	1,080
	Payroll	88,367	91,460	79,309	42,909	37,920	39,810	36,334	41,886	50,459

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 = these data are suppressed.
[4] NA = data not available.

Tables | New York

2015 Economic Impacts of the New York Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	39,867	5,374,448	1,152,780	1,904,988	3,514	181,429	63,039	88,176
Commercial Harvesters	1,644	88,589	25,467	39,165	1,644	88,589	25,467	39,165
Seafood Processors & Dealers	845	136,389	51,857	67,452	123	19,896	7,565	9,840
Importers	13,246	4,097,284	656,668	1,249,032	0	0	0	0
Seafood Wholesalers & Distributors	3,940	318,982	107,836	145,399	121	9,807	3,315	4,470
Retail	20,191	733,204	310,952	403,940	1,625	63,136	26,691	34,702

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	58,479	60,314	57,429	48,856	47,717	48,303	54,524	56,809	56,316	49,412
Finfish & Other	19,806	19,936	18,534	17,331	18,575	20,087	23,515	23,271	19,688	18,815
Shellfish	38,673	40,378	38,896	31,525	29,142	28,215	31,009	33,537	36,628	30,597
Key Species										
American lobster	6,288	4,623	3,821	3,468	3,165	1,398	999	938	985	708
Atlantic surfclam	2,135	5,932	5,670	5,858	3,929	545	2,783	2,410	1,338	NA
Eastern oyster	2,390	2,627	2,870	1,428	2,046	2,174	2,227	4,149	9,372	6,196
Loligo squid	5,844	5,157	5,290	4,167	4,516	7,250	8,648	5,949	5,448	5,409
Quahog clam	12,237	14,224	13,185	8,397	7,774	6,905	9,218	13,475	11,777	12,244
Scups or porgies	2,450	2,348	1,710	1,887	2,112	2,551	3,536	2,971	2,313	3,139
Sea scallop	3,519	3,872	5,050	5,018	3,778	4,960	4,083	2,602	2,963	978
Softshell clam	2,055	1,628	1,076	700	709	351	332	848	982	1,427
Summer flounder	3,409	3,131	2,933	3,087	3,550	3,732	3,653	3,197	2,997	3,040
Tilefishes	3,325	3,843	3,343	3,262	4,077	4,525	4,260	4,676	4,255	3,656

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)[1]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	33,287	35,785	34,175	34,304	33,267	32,010	35,864	33,366	27,377	24,695
Finfish & Other	14,052	15,696	14,686	15,867	18,275	18,442	18,864	18,369	15,645	15,638
Shellfish	19,234	20,089	19,489	18,438	14,992	13,567	17,000	14,997	11,732	9,057
Key Species										
American lobster	1,243	912	850	932	814	344	275	248	223	147
Atlantic surfclam	2,987	9,161	8,753	8,799	5,857	809	4,117	3,452	1,983	NA
Eastern oyster	269	124	135	64	81	98	108	204	422	241
Loligo squid	6,460	5,437	5,469	4,098	3,900	5,630	7,838	4,985	5,138	4,255
Quahog clam	1,650	1,592	1,476	1,410	1,216	1,131	1,299	1,932	1,781	1,898
Scups or porgies	2,416	2,325	1,214	1,850	2,690	3,729	4,307	4,574	3,175	4,052
Sea scallop	1,040	619	782	918	508	522	430	256	262	87
Softshell clam	393	198	131	114	116	57	54	138	160	194
Summer flounder	1,220	942	856	1,142	1,364	1,517	1,238	1,033	833	829
Tilefishes	1,298	1,393	1,199	1,435	1,586	1,521	1,413	1,468	1,383	936

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
American lobster	5.06	5.07	4.49	3.72	3.89	4.06	3.63	3.78	4.42	4.83
Atlantic surfclam	0.71	0.65	0.65	0.67	0.67	0.67	0.68	0.70	0.67	NA
Eastern oyster	8.87	21.21	21.21	22.23	25.41	22.23	20.58	20.32	22.23	25.69
Loligo squid	0.90	0.95	0.97	1.02	1.16	1.29	1.10	1.19	1.06	1.27
Quahog clam	7.42	8.94	8.93	5.96	6.39	6.10	7.10	6.97	6.61	6.45
Scups or porgies	1.01	1.01	1.41	1.02	0.79	0.68	0.82	0.65	0.73	0.77
Sea scallop	3.38	6.25	6.46	5.47	7.44	9.50	9.50	10.18	11.33	11.21
Softshell clam	5.23	8.23	8.24	6.13	6.13	6.13	6.13	6.13	6.13	7.35
Summer flounder	2.80	3.33	3.43	2.70	2.60	2.46	2.95	3.09	3.60	3.67
Tilefishes	2.56	2.76	2.79	2.27	2.57	2.97	3.01	3.18	3.08	3.90

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

2015 Economic Impacts of New York Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	976	143,171	59,382	82,757
	Private Boat	474	49,647	18,618	30,586
	Shore	215	19,133	7,135	11,634
Total Durable Expenditures		6,179	661,989	291,562	461,839
Total State Economic Impacts		7,844	873,940	376,697	586,816

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	85,937
Private Boat	73,880
Shore	22,723
Total	182,541

Equipment	Durable Goods Expenditures
Fishing Tackle	151,205
Other Equipment	51,878
Boat Expenses	365,216
Vehicle Expenses	28,918
Second Home Expenses	245
Total Durable Expenditures	597,463

Total State Trip and Durable Goods Expenditures	780,004

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	735	881	817	638	646	497	533	595	657	555
Non-Coastal	25	39	32	21	24	18	30	8	19	10
Out-of-State	114	147	118	58	69	46	53	93	155	53
Total Anglers	874	1,067	967	717	740	561	616	695	830	618

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	361	684	388	381	348	458	366	565	439	567
Private	3,120	3,315	3,199	2,819	2,351	2,320	1,908	1,711	2,165	1,407
Shore	1,961	2,522	2,341	1,625	1,675	1,389	1,492	1,597	1,351	1,261
Total Trips	5,442	6,521	5,928	4,824	4,374	4,168	3,766	3,873	3,955	3,235

Harvest (H) & Release (R) of Key Species Species Groups (thousands of fish)[1]

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Atlantic herring[2]	H	23	214	69	4	79	76	174	222	188	1,462
	R	2	230	50	0	17	< 1	0	59	15	25
Black sea bass	H	269	410	260	566	543	274	322	353	469	877
	R	1,327	1,549	1,655	1,236	1,163	893	2,471	1,372	1,447	2,234
Bluefish	H	1,832	2,151	1,484	1,293	1,026	927	1,150	1,108	1,424	509
	R	2,379	2,650	3,224	1,793	1,471	1,598	1,809	1,030	1,543	1,055
Drum (weakfish)	H	10	4	40	0	3	< 1	5	7	< 1	< 1
	R	17	109	25	3	3	55	11	6	< 1	4
Porgies (scup)	H	1,678	1,596	1,451	1,460	1,990	715	592	1,096	1,182	1,957
	R	2,622	1,964	2,838	2,124	1,864	998	1,235	1,865	1,730	2,136
Shortfin mako shark	H	< 1	< 1	< 1	0	1	0	< 1	0	11	7
	R	< 1	0	0	0	0	3	3	1	11	9
Striped bass	H	368	474	686	356	538	675	425	491	392	154
	R	1,722	1,678	1,346	1,073	1,069	1,506	586	990	703	592
Summer flounder	H	752	866	609	299	334	376	509	518	508	492
	R	4,946	5,272	5,521	5,564	6,571	7,295	5,013	4,667	4,041	3,929
Winter Flounder	H	261	11	41	69	31	65	43	1	24	5
	R	76	15	17	110	63	101	33	3	11	1
Wrasses (tautog)	H	247	224	319	346	146	111	62	77	300	99
	R	823	387	728	665	567	487	365	590	939	1,018

[1] In this table, '<1' = 0-999 ish and '1' = 1,000-1,499 fish.
[2] This species may not be equivalent to species with similar names listed in the commercial tables.

2014 New York State Economy (% of national total)[1]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	536,890 (7.1%)	7,858,425 (6.5%)	492.71 (8.3%)	749.89 (8.1%)	1,395.49 (8.1%)	0.14

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	61	68	73	101	115	142	133	150	181
	Receipts	3,044	3,516	3,383	4,896	6,784	7,380	8,279	9,946	10,681
Seafood sales, retail	Firms	206	266	247	196	214	183	205	197	188
	Receipts	24,790	23,157	23,983	19,753	18,999	16,286	16,714	15,923	14,369

Seafood Sales & Processing - Employer Establishments (thousands of dollars)[3]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	15	15	17	15	15	18	17	17	17
	Employees	298	294	379	ds	272	299	265	280	ds
	Payroll	16,491	18,723	18,570	15,227	16,976	21,372	25,666	22,776	22,687
Seafood sales, wholesale	Establishments	254	291	231	246	263	291	243	264	270
	Employees	2,066	2,058	1,627	1,741	1,798	1,876	1,839	1,937	2,051
	Payroll	78,198	84,361	72,233	68,345	72,442	76,970	78,324	84,346	87,511
Seafood sales, retail	Establishments	388	372	368	386	394	391	385	399	401
	Employees	1,495	1,575	1,470	1,509	1,586	1,660	1,674	1,796	2,054
	Payroll	26,701	28,497	30,741	31,640	32,001	35,664	38,721	45,049	51,605

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	55	50	50	48	65	62	42	59	72
	Employees	1,464	1,746	1,759	2,299	1,654	1,708	ds	ds	ds
	Payroll	109,315	125,570	160,735	198,352	136,577	154,087	ds	ds	ds
Deep sea freight transportation	Establishments	38	34	29	32	30	31	23	20	23
	Employees	ds	ds	732	782	704	752	214	ds	ds
	Payroll	ds	65,632	108,744	89,313	98,499	88,354	31,229	22,691	19,387
Deep sea passenger transportation	Establishments	4	4	3	4	2	1	2	3	2
	Employees	ds	7	ds	8	ds	ds	ds	ds	ds
	Payroll	ds	240	316	126	ds	ds	ds	ds	ds
Marinas	Establishments	404	411	419	418	429	431	415	424	427
	Employees	2,112	2,070	2,263	2,099	2,052	2,033	1,868	1,907	1,986
	Payroll	83,807	88,862	100,910	96,640	94,654	96,408	87,124	93,212	95,900
Marine cargo handling	Establishments	12	12	10	9	13	12	6	9	12
	Employees	ds	ds	ds	ds	1,086	1,019	ds	922	835
	Payroll	ds	ds	ds	ds	68,555	66,439	ds	60,079	52,523
Navigational services to shipping	Establishments	36	36	32	37	37	35	53	33	36
	Employees	ds	578	386	312	598	596	712	687	722
	Payroll	ds	40,976	23,294	19,126	50,119	54,406	63,334	68,141	74,395
Port & harbor operations	Establishments	3	5	3	4	8	9	18	15	15
	Employees	6	ds	ds	ds	ds	33	1,294	196	168
	Payroll	119	ds	ds	ds	568	1,493	105,325	12,358	10,342
Ship & boat building	Establishments	48	53	49	47	41	43	49	45	42
	Employees	ds	643	688	585	575	552	560	ds	ds
	Payroll	ds	26,653	30,462	28,880	26,771	25,998	24,599	24,338	28,028

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 = these data are suppressed.
[4] NA = data not available.

Tables | Virginia

2015 Economic Impacts of the Virginia Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	16,581	1,169,888	406,602	565,803	15,439	946,687	362,035	489,812
Commercial Harvesters	4,754	341,415	109,687	162,792	4,754	341,415	109,687	162,792
Seafood Processors & Dealers	1,523	149,950	58,341	75,295	1,498	147,511	57,392	74,071
Importers	603	186,464	29,884	56,842	0	0	0	0
Seafood Wholesalers & Distributors	626	85,169	29,443	39,240	510	69,371	23,981	31,961
Retail	9,075	406,889	179,246	231,634	8,677	388,390	170,974	220,989

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	110,066	138,149	146,602	152,017	183,181	193,976	174,534	163,027	172,891	199,500
Finfish & Other	41,409	45,646	40,455	47,345	55,784	58,360	61,467	56,447	54,482	51,273
Shellfish	68,658	92,503	106,147	104,672	127,397	135,616	113,067	106,580	118,409	148,227
Key Species										
Atlantic croaker	4,326	4,445	5,269	6,940	6,025	4,571	7,532	6,247	4,186	4,150
Black sea bass	1,048	663	759	569	928	1,003	1,401	1,716	1,365	1,605
Blue crab	14,057	15,793	18,013	21,169	29,133	26,274	24,561	23,991	27,047	33,041
Goosefish	685	781	951	631	594	752	1,218	920	654	516
Menhaden	22,306	25,317	21,271	23,578	34,476	32,995	31,107	25,343	26,046	28,217
Oysters	3	2,775	3,101	3,745	5,202	6,832	11,949	25,318	29,099	35,781
Sea Scallop	52,764	63,013	65,534	63,312	70,204	79,427	54,076	32,610	33,643	48,816
Spot	1,793	3,232	1,171	3,411	975	3,431	769	2,406	5,763	2,469
Striped bass	2,946	3,831	3,378	4,219	3,635	4,497	5,542	5,702	6,390	4,720
Summer flounder	4,373	3,184	2,719	2,959	4,202	5,956	7,725	8,513	4,733	5,698

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	426,229	493,415	423,066	426,798	510,474	496,629	462,503	381,607	389,211	417,282
Finfish & Other	393,486	452,156	384,698	378,921	457,124	442,091	417,011	346,345	353,287	374,444
Shellfish	32,743	41,259	38,367	47,877	53,350	54,538	45,492	35,262	35,924	42,838
Key Species										
Atlantic croaker	7,829	10,588	11,214	8,576	7,873	5,569	6,942	6,325	4,814	4,588
Black sea bass	328	189	215	164	264	275	392	496	388	422
Blue crab	22,708	25,141	23,243	32,756	38,490	39,656	33,144	24,258	24,205	29,620
Goosefish	677	847	972	743	596	604	907	846	587	445
Menhaden	370,946	420,481	353,895	351,392	433,241	414,159	390,318	317,950	326,817	354,053
Oysters	0	1,867	776	809	1,187	1,522	1,963	3,248	3,765	4,445
Sea Scallop	8,302	9,916	9,685	10,137	9,167	8,260	5,798	2,958	2,752	4,021
Spot	1,696	4,328	1,977	3,910	1,024	3,742	613	2,085	3,983	1,576
Striped bass	1,431	1,962	2,196	2,109	2,139	2,077	2,175	1,680	1,995	1,437
Summer flounder	2,757	1,856	1,654	1,980	2,592	4,065	4,122	4,794	2,049	2,274

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Atlantic croaker	0.55	0.42	0.47	0.81	0.77	0.82	1.09	0.99	0.87	0.90
Black sea bass	3.19	3.50	3.52	3.46	3.52	3.65	3.57	3.46	3.52	3.81
Blue crab	0.62	0.63	0.77	0.65	0.76	0.66	0.74	0.99	1.12	1.12
Goosefish	1.01	0.92	0.98	0.85	1.00	1.25	1.34	1.09	1.11	1.16
Menhaden	0.06	0.06	0.06	0.07	0.08	0.08	0.08	0.08	0.08	0.08
Oysters	16.63	1.49	4.00	4.63	4.38	4.49	6.09	7.80	7.73	8.05
Sea Scallop	6.36	6.35	6.77	6.25	7.66	9.62	9.33	11.02	12.23	12.14
Spot	1.06	0.75	0.59	0.87	0.95	0.92	1.25	1.15	1.45	1.57
Striped bass	2.06	1.95	1.54	2.00	1.70	2.16	2.55	3.39	3.20	3.28
Summer flounder	1.59	1.72	1.64	1.49	1.62	1.47	1.87	1.78	2.31	2.51

2015 Economic Impacts of Virginia Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	97	11,915	4,498	6,710
	Private Boat	550	57,031	19,882	33,297
	Shore	416	38,568	14,424	24,074
Total Durable Expenditures		4,200	413,433	173,947	272,788
Total State Economic Impacts		5,263	520,947	212,751	336,869

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures	Equipment	Durable Goods Expenditures
For-Hire	8,133	Fishing Tackle	108,988
Private Boat	68,795	Other Equipment	38,550
Shore	34,840	Boat Expenses	178,926
Total	111,768	Vehicle Expenses	21,952
		Second Home Expenses	5,853
		Total Durable Expenditures	354,270
Total State Trip and Durable Goods Expenditures			466,038

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	578	463	464	515	496	516	412	419	341	359
Non-Coastal	90	76	89	87	63	56	78	74	53	59
Out-of-State	364	297	338	305	279	320	193	267	206	203
Total Anglers	1,033	836	891	907	838	892	684	760	600	620

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	43	60	57	48	45	30	45	59	53	65
Private	2,590	2,369	2,353	2,124	1,700	1,782	1,426	1,302	1,209	1,126
Shore	1,155	1,083	1,089	876	852	1,086	1,051	1,120	920	892
Total Trips	3,788	3,511	3,499	3,048	2,597	2,899	2,522	2,480	2,182	2,083

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Black sea bass	H	83	36	38	115	30	19	4	21	19	39
	R	1,355	1,271	1,251	1,153	525	444	883	593	578	270
Cobia	H	22	10	5	17	7	4	1	11	6	21
	R	23	3	3	13	9	9	9	16	15	25
Drum (Atlantic croaker)	H	7,221	6,945	8,388	5,327	4,744	3,306	3,454	4,307	3,408	3,330
	R	4,194	8,504	7,807	7,621	4,824	4,873	5,100	6,011	3,622	2,744
Drum (spot)	H	3,585	8,203	4,398	2,147	1,670	2,967	1,350	4,265	3,832	867
	R	1,372	2,157	1,488	1,458	1,156	2,245	1,146	2,214	1,185	509
Drum (spotted seatrout)	H	44	159	104	23	17	248	126	55	47	9
	R	83	363	367	171	550	1,215	429	291	404	482
Drum (weakfish)	H	43	87	28	16	4	4	22	2	9	4
	R	557	229	428	85	177	288	102	79	109	125
Red drum	H	13	46	21	39	11	0	28	124	54	8
	R	186	111	237	178	29	61	2,503	220	116	26
Striped bass	H	461	238	245	226	74	122	70	89	61	96
	R	1,655	949	532	359	134	154	102	172	255	801
Summer flounder	H	763	397	260	289	260	318	260	186	139	159
	R	2,164	3,023	2,425	3,613	2,420	1,987	857	515	640	615
Wrasses (tautog)	H	105	61	56	60	127	46	14	6	26	12
	R	200	80	34	34	129	36	17	16	56	16

[1] In this table, '<1' = 0-999 ish and '1' = 1,000-1,499 fish.

2014 Virginia State Economy (% of national total)[1]

#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
195,639 (2.6%)	3,160,539 (2.6%)	159.15 (2.7%)	266.78 (2.9%)	462.86 (2.7%)	0.69

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	74	62	74	69	56	73	76	84	83
	Receipts	4,916	4,845	5,020	4,053	3,698	3,792	4,691	4,276	5,720
Seafood sales, retail	Firms	86	84	80	82	82	78	87	94	90
	Receipts	8,027	7,265	8,273	6,642	6,951	7,819	8,373	7,612	7,084

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	33	30	26	25	23	18	19	18	20
	Employees	871	955	490	941	961	899	919	781	804
	Payroll	28,530	34,520	11,366	30,600	30,460	33,285	32,955	30,682	29,763
Seafood sales, wholesale	Establishments	80	83	69	72	76	62	64	70	65
	Employees	605	734	621	519	518	469	492	483	448
	Payroll	21,388	25,365	17,667	15,620	17,901	15,733	14,271	14,719	14,769
Seafood sales, retail	Establishments	75	73	68	62	59	58	51	55	57
	Employees	334	282	251	271	265	277	280	254	224
	Payroll	5,348	5,227	5,170	5,401	5,480	5,453	5,563	5,526	5,537

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	13	15	10	9	7	7	12	11	12
	Employees	ds	565	ds	ds	ds	ds	ds	177	152
	Payroll	ds	30,704	ds	ds	ds	ds	ds	10,077	9,264
Deep sea freight transportation	Establishments	22	20	18	16	17	21	19	12	12
	Employees	1,564	1,611	409	ds	421	492	ds	ds	ds
	Payroll	141,085	148,502	32,473	19,241	35,917	42,018	ds	ds	ds
Deep sea passenger transportation	Establishments	1	1	2	2	1	2	1	1	1
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Marinas	Establishments	131	126	119	118	115	110	105	113	107
	Employees	ds	992	964	829	868	818	673	840	814
	Payroll	ds	26,186	24,326	24,631	24,182	23,379	18,874	24,468	24,436
Marine cargo handling	Establishments	17	15	12	12	7	11	6	8	8
	Employees	1,110	1,085	ds	ds	ds	ds	ds	ds	ds
	Payroll	51,654	56,696	ds	ds	41,280	41,262	ds	ds	ds
Navigational services to shipping	Establishments	17	18	23	25	26	21	20	18	20
	Employees	ds	216	375	384	411	419	428	303	322
	Payroll	ds	11,700	21,014	22,177	22,910	22,132	25,732	20,283	21,348
Port & harbor operations	Establishments	10	10	8	6	7	6	13	14	15
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Ship & boat building	Establishments	51	52	59	53	56	51	59	54	56
	Employees	21,741	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	993,066	ds	ds	ds	ds	ds	ds	ds	ds

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 = these data are suppressed.
[4] NA = data not available.

South Atlantic Region

- East Florida
- Georgia
- North Carolina
- South Carolina

Fishing in Florida
(photo credit: Ayeisha Brinson)

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 (SAFMC) and NOAA Fisheries under eight fishery management plans (FMPs). The coastal migratory pelagic resources and spiny lobster FMPs are managed jointly with the Gulf of Mexico Fishery Management Council (GMFMC). The SAFMC, in cooperation with the Mid-Atlantic and New England Fishery Management Councils, developed a dolphin wahoo FMP for the Atlantic.

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)

Red porgy, red snapper, snowy grouper, and Florida Keys/East Florida hogfish were listed as overfished in 2015. Five stocks or stock complexes are currently subject to overfishing: red snapper, speckled hind, Warsaw grouper, Florida Keys/East Florida hogfish, and blueline tilefish.

Catch Share Programs

South Atlantic Wreckfish Individual Transferable Quota Program: This program was implemented in 1992 and is the only catch share program in the South Atlantic Region. This 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 over-capitalization 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.

Policy Updates

Amendment 20B to the Coastal Migratory Pelagics FMP addressed issues associated with the boundaries between migratory groups, zones, and subzones; allocation of commercial annual catch limits; and modification of the framework procedure for management of king mackerel, Spanish mackerel, and cobia. Effective March 1, 2015, Amendment 20B specifically authorized the following items: 1) Eliminated the 500-pound trip limit that was effective when 75% of the respective quotas are landed for king mackerel in the Florida West Coast Northern and Southern subzones; 2) Changed the fishing year for king mackerel in the Florida West Coast Northern subzone from October to September beginning October 1, 2015; 3) Allowed transit of commercial vessels with king mackerel through areas closed to king mackerel fishing if gear is appropriately stowed; 4) Created Northern and Southern Zones for Atlantic migratory group king and Spanish mackerel with separate quotas for each; 4) Made administrative changes to the framework procedure for modifying management measures; 5) Increased annual catch limits and catch targets for cobia; and 6) Created a Florida East Coast Zone for cobia to adjust for differences between the SAFMC and GMFMC jurisdictional areas, and the biological distribution of the Gulf of Mexico and Atlantic stocks.

In 2016, the SAFMC approved the designation of five offshore areas as Spawning Special Management Zones (SMZs) through Amendment 36 to the Snapper-Grouper FMP to help protect spawning fish and unique habitat associated with spawning activities in the South Atlantic. This habitat includes portions of an elbow-shaped ledge off the coast of South Carolina and a deep sinkhole in the ocean floor just off the Florida Keys. Spawning SMZs are expected to protect important spawning habitat and associated species of fish within the SAFMC's snapper–grouper management complex by limiting specific fishing and anchoring activity within the sites. If approved by the Secretary of Commerce, the five areas, ranging in size from 3 to 5 square miles, would be the first such Spawning SMZs designated in federal waters off the South Atlantic coast.

COMMERCIAL FISHERIES

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. It does not include saltwater anglers that fish for sport or subsistence fisher-

Landings Revenue: Largest Increases

From 2006:
- Swordfish (73%, 50% in real terms)
- Oysters (72%, 49% in real terms)
- Blue crab (71%, 48% in real terms)

From 2014:
- Clams (77%)
- Flounders (9%)
- Blue crab (4%)

Landings Revenue: Largest Decreases

From 2006:
- Groupers (-32%, -42% in real terms)
- King mackerels (-13%, -25% in real terms)
- Flounders (-4%, -17% in real terms)

From 2014:
- Tunas (-33%)
- Swordfish (-18%)
- Snappers (-9%)

Landings: Largest Increases

From 2006:
- Swordfish (54%)
- Oysters (30%)
- Blue crab (10%)

From 2014:
- Shrimp (45%)
- Blue crab (18%)
- Clams (14%)

Landings: Largest Decreases

From 2006:
- Groupers (-56%)
- King mackerels (-40%)
- Flounders (-35%)

From 2014:
- Tunas (-22%)
- Swordfish (-12%)
- Flounders (-12%)

men. 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 respent on additional goods or services. If those dollars are respent on other goods and services in the regional economy, this spending generates additional economic activity in the region. 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 seafood businesses and its full supply chain are included). That is, impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

Four different measures are commonly used to show commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. Sales refer to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. It 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 types of measures are calculated in terms of dollars, whereas employment impacts are measured in terms of 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 deal-

ers, seafood wholesalers and distributors, importers, and seafood retailers.[1,2]

In 2015, commercial fishing in Florida generated the largest employment impacts in the South Atlantic Region with 79,700 jobs. Florida had the largest income impacts ($3.3 billion), sales impacts ($17.7 billion), and value-added impacts ($5.9 billion).

The importers sector in Florida generated the highest employment impacts of any state-level sector with 41,500 jobs. The importers sector in Florida generated the highest state-level income impacts ($2.1 billion), the highest state-level sales impacts ($12.8 billion), and the highest state-level value-added impacts in the region ($3.9 billion).

Landings Trends

Landings and landings revenue were flat from 2014 to 2015 in the South Atlantic Region, with shellfish gains largely offset by finfish losses. In particular, landings revenue from blue crab (up $1.6 million) and clams (up $3.1 million) increased in every state except South Carolina. Shrimp landings revenue increased $1.4 million regionally from 2014 to 2015, with shrimp landings up in all states. The only state with an increase in landings revenue, however, was North Carolina (up $4.4 million). Across the region, lower shrimp prices prevailed, reflecting the broader national trend in shrimp prices.

Regionally, tuna (down $1.1 million) and swordfish (down $2.2 million) had the largest declines in landings revenue from 2014 to 2015, which resulted from a combination of lower landings and lower prices.

Landings Revenue

Landings revenue in the South Atlantic Region totaled $182 million in 2015. This number represents a 29% increase from 2006 (a 12% increase in real terms after adjusting for inflation) and remains unchanged from 2014. Landings revenue was highest in North Carolina ($95 million) followed by East Florida ($49 million). Shellfish landings revenue made up 66% of total revenue. Shrimp ($50 million) and blue crab ($46 million) had the highest landings revenue in the South Atlantic Region in 2015. Together they accounted for 53% of total landings revenue.

From 2006 to 2015, swordfish (73%, 50% in real terms); oysters (72%, 49% in real terms); and blue crab (71%, 48% in real terms) had the largest revenue increases, while groupers (-32%, -42% in real terms); king mackerels (-13%, -25% in real terms); and flounders (-4%, -17% in real terms) had the largest decreases. From 2014 to 2015, clams (77%), flounders (9%), and blue crab (4%) had the largest revenue increases, while tunas (-33%), swordfish (-18%), and snappers (-9%) had the largest decreases.

Landings

In 2015, commercial fishermen in the South Atlantic Region landed more than 106 million pounds of finfish and shellfish, a 7% decrease from 2006 and a 1% increase from 2014. Landings volume was highest in North Carolina (66 million pounds), followed by East Florida (24 million pounds). Blue crab had the highest landings volume in the South Atlantic Region, accounting for 38% of landed weight.

From 2006 to 2015, swordfish (54%), oysters (30%), and blue crab (10%) had the largest landings increases, while groupers (-56%), king mackerels (-40%), and flounders (-35%) had the largest decreases. From 2014 to 2015, shrimp (45%), blue crab (18%), and clams (14%) had the largest landings increases, while tunas (-22%), swordfish (-12%), and flounders (-12%) had the largest decreases.

Price

In 2015, clams ($9.65 per pound) received the highest ex-vessel price in the South Atlantic Region. Landings of blue crab ($1.15 per pound) had the lowest ex-vessel price. From 2006 to 2015, clams (57%, 35% in real terms); blue crab (56%, 35% in real terms); and groupers (54%, 33% in real terms) had the largest price increases. There no decreases in price during this period. From 2014 to 2015, clams (55%), flounders (23%), and oysters (9%) had the largest price increases, while shrimp (-29%), tunas (-13%), and blue crab (-13%) had the largest decreases.

RECREATIONAL FISHERIES

In this report, recreational fisheries refer to fishing for fun rather than to resell fish (commercial fishing) or for

[1] The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates (see NMFS Commercial Fishing & Seafood Industry Input/Output Model, available at: www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf).
[2] Commercial economic impacts data were not available for East Florida; data for the entire state of Florida are reported here.

Key South Atlantic Recreational Species

- Atlantic croaker and spot
- Black sea bass
- Bluefish
- Dolphinfish
- King mackerel
- Sharks
- Sheepshead porgy
- Red drum
- Spanish mackerel
- Spotted seatrout

Recreational Catch: Largest Increases

From 2006:

- Porgies (sheepshead) (47%)
- Black sea bass (19%)
- Red drum (10%)

From 2014:

- Dolphinfish (49%)
- Drum (Atlantic croaker and spot) (12%)

Recreational Catch: Largest Decreases

From 2006:

- King mackerel (-72%)
- Drum (spotted seatrout) (-25%)
- Sharks (-12%)

From 2014:

- Porgies (sheepshead) (-29%)
- Black sea bass (-29%)
- Red drum (-27%)

subsistence. The recreational fisheries section reports on economic impacts and expenditures, angler participation, trips, and catch of key species/species groups.

Economic Impacts and Expenditures

The contribution of recreational fishing activities[3] in the United States is reported in terms of economic impacts from angler expenditures. Total annual trip expenditures are estimated by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore). Total annual durable expenditures are estimated by multiplying mean durable expenditures by the estimated annual number of adult participants in a given state.

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. Sales refer 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. 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- 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 terms of 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 greatest employment impacts from expenditures on saltwater recreational fishing in the South Atlantic Region were generated in East Florida (35,500 jobs), followed by North Carolina (14,200 jobs). The largest sales impacts were observed in East Florida ($4 billion), followed by North Carolina ($1.5 billion). The biggest income impacts were generated in East Florida ($1.5 billion), followed by North Carolina ($560 million). The greatest value-added impacts were in East Florida ($2.4 billion), followed by North Carolina ($871 million).

Recreational fishing expenditures (on both fishing trips and durable equipment purchases) across the South Atlantic Region in 2015 totaled about $5.3 billion. Trip expenditures totaled more than $1 billion, with a large portion coming from trips in the shore (46%) and private boat (34%) sectors. Durable goods expenditures totaled $4.3 billion, with the largest portion coming from boat expenses ($2.5 billion).

Fishing Trips

In 2015, recreational fishermen took 16.5 million fishing trips in the South Atlantic Region. This number was a 23% decrease from 2006 and a 6% decrease from 2014. The largest proportions of trips were taken in the shore mode (53%) and private boat mode (44%). States with the highest number of recorded trips were East Florida (8.6 million trips) and North Carolina (4.6 million trips).

[3] Trip expenditure estimates were generated from the 2011 National Marine Recreational Fishing Expenditure Survey. Durable good expenditure impacts were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (see http://www.st.nmfs.noaa.gov/economics/fisheries/recreational/Marine-Angler-Durable-Expenditures/2014-durable-expenditures-survey). Economic impacts from recreational fishing activities were generated using the NMFS Recreational Economic Impact Model (see The Economic Contribution of Marine Angler Expenditures in the United States, 2011, available at http://www.st.nmfs.noaa.gov/economics/publications/marine-angler-expenditures/marine-angler-2011).

Participation

In 2015, 2.2 million recreational anglers fished in the South Atlantic Region. This number was a 28% decrease from 2006 and a 18% decrease from 2014. These anglers were South Atlantic Region residents from either a coastal county (79%) or non-coastal county (21%).

Harvest and Release

Of the South Atlantic's key species and species groups, drum (Atlantic croaker and spot, 11.8 million fish), drum (spotted seatrout, 5.1 million fish), and bluefish (4.9 million fish) were most frequently caught by recreational fishermen. From 2006 to 2015, porgies (sheepshead, 47%), black sea bass (19%), and red drum (10%) had the largest increases in catch, while king mackerel (-72%), drum (spotted seatrout, -25%), and sharks (-12%). From 2014 and 2015, dolphinfish (49%) and drum (Atlantic croaker and spot, 12%) had the largest increases in catch, while porgies (sheepshead, -29%), black sea bass (-29%), and red drum (-27%) had the largest decreases.

MARINE ECONOMY

For this report, the marine economy refers to the economic activity generated by 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) transport, support, and marine operations (employer establishments). These sectors include several different marine-related industries. 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.[4,5,6]

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).[7] 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's CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state's CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average.

In 2014, the CFLQ for Florida was the highest in the region at 1.01. Florida's CFLQ suggests that the level of employment in industries related to commercial fishing in this state is approximately 1.01 times higher than the level of employment in these industries nationwide.
In 2014, 1.1 million establishments operated throughout the South Atlantic Region, including marine and non-marine-related establishments. These establishments employed 16 million workers and had a total annual payroll of $695 billion. The region's gross domestic product was approximately $2 trillion in 2014.

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2014, there were 468 non-employer firms (a 100% increase from 2006) and annual receipts totaled $35 million (a 111% increase from 2006 in real terms). The greatest number of firms was located in Florida (315).

There were 52 employer establishments (a 2% increase from 2006) in 2014. These establishments employed approximately 2,442 workers (a 27% decrease from 2006) and had a total annual payroll of $92 million (a 32% decrease from 2006 in real terms). The greatest number of establishments was located in Florida (27).

Seafood Sales, Retail: In 2014, there were 659 non-employer firms (a 27% increase from 2006) and annual receipts totaled $54 million (an 11% increase from 2006 in real terms). The greatest number of firms was located in Florida (137).

There were 377 employer establishments (a 1% decrease from 2006) in 2014. These establishments employed 1,768 workers (a 13% increase from 2006) and had a total annual payroll of $39 million (an 18% increase from 2006 in real terms). The greatest number of establishments was located in Florida (166).

Seafood Sales, Wholesale: There were 325 establishments (a 14% decrease from 2006) in 2014. These establishments employed 3,880 workers (a 10% increase from 2006) and had a total annual payroll of

[4] Marine Economy information was not available for East Florida; information for the entire state of Florida is provided here.
[5] Unless otherwise stated, data is from the U.S. Census Bureau, http://censtats.census.gov/ (accessed May 31, 2016).
[6] U.S. Bureau of Economic Analysis, "Table 1.1.5 Gross Domestic Product" and "Table SA6N Compensation of Employees by NAICS Industry," http://www.bea.gov/iTable/index_nipa.cfm (accessed May 31, 2016).
[7] U.S. Bureau of Labor Statistics, "Location Quotient Calculator," http://data.bls.gov/location_quotient/ (accessed May 31, 2016).

$144 million (a 1% decrease from 2006 in real terms). The greatest number of establishments was located in Florida (233).

Transport, Support, and Marine Operations

The size of the Transport, Support, and Marine Operations sectors in the South Atlantic Region is difficult to assess because much of the state-level data is suppressed for confidentiality purposes. It is clear, however, that these sectors play an important role in the regional economy. For example, the Ship and Boat Building sector contributed over 12,000 jobs and more than $600 million in payroll in Florida, South Carolina, and North Carolina alone.

Tables | South Atlantic Region

2015 Economic Impacts of the South Atlantic Seafood Industry (thousands of dollars)

	Landings Revenue	With Imports				Without Imports			
		#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Florida	48,827	79,714	17,713,169	3,319,369	5,931,263	10,257	994,047	262,855	403,399
Georgia	16,682	9,616	1,416,098	320,447	523,190	1,988	102,959	40,375	55,004
North Carolina	94,721	10,439	1,026,699	286,269	427,301	6,120	331,175	137,194	181,715
South Carolina	21,570	1,255	74,460	30,428	40,511	1,255	74,459	30,427	40,511

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	140,682	152,400	165,632	147,205	165,447	171,306	171,026	161,220	182,478	181,800
Finfish & Other	60,702	61,335	60,797	63,112	65,922	66,499	63,928	60,621	68,936	62,169
Shellfish	79,980	91,065	104,835	84,093	99,525	104,807	107,097	100,599	113,542	119,630
Key Species										
Blue crab	27,050	33,634	39,986	37,703	36,080	33,862	37,619	44,155	44,771	46,353
Clams	4,223	4,039	3,862	3,516	3,809	3,396	3,457	3,695	3,975	7,028
Flounders	13,739	11,802	11,230	10,389	11,118	9,528	8,011	7,529	12,165	13,202
Groupers	4,724	6,060	5,287	4,348	3,878	3,786	3,432	3,310	3,372	3,197
King mackerels	6,495	6,872	7,695	8,088	7,585	6,580	5,559	5,213	5,722	5,637
Oysters	3,853	3,806	4,028	4,603	7,175	6,850	5,135	6,015	6,628	6,643
Shrimp	39,653	43,807	51,064	33,078	46,146	53,652	54,969	38,667	48,926	50,299
Snappers	2,748	3,922	4,554	4,024	3,497	3,757	3,842	3,687	3,872	3,528
Swordfish	2,753	4,298	3,661	4,821	7,519	9,400	9,482	7,207	5,847	4,771
Tunas	4,692	4,894	4,672	4,869	3,681	5,096	7,036	5,980	6,867	4,634

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	114,661	105,285	116,527	113,479	119,494	123,657	108,133	91,972	104,926	106,388
Finfish & Other	52,032	46,613	43,948	51,117	52,569	53,824	39,490	36,731	49,886	37,821
Shellfish	62,629	58,672	72,580	62,362	66,925	69,833	68,644	55,241	55,040	68,567
Key Species										
Blue crab	36,779	34,045	44,970	38,959	38,840	42,127	40,396	32,776	34,101	40,353
Clams	685	663	628	611	641	569	621	583	637	728
Flounders	6,456	4,939	5,151	5,362	5,109	4,355	2,961	2,889	4,733	4,180
Groupers	1,539	1,820	1,580	1,295	1,105	949	855	770	753	676
King mackerels	3,792	3,736	4,352	4,858	4,247	3,048	2,456	1,898	2,260	2,267
Oysters	808	776	857	938	1,439	1,233	897	1,034	1,144	1,049
Shrimp	22,080	21,235	23,341	20,109	23,203	22,940	22,374	13,804	15,807	22,943
Snappers	967	1,354	1,515	1,373	1,196	1,246	1,229	1,148	1,152	1,034
Swordfish	1,036	1,417	1,307	1,800	2,288	2,611	2,746	2,161	1,810	1,592
Tunas	2,360	2,310	1,658	1,945	1,805	2,209	2,501	2,367	2,675	2,076

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Blue crab	0.74	0.99	0.89	0.97	0.93	0.80	0.93	1.35	1.31	1.15
Clams	6.16	6.09	6.15	5.76	5.94	5.97	5.57	6.34	6.24	9.65
Flounders	2.13	2.39	2.18	1.94	2.18	2.19	2.71	2.61	2.57	3.16
Groupers	3.07	3.33	3.35	3.36	3.51	3.99	4.01	4.3	4.48	4.73
King mackerels	1.71	1.84	1.77	1.66	1.79	2.16	2.26	2.75	2.53	2.49
Oysters	4.77	4.91	4.70	4.91	4.99	5.55	5.72	5.82	5.79	6.33
Shrimp	1.80	2.06	2.19	1.64	1.99	2.34	2.46	2.80	3.10	2.19
Snappers	2.84	2.90	3.01	2.93	2.92	3.02	3.13	3.21	3.36	3.41
Swordfish	2.66	3.03	2.80	2.68	3.29	3.60	3.45	3.33	3.23	3.00
Tunas	1.99	2.12	2.82	2.50	2.04	2.31	2.81	2.53	2.57	2.23

2015 Economic Impacts of the South Atlantic Recreational Fishing Expenditures (thousands of dollars, trips)

	Trips	#Jobs	Sales	Income	Value Added
East Florida	8,634	35,523	4,019,789	1,515,254	2,426,637
Georgia	590	1,433	142,292	58,661	93,408
North Carolina	4,646	14,163	1,450,301	559,858	870,716
South Carolina	2,670	6,900	675,562	245,272	396,858

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	200,492
Private Boat	337,908
Shore	464,337
Total	1,002,737

Equipment	Durable Goods Expenditures
Fishing Tackle	997,932
Other Equipment	422,013
Boat Expenses	2,525,590
Vehicle Expenses	295,240
Second Home Expenses	40,779
Total Durable Expenditures	4,281,556

Total State Trip and Durable Goods Expenditures	5,284,293

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	2,603	3,157	2,330	1,922	1,933	1,893	2,135	2,092	2,189	1,753
Non-Coastal	477	493	560	462	536	450	502	396	530	475
Out-of-State	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Anglers	3,080	3,650	2,890	2,384	2,470	2,343	2,637	2,488	2,719	2,229

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	456	503	415	391	368	372	348	336	414	499
Private	9,823	11,536	10,910	8,923	9,514	8,663	8,775	7,878	7,836	7,301
Shore	11,250	9,956	10,469	9,371	9,185	8,637	8,669	8,402	9,395	8,739
Total Trips	21,528	21,995	21,794	18,684	19,066	17,673	17,793	16,616	17,646	16,539

Harvest (H) & Release (R) of Key Species Species Groups (thousands of fish)

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Black sea bass	H	651	472	375	297	550	807	328	263	351	232
	R	2,742	3,197	2,955	2,312	2,870	5,629	4,615	3,192	5,305	3,811
Bluefish	H	1,488	1,918	1,690	1,588	2,349	1,940	1,381	1,895	1,803	1,683
	R	3,201	4,090	3,086	2,560	4,269	3,458	2,368	3,681	3,416	3,222
Dolphinfish	H	1,019	1,081	1,028	730	825	824	802	522	575	924
	R	186	394	188	98	127	355	126	167	244	296
Drum (Atlantic croaker and spot)	H	4,981	4,578	5,515	2,817	1,947	3,078	2,797	3,322	4,257	5,995
	R	6,766	3,783	4,194	4,876	3,338	4,210	3,562	5,795	6,288	5,854
Drum (spotted seatrout)	H	1,505	1,547	1,633	1,411	932	859	1,690	1,069	876	521
	R	5,263	5,554	5,166	4,169	5,772	4,890	6,519	4,289	4,524	4,565
King mackerel	H	493	820	485	420	234	153	149	99	128	142
	R	199	301	169	97	75	47	27	23	67	52
Porgies (sheepshead)	H	393	638	694	626	705	664	523	593	736	448
	R	418	545	692	509	496	517	629	746	945	743
Red drum	H	319	414	463	276	607	494	458	633	589	419
	R	2,034	1,838	2,414	1,870	3,320	2,137	2,966	3,068	2,957	2,168
Sharks[2]	H	36	52	40	40	32	29	19	42	51	23
	R	2,453	2,321	2,770	2,316	2,744	1,653	1,950	3,375	2,516	2,165
Spanish mackerel	H	654	1,061	1,315	1,124	1,072	868	821	1,055	863	604
	R	274	606	886	520	605	396	424	679	486	402

[1] NA = data are not available because out-of-state resident information is collected for individual states but does not specifiy whether an angler resides in a region.
[2] Sharks include species within the requiem shark family, blacktip sharks, Atlantic sharpnose sharks and unidentified sharks.

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2015 Economic Impacts of the Florida Seafood Industry (thousands of dollars)[1]

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	79,714	17,713,169	3,319,369	5,931,263	10,257	994,047	262,855	403,399
Commercial Harvesters	6,658	479,126	151,375	201,026	6,658	479,126	151,375	201,026
Seafood Processors & Dealers	4,620	833,263	161,261	317,025	535	103,447	20,020	39,357
Importers	41,471	12,827,737	2,055,890	3,910,456	0	0	0	0
Seafood Wholesalers & Distributors	10,077	1,290,597	506,684	630,382	447	57,265	22,482	27,971
Retail	16,889	2,282,446	444,159	872,376	2,616	354,210	68,978	135,045

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	42,002	42,767	47,856	40,992	51,151	60,643	57,766	48,669	53,368	48,827
Finfish & Other	17,422	19,768	21,131	23,164	25,756	26,344	26,061	24,139	24,406	22,867
Shellfish	24,580	23,000	26,726	17,828	25,395	34,300	31,705	24,530	28,962	25,959
Key Species										
Blue crab	3,701	4,924	4,333	2,376	3,415	4,155	4,747	3,785	2,881	3,243
Clams	435	391	510	415	331	220	138	28	53	57
Groupers	587	1,062	848	662	620	613	893	734	756	878
King mackerel	4,318	4,833	6,036	6,563	6,911	5,500	4,685	4,320	4,260	4,803
Lobsters	2,462	2,488	3,312	1,089	2,825	3,207	1,720	3,437	4,691	3,640
Sharks	1,364	726	636	949	757	677	458	491	550	627
Shrimp	16,390	13,821	17,225	12,455	17,071	24,361	21,903	14,125	18,097	16,285
Snappers	972	1,279	1,905	2,383	1,454	1,673	1,604	1,769	2,084	1,657
Spanish mackerel	2,094	2,332	1,827	2,004	2,414	2,686	2,448	2,650	2,620	2,112
Swordfish	1,219	2,529	2,339	2,385	3,677	4,005	4,838	3,287	2,704	2,224

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	27,021	25,196	26,307	27,501	29,713	31,244	28,579	21,415	23,165	23,566
Finfish & Other	13,848	13,893	14,111	16,105	17,137	16,051	14,241	12,553	13,116	11,989
Shellfish	13,173	11,303	12,196	11,396	12,576	15,193	14,338	8,862	10,049	11,577
Key Species										
Blue crab	3,130	4,063	3,342	1,640	2,553	3,226	3,440	2,211	1,373	1,561
Clams	47	41	55	54	42	22	17	5	7	8
Groupers	186	315	239	188	167	154	222	174	169	186
King mackerel	2,572	2,631	3,299	4,064	3,905	2,633	2,143	1,547	1,690	1,859
Lobsters	407	361	506	298	481	514	302	486	498	467
Sharks	1,472	818	776	1,109	781	716	631	657	665	688
Shrimp	8,843	6,174	7,619	8,662	8,743	10,528	8,869	5,044	5,757	7,066
Snappers	355	461	635	805	510	564	523	572	632	497
Spanish mackerel	3,143	3,264	2,263	2,629	3,553	3,433	2,586	2,246	2,563	1,742
Swordfish	407	772	791	838	1,028	1,067	1,343	831	746	608

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Blue crab	1.18	1.21	1.3	1.45	1.34	1.29	1.38	1.71	2.10	2.08
Clams	9.20	9.52	9.29	7.73	7.90	9.84	8.17	6.00	7.74	7.48
Groupers	3.16	3.37	3.55	3.52	3.72	3.99	4.02	4.21	4.47	4.71
King mackerel	1.68	1.84	1.83	1.61	1.77	2.09	2.19	2.79	2.52	2.58
Lobsters	6.06	6.90	6.55	3.65	5.87	6.23	5.69	7.07	9.41	7.79
Sharks	0.93	0.89	0.82	0.86	0.97	0.95	0.73	0.75	0.83	0.91
Shrimp	1.85	2.24	2.26	1.44	1.95	2.31	2.47	2.80	3.14	2.30
Snappers	2.74	2.78	3.00	2.96	2.85	2.97	3.07	3.09	3.30	3.34
Spanish mackerel	0.67	0.71	0.81	0.76	0.68	0.78	0.95	1.18	1.02	1.21
Swordfish	3.00	3.28	2.96	2.85	3.58	3.75	3.60	3.96	3.63	3.66

[1] Economic impacts reported in this table are for the entire state of Florida, not East Florida alone.

2015 Economic Impacts of East Florida Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	1,469	184,683	65,663	102,165
	Private Boat	1,319	143,636	48,540	84,411
	Shore	1,180	121,387	41,812	73,601
Total Durable Expenditures		31,555	3,570,083	1,359,239	2,166,460
Total State Economic Impacts		35,523	4,019,789	1,515,254	2,426,637

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	103,406
Private Boat	152,642
Shore	101,240
Total	357,288

Equipment	Durable Goods Expenditures
Fishing Tackle	627,531
Other Equipment	271,084
Boat Expenses	1,663,492
Vehicle Expenses	193,044
Second Home Expenses	18,806
Total Durable Expenditures	2,773,957

Total State Trip and Durable Goods Expenditures	3,131,245

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	1,660	2,168	1,317	1,099	1,033	1,109	1,181	1,263	1,334	1,001
Non-Coastal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Out-of-State	935	1,008	703	643	629	553	514	540	807	819
Total Anglers	2,595	3,176	2,021	1,741	1,662	1,662	1,695	1,803	2,141	1,821

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	171	169	137	149	118	124	144	156	193	255
Private	5,913	7,157	6,452	5,394	5,706	5,298	5,028	4,643	4,951	4,133
Shore	5,543	5,277	4,651	4,577	4,393	4,735	4,219	4,183	4,500	4,246
Total Trips	11,628	12,603	11,240	10,120	10,218	10,156	9,390	8,981	9,644	8,634

Harvest (H) & Release (R) of Key Species/Species Groups (thousands of fish)

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bluefish	H	433	471	377	623	787	556	278	409	526	433
	R	718	932	499	681	1,621	912	1,111	1,492	1,457	1,063
Dolphinfish	H	492	513	661	328	248	346	434	298	370	481
	R	161	373	185	77	118	347	105	163	240	266
Drum (kingfish)	H	838	854	949	409	721	936	825	971	1,212	495
	R	706	1,099	552	609	935	807	1,102	1,115	1,252	1,395
Drum (spotted seatrout)	H	331	278	182	172	251	287	427	336	308	164
	R	3,316	3,094	2,830	1,642	2,937	2,141	3,026	1,939	2,400	1,997
Gray snapper	H	446	689	352	224	161	187	209	640	611	427
	R	1,326	2,073	1,552	1,707	498	678	1,549	1,991	2,054	1,669
Jack (Florida pompano)	H	164	126	272	90	263	106	180	110	92	91
	R	129	164	360	81	160	297	278	184	313	175
King mackerel	H	340	515	349	291	183	133	114	73	99	101
	R	158	227	125	52	58	45	21	16	51	44
Porgies (sheepshead)	H	244	255	237	227	352	287	267	253	573	306
	R	313	307	465	354	336	357	475	472	704	563
Red drum	H	146	161	159	80	176	180	238	298	276	227
	R	847	759	890	522	1,414	1,051	799	1,542	1,649	1,094
Spanish mackerel	H	323	456	503	369	512	406	247	534	382	82
	R	141	198	364	150	282	147	89	365	208	86

[1] NA = Data is not available because all East Florida residents are considered coastal county residents.
[2] In this table, '<1' = 0-999 ish and '1' = 1,000-1,499 fish.

2014 East Florida State Economy (% of national total)[1,5]

	#Establishments	#Employees	Annual Payroll (million $)	Employee Compensation (million $)	Gross State Product (million $)	Commercial Fishing Location Quotient[2]
Totals	519,875 (6.9%)	7,441,584 (6.1%)	312.96 (5.3%)	461.48 (5%)	838.94 (4.9%)	1.01

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	174	173	202	217	280	294	307	300	315
	Receipts	10,184	10,497	11,065	12,473	14,635	14,618	17,557	17,214	22,329
Seafood sales, retail	Firms	251	319	331	316	361	362	383	338	346
	Receipts	20,708	27,557	26,087	25,667	27,964	29,037	30,765	25,332	26,433

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	22	20	23	25	27	24	27	25	27
	Employees	1,704	1,748	1,637	1,143	1,269	1,095	1,608	1,374	1,419
	Payroll	62,801	58,233	53,455	46,235	45,772	42,612	51,735	50,003	50,556
Seafood sales, wholesale	Establishments	259	267	229	215	229	250	226	234	233
	Employees	2,091	2,308	1,913	1,762	1,747	1,913	1,957	1,878	1,974
	Payroll	73,897	85,019	75,203	72,159	70,889	77,115	75,945	79,266	83,964
Seafood sales, retail	Establishments	173	169	168	158	145	145	151	165	166
	Employees	936	989	991	885	865	849	945	909	1,037
	Payroll	19,513	20,595	21,604	21,182	20,783	20,158	21,577	23,476	25,844

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	54	47	42	42	50	54	60	47	62
	Employees	1,217	1,242	1,106	972	709	753	1,381	1,050	1,743
	Payroll	91,638	94,429	50,115	37,774	50,217	53,341	100,402	82,078	175,366
Deep sea freight transportation	Establishments	73	69	57	58	61	65	75	69	77
	Employees	3,729	3,190	2,486	2,801	2,279	2,374	3,345	2,485	2,015
	Payroll	226,810	208,144	169,055	180,139	159,025	177,386	231,887	140,564	131,069
Deep sea passenger transportation	Establishments	37	34	31	33	29	29	39	31	28
	Employees	9,077	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	571,590	ds	ds	ds	ds	ds	ds	ds	ds
Marinas	Establishments	513	493	442	428	430	411	432	444	464
	Employees	5,494	4,935	5,024	4,665	4,439	4,657	4,918	5,076	5,421
	Payroll	146,390	148,592	151,677	132,955	133,017	142,997	148,573	145,265	168,185
Marine cargo handling	Establishments	66	53	56	59	55	64	43	58	61
	Employees	7,266	6,585	8,052	7,288	7,547	7,484	4,598	6,258	6,992
	Payroll	189,020	173,788	192,473	185,309	191,560	195,458	86,461	188,997	179,024
Navigational services to shipping	Establishments	142	145	147	145	145	150	151	180	190
	Employees	781	1,484	894	829	980	1,047	853	1,390	878
	Payroll	48,370	61,470	56,917	60,641	76,853	75,561	68,366	130,893	74,185
Port & harbor operations	Establishments	27	29	40	32	34	32	66	61	56
	Employees	584	459	712	527	470	377	2,082	555	588
	Payroll	19,417	12,872	24,668	19,006	20,525	16,879	72,554	25,439	20,647
Ship & boat building	Establishments	301	296	297	261	248	246	258	259	263
	Employees	12,385	12,332	12,419	8,221	7,363	7,909	8,621	8,813	9,608
	Payroll	427,888	469,382	442,096	296,537	302,909	325,942	374,831	390,853	448,514

[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 les commercial fishing occurs in this state than the national average.
[3] ds = these data are suppressed.
[4] NA = not applicable.
[5] Census Bureau data for the Marine Economy section of this report is available only through 2014.

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2015 Economic Impacts of the Georgia Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	9,616	1,416,098	320,447	523,190	1,988	102,959	40,375	55,004
Commercial Harvesters	679	28,895	9,828	14,155	679	28,895	9,828	14,155
Seafood Processors & Dealers	833	73,185	28,205	37,230	213	18,676	7,198	9,501
Importers	3,297	1,019,884	163,456	310,905	0	0	0	0
Seafood Wholesalers & Distributors	715	98,123	33,839	47,555	40	5,520	1,904	2,675
Retail	4,092	196,013	85,119	113,344	1,056	49,868	21,446	28,673

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	11,534	11,331	13,081	11,761	13,731	16,179	16,625	11,819	16,233	16,682
Finfish & Other	574	625	623	626	279	448	180	512	473	51
Shellfish	10,960	10,706	12,458	11,135	13,452	15,732	16,445	11,307	15,760	16,631
Key Species										
Blue crab	2,959	3,767	3,910	3,839	2,648	3,341	4,259	3,996	3,770	4,302
Clams	298	290	383	473	430	605	603	563	991	1,884
Grouper	NA	183	NA	NA	NA	NA	NA	NA	NA	NA
Shrimp	7,640	6,446	7,877	6,608	10,103	11,398	11,045	5,773	10,645	9,749
Snails (conchs)	6	1	6	11	27	39	27	1	3	2
Snappers	NA	269	NA	NA	NA	NA	NA	NA	NA	NA

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)[1]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	8,294	7,908	8,930	7,424	7,220	12,795	10,557	10,630	10,427	7,114
Finfish & Other	285	304	267	306	168	4,828	111	155	4,729	37
Shellfish	8,009	7,603	8,663	7,118	7,053	7,967	10,447	10,475	5,698	7,077
Key Species										
Blue crab	4,091	4,421	4,227	3,598	2,329	3,427	4,265	3,230	2,666	2,935
Clams	46	49	54	76	81	107	98	105	192	298
Grouper	NA	54	NA	NA	NA	NA	NA	NA	NA	NA
Shrimp	3,851	2,797	3,132	3,324	4,553	4,355	3,928	1,901	2,790	3,651
Snails (conchs)	5	1	5	11	18	30	18	1	2	1
Snappers	NA	93	NA	NA	NA	NA	NA	NA	NA	NA

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Blue crab	0.72	0.85	0.92	1.07	1.14	0.97	1.00	1.24	1.41	1.47
Clams	6.49	5.89	7.03	6.24	5.3	5.68	6.18	5.34	5.17	6.31
Grouper	NA	3.37	NA	NA	NA	NA	NA	NA	NA	NA
Shrimp	1.98	2.30	2.51	1.99	2.22	2.62	2.81	3.04	3.82	2.67
Snails (conchs)	1.22	1.25	1.31	1.00	1.50	1.30	1.52	1.65	1.51	2.61
Snappers	NA	2.89	NA	NA	NA	NA	NA	NA	NA	NA

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

2015 Economic Impacts of Georgia Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	120	15,356	5,728	8,393
	Private Boat	88	8,772	3,032	5,057
	Shore	137	13,201	4,550	7,623
Total Durable Expenditures		1,088	104,963	45,351	72,335
Total State Economic Impacts		1,433	142,292	58,661	93,408

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	8,125
Private Boat	10,176
Shore	10,937
Total	29,238

Equipment	Durable Goods Expenditures
Fishing Tackle	34,116
Other Equipment	11,008
Boat Expenses	39,073
Vehicle Expenses	18,405
Second Home Expenses	0
Total Durable Expenditures	102,603

Total State Trip and Durable Goods Expenditures	131,841

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	121	149	190	146	145	146	134	99	125	81
Non-Coastal	66	115	154	91	136	131	96	72	115	80
Out-of-State	33	45	98	45	61	78	74	53	70	70
Total Anglers	219	308	441	282	342	355	303	225	310	231

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	29	31	17	16	7	16	20	21	31	34
Private	480	577	731	516	530	620	496	387	340	255
Shore	289	421	456	311	335	335	376	283	456	301
Total Trips	798	1,029	1,204	842	873	970	892	690	827	590

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Black drum	H	20	51	92	16	70	11	19	18	15	8
	R	29	35	66	23	40	5	20	10	8	13
Black sea bass	H	67	34	99	18	13	44	15	81	37	41
	R	184	292	581	113	163	227	134	294	528	232
Bluefish	H	3	11	7	2	13	3	6	3	20	6
	R	22	103	116	72	108	70	52	7	120	74
Drum (Atlantic croaker)	H	34	45	38	82	36	44	38	55	64	111
	R	284	229	294	435	264	262	167	298	471	210
Drum (southern kingfish)	H	448	575	697	587	585	873	377	396	441	451
	R	668	625	873	559	465	668	604	287	244	210
Drum (spotted seatrout)	H	379	577	642	507	384	290	527	238	256	163
	R	809	1,039	721	915	742	552	1,029	321	774	398
Porgies (sheepshead)	H	36	58	65	52	105	138	59	42	21	22
	R	51	84	98	33	39	45	29	38	18	21
Red drum	H	69	113	133	69	195	107	46	74	93	48
	R	136	226	314	168	484	214	90	199	290	168
Sharks[2]	H	6	9	11	7	4	6	4	6	< 1	1
	R	437	592	541	345	284	342	366	265	314	166
Southern flounder	H	23	92	49	34	36	29	18	19	14	24
	R	18	< 1	1	10	3	12	5	7	9	18

[1] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.
[2] Sharks include species within the requiem shark amily, blacktip sharks, Atlantic sharpnose sharks and unidentified sharks.

2014 Georgia State Economy (% of national total)[1]

	#Establishments	#Employees	Annual Payroll (million $)	Employee Compensation (million $)	Gross State Product (million $)	Commercial Fishing Location Quotient[2]
Totals	220,605 (2.9%)	3,551,163 (2.9%)	163.85 (2.8%)	260.9 (2.8%)	474.70 (2.8%)	0.05

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	21	34	45	51	52	61	71	60	62
	Receipts	1,957	2,187	3,489	3,817	5,458	5,540	4,974	4,378	5,471
Seafood sales, retail	Firms	78	87	101	98	96	89	97	77	103
	Receipts	7,180	8,671	6,922	5,701	6,474	8,646	8,233	6,932	9,338

Seafood Sales & Processing - Employer Establishments (thousands of dollars)[3]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	8	6	7	6	6	5	6	5	7
	Employees	1,164	ds	ds	ds	1,056	1,022	854	945	895
	Payroll	43,637	ds	ds	ds	37,343	39,433	32,928	35,987	37,122
Seafood sales, wholesale	Establishments	30	42	30	33	36	28	18	28	24
	Employees	659	688	565	532	514	562	468	469	792
	Payroll	31,654	31,033	20,122	18,628	20,075	20,660	15,459	17,326	24,726
Seafood sales, retail	Establishments	55	44	48	42	48	51	54	60	62
	Employees	184	179	160	162	176	176	214	210	229
	Payroll	2,724	2,633	2,433	2,447	2,502	2,566	3,425	3,390	3,745

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	6	6	6	5	4	4	3	4	7
	Employees	ds	33	28	ds	ds	ds	ds	ds	ds
	Payroll	ds	1,883	2,040	1,700	ds	ds	ds	ds	ds
Deep sea freight transportation	Establishments	15	13	14	13	14	12	12	7	9
	Employees	ds	132	156	29	ds	51	236	28	63
	Payroll	ds	10,090	11,275	2,192	2,465	4,833	11,238	2,311	3,856
Deep sea passenger transportation	Establishments	0	1	0	0	0	1	1	1	1
	Employees	NA	ds	NA	NA	NA	ds	ds	ds	ds
	Payroll	NA	ds	NA	NA	NA	ds	ds	ds	ds
Marinas	Establishments	66	68	60	58	62	63	63	59	65
	Employees	ds	569	527	541	631	580	636	644	586
	Payroll	ds	12,701	15,571	15,736	17,428	16,986	17,921	17,768	18,604
Marine cargo handling	Establishments	17	17	17	18	17	20	10	19	19
	Employees	3,003	2,501	2,660	3,707	2,971	4,655	ds	2,986	3,561
	Payroll	104,596	110,857	97,869	87,410	84,675	108,674	ds	120,985	124,394
Navigational services to shipping	Establishments	10	11	11	9	8	8	10	8	7
	Employees	ds	217	182	ds	ds	ds	ds	ds	ds
	Payroll	ds	11,141	10,193	12,185	11,237	ds	ds	ds	ds
Port & harbor operations	Establishments	5	4	5	5	4	2	13	7	4
	Employees	196	98	ds	ds	ds	ds	ds	ds	ds
	Payroll	3,303	3,108	ds	ds	ds	ds	ds	ds	ds
Ship & boat building	Establishments	16	21	20	14	12	15	14	15	16
	Employees	1,967	2,225	2,159	ds	ds	ds	ds	ds	ds
	Payroll	64,667	68,646	69,096	ds	ds	ds	ds	ds	ds

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 les commercial fishing occurs in this state than the national average.
[3] ds = these data are suppressed.
[4] NA = not applicable.

Tables | North Carolina

2015 Economic Impacts of the North Carolina Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	10,439	1,026,699	286,269	427,301	6,120	331,175	137,194	181,715
Commercial Harvesters	2,586	160,383	65,212	88,618	2,586	160,383	65,212	88,618
Seafood Processors & Dealers	1,214	90,790	35,300	45,615	484	36,215	14,081	18,195
Importers	1,739	537,913	86,211	163,979	0	0	0	0
Seafood Wholesalers & Distributors	499	60,283	21,142	27,906	145	17,522	6,145	8,111
Retail	4,401	177,330	78,405	101,184	2,905	117,055	51,756	66,791

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	70,121	82,285	86,822	77,196	79,361	71,183	72,573	79,105	89,856	94,721
Finfish & Other	37,712	36,199	34,430	33,984	33,147	31,278	31,017	29,821	36,993	32,397
Shellfish	32,409	46,086	52,392	43,212	46,214	39,905	41,556	49,284	52,863	62,324
Key Species										
Atlantic croaker	3,563	2,714	3,142	3,004	3,491	3,164	2,136	1,724	1,813	1,646
Black sea bass	1,715	1,195	1,156	1,401	953	628	688	869	1,415	1,367
Blue crab	17,087	21,432	27,555	27,429	26,425	21,282	22,809	30,006	32,301	33,987
Clams	2,656	2,660	2,435	2,086	2,359	1,933	2,131	2,349	2,931	5,086
Flounders	13,301	11,335	10,886	10,124	10,845	8,890	7,421	7,059	11,748	12,916
Groupers	1,905	2,394	2,274	1,879	1,734	1,463	1,421	1,248	1,205	1,120
King mackerel	2,120	1,967	1,632	1,500	650	1,062	831	877	1,420	802
Shrimp	9,141	17,905	19,251	8,528	10,804	10,886	13,333	12,947	12,405	16,835
Snappers	953	1,601	1,784	1,073	963	1,004	900	917	843	804
Tunas	4,060	4,046	3,393	2,922	1,193	2,437	4,398	3,207	4,207	2,883

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	68,744	62,871	71,209	68,955	71,994	67,487	56,671	50,191	61,958	65,951
Finfish & Other	35,650	30,422	27,630	32,323	32,491	29,725	22,714	21,997	29,450	23,291
Shellfish	33,094	32,450	43,580	36,632	39,503	37,762	33,957	28,194	32,509	42,660
Key Species										
Atlantic croaker	10,397	7,271	5,792	6,135	7,312	5,054	3,107	1,928	2,630	1,819
Black sea bass	778	473	485	615	401	272	256	330	529	468
Blue crab	25,343	21,425	32,917	29,707	30,683	30,035	26,787	22,203	26,231	32,135
Clams	427	438	400	359	366	302	404	356	438	422
Flounders	6,272	4,754	5,009	5,256	5,001	4,102	2,736	2,728	4,589	4,082
Groupers	709	828	785	638	561	409	382	311	299	261
King mackerel	1,186	1,059	1,037	778	329	408	297	345	550	392
Shrimp	5,737	9,537	9,427	5,408	5,955	5,140	6,141	4,860	4,691	9,098
Snappers	345	550	603	374	320	326	279	276	251	232
Tunas	1,982	1,836	1,041	1,028	703	1,056	1,482	1,283	1,653	1,320

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Atlantic croaker	0.34	0.37	0.54	0.49	0.48	0.63	0.69	0.89	0.69	0.91
Black sea bass	2.21	2.53	2.39	2.28	2.38	2.31	2.69	2.64	2.67	2.92
Blue crab	0.67	1.00	0.84	0.92	0.86	0.71	0.85	1.35	1.23	1.06
Clams	6.21	6.08	6.09	5.82	6.44	6.39	5.28	6.61	6.69	12.06
Flounders	2.12	2.38	2.17	1.93	2.17	2.17	2.71	2.59	2.56	3.16
Groupers	2.69	2.89	2.89	2.95	3.09	3.58	3.72	4.01	4.02	4.30
King mackerel	1.79	1.86	1.57	1.93	1.98	2.60	2.79	2.54	2.58	2.05
Shrimp	1.59	1.88	2.04	1.58	1.81	2.12	2.17	2.66	2.64	1.85
Snappers	2.76	2.91	2.96	2.87	3.01	3.08	3.22	3.32	3.36	3.47
Tunas	2.05	2.20	3.26	2.84	1.70	2.31	2.97	2.50	2.55	2.18

2015 Economic Impacts of North Carolina Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	623	72,896	26,480	38,956
	Private Boat	1,369	131,781	46,301	74,109
	Shore	2,973	268,806	94,946	154,912
Total Durable Expenditures		9,198	976,818	392,131	602,739
Total State Economic Impacts		14,163	1,450,301	559,858	870,716

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	43,624
Private Boat	136,986
Shore	208,215
Total	388,825

Equipment	Durable Goods Expenditures
Fishing Tackle	226,458
Other Equipment	91,681
Boat Expenses	607,243
Vehicle Expenses	55,538
Second Home Expenses	21,973
Total Durable Expenditures	1,002,893

Total State Trip and Durable Goods Expenditures	1,391,718

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	588	564	587	446	544	490	614	564	549	479
Non-Coastal	265	265	303	259	296	254	283	240	301	239
Out-of-State	1,374	1,079	1,079	976	1,073	755	764	601	805	830
Total Anglers	2,227	1,908	1,970	1,681	1,914	1,499	1,661	1,405	1,656	1,548

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	234	218	192	146	165	152	160	111	97	114
Private	2,452	2,671	2,461	2,005	2,199	1,899	2,061	2,101	1,707	2,041
Shore	4,178	3,445	4,246	3,158	3,313	2,690	3,082	2,756	3,150	2,491
Total Trips	6,864	6,333	6,898	5,309	5,678	4,740	5,303	4,968	4,954	4,646

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Black sea bass	H	162	138	82	124	176	142	107	64	83	81
	R	1,320	1,194	850	976	1,302	1,715	2,303	1,645	1,508	1,685
Bluefish	H	918	1,257	1,178	829	1,105	1,156	890	1,184	1,085	978
	R	1,838	2,377	2,137	1,555	2,222	1,925	1,037	1,872	1,541	1,428
Dolphinfish	H	524	535	360	370	499	472	327	212	185	435
	R	25	5	2	3	5	8	3	3	4	30
Drum (Atlantic croaker and spot)	H	3,535	3,540	2,162	1,425	1,313	1,458	1,073	1,877	2,654	1,554
	R	5,177	2,811	2,755	3,142	2,473	2,825	2,016	3,302	3,614	3,189
Drum (spotted seatrout)	H	565	532	654	609	195	216	501	369	234	87
	R	595	849	881	1,214	1,685	1,916	1,647	1,427	961	1,776
Flounder (lefteye and summer)	H	152	192	71	100	145	94	105	91	145	81
	R	929	1,094	1,692	1,224	1,599	992	1,399	1,530	1,061	929
King mackerel	H	145	270	106	91	37	15	27	23	23	34
	R	32	44	25	12	6	< 1	3	5	10	7
Spanish mackerel	H	306	495	744	678	484	367	491	497	398	388
	R	96	258	449	313	294	171	235	289	241	216
Striped bass	H	99	49	36	12	34	107	8	20	8	17
	R	63	82	174	122	108	296	176	124	95	115
Yellowfin tuna	H	166	102	26	29	23	25	57	45	27	24
	R	13	< 1	< 1	< 1	< 1	< 1	4	1	4	2

[1] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.

2014 North Carolina State Economy (% of national total)[1]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	219,897 (2.9%)	3,560,448 (2.9%)	155.37 (2.6%)	251.03 (2.7%)	481.88 (2.8%)	0.13

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	27	30	ds	34	40	50	46	58	63
	Receipts	1,084	1,813	ds	1,297	1,652	2,705	1,630	4,605	4,599
Seafood sales, retail	Firms	115	150	114	140	126	144	136	127	137
	Receipts	11,342	14,999	10,918	12,188	9,057	10,386	11,990	12,175	13,430

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

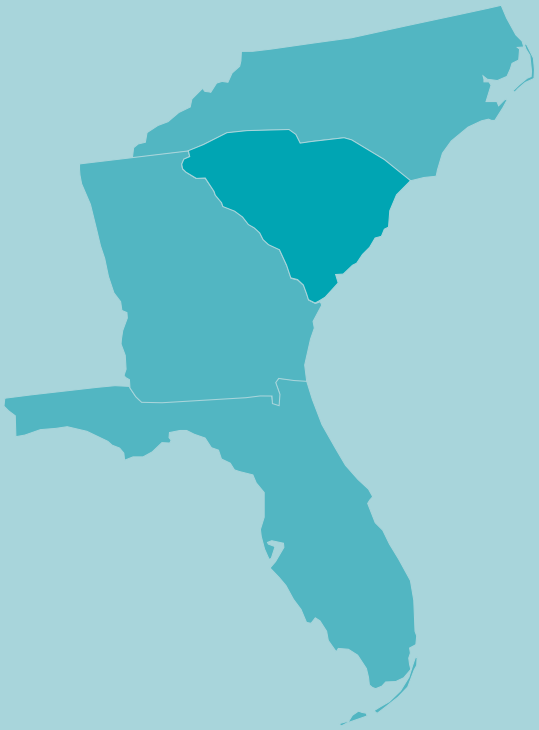
		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	18	22	18	16	16	14	12	13	14
	Employees	475	ds	232	170	171	ds	ds	135	128
	Payroll	11,563	12,659	5,373	4,461	4,749	4,830	5,084	4,563	4,720
Seafood sales, wholesale	Establishments	70	71	65	66	66	64	59	59	56
	Employees	582	597	559	584	590	603	793	849	966
	Payroll	16,543	15,655	16,843	17,383	18,348	19,344	23,949	26,687	30,292
Seafood sales, retail	Establishments	89	86	90	77	82	84	88	86	93
	Employees	250	241	219	243	247	244	289	254	278
	Payroll	4,129	4,170	4,143	4,494	5,017	5,250	5,860	5,872	6,263

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	4	6	4	6	4	5	6	5	5
	Employees	ds	54	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	2,061	ds	2,366	ds	ds	ds	ds	ds
Deep sea freight transportation	Establishments	8	6	5	6	10	8	7	8	8
	Employees	ds	ds	ds	9	ds	ds	25	ds	ds
	Payroll	ds	510	533	617	ds	ds	1,579	ds	ds
Deep sea passenger transportation	Establishments	1	1	0	1	0	1	0	0	0
	Employees	ds	ds	NA	ds	NA	ds	NA	NA	NA
	Payroll	ds	ds	NA	ds	NA	ds	NA	NA	NA
Marinas	Establishments	103	96	107	105	102	104	102	99	100
	Employees	681	522	656	501	536	524	531	501	541
	Payroll	16,616	14,922	17,164	15,858	16,238	16,187	15,975	16,369	16,774
Marine cargo handling	Establishments	9	13	13	12	11	14	6	9	9
	Employees	757	652	760	914	600	ds	ds	ds	ds
	Payroll	19,736	25,164	23,328	20,707	20,755	ds	ds	ds	ds
Navigational services to shipping	Establishments	7	14	10	11	13	11	8	10	13
	Employees	ds	102	87	96	94	86	90	77	78
	Payroll	ds	3,773	3,668	4,313	3,968	4,041	3,203	3,583	3,844
Port & harbor operations	Establishments	5	3	3	2	4	3	9	5	2
	Employees	ds	ds	ds	ds	ds	ds	ds	46	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	1,579	ds
Ship & boat building	Establishments	74	78	77	64	60	57	60	52	52
	Employees	4,232	ds	4,281	1,983	1,501	1,515	1,760	1,059	1,153
	Payroll	153,672	ds	138,243	68,004	64,807	66,929	74,843	49,462	50,102

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 les commercial fishing occurs in this state than the national average.
[3] ds = these data are suppressed.
[4] NA = not applicable.

Tables | South Carolina



2015 Economic Impacts of the South Carolina Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	1,255	74,460	30,428	40,511	1,255	74,459	30,427	40,511
Commercial Harvesters	455	35,762	13,995	19,285	455	35,762	13,995	19,285
Seafood Processors & Dealers	93	7,877	3,081	3,962	93	7,877	3,081	3,962
Importers	0	1	0	0	0	0	0	0
Seafood Wholesalers & Distributors	32	3,689	1,296	1,702	32	3,689	1,296	1,702
Retail	674	27,131	12,056	15,562	674	27,131	12,056	15,562

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	17,025	16,017	17,872	17,256	21,205	23,300	24,061	21,627	23,021	21,570
Finfish & Other	4,995	4,744	4,614	5,338	6,740	8,429	6,670	6,149	7,064	6,854
Shellfish	12,031	11,274	13,259	11,918	14,465	14,871	17,391	15,478	15,957	14,716
Key Species										
Black sea bass	168	236	257	362	213	182	303	434	328	246
Blue crab	3,304	3,511	4,187	4,059	3,593	5,084	5,804	6,367	5,818	4,820
Clams	834	697	535	542	688	638	584	755	NA	NA
Groupers	2,232	2,421	2,165	1,808	1,524	1,710	1,118	1,329	1,412	1,199
Oysters	1,369	1,375	1,739	1,738	1,858	1,975	2,155	2,341	2,243	2,286
Sharks	144	78	78	56	123	166	136	76	68	55
Shrimp	6,481	5,634	6,712	5,487	8,168	7,008	8,688	5,823	7,778	7,430
Snappers	823	773	864	568	1,079	1,080	1,338	1,001	945	1,067
Swordfish	NA	NA	187	1,116	1,944	2,777	1,635	983	1,245	1,270
Tilefish	271	5	66	9	25	8	128	379	506	536

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)[1]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	10,602	9,310	10,081	9,599	10,567	12,131	12,325	9,736	9,375	9,756
Finfish & Other	2,249	1,994	1,940	2,384	2,774	3,220	2,424	2,026	2,590	2,503
Shellfish	8,353	7,316	8,141	7,215	7,793	8,911	9,902	7,711	6,785	7,253
Key Species										
Black sea bass	86	114	132	168	98	100	118	163	125	81
Blue crab	4,215	4,137	4,484	4,014	3,275	5,439	5,905	5,133	3,831	3,722
Clams	165	135	119	123	152	137	102	118	NA	NA
Groupers	645	624	556	469	378	386	251	284	284	229
Oysters	291	285	324	309	332	337	362	376	339	334
Sharks	147	105	110	63	87	108	104	52	47	34
Shrimp	3,650	2,727	3,162	2,716	3,951	2,918	3,435	1,999	2,569	3,129
Snappers	267	250	277	194	365	356	427	299	269	305
Swordfish	NA	NA	71	459	630	741	500	272	369	391
Tilefish	139	4	28	5	15	4	46	150	187	170

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Black sea bass	1.97	2.07	1.94	2.15	2.16	1.82	2.58	2.67	2.62	3.04
Blue crab	0.78	0.85	0.93	1.01	1.10	0.93	0.98	1.24	1.52	1.3
Clams	5.06	5.17	4.51	4.42	4.54	4.65	5.71	6.42	NA	NA
Groupers	3.46	3.88	3.90	3.85	4.04	4.42	4.45	4.67	4.97	5.24
Oysters	4.71	4.82	5.36	5.63	5.60	5.85	5.96	6.23	6.61	6.84
Sharks	0.98	0.74	0.71	0.89	1.42	1.53	1.30	1.45	1.45	1.62
Shrimp	1.78	2.07	2.12	2.02	2.07	2.40	2.53	2.91	3.03	2.37
Snappers	3.08	3.09	3.12	2.92	2.95	3.03	3.13	3.34	3.52	3.50
Swordfish	NA	NA	2.64	2.43	3.09	3.75	3.27	3.61	3.37	3.25
Tilefish	1.95	1.36	2.30	2.00	1.71	1.84	2.78	2.53	2.71	3.15

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

2015 Economic Impacts of South Carolina Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	665	71,043	25,026	38,446
	Private Boat	367	31,741	10,479	17,490
	Shore	1,838	164,241	54,555	96,443
Total Durable Expenditures		4,030	408,537	155,212	244,479
Total State Economic Impacts		6,900	675,562	245,272	396,858

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	45,337
Private Boat	38,104
Shore	143,945
Total	227,386

Equipment	Durable Goods Expenditures
Fishing Tackle	109,827
Other Equipment	48,240
Boat Expenses	215,782
Vehicle Expenses	28,253
Second Home Expenses	0
Total Durable Expenditures	402,103

Total State Trip and Durable Goods Expenditures	629,489

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	234	277	236	231	210	148	207	166	181	192
Non-Coastal	146	113	103	112	104	66	123	84	114	157
Out-of-State	617	551	604	554	494	264	406	602	569	684
Total Anglers	997	941	942	898	809	478	736	852	864	1,033

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	21	85	69	80	77	81	25	48	94	96
Private	978	1,132	1,266	1,008	1,078	847	1,189	748	838	873
Shore	1,240	813	1,116	1,325	1,143	879	992	1,181	1,289	1,701
Total Trips	2,238	2,030	2,451	2,413	2,298	1,806	2,206	1,977	2,221	2,670

Harvest (H) & Release (R) of Key Species Species Groups (thousands of fish)[1]

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Black sea bass	H	218	135	93	46	220	481	96	26	112	50
	R	671	1,012	961	566	717	2,606	833	431	1,756	1,099
Bluefish	H	134	179	128	135	444	225	206	299	172	265
	R	622	677	333	252	318	551	169	309	298	658
Drum (Atlantic croaker and spot)	H	1,229	646	2,798	828	369	946	1,030	839	616	3,480
	R	1,092	377	394	841	354	463	359	1,758	1,207	1,760
Drum (southern kingfish)	H	926	707	829	1,058	389	610	781	1,205	701	463
	R	1,162	540	613	690	0	68	146	< 1	8	3
Drum (spotted seatrout)	H	230	161	155	124	101	66	235	126	78	106
	R	544	572	734	399	407	280	817	601	389	393
Porgies (sheepshead)	H	61	109	216	222	102	172	77	25	80	44
	R	27	21	60	24	58	93	45	81	150	124
Red drum	H	49	72	119	70	173	162	121	97	104	107
	R	540	437	552	751	787	664	544	673	636	571
Sharks[2]	H	6	12	12	23	11	12	5	15	21	6
	R	966	421	483	805	1,172	389	674	1,169	847	899
Southern flounder	H	111	77	102	88	109	101	92	62	59	59
	R	200	106	102	75	< 1	17	35	< 1	< 1	< 1
Spanish mackerel	H	24	95	53	74	70	87	80	22	81	133
	R	28	97	68	56	28	67	98	25	36	100

[1] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.
[2] Sharks include species within the requiem shark amily, blacktip sharks, Atlantic sharpnose sharks and unidentified sharks.

2014 South Carolina State Economy (% of national total)[1]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	102,297 (1.4%)	1,617,249 (1.3%)	62.41 (1.1%)	107 (1.2%)	189.28 (1.1%)	0.09

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	12	12	15	21	23	32	35	30	28
	Receipts	1,303	857	1,155	1,794	1,386	1,326	1,868	1,657	2,690
Seafood sales, retail	Firms	76	75	64	77	78	87	67	67	73
	Receipts	3,427	3,876	4,650	4,709	3,978	5,535	4,818	3,765	4,845

Seafood Sales & Processing - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	3	5	2	2	2	1	0	0	4
	Employees	ds	ds	ds	ds	ds	ds	NA	NA	ds
	Payroll	ds	ds	ds	ds	ds	ds	NA	NA	ds
Seafood sales, wholesale	Establishments	19	26	20	15	16	12	15	16	12
	Employees	191	220	108	111	120	101	125	134	148
	Payroll	5,542	6,186	3,770	3,676	3,868	3,760	4,506	4,849	5,329
Seafood sales, retail	Establishments	62	60	64	57	56	61	60	56	56
	Employees	190	210	292	261	260	245	228	222	224
	Payroll	2,905	3,155	4,871	4,901	4,580	4,231	3,670	3,713	3,633

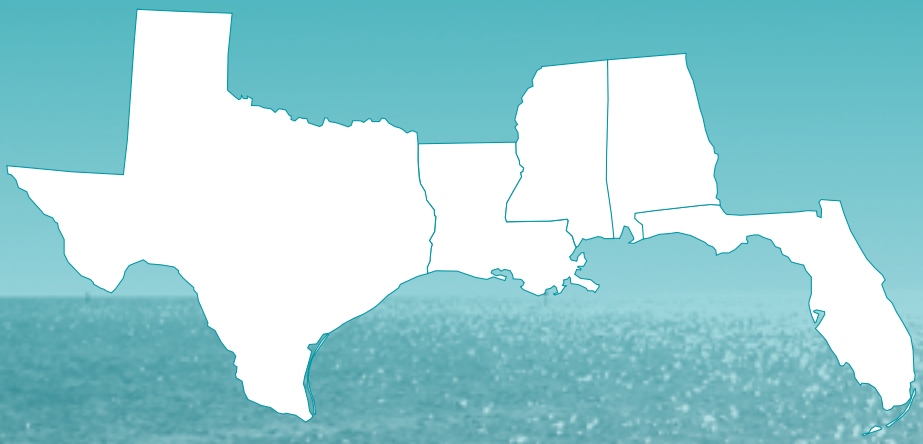
Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	4	5	4	4	4	4	5	5	5
	Employees	ds	60	ds	ds	ds	ds	40	ds	ds
	Payroll	ds	2,352	ds	ds	ds	ds	2,625	ds	ds
Deep sea freight transportation	Establishments	9	6	4	8	7	6	6	4	1
	Employees	ds	67	ds	ds	20	ds	ds	21	ds
	Payroll	ds	3,419	659	ds	758	722	ds	633	ds
Deep sea passenger transportation	Establishments	1	1	7	6	2	2	1	0	0
	Employees	ds	ds	ds	ds	ds	ds	ds	NA	NA
	Payroll	ds	ds	ds	ds	ds	ds	ds	NA	NA
Marinas	Establishments	71	72	68	69	73	75	70	77	70
	Employees	452	469	588	533	537	543	595	650	661
	Payroll	10,105	11,498	13,753	12,642	13,786	15,805	15,408	16,147	17,212
Marine cargo handling	Establishments	17	15	17	14	12	14	10	13	14
	Employees	2,707	1,419	1,282	1,953	1,731	1,717	715	ds	1,902
	Payroll	83,142	75,967	56,812	43,170	39,625	49,172	30,381	ds	66,803
Navigational services to shipping	Establishments	8	6	8	8	7	8	10	8	9
	Employees	155	152	227	208	222	217	247	221	219
	Payroll	7,588	7,369	11,916	12,522	12,591	11,922	16,625	13,820	14,513
Port & harbor operations	Establishments	1	3	3	2	2	5	7	2	3
	Employees	ds	113	ds	ds	ds	ds	676	ds	ds
	Payroll	ds	7,058	ds	ds	ds	ds	29,332	ds	ds
Ship & boat building	Establishments	45	41	46	41	39	41	39	37	37
	Employees	2,425	2,962	3,001	1,929	1,922	1,943	1,980	2,262	2,225
	Payroll	92,098	102,531	97,743	73,988	74,945	85,568	90,942	96,081	98,324

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 les commercial fishing occurs in this state than the national average.
[3] ds = these data are suppressed.
[4] NA = not applicable.

Gulf of Mexico Region

- Alabama
- West Florida
- Louisiana
- Mississippi
- Texas



An angler fishing from a jetty, while an egret waits in anticipation of an easy meal (photo credit: Tom Sminkey, NOAA Fisheries Office of Science and Technology)

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)

Three stocks or stock complexes in the Gulf of Mexico Region were identified as overfished in 2015: gray triggerfish, greater amberjack, and red snapper.

Catch Share Programs

Two catch share programs have been implemented in the Gulf of Mexico: the Red Snapper Individual Fishing Quota (IFQ) Program and the Grouper–Tilefish IFQ Program. 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 key performance indicators of this program show that relative to the baseline period (the 3-year period prior to implementation), the 2014 quota, landings, inflation-adjusted total revenue, and inflation-adjusted total revenue per vessel increased. In contrast, the number of active vessels has decreased since the implementation of the IFQ Program.

Grouper-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 key performance indicators of this program generally show that relative to the baseline period (the 3-year period prior to implementation), 2014 landings, inflation-adjusted total revenue, and inflation-adjusted revenue per active vessel increased. However, overall quota and the number of active vessels decreased during this period.

Policy Updates

In January 2016, NOAA Fisheries published a final rule for the GMFMC Aquaculture Plan for Federal Waters of the Gulf of Mexico. The plan established a regional permitting process to manage the development of an environmentally and economically sustainable aquaculture fishery in federal waters. Before the plan was implemented, exempted fishing permits were required to conduct aquaculture in federal waters. However, these exempted fishing permits were not good investments for commercial aquaculture operations because of their limited duration. No more than 20 Gulf aquaculture permits can be issued under this final rule.

Also in 2016, the GMFMC approved Amendment 28 to the FMP for the Reef Fish Resources of the Gulf of Mexico. The amendment reallocated the red snapper harvest consistent with the updated 2014 red snapper population assessment to ensure the allowable catch and recovery benefits from a rebuilding population were fairly and equitably allocated between commercial and recreational anglers. The amendment reallocated the red snapper stock annual catch limit between the commercial and recreational sectors from 51%:49% to 48.5%:51.5%, respectively.

COMMERCIAL FISHERIES

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. It does not include saltwater anglers that 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/species groups.

Economic Impacts

The premise behind economic impact modeling is that every dollar spent in a regional economy (direct impact) is either saved or respent on additional goods or services. If those dollars are respent on other goods and services

Key Gulf of Mexico Region Commercial Species

- Blue crab
- Crawfish
- Groupers
- Menhaden
- Mullets
- Oysters
- Red snapper
- Shrimp
- Spiny lobster
- Tunas

in the regional economy, this spending generates additional economic activity in the region. 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 seafood businesses and its full supply chain are included). That is, impacts from the seafood industry as well as the economic activity generated throughout each region's broader economy from this industry.

Four different measures are commonly used to show commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. Sales refer to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. It 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 types of measures are calculated in terms of dollars, whereas employment impacts are measured in terms of 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.[1,2]

In 2015, commercial fishing in Florida generated the largest employment impacts in the Gulf of Mexico Region with 79,700 jobs. Florida had the largest income impacts ($3.3 billion), sales impacts ($17.7 billion), and value-added impacts ($5.9 billion).

The importers sector in Florida generated the highest employment impacts of any state-level sector (41,500

Landings Revenue: Largest Increases

From 2006:
- Crawfish (431%, 359% in real terms)
- Menhaden (208%, 166% in real terms)
- Red snapper (108%, 80% in real terms)

From 2014:
- Menhaden (72%)
- Red snapper (19%)
- Oysters (7%)

Landings Revenue: Largest Decreases

From 2006:
- Tunas (-47%, -54% in real terms)
- Mullets (-28%, -38% in real terms)
- Shrimp (-12%, -24% in real terms)

From 2014:
- Crawfish (-57%)
- Shrimp (-41%)
- Mullets (-34%)

Landings: Largest Increases

From 2006:
- Crawfish (272%)
- Red snapper (45%)
- Menhaden (32%)

From 2014:
- Menhaden (40%)
- Red snapper (18%)
- Spiny lobster (10%)

Landings: Largest Decreases

From 2006:
- Tunas (-53%)
- Shrimp (-30%)
- Mullets (-24%)

From 2014:
- Crawfish (-58%)
- Mullets (-29%)
- Tunas (-24%)

[1] The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates (see NMFS Commercial Fishing & Seafood Industry Input/Output Model, available at www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf).
[2] Separate commercial economic impacts were not available for West Florida. Impacts for the entire state of Florida are reported here.

jobs). The importers sector in Florida generated the highest state-level income impacts ($2.1 billion), the highest state-level sales impacts ($12.8 billion), and the highest state-level value-added impacts in the region ($3.9 billion).

Landings Trends

Landings revenue declined from $1.1 billion in 2014 to $858 million in 2015 largely due to shellfish landings revenue losses (down $246 million), which were only partially offset by finfish revenue gains (up $54 million). Regionally, shellfish landings revenues were down almost across the board: shrimp, down $238 million; blue crab, down $5.1 million; crawfish, down $9.2 million; and spiny lobster, down $8.0 million. While the decline in shrimp landings revenue was somewhat attributable to lower landings (-6%), the major driver was lower prices, which fell 37% from the previous year. Market reports identified high inventories as a key factor in driving prices of both domestically harvested shrimp and shrimp imports lower. In addition, 2014 shrimp prices were the highest since 2000 due to a number of factors, including the disruption in the Asian market due to the spread of "early mortality syndrome: (EMS), a bacteria that causes early death in shrimp. A comparison of the 2015 shrimp price to the average price from the previous five years indicates prices were 22% lower in 2015 relative to that period.

Lower blue crab landings revenue in 2015 relative to 2014 also reflects the fact that 2014 was a banner year for blue crab – garnering the highest landings revenue and price on record in both nominal and real terms. While 2015 blue crab landings revenue was indeed lower than 2014, it was still a good year relative to the average landings revenue from the previous five years – in 2015, blue crab landings revenue were up 31% relative to the preceding five year average.

Landings Revenue

Landings revenue in the Gulf Region totaled $858 million in 2015. This number represents a 24% increase from 2006 (a 7% increase in real terms after adjusting for inflation) and an 18% decrease from 2014. Landings revenue was highest in Louisiana ($374 million) followed by West Florida ($192 million). Shellfish landings revenue made up 71% of total revenue. Shrimp ($348 million) and menhaden ($139 million) had the highest landings revenue in the Gulf of Mexico Region in 2015. Together they accounted for 57% of total landings revenue.

From 2006 to 2015, crawfish (431%, 359% in real terms); menhaden (208%, 166% in real terms); and red snapper (108%, 80% in real terms) had the largest revenue increases, while tunas (-47%, -54% in real terms); mullets (-28%, -38% in real terms); and shrimp (-12%, -24% in real terms) had the largest decreases. From 2014 to 2015, menhaden (72%), red snapper (19%), and oysters (7%) had the largest revenue increases, while crawfish (-57%), shrimp (-41%), and mullets (-34%) had the largest decreases.

Landings

In 2015, commercial fishermen in the Gulf Region landed 1.6 billion pounds of finfish and shellfish, a 14% increase from 2006 and a 25% increase from 2014. Landings volume was highest in Louisiana (1 billion pounds), followed by Mississippi (306 million pounds). Menhaden had the highest landings volume in the Gulf of Mexico Region, accounting for 76% of landed weight.

From 2006 to 2015, crawfish (272%), red snapper (45%), and menhaden (32%) had the largest landings increases, while tunas (-53%), shrimp (-30%), and mullets (-24%) had the largest decreases. From 2014 to 2015, menhaden (40%), red snapper (18%), and spiny lobster (10%) had the largest landings increases, while crawfish (-58%), mullets (-29%), and tunas (-24%) had the largest decreases.

Price

In 2015, spiny lobster ($8.06 per pound) received the highest ex-vessel price in the Gulf of Mexico Region. Landings of menhaden ($0.12 per pound) had the lowest ex-vessel price. From 2006 to 2015, menhaden (134%, 102% in real terms); blue crab (121%, 91% in real terms); and oysters (83%, 58% in real terms) had the largest price increases, while mullets (-6%, -18% in real terms) had the largest decrease. From 2014 to 2015, menhaden (23%), oysters (12%), and groupers

(5%) had the largest price increases, while shrimp (-37%), spiny lobster (-24%), and blue crab (-8%) had the largest decreases.

RECREATIONAL FISHERIES

In this report, recreational fisheries refer to fishing for fun rather than to resell fish (commercial fishing) or for subsistence. The recreational fisheries section reports on economic impacts and expenditures, angler participation, trips, and catch of key species/species groups.

Key Gulf of Mexico Region Recreational Species

- Atlantic croaker
- Gulf and southern kingfish
- Red drum
- Red snapper
- Sand and silver seatrout
- Sheepshead porgy
- Southern flounder
- Spanish mackerel
- Spotted seatrout
- Striped mullet

Recreational Catch: Largest Increases

From 2006:
- Striped mullet (62%)
- Porgies (sheepshead) (7%)
- Drum (sand and silver seatrouts) (1%)

From 2014:
- Drum (Gulf and southern kingfish) (33%)
- Drum (sand and silver seatrouts) (22%)
- Drum (spotted seatrout) (14%)

Recreational Catch: Largest Decreases

From 2006:
- Drum (spotted seatrout) (-51%)
- Red snapper (-39%)
- Spanish mackerel (-36%)

From 2014:
- Spanish mackerel (-34%)
- Drum (Atlantic croaker) (-29%)
- Striped mullet (-24%)

Economic Impacts and Expenditures

The contribution of recreational fishing activities[3] in the United States is reported in terms of economic impacts from angler expenditures. Total annual trip expenditures are estimated by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore). Total annual durable expenditures are estimated by multiplying mean durable expenditures by the estimated annual number of adult participants in a given state.

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. Sales refer 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. 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- 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 terms of 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 greatest employment impacts from expenditures on saltwater recreational fishing in the Gulf of Mexico Region were generated in West Florida (61,300 jobs), followed by Texas (15,400 jobs). The largest sales impacts were observed in West Florida ($6.9 billion), followed by Texas ($1.9 billion). The biggest income impacts were generated in West Florida ($2.6 billion), followed by Texas ($726 million). The greatest value-added impacts were in West Florida ($4.2 billion), followed by Texas ($1.2 billion).

Recreational fishing expenditures (on both fishing trips and durable equipment purchases) across the Gulf of Mexico Region in 2015 totaled about $10.4 billion. Trip expenditures totaled more than $1.4 billion, with a large portion coming from trips in the private boat (41%) and for-hire (30%) sectors. Durable goods expenditures to-

[3] Trip expenditure estimates were generated from the 2011 National Marine Recreational Fishing Expenditure Survey. Durable good expenditure impacts were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (see http://www.st.nmfs.noaa.gov/economics/fisheries/recreational/Marine-Angler-Durable-Expenditures/2014-durable-expenditures-survey). Economic impacts from recreational fishing activities were generated using the NMFS Recreational Economic Impact Model (see The Economic Contribution of Marine Angler Expenditures in the United States, 2011, available at http://www.st.nmfs.noaa.gov/economics/publications/marine-angler-expenditures/marine-angler-2011).

taled $9 billion, with the largest portion coming from boat expenses ($5.2 billion).

Fishing Trips

In 2015, recreational fishermen took 19.7 million fishing trips in the Gulf of Mexico Region. This number was a 15% decrease from 2006 and a 6% decrease from 2014. The largest proportions of trips were taken in the private boat mode (56%) and shore mode (39%). States with the highest number of recorded trips were West Florida (13.4 million trips) and Louisiana (2.4 million trips).

Participation

In 2015, 2.5 million recreational anglers fished in the Gulf of Mexico Region. This number was a 31% decrease from 2006 and a 13% decrease from 2014. These anglers were Gulf of Mexico Region residents from either a coastal county (90%) or non-coastal county (10%).

Harvest and Release

Of the Gulf of Mexico's key species and species groups, drum (spotted seatrout, 16.9 million fish), red drum (6.2 million fish), and drum (sand and silver seatrouts, 3.8 million fish) were most frequently caught by recreational anglers. From 2006 to 2015, striped mullet (62%); porgies (sheepshead, 7%); and drum (sand and silver seatrouts, 1%) had the largest increases in catch, while drum (spotted seatrout, -51%); red snapper (-39%); and Spanish mackerel (-36%) had the largest decreases. From 2014 to 2015, drum (Gulf and southern kingfish, 33%); drum (sand and silver seatrouts, 22%); and drum (spotted seatrout, 14%) had the largest increases in catch, while Spanish mackerel (-34%); drum (Atlantic croaker, -29%); and striped mullet (-24%) had the largest decreases.

MARINE ECONOMY

For this report, the marine economy refers to the economic activity generated by 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) transport, support, and marine operations (employer establishments). These sectors include several different marine-related industries. 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.[4,5,6]

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).[7] 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's CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state's CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average.

In 2014, the CFLQ for Louisiana was the highest in the region at 2.14. Louisiana's CFLQ suggests that the level of employment in industries related to commercial fishing in this state is approximately 2.14 times higher than the level of employment in these industries nationwide.

In 2014, 1.3 million establishments operated throughout the Gulf of Mexico Region, including marine and non-marine-related establishments. These establishments employed 22 million workers and had a total annual payroll of $988 billion. The region's gross domestic product was approximately $3 trillion in 2014.

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2014, there were 632 non-employer firms (a 44% increase from 2006) and annual receipts totaled $43 million (a 54% increase from 2006 in real terms). The greatest number of firms was located in Florida (315). There were 138 employer establishments (a 5% increase from 2006) in 2014. These establishments employed approximately 6,676 workers (a 29% decrease from 2006) and had a total annual payroll of $211 million (a 19% decrease from 2006 in real terms). The greatest number of establishments was located in Louisiana (37).

[4] Marine Economy information was not available for West Florida, information for the entire state of Florida is provided here.
[5] Unless otherwise stated, data is from the U.S. Census Bureau, http://censtats.census.gov/ (accessed May 31, 2016).
[6] U.S. Bureau of Economic Analysis, "Table 1.1.5 Gross Domestic Product" and "Table SA6N Compensation of Employees by NAICS Industry," http://www.bea.gov/iTable/index_nipa.cfm (accessed May 31, 2016).
[7] U.S. Bureau of Labor Statistics, "Location Quotient Calculator," http://data.bls.gov/location_quotient/ (accessed May 31, 2016).

Seafood Sales, Retail: In 2014, there were 819 non-employer firms (a 20% increase from 2006) and annual receipts totaled $66 million (a 15% decrease from 2006 in real terms). The greatest number of firms was located in Florida (346).

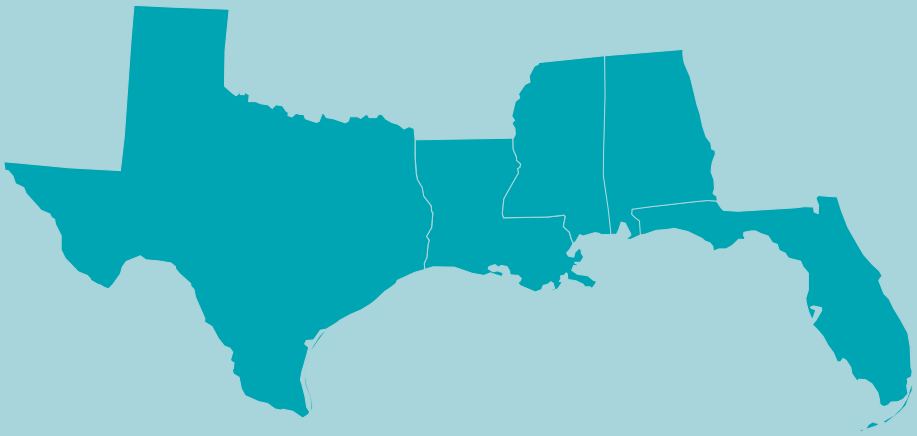
There were 356 employer establishments (a 4% decrease from 2006) in 2014. These establishments employed 2,194 workers (a 13% increase from 2006) and had a total annual payroll of $48 million (a 24% increase from 2006 in real terms). The greatest number of establishments was located in Florida (166).

Seafood Sales, Wholesale: There were 463 establishments (a 10% decrease from 2006) in 2014. These establishments employed 3,850 workers (a 9% decrease from 2006) and had a total annual payroll of $155 million (a 2% increase from 2006 in real terms). The greatest number of establishments was located in Florida (233).

Transport, Support, and Marine Operations

The size of the Transport, Support, and Marine Operations sectors in the Gulf of Mexico Region is difficult to assess because much of the state-level data is suppressed for confidentiality purposes. It is clear, however, that these sectors play an important role in the regional economy. For example, the Ship and Boat Building sector contributed over 12,000 jobs and more than $600 million in payroll in Alabama, Florida, Louisiana, and Texas alone (data for Mississippi are suppressed). The Coastal Freight Transportation sector contributed over $960 million in payroll to the region, mainly in Louisiana, Texas, and Florida.

Tables | Gulf of Mexico Region



2015 Economic Impacts of the Gulf of Mexico Seafood Industry (thousands of dollars)

		With Imports				Without Imports			
	Landings Revenue	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Alabama	50,935	9,956	501,815	188,824	250,925	9,348	421,219	168,896	220,481
Florida	192,419	79,714	17,713,169	3,319,369	5,931,263	10,257	994,047	262,855	403,399
Louisiana	373,682	32,015	1,839,750	673,344	920,809	30,635	1,601,577	623,704	838,255
Mississippi	67,471	9,490	465,361	185,978	239,711	9,485	464,680	185,834	239,474
Texas	173,419	14,829	1,016,864	361,386	509,834	14,571	966,117	351,189	492,440

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	691,220	690,211	663,848	636,427	624,629	811,905	745,822	941,881	1,050,708	857,926
Finfish & Other	136,644	146,525	147,115	142,425	117,831	184,721	184,388	200,892	197,023	250,557
Shellfish	554,576	543,686	516,732	494,003	506,797	627,184	561,434	740,990	853,685	607,369
Key Species										
Blue crab	43,355	46,028	39,813	45,484	41,264	48,794	47,984	61,804	79,050	73,918
Crawfish	1,290	9,034	9,507	15,547	13,971	9,914	4,998	16,490	16,088	6,851
Groupers	23,721	21,488	24,108	18,435	14,270	20,326	24,634	24,628	29,835	27,668
Menhaden	44,946	62,110	64,376	60,606	51,750	92,855	83,450	90,643	80,397	138,511
Mullets	9,429	5,543	6,099	6,105	5,221	10,368	7,557	13,222	10,311	6,781
Oysters	62,316	69,542	60,464	73,464	55,085	65,273	71,688	76,450	92,868	99,008
Red snapper	13,167	9,570	7,972	7,984	10,202	11,413	13,565	20,621	23,115	27,432
Shrimp	397,706	367,060	366,808	327,608	339,228	441,384	390,464	513,380	585,809	348,301
Spiny lobster	24,867	24,527	19,141	12,203	32,747	35,610	21,128	46,744	50,534	42,547
Tunas	8,461	10,535	6,170	8,180	2,688	5,516	10,516	7,308	6,330	4,502

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	1,362,326	1,404,307	1,278,879	1,435,665	1,072,068	1,792,550	1,438,492	1,346,511	1,239,734	1,554,654
Finfish & Other	975,313	1,071,825	994,813	1,071,919	810,889	1,472,911	1,151,387	1,043,696	928,831	1,258,438
Shellfish	387,013	332,482	284,066	363,746	261,179	319,640	287,105	302,815	310,903	296,215
Key Species										
Blue crab	67,481	57,964	49,258	61,277	41,240	55,606	50,409	46,941	51,395	52,045
Crawfish	1,469	15,848	15,735	19,312	14,557	9,599	4,216	19,676	13,055	5,461
Groupers	9,434	7,723	8,941	7,008	5,075	7,175	8,317	7,613	8,824	7,814
Menhaden	901,398	1,005,325	927,517	1,002,579	753,442	1,398,654	1,078,139	971,308	848,589	1,188,983
Mullets	12,727	8,933	10,609	11,303	8,963	14,233	10,772	13,482	13,654	9,692
Oysters	19,674	22,518	20,723	22,829	15,824	18,742	19,948	19,257	17,931	17,078
Red snapper	4,637	2,998	2,370	2,503	3,259	3,567	3,994	5,306	5,730	6,739
Shrimp	288,973	225,163	188,806	250,572	178,902	221,469	203,328	207,106	215,487	202,916
Spiny lobster	4,368	3,402	2,975	3,960	5,286	5,302	3,634	5,600	4,794	5,281
Tunas	2,851	3,426	1,786	2,836	1,322	1,588	3,031	2,094	1,757	1,343

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Blue crab	0.64	0.79	0.81	0.74	1.00	0.88	0.95	1.32	1.54	1.42
Crawfish	0.88	0.57	0.60	0.81	0.96	1.03	1.19	0.84	1.23	1.25
Groupers	2.51	2.78	2.70	2.63	2.81	2.83	2.96	3.24	3.38	3.54
Menhaden	0.05	0.06	0.07	0.06	0.07	0.07	0.08	0.09	0.09	0.12
Mullets	0.74	0.62	0.57	0.54	0.58	0.73	0.70	0.98	0.76	0.70
Oysters	3.17	3.09	2.92	3.22	3.48	3.48	3.59	3.97	5.18	5.80
Red snapper	2.84	3.19	3.36	3.19	3.13	3.20	3.40	3.89	4.03	4.07
Shrimp	1.38	1.63	1.94	1.31	1.90	1.99	1.92	2.48	2.72	1.72
Spiny lobster	5.69	7.21	6.43	3.08	6.20	6.72	5.81	8.35	10.54	8.06
Tunas	2.97	3.07	3.45	2.88	2.03	3.47	3.47	3.49	3.60	3.35

2015 Economic Impacts of the Gulf of Mexico Recreational Fishing Expenditures (thousands of dollars, trips)

	Trips	#Jobs	Sales	Income	Value Added
Alabama	2,324	13,888	1,244,884	532,226	888,904
West Florida	13,425	61,278	6,947,889	2,620,297	4,184,808
Louisiana	2,426	11,054	1,285,974	474,397	784,385
Mississippi	1,551	5,511	656,407	217,633	354,185
Texas	1,403	15,368	1,937,753	726,079	1,202,300

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	433,490
Private Boat	582,302
Shore	409,074
Total	1,424,866

Equipment	Durable Goods Expenditures
Fishing Tackle	1,939,267
Other Equipment	846,137
Boat Expenses	5,175,195
Vehicle Expenses	932,081
Second Home Expenses	127,214
Total Durable Expenditures	9,019,894

Total State Trip and Durable Goods Expenditures	10,444,760

Recreational Anglers by Residential Area (thousands of anglers)[1,2]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	3,328	3,235	2,926	2,550	2,480	2,737	2,803	2,973	2,616	2,250
Non-Coastal	315	326	262	296	235	311	268	400	273	262
Out-of-State[3]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Anglers	3,643	3,562	3,188	2,846	2,715	3,048	3,071	3,373	2,890	2,512

Recreational Fishing Effort by Mode (thousands of angler trips)[4]

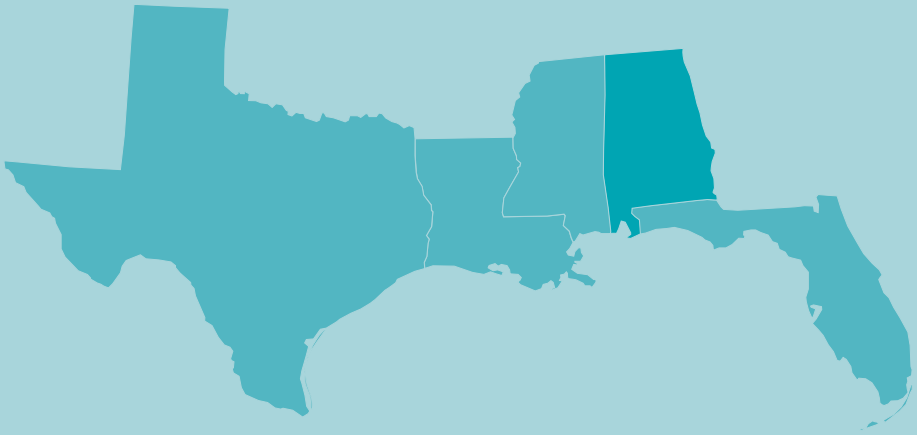
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	836	852	819	822	580	735	884	907	927	1,088
Private	13,620	14,980	15,195	13,443	12,685	12,911	12,782	13,510	11,547	10,952
Shore	8,837	8,457	8,776	8,332	7,783	8,930	9,506	10,817	8,582	7,686
Total Trips	23,293	24,289	24,790	22,597	21,047	22,576	23,172	25,233	21,056	19,726

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Drum (Atlantic Croaker)	H	1,542	1,408	1,936	1,291	1,634	2,208	1,462	1,883	2,681	1,347
	R	2,312	2,616	3,149	3,856	3,828	5,899	3,920	3,269	2,239	2,167
Drum (Gulf and southern kingfish)	H	1,250	1,136	1,305	1,065	1,421	939	918	1,622	707	1,173
	R	926	842	728	576	624	539	536	474	358	248
Drum (sand and silver seatrouts)	H	2,239	3,184	3,556	4,314	4,701	5,960	5,056	3,013	2,674	3,160
	R	1,539	1,911	1,990	2,444	1,806	2,540	2,476	1,851	482	675
Drum (spotted seatrout)	H	14,273	12,104	15,042	14,147	10,871	14,719	13,593	12,762	5,818	7,807
	R	20,056	18,850	21,017	17,364	14,565	19,119	20,215	19,527	8,932	9,067
Porgies (sheepshead)	H	1,188	1,244	1,615	1,607	1,195	2,273	1,596	1,355	1,391	1,327
	R	1,508	1,222	1,487	1,339	1,739	1,633	1,516	1,672	1,579	1,562
Red drum	H	2,681	3,135	3,560	2,893	3,516	3,891	3,013	4,138	2,115	2,248
	R	6,393	6,222	7,016	5,525	6,467	6,449	6,329	7,701	3,480	3,912
Red snapper	H	1,036	1,268	719	827	367	557	625	1,289	559	807
	R	2,831	3,258	2,111	2,146	1,436	1,521	1,425	2,824	1,786	1,543
Southern flounder	H	537	701	538	691	802	858	836	1,102	486	417
	R	171	240	122	193	220	222	310	339	73	83
Spanish mackerel	H	1,769	1,338	1,899	1,508	1,577	1,542	1,841	3,355	1,722	1,780
	R	2,854	2,104	2,041	1,636	2,476	1,942	1,442	4,159	2,779	1,200
Striped mullet	H	1,102	1,150	1,259	742	1,666	1,902	2,356	2,984	2,366	1,949
	R	141	157	146	225	126	313	204	195	293	68

[1] The Marine Recreational Program (MRIP) does not collect angler participation data for Texas.
[2] Includes Louisiana resident participation estimated from historical MRIP data (2006-2013) and a state creel survey (2014-2015).
[3] Data are not available because out-of-state resident information is collected for individual states but whether an angler is a resident of a region is not specified.
[4] The Marine Recreational Program (MRIP) does not collect effort data for Texas.
[5] Data on the number of fish released in Texas are not collected by the Texas Parks and Wildlife Department (TPWD) and therefore not reported in this table.

Tables | Alabama



2015 Economic Impacts of the Alabama Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	9,956	501,815	188,824	250,925	9,348	421,219	168,896	220,481
Commercial Harvesters	1,559	84,003	24,955	37,125	1,559	84,003	24,955	37,125
Seafood Processors & Dealers	1,924	136,055	53,293	67,724	1,523	107,688	42,182	53,604
Importers	163	50,564	8,104	15,414	0	0	0	0
Seafood Wholesalers & Distributors	152	8,027	2,814	3,625	146	7,695	2,697	3,475
Retail	6,157	223,167	99,658	127,037	6,120	221,834	99,062	126,278

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	48,558	48,845	44,503	39,624	26,335	50,910	46,495	56,778	70,174	50,935
Finfish & Other	4,572	3,686	4,358	3,662	2,748	4,072	5,183	4,680	4,572	5,023
Shellfish	43,986	45,160	40,145	35,962	23,587	46,838	41,312	52,098	65,601	45,912
Key Species										
Blue crab	1,319	1,711	1,533	961	732	1,128	1,044	1,036	1,319	1,227
Flounders	223	261	214	197	97	222	185	58	53	66
Menhaden	48	71	59	42	15	58	84	104	147	154
Mullets	1,171	984	1,030	765	594	687	1,206	1,178	1,046	761
Oysters	3,639	2,698	243	77	390	1,322	1,253	786	441	290
Red snapper	536	213	239	263	329	314	316	401	697	1,443
Sharks	463	250	403	275	111	381	330	247	219	262
Shrimp	39,022	40,742	38,355	34,894	22,463	44,361	39,009	50,266	63,826	44,392
Spanish mackerel	573	453	664	301	499	582	1,149	940	472	705
Vermillion snapper	318	323	507	841	384	622	393	88	387	247

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	34,033	29,434	24,612	29,199	14,063	26,119	26,322	23,411	25,630	26,570
Finfish & Other	6,498	4,857	5,577	4,478	3,441	4,966	6,596	5,831	5,276	5,095
Shellfish	27,535	24,578	19,035	24,721	10,622	21,153	19,726	17,580	20,353	21,474
Key Species										
Blue crab	2,384	2,557	1,799	1,458	927	1,617	1,325	1,025	1,184	1,302
Flounders	118	133	107	97	48	111	83	25	23	26
Menhaden	350	470	268	190	81	364	521	496	700	695
Mullets	1,913	1,798	2,017	1,814	1,202	1,262	1,946	1,793	1,829	1,385
Oysters	940	769	71	23	68	296	265	133	58	34
Red snapper	177	59	61	65	83	78	78	108	180	356
Sharks	1,227	315	424	328	140	450	495	343	272	392
Shrimp	24,201	21,247	17,154	23,215	9,625	19,224	18,124	16,408	19,097	20,135
Spanish mackerel	873	580	921	418	733	839	1,377	972	431	617
Vermillion snapper	122	129	199	346	148	224	132	28	124	74

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Blue crab	0.55	0.67	0.85	0.66	0.79	0.70	0.79	1.01	1.11	0.94
Flounders	1.89	1.97	2.01	2.04	2.05	2.00	2.21	2.35	2.24	2.51
Menhaden	0.14	0.15	0.22	0.22	0.18	0.16	0.16	0.21	0.21	0.22
Mullets	0.61	0.55	0.51	0.42	0.49	0.54	0.62	0.66	0.57	0.55
Oysters	3.87	3.51	3.41	3.33	5.75	4.47	4.72	5.90	7.60	8.62
Red snapper	3.03	3.62	3.93	4.04	3.97	4.04	4.05	3.70	3.86	4.05
Sharks	0.38	0.79	0.95	0.84	0.79	0.85	0.67	0.72	0.81	0.67
Shrimp	1.61	1.92	2.24	1.50	2.33	2.31	2.15	3.06	3.34	2.20
Spanish mackerel	0.66	0.78	0.72	0.72	0.68	0.69	0.83	0.97	1.09	1.14
Vermillion snapper	2.61	2.50	2.55	2.43	2.59	2.78	2.97	3.12	3.11	3.33

2015 Economic Impacts of Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	501	58,673	20,918	30,635
	Private Boat	490	48,584	14,604	25,151
	Shore	956	83,968	27,507	46,603
Total Durable Expenditures		11,941	1,053,659	469,197	786,515
Total State Economic Impacts		13,888	1,244,884	532,226	888,904

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	37,088
Private Boat	47,725
Shore	68,939
Total	153,752

Equipment	Durable Goods Expenditures
Fishing Tackle	275,371
Other Equipment	89,408
Boat Expenses	928,568
Vehicle Expenses	39,927
Second Home Expenses	22,786
Total Durable Expenditures	1,356,060

Total State Trip and Durable Goods Expenditures	1,509,812

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	233	253	192	205	195	295	254	279	220	225
Non-Coastal	184	169	116	151	140	177	131	224	123	151
Out-of-State	320	291	237	209	220	435	339	549	510	455
Total Anglers	736	712	545	566	554	907	723	1,052	853	831

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	78	75	56	56	34	75	59	90	87	98
Private	811	985	946	885	840	1,206	1,035	1,006	714	918
Shore	1,050	901	702	772	812	1,202	1,211	1,767	1,368	1,308
Total Trips	1,938	1,961	1,704	1,713	1,686	2,483	2,305	2,862	2,169	2,324

Harvest (H) & Release (R) of Key Species/Species Groups (thousands of fish)

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bluefish	H	13	26	16	14	30	75	56	163	36	17
	R	151	175	54	46	80	167	197	639	518	192
Drum (Atlantic Croaker)	H	452	463	1,163	250	918	886	345	391	1,105	539
	R	824	924	1,371	1,821	1,861	2,593	1,206	886	1,393	1,401
Drum (kingfishes)[1]	H	443	476	668	593	633	626	227	929	322	350
	R	460	289	257	284	309	341	97	260	156	131
Drum (sand seatrout)	H	593	704	1,216	1,428	2,069	2,346	1,415	486	524	881
	R	503	481	409	752	835	743	480	294	246	317
Drum (spotted seatrout)	H	327	359	269	318	610	826	773	539	242	522
	R	598	488	844	757	454	1,301	1,126	761	254	907
Porgies (sheepshead)	H	124	320	289	166	218	480	313	285	121	316
	R	80	30	159	48	51	146	48	46	18	168
Red drum	H	100	84	88	62	123	143	124	188	90	161
	R	145	136	227	110	151	150	305	425	318	254
Red snapper	H	181	217	107	138	42	217	152	450	132	297
	R	639	851	340	394	288	488	194	857	758	610
Southern flounder	H	123	96	93	139	243	163	155	84	29	50
	R	65	38	38	22	65	60	53	43	18	26
Spanish mackerel	H	58	92	111	76	255	334	516	1,313	128	707
	R	48	21	32	60	101	128	148	1,130	53	275

[1] Kingfishes include southern kingfish and Gulf kingfish.

2014 Alabama State Economy (% of national total)[1]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	97,714 (1.3%)	1,604,016 (1.3%)	64.29 (1.1%)	105.84 (1.1%)	200.41 (1.2%)	0.58

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	34	47	33	41	68	67	47	58	57
	Receipts	1,558	1,547	1,894	1,809	3,314	4,354	1,965	3,069	3,446
Seafood sales, retail	Firms	57	61	57	67	71	58	68	66	55
	Receipts	4,802	4,279	5,632	5,484	5,197	4,759	7,073	5,520	4,351

Seafood Sales & Processing - Employer Establishments (thousands of dollars)[3]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	24	23	23	22	21	16	17	22	23
	Employees	1,629	1,510	1,450	1,086	1,128	882	778	989	963
	Payroll	34,703	32,774	29,277	24,900	22,824	21,922	19,730	22,641	23,973
Seafood sales, wholesale	Establishments	26	31	29	28	23	25	16	18	18
	Employees	395	395	494	339	332	321	306	281	388
	Payroll	6,195	6,202	8,751	5,893	5,119	6,547	6,221	6,861	9,321
Seafood sales, retail	Establishments	28	33	33	31	34	32	32	28	31
	Employees	ds	ds	ds	130	132	120	189	219	200
	Payroll	ds	1,809	1,710	2,044	2,016	1,888	2,990	3,267	3,330

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	6	8	4	4	5	5	4	5	5
	Employees	15	48	ds	ds	ds	215	ds	ds	45
	Payroll	754	3,266	ds	ds	ds	13,117	ds	ds	2,617
Deep sea freight transportation	Establishments	3	5	7	7	5	6	5	5	2
	Employees	ds	46	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	3,553	ds	ds	ds	ds	ds	ds	ds
Deep sea passenger transportation	Establishments	1	1	2	3	2	2	1	0	0
	Employees	ds	ds	ds	ds	ds	ds	ds	NA	NA
	Payroll	ds	ds	ds	ds	ds	ds	ds	NA	NA
Marinas	Establishments	52	52	56	55	54	53	57	54	54
	Employees	312	364	316	278	609	ds	329	332	343
	Payroll	8,388	9,382	9,170	8,418	12,149	12,196	10,253	9,659	9,804
Marine cargo handling	Establishments	14	19	20	19	19	19	10	13	13
	Employees	ds	491	756	658	548	536	ds	554	778
	Payroll	ds	21,076	33,244	27,272	32,143	34,998	ds	34,481	37,273
Navigational services to shipping	Establishments	18	16	17	16	16	16	14	12	16
	Employees	ds	338	287	294	276	283	241	208	124
	Payroll	ds	17,554	16,712	15,383	14,737	14,981	8,808	14,761	6,902
Port & harbor operations	Establishments	3	2	4	5	5	3	6	3	2
	Employees	ds	ds	ds	ds	ds	ds	101	4	ds
	Payroll	ds	ds	ds	ds	ds	ds	5,788	160	ds
Ship & boat building	Establishments	47	42	42	40	32	35	37	38	37
	Employees	3,027	3,570	4,435	3,913	2,598	3,176	4,936	5,948	5,904
	Payroll	121,185	172,380	188,543	159,065	151,813	166,116	251,063	303,016	311,296

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 les commercial fishing occurs in this state than the national average.
[3] ds = these data are suppressed.
[4] NA = not applicable.

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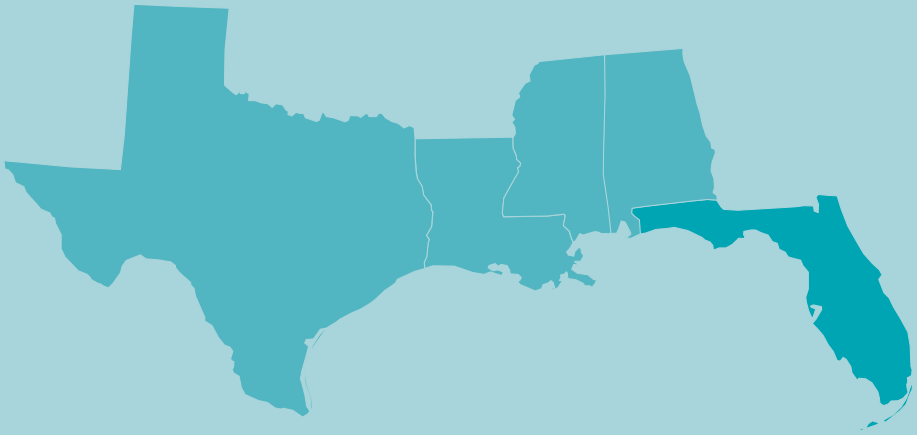


2015 Economic Impacts of the Florida Seafood Industry (thousands of dollars)[1]

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	79,714	17,713,169	3,319,369	5,931,263	10,257	994,047	262,855	403,399
Commercial Harvesters	6,658	479,126	151,375	201,026	6,658	479,126	151,375	201,026
Seafood Processors & Dealers	4,620	833,263	161,261	317,025	535	103,447	20,020	39,357
Importers	41,471	12,827,737	2,055,890	3,910,456	0	0	0	0
Seafood Wholesalers & Distributors	10,077	1,290,597	506,684	630,382	447	57,265	22,482	27,971
Retail	16,889	2,282,446	444,159	872,376	2,616	354,210	68,978	135,045

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	145,494	132,162	123,850	117,324	139,046	166,015	143,188	182,163	204,477	192,419
Finfish & Other	51,015	46,828	51,698	49,976	41,321	59,580	60,710	67,994	71,866	66,033
Shellfish	94,479	85,334	72,152	67,349	97,725	106,434	82,479	114,169	132,611	126,386
Key Species										
Blue crab	7,043	5,769	3,289	4,195	6,706	7,719	5,142	6,454	6,977	8,279
Gag	4,151	4,348	4,913	2,759	2,079	1,439	2,437	2,799	2,852	2,782
Lobsters	24,885	24,546	19,175	12,206	32,752	35,616	21,136	46,749	50,537	42,549
Mullet	6,021	3,663	4,172	5,069	4,188	8,630	5,050	11,081	8,072	5,330
Oyster	5,415	6,631	5,519	6,968	6,298	8,582	9,706	5,783	4,038	4,427
Quahog clam	807	914	1,825	1,524	1,002	921	753	921	NA	NA
Red grouper	14,384	11,024	13,591	10,488	8,992	15,087	16,737	16,219	20,944	18,931
Red snapper	1,991	3,066	2,951	2,980	4,552	5,417	6,141	8,073	8,067	9,992
Shrimp	32,225	20,976	23,265	24,446	27,554	28,456	21,463	29,155	41,819	34,431
Stone crab	24,029	26,213	19,019	17,806	23,335	24,430	23,934	24,710	27,132	34,407

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)[2]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	70,766	59,784	60,380	66,387	63,678	78,459	63,347	63,227	76,429	71,485
Finfish & Other	36,226	31,146	35,740	39,000	32,251	42,392	39,077	38,003	46,762	35,833
Shellfish	34,540	28,638	24,640	27,386	31,428	36,067	24,270	25,223	29,667	35,652
Key Species										
Blue crab	8,610	6,110	2,660	3,371	5,759	6,833	4,157	4,463	4,187	4,713
Gag	1,436	1,339	1,478	825	572	369	612	676	681	642
Lobsters	4,372	3,405	2,981	3,961	5,287	5,303	3,635	5,601	4,795	5,282
Mullet	7,308	5,619	6,980	9,167	7,262	11,410	7,249	10,879	10,495	7,486
Oyster	2,394	2,959	2,526	2,877	2,165	3,100	3,316	1,298	731	792
Quahog clam	96	116	279	255	156	137	128	183	NA	NA
Red grouper	6,062	4,352	5,628	4,387	3,488	5,635	6,141	5,412	6,545	5,664
Red snapper	649	919	849	863	1,317	1,538	1,698	2,181	2,094	2,640
Shrimp	14,176	8,628	9,942	11,451	12,892	11,975	7,658	9,672	11,750	11,452
Stone crab	4,784	5,884	6,163	5,382	5,100	5,460	5,202	3,767	1,889	2,633

Average Annual Price of Key Species/Species Groups (dollars per pound)[2]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Blue crab	0.82	0.94	1.24	1.24	1.16	1.13	1.24	1.45	1.67	1.76
Gag	2.89	3.25	3.32	3.34	3.63	3.90	3.98	4.14	4.19	4.33
Lobsters	5.69	7.21	6.43	3.08	6.19	6.72	5.81	8.35	10.54	8.06
Mullet	0.82	0.65	0.60	0.55	0.58	0.76	0.70	1.02	0.77	0.71
Oyster	2.26	2.24	2.19	2.42	2.91	2.77	2.93	4.46	5.52	5.59
Quahog clam	8.44	7.90	6.53	5.97	6.43	6.74	5.86	5.03	NA	NA
Red grouper	2.37	2.53	2.41	2.39	2.58	2.68	2.73	3.00	3.20	3.34
Red snapper	3.07	3.34	3.47	3.45	3.46	3.52	3.62	3.70	3.85	3.78
Shrimp	2.27	2.43	2.34	2.13	2.14	2.38	2.80	3.01	3.56	3.01
Stone crab	5.02	4.45	3.09	3.31	4.58	4.47	4.60	6.56	14.36	13.07

[1] Economic impacts reported in this table are for the entire state of Florida, not West Florida alone.
[2] NA = These data are confidential and therefore not disclosable.

2015 Economic Impacts of Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	4,097	505,441	182,036	278,864
	Private Boat	2,377	257,005	88,312	152,299
	Shore	1,490	151,789	52,754	92,197
Total Durable Expenditures		53,314	6,033,654	2,297,195	3,661,448
Total State Economic Impacts		61,278	6,947,889	2,620,297	4,184,808

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	276,651
Private Boat	264,408
Shore	122,115
Total	663,174

Equipment	Durable Goods Expenditures
Fishing Tackle	1,147,480
Other Equipment	477,538
Boat Expenses	2,733,775
Vehicle Expenses	276,194
Second Home Expenses	53,167
Total Durable Expenditures	4,688,154

Total State Trip and Durable Goods Expenditures	5,351,328

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	2,084	1,934	1,820	1,551	1,538	1,592	1,718	1,813	1,649	1,414
Non-Coastal[1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Out-of-State	1,988	2,151	2,029	1,671	1,470	1,624	2,141	2,538	2,716	2,399
Total Anglers	4,072	4,085	3,849	3,222	3,008	3,216	3,859	4,351	4,365	3,813

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	565	612	571	573	461	536	699	684	694	786
Private	9,382	10,005	10,145	8,623	8,160	7,520	7,865	8,328	8,115	6,997
Shore	6,721	6,319	6,782	6,482	5,645	5,845	6,216	6,937	6,370	5,643
Total Trips	16,667	16,936	17,497	15,677	14,266	13,901	14,780	15,949	15,179	13,425

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Common snook	H	25	35	25	14	0	< 1	< 1	33	14	21
	R	1,391	1,591	1,595	1,924	600	747	1,040	1,547	1,578	2,119
Drum (sand and silver seatrouts)	H	434	1,120	746	893	410	865	1,415	706	578	396
	R	409	598	584	460	210	294	742	239	122	206
Drum (spotted seatrout)	H	1,616	1,514	1,543	1,371	1,115	1,475	1,626	1,406	1,340	1,295
	R	9,457	10,059	9,584	7,672	8,470	11,382	10,920	7,759	7,936	7,342
Gag	H	357	285	434	203	232	98	132	213	105	96
	R	1,875	2,676	4,077	2,724	2,018	1,158	981	1,170	818	483
Gray snapper	H	663	1,047	1,393	1,176	560	419	948	1,482	1,933	1,449
	R	2,848	4,289	5,690	3,014	1,858	2,240	3,126	5,136	7,519	5,706
King mackerel	H	343	271	184	453	172	127	180	205	306	252
	R	392	85	155	138	81	47	62	87	118	73
Mullets[3]	H	1,297	613	1,238	656	966	857	1,549	1,641	1,480	1,096
	R	100	183	143	191	73	106	88	224	319	204
Porgies (sheepshead)	H	623	591	557	681	455	607	628	524	895	589
	R	943	894	855	808	1,246	1,275	1,177	1,084	1,535	902
Red drum	H	376	412	457	225	240	287	414	364	389	504
	R	2,828	2,558	2,561	1,440	1,992	2,895	2,299	2,197	2,647	3,428
Spanish mackerel	H	1,672	1,205	1,754	1,392	1,284	1,155	1,215	1,970	1,566	1,033
	R	2,767	2,065	1,988	1,546	2,360	1,780	1,219	3,017	2,724	920

[1] Data is not available because all West Florida residents are considered coastal county residents.
[2] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.
[3] Mullets encompass species within the mullet genus, including striped mullets.

2014 West Florida State Economy (% of national total)[1,5]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	519,875 (6.9%)	7,441,584 (6.1%)	312.96 (5.3%)	461.48 (5%)	838.94 (4.9%)	1.01

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	174	173	202	217	280	294	307	300	315
	Receipts	10,184	10,497	11,065	12,473	14,635	14,618	17,557	17,214	22,329
Seafood sales, retail	Firms	251	319	331	316	361	362	383	338	346
	Receipts	20,708	27,557	26,087	25,667	27,964	29,037	30,765	25,332	26,433

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

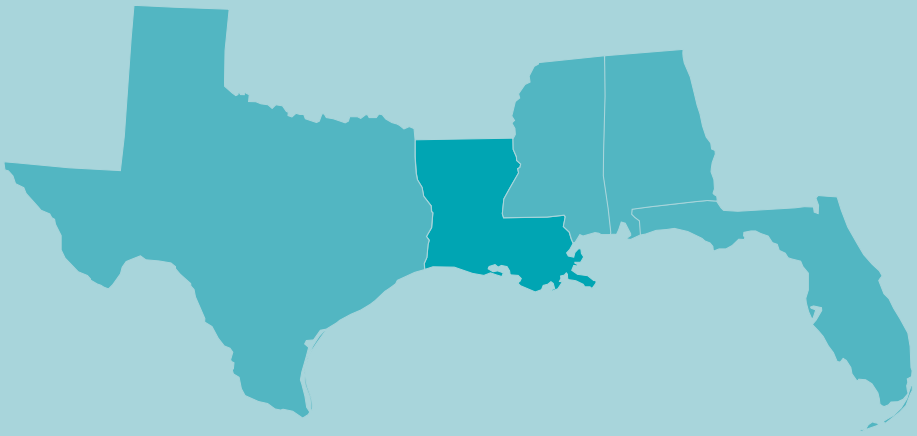
		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	22	20	23	25	27	24	27	25	27
	Employees	1,704	1,748	1,637	1,143	1,269	1,095	1,608	1,374	1,419
	Payroll	62,801	58,233	53,455	46,235	45,772	42,612	51,735	50,003	50,556
Seafood sales, wholesale	Establishments	259	267	229	215	229	250	226	234	233
	Employees	2,091	2,308	1,913	1,762	1,747	1,913	1,957	1,878	1,974
	Payroll	73,897	85,019	75,203	72,159	70,889	77,115	75,945	79,266	83,964
Seafood sales, retail	Establishments	173	169	168	158	145	145	151	165	166
	Employees	936	989	991	885	865	849	945	909	1,037
	Payroll	19,513	20,595	21,604	21,182	20,783	20,158	21,577	23,476	25,844

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	54	47	42	42	50	54	60	47	62
	Employees	1,217	1,242	1,106	972	709	753	1,381	1,050	1,743
	Payroll	91,638	94,429	50,115	37,774	50,217	53,341	100,402	82,078	175,366
Deep sea freight transportation	Establishments	73	69	57	58	61	65	75	69	77
	Employees	3,729	3,190	2,486	2,801	2,279	2,374	3,345	2,485	2,015
	Payroll	226,810	208,144	169,055	180,139	159,025	177,386	231,887	140,564	131,069
Deep sea passenger transportation	Establishments	37	34	31	33	29	29	39	31	28
	Employees	9,077	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	571,590	ds	ds	ds	ds	ds	ds	ds	ds
Marinas	Establishments	513	493	442	428	430	411	432	444	464
	Employees	5,494	4,935	5,024	4,665	4,439	4,657	4,918	5,076	5,421
	Payroll	146,390	148,592	151,677	132,955	133,017	142,997	148,573	145,265	168,185
Marine cargo handling	Establishments	66	53	56	59	55	64	43	58	61
	Employees	7,266	6,585	8,052	7,288	7,547	7,484	4,598	6,258	6,992
	Payroll	189,020	173,788	192,473	185,309	191,560	195,458	86,461	188,997	179,024
Navigational services to shipping	Establishments	142	145	147	145	145	150	151	180	190
	Employees	781	1,484	894	829	980	1,047	853	1,390	878
	Payroll	48,370	61,470	56,917	60,641	76,853	75,561	68,366	130,893	74,185
Port & harbor operations	Establishments	27	29	40	32	34	32	66	61	56
	Employees	584	459	712	527	470	377	2,082	555	588
	Payroll	19,417	12,872	24,668	19,006	20,525	16,879	72,554	25,439	20,647
Ship & boat building	Establishments	301	296	297	261	248	246	258	259	263
	Employees	12,385	12,332	12,419	8,221	7,363	7,909	8,621	8,813	9,608
	Payroll	427,888	469,382	442,096	296,537	302,909	325,942	374,831	390,853	448,514

[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 les commercial fishing occurs in this state than the national average.
[3] ds = these data are suppressed.
[4] NA = not applicable.
[5] Census Bureau data for the Marine Economy section of this report is available only through 2014.

Tables | Louisiana



2015 Economic Impacts of the Louisiana Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	32,015	1,839,750	673,344	920,809	30,635	1,601,577	623,704	838,255
Commercial Harvesters	12,922	695,222	240,049	349,394	12,922	695,222	240,049	349,394
Seafood Processors & Dealers	1,863	175,803	68,190	86,980	1,764	166,401	64,544	82,328
Importers	619	191,492	30,690	58,375	0	0	0	0
Seafood Wholesalers & Distributors	970	118,231	40,278	52,137	858	104,610	35,638	46,131
Retail	15,641	659,002	294,136	373,923	15,092	635,343	283,474	360,402

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	278,292	289,288	275,701	286,993	233,559	324,123	291,721	399,433	487,435	373,682
Finfish & Other	60,740	65,201	64,118	62,632	56,912	102,097	85,093	103,919	98,773	109,672
Shellfish	217,552	224,087	211,582	224,361	176,647	222,026	206,628	295,514	388,662	264,010
Key Species										
Blue crab	32,605	35,044	32,203	37,301	30,325	36,784	38,196	51,568	66,706	58,069
Crawfish	1,290	9,034	9,507	15,547	13,971	9,914	4,998	16,490	16,088	6,851
King mackerel	1,112	1,298	1,307	1,184	1,149	1,594	1,475	1,517	2,414	2,006
Menhaden	36,441	41,368	45,768	42,555	43,331	82,881	60,934	80,262	72,844	85,322
Mullets	2,061	690	749	73	185	775	976	626	893	418
Oysters	35,999	40,148	39,009	50,950	24,986	41,652	37,832	44,872	67,482	85,090
Red snapper	4,472	2,529	2,038	2,185	2,311	2,261	2,434	4,824	6,427	6,610
Shrimp	147,652	139,842	130,854	120,555	107,362	133,670	125,587	182,579	238,382	113,990
Tunas	7,040	8,334	4,409	6,338	1,649	3,369	7,752	4,595	4,276	2,743
Vermillion snapper	762	991	819	806	399	517	598	474	700	633

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	918,675	999,343	919,017	1,007,474	793,377	1,311,040	993,744	994,146	872,432	1,070,385
Finfish & Other	714,550	814,647	759,440	806,845	665,677	1,153,921	852,107	823,989	687,557	917,426
Shellfish	204,125	184,696	159,577	200,629	127,700	157,119	141,637	170,157	184,875	152,960
Key Species										
Blue crab	53,394	45,107	41,714	53,057	30,752	43,893	41,291	39,193	43,219	41,308
Crawfish	1,469	15,848	15,735	19,312	14,557	9,599	4,216	19,676	13,055	5,461
King mackerel	971	879	789	927	691	1,002	969	788	1,167	1,047
Menhaden	689,853	789,621	738,092	785,575	648,561	1,131,287	828,612	800,101	663,693	893,789
Mullets	3,361	1,375	1,503	189	362	1,385	1,385	609	1,186	692
Oysters	11,417	12,858	12,840	15,006	6,874	11,156	10,124	11,364	12,692	14,488
Red snapper	1,653	807	589	667	828	918	980	1,216	1,489	1,591
Shrimp	137,839	110,860	89,285	113,250	75,515	92,469	85,988	99,922	115,908	91,698
Tunas	2,143	2,476	1,248	2,009	490	932	2,113	1,241	1,142	661
Vermillion snapper	365	517	409	412	186	234	261	174	242	213

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Blue crab	0.61	0.78	0.77	0.70	0.99	0.84	0.93	1.32	1.54	1.41
Crawfish	0.88	0.57	0.60	0.81	0.96	1.03	1.19	0.84	1.23	1.25
King mackerel	1.15	1.48	1.66	1.28	1.66	1.59	1.52	1.93	2.07	1.92
Menhaden	0.05	0.05	0.06	0.05	0.07	0.07	0.07	0.10	0.11	0.10
Mullets	0.61	0.50	0.50	0.39	0.51	0.56	0.70	1.03	0.75	0.60
Oysters	3.15	3.12	3.04	3.40	3.63	3.73	3.74	3.95	5.32	5.87
Red snapper	2.71	3.13	3.46	3.28	2.79	2.46	2.48	3.97	4.32	4.15
Shrimp	1.07	1.26	1.47	1.06	1.42	1.45	1.46	1.83	2.06	1.24
Tunas	3.29	3.37	3.53	3.16	3.37	3.62	3.67	3.70	3.74	4.15
Vermillion snapper	2.09	1.92	2.00	1.95	2.15	2.21	2.30	2.73	2.89	2.97

2015 Economic Impacts of Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	594	86,160	33,462	49,712
	Private Boat	762	106,451	27,898	51,666
	Shore	316	40,690	10,749	19,870
Total Durable Expenditures		9,382	1,052,673	402,288	663,137
Total State Economic Impacts		11,054	1,285,974	474,397	784,385

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	50,623
Private Boat	84,284
Shore	33,908
Total	168,815

Equipment	Durable Goods Expenditures
Fishing Tackle	180,534
Other Equipment	89,811
Boat Expenses	739,239
Vehicle Expenses	138,056
Second Home Expenses	11,691
Total Durable Expenditures	1,159,331

Total State Trip and Durable Goods Expenditures	1,328,146

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	868	853	795	669	609	690	651	709	NA	NA
Non-Coastal	108	124	120	108	67	86	77	109	NA	NA
Out-of-State	198	157	170	139	120	183	165	262	NA	NA
Total Anglers	1,174	1,134	1,084	916	796	959	893	1,080	NA	NA

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	187	144	179	183	79	113	115	122	131	162
Private	2,801	3,156	3,508	3,176	3,055	3,342	2,891	3,190	2,096	2,264
Shore	775	889	933	769	729	1,122	1,131	1,349	NA	NA
Total Trips	3,763	4,188	4,620	4,128	3,862	4,576	4,137	4,661	2,227	2,426

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Black drum	H	368	386	543	519	398	468	424	454	217	219
	R	717	729	1,117	974	1,033	1,085	881	1,638	NA	NA
Drum (Atlantic Croaker)	H	805	683	357	471	229	606	520	829	235	208
	R	1,143	1,006	1,187	1,100	1,268	2,319	1,675	1,797	NA	NA
Drum (sand seatrout)	H	774	888	1,085	879	1,065	1,187	895	755	532	366
	R	453	541	825	854	514	1,032	679	990	NA	NA
Drum (spotted seatrout)	H	10,872	8,930	11,705	10,557	7,857	10,440	9,608	9,004	3,231	4,298
	R	9,026	7,394	9,580	7,975	5,054	5,803	6,776	9,709	NA	NA
Drum(southern kingfish)	H	89	67	74	103	41	16	110	15	4	20
	R	151	28	118	59	47	25	40	65	NA	NA
Porgies (sheepshead)	H	326	271	706	703	430	869	397	368	262	258
	R	463	287	448	473	439	188	237	477	NA	NA
Red drum	H	1,828	2,308	2,673	2,237	2,812	3,023	2,011	3,169	1,283	1,241
	R	3,321	3,455	4,075	3,733	4,111	3,195	2,871	4,676	NA	NA
Red snapper	H	173	160	84	97	7	31	101	83	128	173
	R	429	285	262	195	7	108	131	224	NA	NA
Southern flounder	H	290	349	235	286	327	399	331	685	209	216
	R	54	67	37	50	72	61	98	134	NA	NA
Yellowfin tuna	H	14	8	17	3	< 1	13	25	11	14	22
	R	< 1	< 1	7	0	0	4	3	2	NA	NA

[1] Louisiana data not available for 2014 and 2015.
[2] Effort for 2015 is estimated using data from a state creel survey and does not capture shore-based effort separately from private boat effort.
[3] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.
[4] Harvest and release totals for 2015 are estimated using data from a state creel survey.

2014 Louisiana State Economy (% of national total)[1]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	104,976 (1.4%)	1,717,797 (1.4%)	76.73 (1.3%)	117.5 (1.3%)	251.67 (1.5%)	2.14

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	99	85	77	68	120	94	78	99	111
	Receipts	8,179	6,523	7,365	5,308	10,358	9,308	8,492	9,136	8,632
Seafood sales, retail	Firms	181	196	182	173	197	192	184	173	177
	Receipts	20,046	20,932	25,900	17,622	16,001	18,758	16,804	17,538	17,383

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

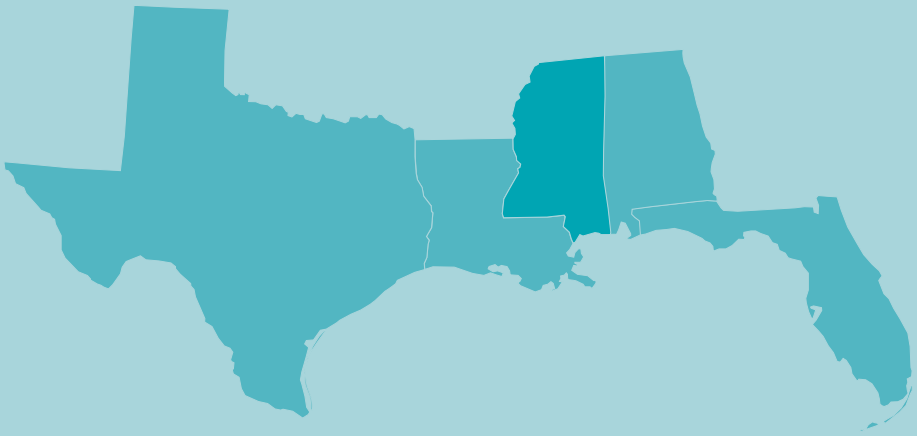
		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	40	41	36	38	34	33	35	36	37
	Employees	1,506	1,253	991	1,301	1,209	1,006	1,117	964	943
	Payroll	45,439	41,391	32,382	37,657	35,770	46,440	51,237	49,339	50,881
Seafood sales, wholesale	Establishments	112	119	98	98	97	94	103	106	109
	Employees	807	954	739	702	683	767	862	846	672
	Payroll	21,243	21,604	15,858	17,261	15,554	18,427	22,296	23,235	24,107
Seafood sales, retail	Establishments	101	101	107	106	101	100	97	94	90
	Employees	759	781	681	703	527	590	704	643	562
	Payroll	10,560	11,827	11,141	11,564	11,214	11,090	13,042	11,213	10,421

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	137	138	123	117	125	125	105	102	124
	Employees	6,397	7,680	6,506	6,077	5,610	5,834	6,422	5,317	6,275
	Payroll	386,136	527,290	549,388	391,914	405,796	417,362	497,165	458,589	556,693
Deep sea freight transportation	Establishments	24	22	18	21	16	17	18	11	19
	Employees	595	685	1,095	1,192	93	93	ds	95	ds
	Payroll	35,269	39,843	87,479	91,760	6,147	5,608	ds	5,435	ds
Deep sea passenger transportation	Establishments	2	3	2	2	1	3	2	4	4
	Employees	ds	ds	ds	ds	ds	ds	ds	3	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	363	ds
Marinas	Establishments	41	50	43	43	43	45	44	41	39
	Employees	ds	378	274	244	314	329	257	250	229
	Payroll	ds	17,794	9,581	8,989	14,716	10,771	9,209	8,693	7,276
Marine cargo handling	Establishments	51	49	39	44	41	42	37	44	49
	Employees	3,100	2,978	2,010	2,193	2,511	2,526	2,016	2,834	3,106
	Payroll	118,748	128,207	85,484	92,883	105,063	108,491	93,896	174,054	212,786
Navigational services to shipping	Establishments	129	128	145	137	138	138	136	133	137
	Employees	2,204	2,508	2,884	2,893	3,176	3,396	2,545	2,533	2,816
	Payroll	115,222	141,757	183,381	175,271	224,533	208,306	162,094	169,795	206,318
Port & harbor operations	Establishments	18	14	22	17	21	20	46	18	14
	Employees	436	467	517	440	431	461	1,205	443	ds
	Payroll	29,676	31,734	37,181	33,907	38,776	38,745	80,780	37,122	ds
Ship & boat building	Establishments	108	112	117	109	109	109	116	110	117
	Employees	11,521	12,808	12,815	12,521	11,737	11,722	10,933	7,413	8,512
	Payroll	437,028	503,199	619,606	613,188	600,259	639,047	631,098	416,319	479,243

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 les commercial fishing occurs in this state than the national average.
[3] ds = these data are suppressed.
[4] NA = not applicable.

Tables | Mississippi



2015 Economic Impacts of the Mississippi Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	9,490	465,361	185,978	239,711	9,485	464,680	185,834	239,474
Commercial Harvesters	1,995	107,051	33,712	48,357	1,995	107,051	33,712	48,357
Seafood Processors & Dealers	1,646	137,967	54,583	68,394	1,645	137,918	54,563	68,370
Importers	2	540	86	164	0	0	0	0
Seafood Wholesalers & Distributors	184	19,029	6,715	8,460	183	18,991	6,701	8,443
Retail	5,664	200,774	90,882	114,336	5,662	200,719	90,857	114,304

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	21,586	39,340	43,696	37,956	21,895	30,291	49,335	34,971	26,017	67,471
Finfish & Other	8,959	21,359	19,233	18,667	8,963	10,527	23,172	10,938	8,102	53,743
Shellfish	12,628	17,981	24,464	19,289	12,932	19,764	26,163	24,033	17,914	13,728
Key Species										
Blue crab	928	741	447	573	366	318	724	416	997	1,209
Flounders	36	58	40	58	64	118	101	45	55	76
Menhaden	8,447	20,658	18,534	17,987	8,378	9,871	22,394	10,230	7,358	52,962
Mullets	23	35	32	30	31	56	63	61	25	12
Oysters	NA	819	6,858	6,094	4,268	928	1,596	1,544	1,685	969
Red snapper	NA	NA	NA	158	NA	168	226	NA	307	NA
Shrimp	11,699	16,418	17,146	12,612	8,293	18,514	23,844	22,073	15,232	11,550

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)[1]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	221,720	227,834	201,822	230,255	111,229	278,075	263,641	180,600	190,556	305,858
Finfish & Other	212,213	216,375	190,191	217,461	105,274	267,407	249,382	171,000	184,393	294,723
Shellfish	9,507	11,459	11,631	12,794	5,955	10,668	14,259	9,600	6,163	11,136
Key Species										
Blue crab	1,127	737	450	545	366	370	782	359	570	798
Flounders	16	25	17	25	28	55	43	19	21	29
Menhaden	211,163	215,182	189,118	216,709	104,729	266,774	248,824	170,500	183,950	294,233
Mullets	66	70	57	62	59	93	99	95	39	21
Oysters	NA	299	2,606	2,189	1,453	247	425	336	321	182
Red snapper	NA	NA	NA	57	NA	86	115	NA	170	NA
Shrimp	8,380	10,421	8,570	10,054	4,135	10,048	13,051	8,904	5,271	10,155

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Blue crab	0.82	1.01	0.99	1.05	1.00	0.86	0.93	1.16	1.75	1.51
Flounders	2.22	2.38	2.36	2.34	2.33	2.14	2.33	2.38	2.66	2.61
Menhaden	0.04	0.10	0.10	0.08	0.08	0.04	0.09	0.06	0.04	0.18
Mullets	0.35	0.50	0.57	0.48	0.52	0.61	0.64	0.64	0.64	0.56
Oysters	NA	2.74	2.63	2.78	2.94	3.75	3.75	4.59	5.25	5.32
Red snapper	NA	NA	NA	2.75	NA	1.96	1.97	NA	1.81	NA
Shrimp	1.40	1.58	2.00	1.25	2.01	1.84	1.83	2.48	2.89	1.14

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

2015 Economic Impacts of Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	156	18,791	6,468	9,323
	Private Boat	212	24,764	6,440	10,751
	Shore	105	10,383	2,910	4,861
Total Durable Expenditures		5,038	602,469	201,815	329,250
Total State Economic Impacts		5,511	656,407	217,633	354,185

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures
For-Hire	11,152
Private Boat	27,638
Shore	10,660
Total	49,450

Equipment	Durable Goods Expenditures
Fishing Tackle	86,817
Other Equipment	43,870
Boat Expenses	282,097
Vehicle Expenses	82,783
Second Home Expenses	292
Total Durable Expenditures	495,859

Total State Trip and Durable Goods Expenditures	545,309

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	143	196	119	125	137	160	179	171	171	195
Non-Coastal	23	34	26	36	29	48	60	67	62	48
Out-of-State	27	55	48	50	50	60	91	101	94	114
Total Anglers	193	284	194	212	216	268	331	339	328	357

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	7	21	13	11	7	11	11	11	16	42
Private	626	834	596	759	629	843	991	986	621	773
Shore	291	349	359	310	597	761	948	764	843	736
Total Trips	924	1,204	969	1,079	1,233	1,615	1,950	1,761	1,481	1,551

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Drum (Atlantic Croaker)	H	59	72	182	340	209	453	317	330	820	328
	R	189	264	388	715	422	606	695	330	375	710
Drum (kingfishes)[2]	H	164	161	180	126	174	177	234	519	190	550
	R	31	48	57	61	47	36	157	94	32	54
Drum (sand and silver seatrouts)	H	304	296	351	1,003	986	1,336	1,151	916	891	1,406
	R	173	230	166	378	246	472	574	327	113	152
Drum (spotted seatrout)	H	470	385	608	1,090	556	841	776	1,016	415	867
	R	976	909	1,008	960	586	633	1,394	1,298	743	818
Porgies (sheepshead)	H	36	17	17	22	43	260	115	93	75	113
	R	23	11	25	9	3	24	54	65	27	492
Red drum	H	58	43	77	84	77	91	140	148	106	100
	R	99	73	153	241	213	208	853	403	515	229
Red snapper	H	7	2	9	15	1	7	27	35	6	7
	R	52	9	103	55	25	< 1	2	95	42	194
Sharks[3]	H	4	5	3	21	70	35	16	89	6	13
	R	38	43	31	36	87	38	104	75	44	12
Southern flounder	H	47	121	109	209	196	182	227	215	168	64
	R	35	31	45	120	79	99	153	159	54	57
Striped Mullet	H	2	66	79	119	188	491	396	647	602	712
	R	4	14	4	4	13	83	108	19	5	43

[1] In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.
[2] Kingfishes include southern kingfish and Gulf kingfish.
[3] Sharks include species within the requiem shark family, blacktip sharks, Atlantic sharpnose sharks and unidentified sharks.

2014 Mississippi State Economy (% of national total)[1]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	58,541 (0.8%)	912,014 (0.8%)	32.78 (0.6%)	56.46 (0.6%)	104.75 (0.6%)	1.12

Seafood Sales & Processing - Non-Employer Firms (thousands of dollars)[3]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	22	ds	17	16	30	25	27	ds	21
	Receipts	1,537	ds	1,055	753	1,937	2,108	930	ds	1,932
Seafood sales, retail	Firms	53	57	48	56	69	51	50	54	42
	Receipts	4,021	4,126	3,437	4,206	3,421	3,505	3,957	3,855	3,129

Seafood Sales & Processing - Employer Establishments (thousands of dollars)[3]

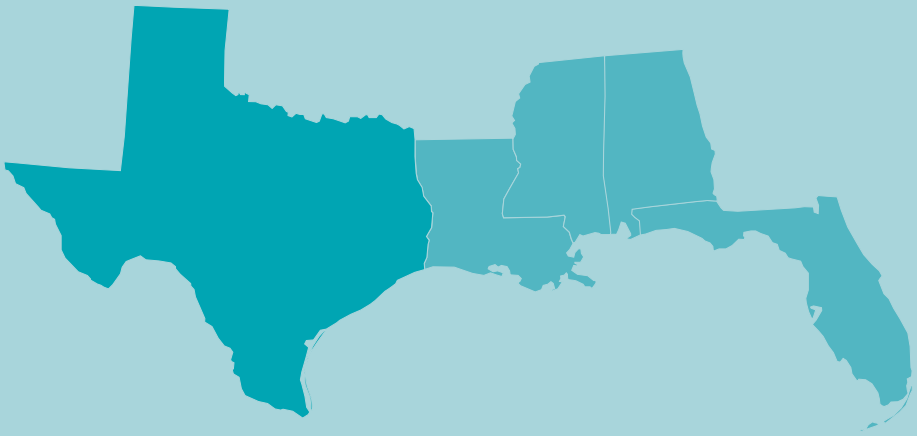
		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	24	22	20	20	20	18	18	19	19
	Employees	3,353	3,022	3,062	2,796	2,849	2,464	2,368	2,284	2,289
	Payroll	60,510	60,633	61,723	61,926	61,731	52,502	55,407	59,212	57,324
Seafood sales, wholesale	Establishments	23	25	18	16	18	18	17	14	14
	Employees	58	106	61	113	ds	64	102	ds	ds
	Payroll	2,063	3,285	3,088	2,836	2,542	2,532	4,412	1,546	1,587
Seafood sales, retail	Establishments	12	15	18	14	15	17	13	13	10
	Employees	41	ds	50	46	50	58	ds	ds	ds
	Payroll	395	ds	699	841	810	838	1,902	ds	ds

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	5	4	5	5	4	4	4	6	4
	Employees	ds	ds	119	114	ds	127	ds	230	277
	Payroll	ds	7,585	8,351	7,730	8,058	7,233	ds	17,080	16,365
Deep sea freight transportation	Establishments	3	1	0	1	1	1	2	1	1
	Employees	ds	ds	NA	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	NA	ds	ds	ds	ds	ds	ds
Deep sea passenger transportation	Establishments	1	1	0	0	0	0	0	0	0
	Employees	ds	ds	NA	NA	NA	NA	NA	NA	NA
	Payroll	ds	ds	NA	NA	NA	NA	NA	NA	NA
Marinas	Establishments	16	19	17	13	18	19	16	16	18
	Employees	ds	ds	111	172	183	189	204	154	193
	Payroll	ds	2,145	2,794	3,479	4,163	5,137	5,361	3,972	4,960
Marine cargo handling	Establishments	5	5	7	8	7	7	2	4	5
	Employees	238	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	8,621	ds	ds	ds	ds	ds	ds	ds	ds
Navigational services to shipping	Establishments	8	9	8	7	8	6	7	6	7
	Employees	ds	ds	ds	ds	141	ds	ds	ds	ds
	Payroll	ds	1,754	ds	ds	6,982	ds	ds	ds	ds
Port & harbor operations	Establishments	1	1	1	1	1	1	3	2	1
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Ship & boat building	Establishments	20	23	24	20	20	20	18	19	18
	Employees	11,909	14,578	ds	ds	ds	ds	ds	ds	ds
	Payroll	498,660	615,837	ds	ds	ds	ds	ds	ds	ds

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 les commercial fishing occurs in this state than the national average.
[3] ds = these data are suppressed.
[4] NA = not applicable.

Tables | Texas



2015 Economic Impacts of the Texas Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	14,829	1,016,864	361,386	509,834	14,571	966,117	351,189	492,440
Commercial Harvesters	3,882	365,913	106,918	170,617	3,882	365,913	106,918	170,617
Seafood Processors & Dealers	1,207	111,031	41,769	55,011	1,200	110,427	41,542	54,712
Importers	134	41,598	6,667	12,681	0	0	0	0
Seafood Wholesalers & Distributors	463	68,734	22,934	31,759	435	64,671	21,578	29,882
Retail	9,143	429,589	183,099	239,766	9,053	425,106	181,152	237,229

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	197,291	180,575	176,098	154,530	203,795	240,566	215,083	268,537	262,605	173,419
Finfish & Other	11,359	9,452	7,709	7,488	7,888	8,445	10,231	13,361	13,709	16,086
Shellfish	185,932	171,123	168,389	147,043	195,907	232,121	204,852	255,176	248,896	157,333
Key Species										
Atlantic croaker	500	450	446	484	531	622	743	819	681	746
Black drum	2,013	1,660	1,363	1,377	1,573	1,448	1,491	1,699	1,981	2,003
Blue crab	1,459	2,763	2,342	2,454	3,134	2,845	2,878	2,331	3,050	5,133
Flounders	164	62	144	91	62	205	175	73	97	187
Groupers	671	474	606	695	389	572	774	1,168	1,156	1,483
Oysters	17,263	19,246	8,835	9,376	19,144	12,789	21,302	23,465	19,221	8,232
Red snapper	6,168	3,762	2,744	2,398	3,009	3,254	4,448	7,324	7,617	9,387
Shrimp	167,108	149,084	157,187	135,100	173,556	216,382	180,562	229,307	226,551	143,939
Tunas	0	NA	94	139	4	2	5	7	14	3
Vermillion snapper	642	1,554	1,430	1,233	1,337	1,274	1,434	659	604	920

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)[1]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	117,131	87,912	73,048	102,351	89,721	98,857	91,438	85,127	74,687	80,356
Finfish & Other	5,825	4,800	3,866	4,134	4,247	4,224	4,225	4,872	4,842	5,362
Shellfish	111,306	83,111	69,182	98,216	85,475	94,633	87,213	80,255	69,846	74,994
Key Species										
Atlantic croaker	67	62	59	63	67	79	89	96	78	90
Black drum	2,212	1,687	1,468	1,610	1,729	1,795	1,623	1,689	1,747	1,813
Blue crab	1,966	3,454	2,635	2,844	3,436	2,893	2,853	1,902	2,234	3,924
Flounders	68	24	58	32	26	75	60	20	25	51
Groupers	236	161	188	227	156	199	227	306	281	355
Oysters	4,923	5,633	2,679	2,733	5,265	3,943	5,817	6,126	4,129	1,583
Red snapper	2,158	1,213	870	851	1,031	948	1,123	1,800	1,797	2,152
Shrimp	104,378	74,007	63,855	92,602	76,734	87,753	78,507	72,200	63,461	69,475
Tunas	0	NA	22	45	1	1	3	3	6	1
Vermillion snapper	273	672	592	561	539	465	511	234	203	307

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Atlantic croaker	7.43	7.29	7.58	7.64	7.98	7.84	8.31	8.55	8.77	8.28
Black drum	0.91	0.98	0.93	0.86	0.91	0.81	0.92	1.01	1.13	1.11
Blue crab	0.74	0.80	0.89	0.86	0.91	0.98	1.01	1.23	1.37	1.31
Flounders	2.42	2.55	2.48	2.84	2.37	2.75	2.94	3.55	3.89	3.65
Groupers	2.85	2.95	3.22	3.06	2.49	2.87	3.41	3.81	4.12	4.18
Oysters	3.51	3.42	3.30	3.43	3.64	3.24	3.66	3.83	4.66	5.20
Red snapper	2.86	3.10	3.15	2.82	2.92	3.43	3.96	4.07	4.24	4.36
Shrimp	1.60	2.01	2.46	1.46	2.26	2.47	2.30	3.18	3.57	2.07
Tunas	0.69	NA	4.26	3.08	3.19	1.82	1.83	2.10	2.29	2.43
Vermillion snapper	2.35	2.31	2.42	2.20	2.48	2.74	2.81	2.81	2.98	3.00

[1] NA = these data are confidential thus not disclosable.

2015 Economic Impacts of Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	787	108,647	39,656	61,107
	Private Boat	1,861	249,714	75,009	136,251
	Shore	2,281	274,748	85,859	154,546
Total Durable Expenditures		10,439	1,304,644	525,555	850,396
Total State Economic Impacts		15,368	1,937,753	726,079	1,202,300

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)[1]

Fishing Mode	Trip Expenditures
For-Hire	57,976
Private Boat	158,247
Shore	173,452
Total	389,675

Equipment	Durable Goods Expenditures
Fishing Tackle	249,065
Other Equipment	145,510
Boat Expenses	491,516
Vehicle Expenses	395,121
Second Home Expenses	39,278
Total Durable Expenditures	1,320,490

Total State Trip and Durable Goods Expenditures	1,710,165

Harvest (H) of Key Species Species Groups (thousands of fish)[2]

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Black drum	H	73	66	82	98	165	129	257	150	139	128
Drum (Atlantic Croaker)	H	101	95	64	117	125	157	157	152	117	214
Drum (sand seatrout)	H	129	95	152	111	127	227	177	151	147	110
Drum (spotted seatrout)	H	987	916	917	810	732	1,137	810	796	590	825
King mackerel	H	29	11	8	16	6	9	9	10	13	9
Porgies (sheepshead)	H	78	46	46	34	49	57	143	84	39	51
Red drum	H	318	289	266	285	264	347	323	269	247	241
Red snapper	H	69	45	41	31	33	36	34	48	40	50
Southern flounder	H	64	49	64	47	30	92	96	92	71	85

[1] 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 2013 data provided by the Texas Parks and Wildlife Department (TPWD). These effort estimates were reviewed by the TPWD. To calculate angler expenditure estimates (durable equipment expenditures), participation estimates were based on the sum of saltwater licenses sold in Texas plus a proportion of combination licenses sold in Texas. A change in the method of reporting landings occurred in 2007 so data from 2007 is not comparable to earlier years.

[2] Data collected by the TPWG is reported in this table. The data collected by the TPWD differs from the data collected and reported in the MRIP. Data on the number of fish released are not reported by TPWD. Please see the TPWD for more information: www.tpwd.state.tx.us/fishboat/.

2014 Texas State Economy (% of national total)[1]

	#Establishments	#Employees	Annual Payroll ($ billions)	Employee Compensation ($ billions)	Gross State Product ($ billions)	Commercial Fishing Location Quotient[2]
Totals	557,721 (7.4%)	9,920,214 (8.2%)	501.46 (8.4%)	764.03 (8.3%)	1,641.04 (9.5%)	0.24

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

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	109	94	85	82	99	119	123	123	128
	Receipts	2,974	5,386	3,466	3,858	3,224	5,734	6,675	7,484	6,706
Seafood sales, retail	Firms	141	182	188	196	184	171	194	173	199
	Receipts	18,355	17,442	18,204	13,177	12,124	13,433	14,891	15,094	15,160

Seafood Sales & Processing - Employer Establishments (thousands of dollars)[3]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	21	26	27	24	22	24	22	30	32
	Employees	1,155	1,207	1,169	1,026	1,184	1,273	1,248	1,026	1,062
	Payroll	24,302	27,813	27,045	29,006	24,961	26,425	27,737	27,638	28,643
Seafood sales, wholesale	Establishments	92	104	69	75	77	82	71	75	89
	Employees	897	970	734	683	715	723	603	729	816
	Payroll	28,586	51,597	24,498	23,650	23,879	26,356	25,309	30,370	35,553
Seafood sales, retail	Establishments	58	62	60	51	52	50	60	60	59
	Employees	207	189	206	189	199	ds	ds	331	395
	Payroll	3,229	3,703	3,403	3,393	3,742	4,090	6,102	6,891	8,201

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)[3,4]

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	45	43	42	43	48	48	39	42	48
	Employees	2,270	2,513	2,815	2,729	1,909	1,764	1,814	2,253	2,227
	Payroll	107,328	131,946	251,997	200,219	161,080	177,549	174,686	207,831	215,950
Deep sea freight transportation	Establishments	40	41	35	36	30	39	40	33	33
	Employees	751	920	514	802	764	860	742	ds	790
	Payroll	41,969	49,761	40,764	61,309	63,408	71,515	65,818	44,902	55,106
Deep sea passenger transportation	Establishments	3	4	3	2	1	1	0	2	2
	Employees	ds	ds	ds	ds	ds	ds	NA	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	NA	ds	ds
Marinas	Establishments	150	141	143	131	148	144	132	124	128
	Employees	ds	1,200	1,486	1,423	1,198	1,233	1,169	1,258	1,222
	Payroll	ds	28,359	34,039	33,803	33,968	34,928	34,711	36,461	36,776
Marine cargo handling	Establishments	64	62	55	57	54	55	42	48	53
	Employees	5,349	6,237	6,313	6,276	5,262	5,259	4,373	6,390	7,451
	Payroll	161,386	186,416	196,006	167,562	166,877	153,360	130,817	272,286	327,690
Navigational services to shipping	Establishments	84	90	99	95	87	91	91	89	93
	Employees	1,373	1,709	1,884	1,849	1,606	1,448	1,676	1,485	1,588
	Payroll	98,244	125,061	137,962	137,289	132,283	113,444	124,500	130,572	139,259
Port & harbor operations	Establishments	16	15	24	30	29	26	37	27	25
	Employees	112	98	ds	421	ds	439	1,381	630	387
	Payroll	4,992	5,163	10,538	13,778	18,627	18,842	55,470	25,229	13,544
Ship & boat building	Establishments	90	96	102	99	97	91	89	87	88
	Employees	3,515	4,810	5,368	3,891	3,386	2,773	5,601	5,686	5,178
	Payroll	170,308	210,275	235,190	158,261	147,492	153,077	310,230	297,248	306,571

[1] Census Bureau data for the Marine Economy section of this report is available only through 2014.
[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 les commercial fishing occurs in this state than the national average.
[3] ds = these data are suppressed.
[4] NA = not applicable.

Data Sources

A full cod trawl on deck
(photo credit: Crew and officers of NOAA)

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Fishery Management Councils & Fishery Plans:

- Caribbean Fishery Management Council. www.caribbeanfmc.com
- Gulf of Mexico Fishery Management Council. www.gulfcouncil.org
- Mid-Atlantic Fishery Management Council. http://www.mafmc.org/
- New England Fishery Management Council. www.nefmc.org/
- North Pacific Fishery Management Council. http://www.npfmc.org/
- Pacific Fishery Management Council. www.pcouncil.org
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Data for New England, Mid-Atlantic, South Atlantic, Gulf of Mexico, North Pacific, Pacific and Western Pacific Regions:

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Publications

Recreational fishing boat ready for the White Marlin Open in Ocean City, Maryland (photo credit: Amy Bowman)

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:

United States

UNITED STATES | Climate Change Research

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Caribbean

CARIBBEAN | Commercial Fisheries Economics Research

Agar, J., **J. Waters**, M. Valdes-Pizzini, M. Shivlani, T. Murray, J. Kirkley, and D. Suman. 2008. U.S. Caribbean Fish Trap Fishery Socioeconomic Study. *Bulletin of Marine Science* 82(3): 315-331.

CARIBBEAN | Spatial Analysis & Marine Protected Areas Research

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CARIBBEAN | Sociocultural Fisheries Research

Valds-Pizzini, M., **J. Agar**, K. Kitner, C. Garca-Quijano, M. Tust, and F. Forrestal. 2010. Cruzan Fisheries: A rapid assessment of the historical, social, cultural and economic processes that shaped coastal communities' dependence and engagement in fishing in the island of St. Croix, U.S. Virgin Islands. NOAA Series on U.S. Caribbean Fishing Communities. NOAA Tech. Memo. NMFS-SEFSC-597, 144p.

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CARIBBEAN | U.S. Territories & International Fisheries Research

Agar, J., M. Shivlani, **J. Waters**, M. Valdes-Pizzini, T. Murray, J. Kirkley, and D. Suman. 2005. U.S. Caribbean Fish Trap Fishery Costs and Earnings Study. U.S. Dept. of Commerce. NOAA Tech. Memo. NMFS-SEFSC-534, 127p. Available at: http://www.sefsc.noaa.gov/docs/Trap_May2006.pdf.

Resources

Fileting the day's catch, St. Croix, USVI
(photo credit: Scott Crosson)

UNITED STATES

Federal Agencies

- Economics & Social Analysis Division, Office of Science & Technology, NOAA Fisheries www.st.nmfs.noaa.gov/economics/
- Office of Science & Technology, NOAA Fisheries | https://www.st.nmfs.noaa.gov/
- Marine Recreational Information Program http://www.st.nmfs.noaa.gov/recreational-fisheries/index
- Bureau of Oceans and International Environmental and Scientific Affairs, U.S. Department of State www.state.gov/e/oes/ocns/fish/

NORTH PACIFIC

Federal Agencies

- Economic & Social Sciences Research, Alaska Fisheries Science Center, NOAA Fisheries http://www.afsc.noaa.gov/REFM/Socioeconomics/default.php
- Alaska Fisheries Science Center, NOAA Fisheries | www.afsc.noaa.gov
- Alaska Regional Office, NOAA Fisheries | https://alaskafisheries.noaa.gov/
- Alaska Region, U.S. Fish & Wildlife Service | http://www.fws.gov/alaska/
- District 17, U.S. Coast Guard | www.uscg.mil/D17

State Agencies

- Alaska Department of Fish & Game | www.adfg.state.ak.us

Councils & 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

- Economics, Groundfish Analysis Program, Northwest Fisheries Science Center, NOAA Fisheries http://www.nwfsc.noaa.gov/research/divisions/fram/economic/
- Human Dimensions Program, Northwest Fisheries Science Center, NOAA Fisheries www.nwfsc.noaa.gov/research/divisions/cbd/humandim
- Northwest Fisheries Science Center, NOAA Fisheries | www.nwfsc.noaa.gov
- West Coast Regional Office, NOAA Fisheries | www.westcoast.fisheries.noaa.gov
- Socioeconomics Research, Southwest Fisheries Science Center, NOAA Fisheries https://swfsc.noaa.gov/textblock.aspx?id=1038&ParentMenuId=109
- Southwest Fisheries Science Center | https://swfsc.noaa.gov/
- Pacific Region, U.S. Fish & Wildlife Service | www.fws.gov/pacific
- California & Nevada, U.S. Fish & Wildlife Service | www.fws.gov/cno
- District 13, U.S. Coast Guard | www.uscg.mil/D13

State Agencies

- California Department of Fish & Game | www.wildlife.ca.gov
- Oregon Department of Fish & Wildlife | www.dfw.state.or.us
- Washington Department of Fish & Wildlife | http://wdfw.wa.gov/

Councils & 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

- Socioeconomics & Planning Group, Office of the Director, Pacific Islands Fisheries Science Center, NOAA Fisheries www.pifsc.noaa.gov/socioeconomics/
- Pacific Islands Fisheries Science Center, NOAA Fisheries | www.pifsc.noaa.gov
- Pacific Islands Regional Office, NOAA Fisheries | www.fpir.noaa.gov
- Pacific Region, U.S. Fish & Wildlife Service | www.fws.gov/pacific
- District 14, U.S. Coast Guard | www.uscg.mil/d14

State Agencies

- Hawai'i Department of Land & Natural Resources | www.hawaii.gov/dlnr
- Guam Office of the Governor | www.guamgovernor.net
- Department of Marine & Wildlife Resources, American Samoa Office of the Governor
- Division of Fish & Wildlife, Commonwealth of the Northern Mariana Islands | http://www.cnmi-dfw.com/

Councils & Commissions

- Western Pacific Fishery Management Council | www.wpcouncil.org

NEW ENGLAND

Federal Agencies

- Social Sciences Branch, Northeast Fisheries Science Center, NOAA Fisheries | www.nefsc.noaa.gov/read/socialsci
- Northeast Fisheries Science Center, NOAA Fisheries | www.nefsc.noaa.gov
- Greater Atlantic Regional Fisheries Office, NOAA Fisheries | www.greateratlantic.fisheries.noaa.gov
- Northeast Region, U.S. Fish & Wildlife Service | www.fws.gov/northeast
- District 1, U.S. Coast Guard | www.uscg.mil/D1

State Agencies

- Maine Department of Marine Resources | www.maine.gov/dmr/index.htm
- Rhode Island Department of Environmental Management | www.dem.ri.gov
- Massachusetts Division of Marine Fisheries | www.mass.gov/eea/land-use-habitats/marine-fisheries/
- Connecticut Department of Environmental Protection | www.ct.gov/dep/site/
- New Hampshire Fish & Game Department | www.wildlife.state.nh.us

Councils & Commissions

- New England Fishery Management Council | www.nefmc.org
- Atlantic States Marine Fisheries Commission | www.asmfc.org

MID-ATLANTIC

Federal Agencies

- Social Sciences Branch, Northeast Fisheries Science Center, NOAA Fisheries | www.nefsc.noaa.gov/read/socialsci
- Northeast Fisheries Science Center, NOAA Fisheries | www.nefsc.noaa.gov
- Greater Atlantic Regional Fisheries Office, NOAA Fisheries | www.greateratlantic.fisheries.noaa.gov
- Northeast Region, U.S. Fish & Wildlife Service | www.fws.gov/northeast
- District 5, U.S. Coast Guard | www.uscg.mil/D5

State Agencies

- Bureau of Marine Resources, New York Department of Environmental Conservation www.dec.ny.gov/about/796.html
- New Jersey Division of Fish & Wildlife | www.state.nj.us/dep/fgw
- Pennsylvania Fish & Boat Commission | http://fishandboat.com/
- Delaware Division of Fish & Wildlife | www.fw.delaware.gov
- Fisheries Service, Maryland Department of Natural Resources | www.dnr.state.md.us/fisheries
- Virginia Marine Resources Commission | www.mrc.state.va.us

Councils & Commissions

- Mid-Atlantic Fishery Management Council | www.mafmc.org
- Atlantic States Marine Fisheries Commission | www.asmfc.org

SOUTH ATLANTIC

Federal Agencies

- Social Science Research Group, Southeast Fisheries Science Center, NOAA Fisheries www.sefsc.noaa.gov/socialscience.jsp
- Southeast Fisheries Science Center, NOAA Fisheries | www.sefsc.noaa.gov
- Southeast Regional Office, NOAA Fisheries | http://sero.nmfs.noaa.gov/
- Southeast Region, U.S. Fish & Wildlife Service | www.fws.gov/southeast
- Southwest Region, U.S. Fish & Wildlife Service | www.fws.gov/southwest
- District 7, U.S. Coast Guard | www.uscg.mil/D7

State Agencies

- Division of Marine Fisheries, North Carolina Department of Environment & Natural Resources http://portal.ncdenr.org/web/mf/
- Marine Resources Division, South Carolina Department of Natural Resources | www.dnr.sc.gov
- Coastal Resources Division, Georgia Department of Natural Resources | http://www.coastalgadnr.org/
- Florida Fish & Wildlife Conservation Commission | http://myfwc.com/

Councils & Commissions

- South Atlantic Fishery Management Council | www.safmc.net
- Atlantic States Marine Fisheries Commission | www.asmfc.org

GULF OF MEXICO

Federal Agencies

- Social Science Research Group, Southeast Fisheries Science Center, NOAA Fisheries www.sefsc.noaa.gov/socialscience.jsp
- Southeast Fisheries Science Center, NOAA Fisheries | www.sefsc.noaa.gov
- Southeast Regional Office, NOAA Fisheries | http://sero.nmfs.noaa.gov/
- Southeast Region, U.S. Fish & Wildlife Service | www.fws.gov/southeast
- Southwest Region, U.S. Fish & Wildlife Service | www.fws.gov/southwest
- District 8, U.S. Coast Guard | www.uscg.mil/D8

State Agencies

- Florida Fish & Wildlife Conservation Commission | http://myfwc.com/
- Marine Resources Division, Alabama Department of Conservation & Natural Resources www.outdooralabama.com
- Mississippi Department of Marine Resources | www.dmr.state.ms.us
- Louisiana Department of Wildlife & Fisheries | http://www.wlf.louisiana.gov/
- Texas Parks & Wildlife Department | www.tpwd.state.tx.us

Councils & 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 | http://oregonstate.edu/dept/IIFET/NAAFE/Home.html
- International Institute of Fisheries Economics & Trade | http://oregonstate.edu/dept/iifet/

OTHER ORGANIZATIONS & INFORMATION

- Organisation for Economic Co-operation & Development | http://www.oecd.org/
- Fisheries and Aquaculture Department, Food and Agriculture Organization of the United Nations http://www.fao.org/fishery/capture/en
- Marine Stewardship Council | www.msc.org

Glossary

Fish hose, Newport, Oregon
(photo credit: Marie Guldin and Erin Malick)

Angler[1] – A person catching fish or shellfish 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 nonemployer businesses, such as payments received as independent agents and contractors. The composition of nonemployer receipts may differ from receipts data published for employer establishments. For example, for wholesale agents and brokers without payroll (nonemployers), 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[4] – 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; 3. The component of fish encountering fishing gear, which is retained by the gear. Catch is usually expressed in terms of wet weight. It refers sometimes to the total amount caught and sometimes only to the amount landed. The fish that are not landed, but returned to the sea, are called discards or bycatch. 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[5] – 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[6] – A coastal county meets one of the following criteria: 1) at least 15 percent of a county's total land area is located within the nation's coastal watershed; 2) a portion of or an entire county accounts for at least 15 percent of a coastal cataloging unit. Any U.S. county that meets these criteria is classified as coastal.

Coastal County Angler – For this report, a coastal county angler refers to a recreational fishermen who lives within a given state and within a coastal county of that state.

Commercial Fishing Location Quotient (CFLQ)[7] – 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)[8] – As defined by the U.S. Commission on Ocean Policy, a DAP program assigns an individual or other entity access to a pre-determined 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 programs are sometimes known as rights-based management, and are of 10 synonymous with Limited Access Privilege Programs (see "Limited Access Privilege Program"). However, "rights-based management" implies granting an individual the "right" to fish. With the exception of 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[9] – 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 (tackle, rods, reels, line, etc.); durable goods (motor boats and accessories, non-motorized boats, boating electronics, mooring, boat storage, boat insurance, and vehicles or homes); and angling accessories and multi-purpose items (magazines, club dues, saltwater angling-specific clothing, and camping gear).

Ecolabel or Ecolabelling Scheme[10] – 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[9,11] – 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 saltwater anglers.

Economic Impacts[9,11] – 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, and the contribution to gross domestic product (GDP) by state (also known as value-added impacts) from expenditures related to recreational fishing.

Effort[1] – For this report, effort refers to the number of fishing trips taken by recreational fishermen (anglers). The term can also refer to the amount of time and fishing power used to harvest fish in commercial fisheries, including gear size, boat size and horsepower.

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.

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.

Expenditures[9] – 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.

Ex-Vessel[10] – Refers to activities that occur when a commercial fishing boat lands or unloads a catch. For example, the price for the catch that a captain receives at the point of landing is an ex-vessel price.

Exclusive Economic Zone (EEZ)[1] – The EEZ is the area that extends 200 nautical miles from the seaward boundaries 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.

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[4] – 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)[4] – 1. A document prepared under supervision of the appropriate fishery management council (FMC) for management of stocks of fish judged to require management. The plan must generally 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[4] – A market-based fisheries management tool where access to fisheries resources is limited to a specific group of fishermen. See also "Catch Share Progam."

Fishing Day – For this report, a fishing day refers to a partial or full day spent in recreational fishing and can be different from a fishing trip. For example, one fishing trip can consist of more than 1 fishing day. This term is used in the Alaska recreational fishing tables.

Fishing Effort[10] – 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 participants (that is, recreational fishermen or anglers) who engage in recreational fishing activities.

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 refers to a recreational fishing excursion and can be different from a fishing day. For example, one fishing trip can consist of more than 1 fishing day. 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 a recreational fishermen (angler) on a party (also referred to as a headboat) or charter boat.

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 of weight or fish caught and kept from an area over a period of time. Note that landings, catch and harvest are different. For recreational fishing activities, harvest refers to the number of individual fish not thrown back into the sea by a recreational fishermann (angler). However, in Hawai'i and the Gulf states, harvest includes fish thrown back dead. See also "Catch" and "Release."

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 of 10 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 significance to a state or region.

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.

Limited Access Privilege Program (LAPP) or Limited Access Privilege System[4] – 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."

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 of 10 uses this management tool to limit entry into a fishery.

Limited Entry Program – Also known as a license limitation program; see "License Limitation Program."

Location Quotient[7] – 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 a metropolitan area. The reference or base industry is usually the all-industry total. The following discussion assumes the defaults are used. 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[4] – 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 was 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 categories 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.

Nonemployer Firms[3] – A nonemployer 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 nonemployers are self-employed individuals operating very small unincorporated businesses that may or may not be the owner's principal source of income.

Non-Resident – 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[15] – When the harvesting capability within a given fishery exceeds the level of harvest allowed for that fishery.

Overcapitalization[10] – 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[14] – 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.

Regional Fishery Management Council or Fishery Management Council (FMC)[4] – 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 government; 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.

Sector Allocation Program[16] – 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 of 10 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[12] – 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."

Trip Expenditures – For this report, trip expenditures refer to expenses incurred by recreational fishermen (anglers) on a fishing trip. Trip expenditures are described for 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 U.S.).

Value-Added[1] – A firm's sales minus the cost of the goods and services it purchases from other industries to produce its outputs.

GLOSSARY NOTES

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A light-hearted sign displaying a fisherman's game fish of choice, Lewes, DE
(photo credit: William B. Folsom, NOAA Fisheries)