



# NOAA FISHERIES

Office of Science & Technology

## Highlights from the Annual Report Fisheries Economics of the United States, 2015



### Fisheries and the Economy

U.S. fisheries provide jobs, food and recreational opportunities, and are a vital part of our cultural heritage. They are also an economic engine that supports U.S. fishing communities nationwide.

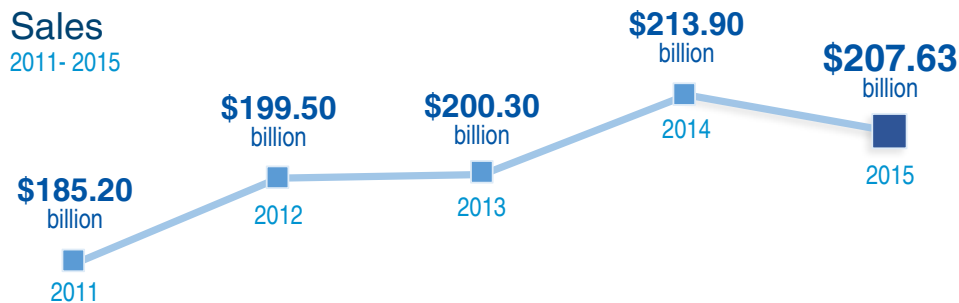
One of NOAA Fisheries' core missions is promoting sustainable fisheries, including the economic vitality of the communities that depend on this resource. Every year, we publish a report that highlights the economic benefits of U.S. fisheries to our national economy: *Fisheries Economics of the United States* (FEUS). FEUS tracks economic trends of the commercial fishing and seafood industry, recreational fishing industry, and other marine-related sectors. Analyzing this cross-section of the fishing industry offers an overall picture of the economic benefits provided by each sector. This document looks specifically at the commercial fishing and seafood industry and the recreational fishing industry.

### A Look at the Nation

The FEUS 2015 report demonstrates the integral role fisheries play in our economy and the success of our fishery management programs. In 2015, U.S. fisheries supported 1.6 million jobs (a 1% increase from 2011) and contributed \$208 billion in sales (a 12% increase from 2011).



### Sales 2011- 2015

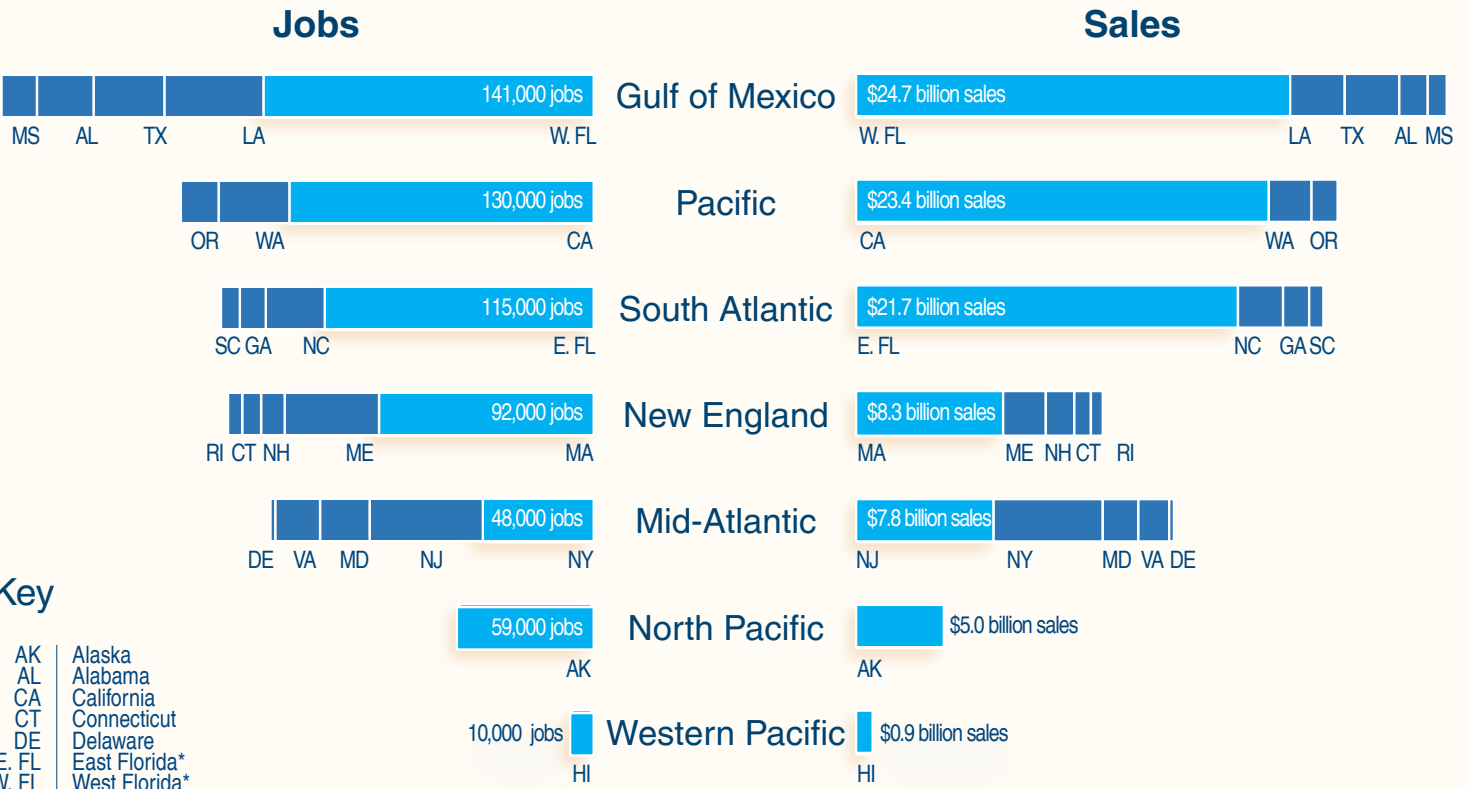


# National and Regional Highlights

FEUS highlights eight Regional Fishery Management Councils around the United States that create fishery management plans for the sustainable use of federal fisheries. Regional Councils include: North Pacific, Pacific, Western Pacific, New England, Mid-Atlantic, South Atlantic, and Gulf of Mexico. The following U.S. and state impacts include both commercial and recreational fishing values.

## State Contributions by Region

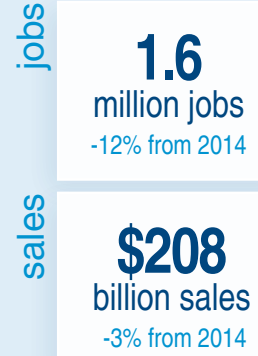
Values for Top State in Each Region



### Key

- AK Alaska
- AL Alabama
- CA California
- CT Connecticut
- DE Delaware
- E. FL East Florida\*
- W. FL West Florida\*
- GA Georgia
- HI Hawaii
- LA Louisiana
- MA Massachusetts
- MD Maryland
- ME Maine
- MS Mississippi
- NC North Carolina
- NH New Hampshire
- NJ New Jersey
- NY New York
- OR Oregon
- RI Rhode Island
- SC South Carolina
- TX Texas
- VA Virginia
- WA Washington

## U.S. Impacts



## Did You Know?

**1/2** of U.S. shrimp landings revenue (\$258 million) was generated by Louisiana and Texas

**33%** of U.S. landings revenue (\$1.7 billion) was generated by Alaska

**36%** of all recreational fishing trips were taken in Florida

\*W. FL and E. FL include recreational impacts for these areas and statewide commercial impacts; it is not possible to separate commercial impacts by sub-area.

# Commercial Fisheries and Seafood Industry Highlights

The Commercial Fisheries and Seafood Industry section reports on the impact of fishermen who sell their catch for profit. Because a large quantity of seafood is imported into the United States, we estimate some commercial impacts both with and without imports. The value of U.S. commercial fisheries landings remains strong and has a broad positive impact on the U.S. economy. In 2015, the seafood industry supported nearly 1.2 million jobs and generated \$144 billion.

## U.S. Seafood Industry Economic Impacts, 2014-2015

Commercial economic impacts fell relative to 2014 because landings revenue declined by \$330 million (down 6%) and seafood imports fell \$1.4 billion (down 7%) over the same period.

Environmental factors such as the “warm blob,” marine toxins, and El Niño affected the landings revenue of several key commercial fisheries in the Pacific, including crab (down \$94 million), squid (down \$48 million), hake (down \$35 million), and salmon (down \$23 million); see “Impact of Environmental Variability on Our Fishing Economy”.

U.S. shrimp (down \$210 million) and Alaska salmon (down \$133 million) landings revenue fell primarily due to market forces.

## U.S. Impacts

	With Imports	Without Imports
jobs	<b>1.2</b> million jobs -15% from 2014	<b>0.7</b> million jobs -14% from 2014
sales	<b>\$144</b> billion sales -6% from 2014	<b>\$52</b> billion sales -5% from 2014

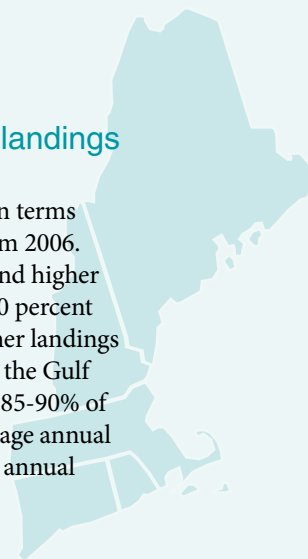


## Commercial Landings Trend: New England Lobster

MAINE LOBSTER	
Landings Revenue (\$498 million)	Landings (122 million lbs)
<b>63%</b> increase from 2006	<b>62%</b> increase from 2006

### What caused New England's lobster landings revenue to increase 55% from 2006?

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



## Recreational Fisheries Highlights

Saltwater recreational fishing is among the nation's favorite pastimes, and it remains a key contributor to the national economy. In 2015, recreational fishing supported 439,000 jobs and generated \$63 billion in sales impacts. Job impacts in this sector remained steady from 2014, while sales impacts increased (up 5%).

### Trip and Durable Equipment Expenditures, 2015

In 2015, approximately 8.9 million recreational saltwater anglers across the U.S. took 61 million saltwater fishing trips. These anglers spent \$4.5 billion on fishing trips and \$24 billion on durable fishing-related equipment. These expenditures contributed \$63 billion in sales impacts to the U.S. economy and generated \$36 billion in value added impacts.

Of total fishing trip expenditures, expenditures for private boat fishing trips were the highest (\$1.8 billion), followed by shore-based fishing trips (\$1.4 billion), and for-hire fishing trips (\$1.3 billion). Of expenditures on fishing-related durable equipment, anglers spent more on boat expenses (\$14.1 billion) than any other durable good. Other major expenditures include fishing tackle (\$3.3 billion), vehicle expenses (\$3.2 billion), and second home expenses (\$1.9 billion).

## U.S. Impacts

jobs

**0.4**  
million jobs  
no change from 2014

sales

**\$63**  
billion sales  
+5% from 2014



## Recreational Job Impacts: State with the Most Job Growth

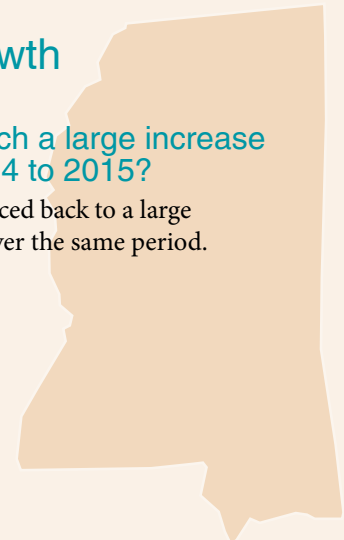
MISSISSIPPI

**Jobs**  
(5,511 jobs)

**32%**  
increase  
from 2014

### Why did Mississippi have such a large increase in recreational jobs from 2014 to 2015?

Mississippi's increase in jobs can be traced back to a large increase in for-hire trips (up 163%) over the same period.



## Impact of Environmental Variability on Our Fishing Economy

Marine species tend to be highly sensitive to changes in their environment. For example, changes in ocean temperature can affect the abundance and distribution of commercially and recreationally important species. These changes can cause economic disruptions if a fish population becomes less productive or moves out of range of the fishermen who catch them. From 2014 to 2015, the Pacific Region brought in lower landings and landings revenue of several commercially important species due to environmental changes that affected the abundance and distribution of these species. The “Warm Blob” anomaly along the West Coast ended in 2016; however, harmful algal blooms that can cause marine toxin closures occur every year and El Niño events occur irregularly (approximately every two to seven years). The severity of harmful algal blooms vary with various environmental factors, such as temperature, sunlight, and nutrients.



SALMON



HAKE

### The “Warm Blob” Effect

Landings and landings revenue for Pacific salmon and hake in Oregon and Washington may have been affected by the “warm blob” effect — a large mass of relatively warm water in the Pacific Ocean off the coast of North America. This unusual mass of warm water is less nutrient-rich than the cold upwelling waters, which results in reduced phytoplankton productivity. Lower phytoplankton productivity disrupts the food chain and has forced some species to migrate further away in search of food. Warmer waters can also cause fish populations to shift north and to deeper waters.

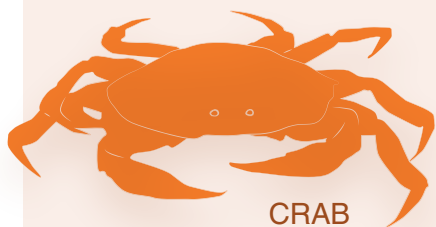
#### Landings Revenue Decreases from 2014 to 2015

##### Salmon landings revenue fell:

- \$8 million (down 41%) in Oregon.
- \$11 million (down 28%) in Washington.

##### Hake landings revenue fell:

- \$11 million (down 61%) in Oregon.
- \$3 million (down 53%) in Washington.



CRAB

### Marine Toxin Closures

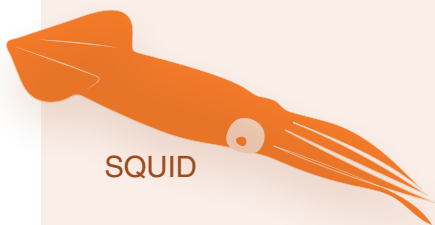
Marine biotoxins are poisons produced by microscopic algae (a type of phytoplankton) and occur when warmer water temperatures, sunlight, and nutrient-rich waters cause rapid plankton reproduction (also known as a “harmful algal bloom”). These bloom events can trigger unsafe levels of marine biotoxins in the food chain, as well as the surrounding sediment, posing a danger to human health and the marine environment. From 2014 to 2015, there was a massive bloom which caused marine toxin closures all along the West Coast.

#### Landings Revenue Decreases from 2014 to 2015

Crab landings revenue had significant declines in all three states in the Pacific due to marine toxin closures, which sharply reduced landings.

##### Crab landings revenue fell:

- \$50 million (down 71%) in California.
- \$36 million (down 75%) in Oregon.
- \$8 million (down 10%) in Washington.



SQUID



SARDINE

### El Niño

El Niño is a naturally occurring climate pattern associated with warming of the ocean surface temperatures in the central and eastern tropical Pacific Ocean, which can significantly influence weather patterns, ocean conditions, and marine fisheries worldwide. The warmer waters cause squid to move to colder and deeper waters and Pacific sardines to shift their spawning grounds further north. Along with the warm ‘blob’, El Niño likely contributed to lower landings and landings revenue for both species on the West Coast from 2014 to 2015.

#### Landings Revenue Decreases from 2014 to 2015

Squid revenue fell due to the large landings decline (148 million pounds, down 65%). Sardine revenue fell due to fishery closures based on low stock abundance and lower prices.

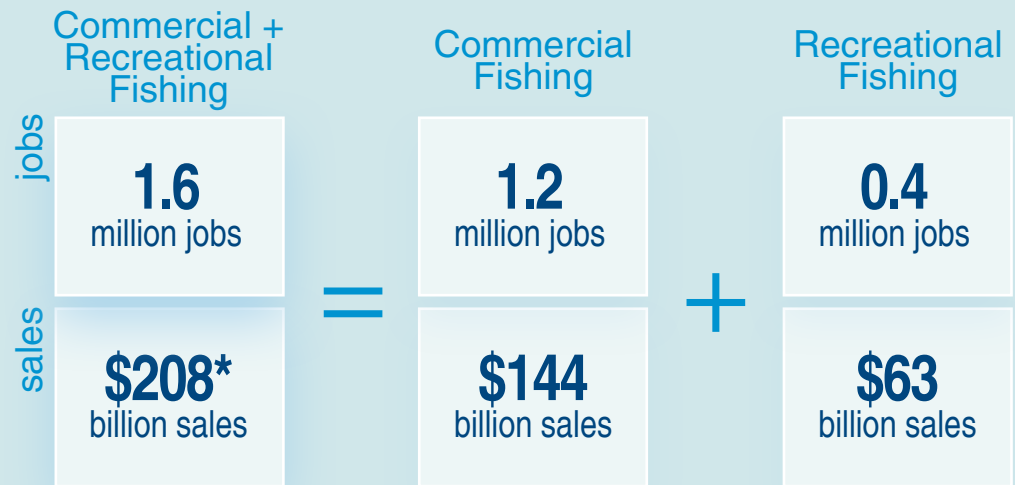
##### Squid landings revenue fell:

- \$48 million (down 66%) in California.

##### Sardine landings revenue fell:

- \$2 million (down 83%) in California.
- \$3 million (down 77%) in Oregon

Commercial and recreational fisheries remain a vital part of our economy.



## Policy Highlights

### Reducing Bycatch

In 2015, NOAA Fisheries implemented an Individual Bluefin Quota Catch Share Program in the Atlantic Highly Migratory Species pelagic longline 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 by 88% (from 139 mt in 2014 to 17 mt in 2015).

### Science-based Management

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's Bycatch Reduction Engineering Program to expand their successful real-time bycatch avoidance network. A fleet of 61 vessels uses this network to avoid fishing in high bycatch locations. 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.

### Learn More

[www.st.nmfs.noaa.gov/economics/publications/feus/fisheries\\_economics\\_2015/index](http://www.st.nmfs.noaa.gov/economics/publications/feus/fisheries_economics_2015/index)

\*This number is rounded based on the added values of commercial (\$144.2 billion) and recreational (\$63.4 billion) fishing.

### Protecting Habitats

In 2016, the South Atlantic Fishery Management Council approved the designation of five offshore areas as Spawning Special Management Zones to the Snapper-Grouper Fishery Management Plan. These zones will help protect spawning fish and unique habitat associated with spawning activities in the South Atlantic. If approved by the Secretary of Commerce, the five areas would be the first such spawning zones designated in federal waters off the South Atlantic coast.

## Looking Forward

NOAA Fisheries is always looking ahead at new developments to continue increasing the strength of our fishing economy and the sustainable use of our fisheries.

