



**NOAA  
FISHERIES**

# Status of Stocks 2017

## Annual Report to Congress on the Status of U.S. Fisheries

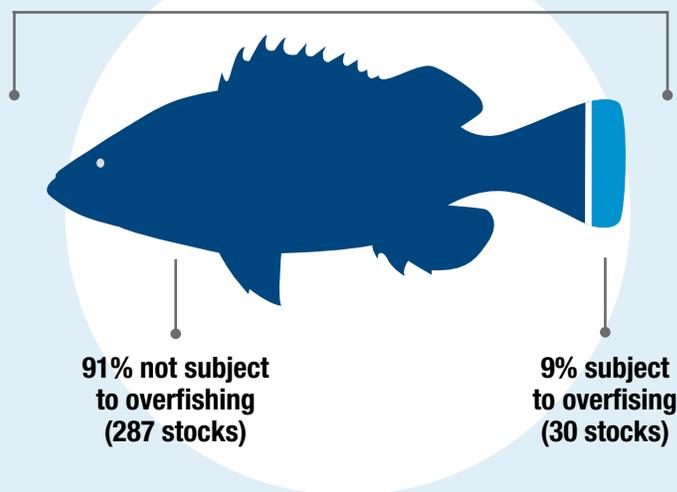
NOAA Fisheries is pleased to present the 2017 Report to Congress on the Status of U.S. Fisheries managed under the science-based framework established by the Magnuson-Stevens Fishery Conservation and Management Act (MSA). The 2017 report highlights the work toward the goal of maximizing fishing opportunities while ensuring the sustainability of fisheries and fishing communities. Due to the combined efforts of NOAA Fisheries, the eight regional fishery management councils, and other partners, three previously overfished stocks were rebuilt and the number of stocks listed as overfished is at a new all-time low. Additionally, the number of stocks on the overfishing list remains near an all-time low. In 2017, information became available for three stocks, which resulted in new stock status determinations. None of these stocks are subject to overfishing or are overfished. Continuous monitoring and improvement of our knowledge about the status of stocks is key to ongoing sustainable fisheries management under the MSA.

## Benefits of Sustainable Fisheries Management

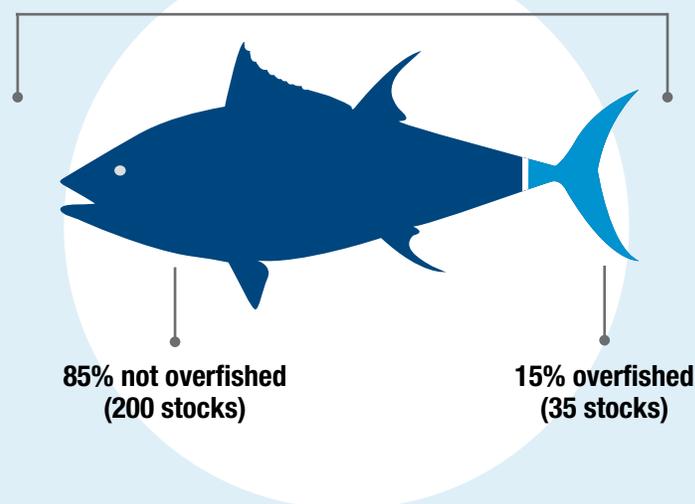
Sustainable fisheries management is an adaptive process that relies on sound science, innovative management approaches, effective enforcement, meaningful partnerships, and robust public participation. Sustainable fisheries play an important role in the nation's economy by providing opportunities for commercial, recreational, and subsistence fishing, marine aquaculture, and sustainable seafood for the nation. Combined, U.S. commercial and recreational saltwater fishing generated more than \$208 billion in sales and supported 1.6 million jobs in 2015. By ending overfishing and rebuilding stocks, we are strengthening the value of U.S. fisheries to the economy, our communities, and marine ecosystems.

## Stock Status By The Numbers

### 317 stocks with known overfishing status



### 235 stocks with known overfished status



## The Year in Review

At the end of 2017, the overfishing list included 30 stocks and the overfished list included 35 stocks. Overfishing remains near all-time lows and we reached a new milestone with the number of overfished stocks at the lowest level ever—just 15 percent of assessed stocks. The number of stocks rebuilt since 2000 increased to 44. NOAA Fisheries tracks 474 stocks or stock complexes in 46 fishery management plans. Each year, assessments of various fish stocks and stock complexes are conducted to determine their status. These assessments include stocks of both known status and previously unknown status. Based on assessments conducted by the end of 2017, six stocks were removed from the overfishing list and six were added. The additions are the result of stock assessments or data showing catch was too high, including international harvest on certain stocks that the United States has limited ability to control. Six stocks were removed from the overfished list and three were added based on stock assessments that indicated population sizes were too low. As required by the MSA management framework, the councils are developing management measures to end overfishing and rebuild all stocks added to the overfishing and overfished lists. Specific changes to the status of stocks in 2017 include:



OVERFISHING LIST	
Removed	Added
Sailfish – Western Atlantic <sup>1</sup> Blue king crab – Pribilof Islands Puerto Rico Wrasses Complex Coho salmon – Puget Sound: Hood Canal <sup>1</sup> Winter flounder – Georges Bank Witch flounder – Northwestern Atlantic Coast (now unknown)	Greater amberjack – Gulf of Mexico Red grouper – Southern Atlantic Coast Coho salmon – Puget Sound: Stillaguamish <sup>1</sup> Shortfin mako – North Atlantic <sup>1</sup> Red hake – Southern Georges Bank / Mid-Atlantic Gray triggerfish – Gulf of Mexico
OVERFISHED LIST	
Removed	Added
Yelloweye rockfish – Pacific coast Winter flounder – Georges Bank Gray triggerfish – Gulf of Mexico Red snapper – Gulf of Mexico Pacific ocean perch – Pacific Coast Bluefin tuna – Western Atlantic (now unknown)	Red grouper – Southern Atlantic Coast Shortfin mako – North Atlantic <sup>1</sup> Red hake – Southern Georges Bank / Mid-Atlantic
REBUILT LIST	
Bocaccio – Southern Pacific Coast Darkblotched rockfish – Pacific Coast Pacific ocean perch – Pacific Coast	
FIRST TIME STATUS DETERMINATIONS	
Not Subject to Overfishing	Not Overfished
Spiny dogfish – Pacific coast St. Croix Wrasses Complex	Golden king crab – Aleutian Islands

<sup>1</sup> This stock is fished by U.S. and international fleets.

# Ending Overfishing Under Effective Laws

Under the MSA, the United States has become an international leader in fisheries management. NOAA Fisheries is committed to continuing our successful efforts to prevent overfishing and rebuild overfished stocks. The MSA has been reauthorized twice since its enactment—once in 1996 and again in 2006.

The 2006 reauthorization included a new requirement to use annual catch limits (ACLs) to end and prevent overfishing. In 2017, ACLs were not exceeded for 91 percent of all stocks or complexes. Councils are implementing management measures to address any ACL overages that did occur. Monitoring catch levels and keeping them in check on an annual basis—as occurs with ACLs—helps reduce the chance of overfishing and ensures long-term biological and economic sustainability.

ACLs are effective in preventing overfishing, but some challenges remain. For data-poor and rarely sampled stocks, for example, fisheries managers are still learning how to accurately account for catch and determine effective mechanisms to address overfishing. NOAA's regional fisheries science centers and the councils' scientific and statistical committees (SSCs) have employed a number of methods for setting catch advice in these data-poor situations. For example, species with similar habitat and life histories can be grouped together to increase data availability, with catch advice for the complex established from an indicator species.

## Improving Stocks, Rebuilding Fisheries

In 2017, NOAA Fisheries added three additional stocks (bocaccio—Southern Pacific Coast, darkblotched rockfish—Pacific Coast, and Pacific ocean perch—Pacific Coast) to the rebuilt list. When a stock is determined to be overfished, a council must develop a rebuilding plan. A typical rebuilding plan allows fishing to continue at a reduced level so the stock can rebuild to its target level and produce its maximum sustainable yield (MSY). This approach keeps fishermen and waterfronts working while stocks rebuild.

Thirty-nine stocks or stock complexes are currently in rebuilding plans. NOAA Fisheries monitors rebuilding stocks and, through the fishery management council process, adjusts management measures as necessary to increase stock abundance to a target level that supports MSY. When a rebuilding stock increases above the overfished threshold, the stock is removed from the overfished list but remains under its rebuilding plan until it is fully rebuilt. Currently, 10 stocks are no longer overfished but continue to be managed under rebuilding plans.

## National Standard 1 Guidelines

**National Standard 1: U.S. fisheries management shall prevent overfishing and achieve optimum yield from each fishery on a continuing basis.**

All eight regional fishery management councils and the NOAA Fisheries Atlantic Highly Migratory Species Division have been developing and implementing the tools provided in the 2016 National Standard 1 Guidelines to achieve more stable and flexible fisheries management while continuing to prevent overfishing, rebuild overfished stocks, and achieve optimum yield. For example:

- Gulf of Mexico Council: Considering action to allow year-to-year carry-over of uncaught quota.
- Mid-Atlantic Council: Adopted an Unmanaged Forage Amendment to prevent new or expanded commercial fisheries on certain forage species until proper evaluation.
- South Atlantic Council: Exploring a phase-in approach, allowing managers to make necessary reductions to catch levels gradually.
- North Pacific Council: Reclassified a stock as an ecosystem component species and removed its annual catch limit. There was no directed fishing for the stock, it was not overfished, and there was no conservation concern for the population.

# Overfished and Overfishing Stock Status 2017 by U.S. Region

■ 35 On Overfished List ● 30 On Overfishing List

## North Pacific

- Blue king crab – Pribilof Islands

## Pacific

- Coho salmon – Puget Sound/Stillaguamish<sup>1</sup>

## Pacific and Western Pacific

- ● Pacific bluefin tuna – Pacific<sup>1</sup>
- Swordfish – Eastern Pacific<sup>1,2</sup>

## Western Pacific

- ● Striped marlin – Western/Central Pacific<sup>1</sup>
- Seamount Groundfish Complex – Hancock Seamount<sup>1</sup>
- Bigeye tuna – Western/Central Pacific<sup>1</sup>

## Gulf of Mexico

- ● Greater amberjack
- Gray triggerfish

## Caribbean

- Goliath grouper
- Nassau grouper
- Queen conch
- Triggerfishes and Filefishes Complex – Puerto Rico
- Caribbean spiny lobster – Puerto Rico

## New England

- ● Atlantic cod – Georges Bank
- ● Atlantic cod – Gulf of Maine
- Windowpane – Gulf of Maine/Georges Bank
- Witch flounder
- ● Yellowtail flounder – Cape Cod/Gulf of Maine
- ● Yellowtail flounder – Georges Bank
- ● Yellowtail flounder – Southern New England/Mid-Atlantic
- Thorny skate – Gulf of Maine
- Atlantic halibut
- Atlantic salmon
- Atlantic wolffish
- Ocean pout
- Winter flounder – Southern New England
- ● Red hake – Southern Georges Bank/Mid-Atlantic

## Highly Migratory Species

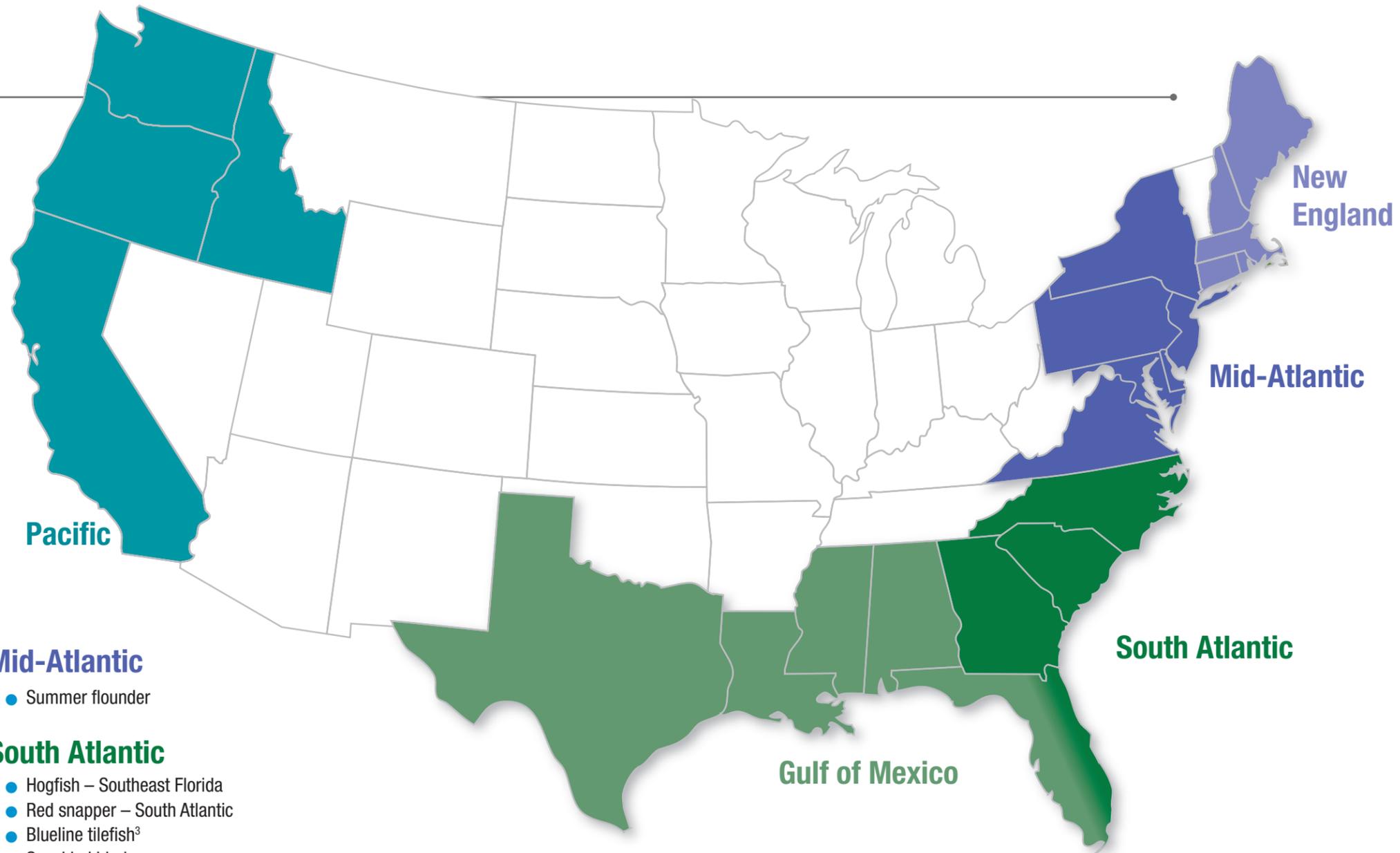
- ● Blacknose shark – Atlantic
- ● Blue marlin – Atlantic<sup>1</sup>
- ● Dusky shark – Atlantic
- ● White marlin – Atlantic<sup>1</sup>
- ● Scalloped hammerhead – Atlantic
- Porbeagle shark – Atlantic<sup>1</sup>
- Sandbar shark – Atlantic
- Bigeye tuna – Atlantic<sup>1</sup>
- ● Shortfin mako – North Atlantic<sup>1</sup>

## Mid-Atlantic

- Summer flounder

## South Atlantic

- ● Hogfish – Southeast Florida
- ● Red snapper – South Atlantic
- Blueline tilefish<sup>3</sup>
- Speckled hind
- Warsaw grouper
- Red porgy
- Snowy grouper
- Tilefish – South Atlantic
- ● Red grouper – South Atlantic



<sup>1</sup> Stock is fished by U.S. and international fleets.

<sup>2</sup> The geographic boundary of this stock extends from Mexico south and west to the Palmyra Atoll.

<sup>3</sup> Stock status based on 2015 landings data compared to the overfishing limit. The 2017 blueline tilefish stock assessment is currently under evaluation by NOAA Fisheries.

## Overfishing & Overfished

The main concepts related to “overfishing” and “overfished” covered in this report are:

### **Maximum sustainable yield (MSY):**

The largest long-term average catch that can be taken from a stock under prevailing environmental and fishery conditions.

**Overfishing:** A stock having a harvest rate higher than the rate that produces its MSY.

**Overfished:** A stock having a population size that is too low and that jeopardizes the stock’s ability to produce its MSY.

**Rebuilt:** A stock that was previously overfished and that has increased in abundance to the target population size that supports its MSY.

## What’s the difference?

As a harvest rate, overfishing is a direct result of fishing activities. Allowed to continue unchecked, overfishing is associated with many negative outcomes, including a depleted population. Current management practices—such as annual catch limits and accountability measures—reduce the likelihood of this happening.

As a population size, overfished can be the result of many factors, including overfishing, as well as habitat degradation, pollution, climate change, and disease. While overfishing is sometimes the main cause of an overfished stock, these other factors can also play a role and may affect the stock’s ability to rebuild.

## The Science Behind Stock Status

Fishery management plans must specify objective and measurable criteria (reference points) to determine when a stock is overfished or subject to overfishing. A scientific analysis of the abundance and composition of a fish stock, as well as the degree of fishing intensity, is called a stock assessment. Stock assessments are subject to regional peer review as part of the process to ensure that management decisions are based on the best scientific information available, as mandated by the MSA. In fiscal year 2017, NOAA Fisheries conducted 216 stock assessments, the most ever completed in one fiscal year.

The councils and the agency use information from stock assessments to develop and recommend ACLs and other conservation and management measures. While catch limits are set annually, assessments are often done less frequently. To determine whether catch limits have successfully ended or prevented overfishing, NOAA Fisheries may use the fishing intensity metrics and reference points derived in a stock assessment or a comparison of catch to the overfishing limit (OFL). If the catch-to-OFL comparison is used, an overfishing determination is made annually. If a stock assessment is used, due to timing of the next stock assessment, several years may pass before we are able to determine if catch limits successfully ended overfishing.

## 2017 Rebuilt Stocks

Three stocks (bocaccio—Southern Pacific Coast, darkblotched rockfish—Pacific Coast, and Pacific ocean perch—Pacific Coast) were declared rebuilt in 2017, adding to a growing list of rebuilding success stories.

### Bocaccio



### Darkblotched Rockfish



### Pacific Ocean Perch



- Three Pacific coast groundfish stocks rebuilt ahead of schedule in 2017, resulting in significantly higher future catch levels for bocaccio and Pacific ocean perch.
- This increased catch and associated economic gains will come as good news to commercial and recreational fishermen who have endured sharp reductions in catch levels and other restrictions in an effort to quickly rebuild these stocks.

## Stock Trends 2008–2017



## Remaining Competitive in a Global Market

### Through Productive and Sustainable Fisheries

The need to increase our nation's seafood production is a continuing and growing challenge, and rebuilding and maintaining fish stocks at sustainable levels will help achieve this goal. NOAA Fisheries is focusing on a number of activities aimed at leveling the playing field for our domestic seafood industry. These include increasing seafood trade opportunities and market access so that we can remain competitive with other seafood exporting countries.

In 2017, we worked to train importers on the requirements of NOAA's new Seafood Import Monitoring Program. For imports of certain seafood products, the program establishes the reporting and recordkeeping requirements needed to prevent illegal, unreported, and unregulated (IUU)—caught and/or misrepresented seafood from entering U.S. commerce. This is the first phase of a traceability program that will provide additional protections for our national economy and for global food security and the sustainability of our shared ocean resources. NOAA scientists also developed a simple, cost-effective rapid screening method to identify commonly substituted fresh and frozen finfish species sold in the U.S. seafood marketplace. To remain competitive in the global market, we are also committed to increasing our domestic seafood production through aquaculture. Expanding U.S. aquaculture supplements wild-harvest fisheries and supports our efforts to rebuild and maintain sustainable fisheries, working waterfronts, and resilient oceans. Marine aquaculture operations provide a year-round source of high-quality jobs and economic opportunities that augment seasonal tourism and commercial fishing in coastal communities. By fostering responsible aquaculture in the United States, we can ensure a safe, secure, and sustainable local seafood supply.

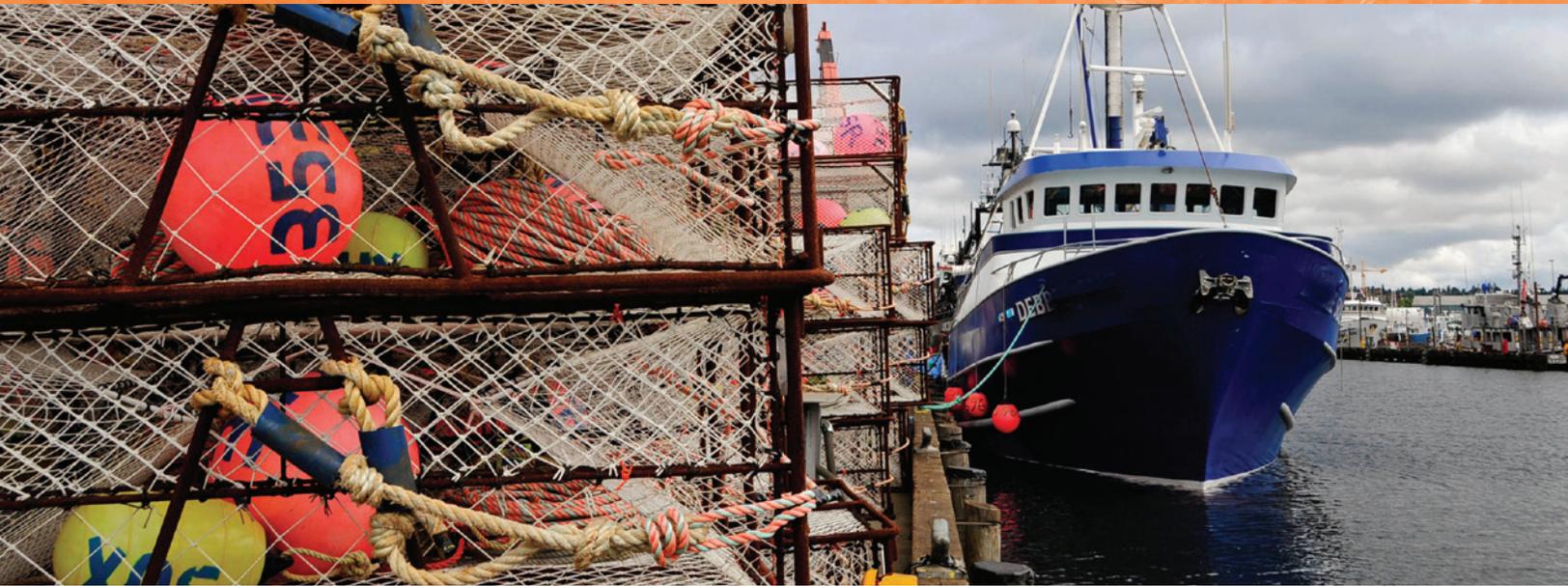
## FishWatch

FishWatch, the nation's database for sustainable seafood, marked its 10th year in 2017. Fish dealers, fishermen, and everyday seafood shoppers can count on FishWatch to provide up-to-date information on the status of some of the nation's most valuable marine fish harvested and farmed in the United States. The website provides information about how the science, laws, and management process ensure sustainable seafood from U.S. fisheries and aquaculture. The website also includes information about buying and handling seafood, along with recipes. For more information, visit [www.fishwatch.gov](http://www.fishwatch.gov).

## Improving Opportunity and Stability in Recreational Fisheries

In the United States, approximately 8.9 million saltwater anglers support 439,000 jobs and generate \$63 billion in sales impacts.

NOAA recently hosted a National Saltwater Recreational Fisheries Summit following constructive roundtable discussions with the angler community in 2017. The summit brought together saltwater recreational fishing community leaders, councils, interstate marine fisheries commissions, and agency staff under the theme of "Improving Opportunity and Stability in Saltwater Recreational Fisheries." It focused on how anglers and managers can work together to address current challenges and improve the future of saltwater recreational fisheries.



## Adapting for the Future

NOAA Fisheries, the regional fishery management councils, and our many partners continue to build on the United States' successful fisheries management approach by implementing tools and advancing policies that will help us meet the challenges of today and tomorrow.

Collectively, we are working harder than ever to meet our conservation goals in a way that maximizes revenue, increases fishing opportunities, and reduces regulatory burdens on the industry. In 2017, we sought and reviewed input from the public on unnecessary, ineffective, or costly regulations. In 2018, in conjunction with the councils, we will review all of our fishery regulations to identify those that should be removed or revised to further reduce regulatory constraints and optimize fishery benefits.

Other advancements include expanding the use of electronic monitoring programs to improve fishery data collection. Currently, nine fisheries across the country have implemented electronic monitoring programs to improve compliance and catch accounting and to reduce discards. NOAA Fisheries is also transforming how we collect data aboard research vessels. For example, an integrated biological and oceanographic data system has reduced errors and made data available to managers within weeks rather than months. New towed underwater cameras collect fisheries data without damaging habitat or extracting resources. These advances and others are improving the quality and timeliness of data used in stock assessments.

Fisheries management occurs in a dynamic environment and amid increasingly changing ocean conditions, and we continue to adapt our science and management processes to address these changes. Among other activities, we have conducted fish climate vulnerability assessments to identify which species and fishing communities may be most susceptible to environmental change. The agency has increased the use of modeling tools such as management strategy evaluations to assess how environmental variability and species interactions affect fisheries management. We have also developed ecosystem indicators that can be tracked and reported alongside stock assessments, often in the form of ecosystem status reports.

These efforts are just a few examples of how we are looking to the future to ensure the long-term sustainability of our fisheries and the businesses and communities that depend on them. Our dynamic, science-based management process is proving successful at ending overfishing and rebuilding stocks, and it is helping us realize significant benefits to the U.S. economy. We look forward to working with Congress, the councils, our state partners, and other stakeholders to further these efforts and identify other opportunities to strengthen the long-term biological and economic sustainability of our nation's fisheries.

Visit our website for more information:  
<https://www.fisheries.noaa.gov>