Status of Stocks 2015

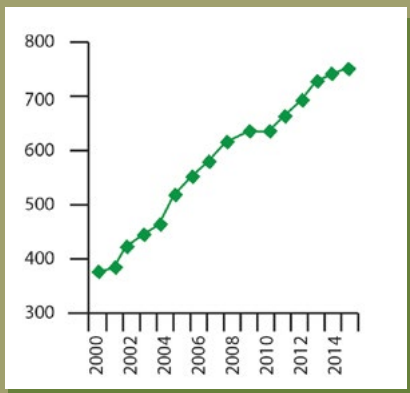
Annual Report to Congress on the Status of U.S. Fisheries

NOAA FISHERIES

NOAA Fisheries is pleased to present the 2015 Report to Congress on the Status of U.S. Fisheries as managed under the science-based framework established under the Magnuson-Stevens Fishery Conservation and Management Act (MSA). 2016 marks the 40th anniversary of the MSA and the federal, state, and stakeholder partnership it established through eight fishery management councils to sustainably manage our nation's marine fisheries. In 2015, two previously overfished stocks were rebuilt, and the number of stocks on the overfishing and overfished lists remains near all-time lows. Several stocks were assessed for the first time in 2015, which resulted in new information about the status of these stocks. Continuous monitoring and improvement of our knowledge about the status of these stocks is key under the MSA process for managing our fisheries to be sustainable.

Fish Stock Sustainability Index

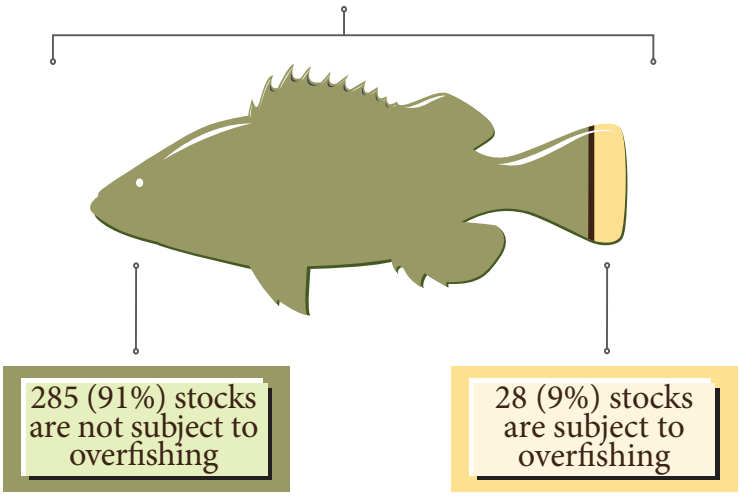
The Fish Stock Sustainability Index (FSSI) provides a comprehensive indication of the sustainability of U.S. fisheries using information across multiple stock status factors. Since 2000, the score has increased 98% from 382.5 to 758. The FSSI tracks 199 of the most important commercial and recreational fish stocks. These stocks account for about 85% of total catch. The FSSI reflects information about a stock's overfishing and overfished status, whether the stock has been assessed, and indicators of its rebuilding progress. The 2015 total FSSI score is an all-time high.



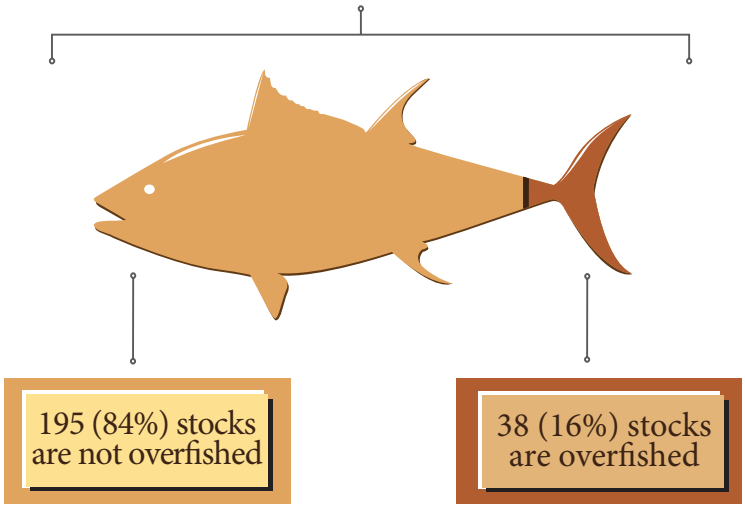
Status Listings

Overfishing & Overfished Lists

Overfishing: 313 stocks with known status:



Overfished: 233 stocks with known status:



40 YEARS MAGNUSON STEVENS ACT

A Journey to Sustainable Fisheries

The Year in Review

At the end of 2015, 28 stocks were on the overfishing list and 38 stocks were on the overfished list. The number of stocks rebuilt since 2000 increased to 39. NOAA Fisheries tracks 473 stocks and stock complexes in 46 fishery management plans, or FMPs. 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 2015, eight stocks were removed from the overfishing list and ten were added. Two stocks came off the overfished list, and three were added. As required by the MSA management framework, all stocks added to the overfishing and overfished lists have management measures being implemented to end overfishing and rebuild. Specific changes to the status of stocks in 2015 include:

2014	2015
26 (8%) on overfishing list	28 (9%) on overfishing list
37 (16%) on overfished list	38 (16%) on overfished list
37 stocks on rebuilt list	39 stocks on rebuilt list

Overfishing List

Removed	Added
Hogfish - Eastern Gulf of Mexico	Hogfish - Southeast Florida[1]
Puerto Rico Scups & Porgies Complex	Chinook salmon - Columbia River Basin: Upper River Summer
Puerto Rico Wrasses Complex	Chinook salmon - Washington Coast: Willapa Bay Fall Natural
Thorny skate - Gulf of Maine	Chinook salmon - Washington Coast: Grays Harbor Fall
Winter skate - Georges Bank/ Southern New England	Coho salmon - Washington Coast: Hoh
Windowpane - Gulf of Maine/Georges Bank	Swordfish - Eastern Pacific[2]
Greater amberjack - Gulf of Mexico	Summer flounder
Gray triggerfish - Gulf of Mexico	Yellowtail flounder - Southern New England/ Mid-Atlantic
	Winter flounder - Georges Bank
	Bigeye tuna - Atlantic

Overfished List

Removed	Added
Blueline tilefish - South Atlantic	Hogfish - Southeast Florida[1]
Canary rockfish - Pacific Coast[3]	Yellowtail Flounder - Southern New England/ Mid-Atlantic
	Winter Flounder - Georges Bank

Rebuilt List

Canary rockfish - Pacific Coast[3]
Petrale sole - Pacific Coast

1. Stock status was formerly listed as unknown
2. This stock was previously listed as a Pacific-wide stock, but was reported for the first time as separate Eastern Pacific and Western and Central North Pacific stocks.
3. This stock was removed from the overfished list and is now rebuilt.

40 Years of Sustainable Fishery Management

After World War II, increased pressure and landings by foreign nations led to sharp declines in many fish stocks. In response, Congress passed the Fishery Conservation and Management Act in 1976. It established a 200 mile fishery conservation zone ending the unmanaged, open access to fisheries off U.S. coasts by foreign fleets. A second major update came in 1996. Recognizing the growth and importance of domestic fisheries, Congress added provisions to protect habitat, improve safety, address bycatch, and recognize the value of fisheries to coastal communities.

In 2007, Congress enacted a requirement to use annual catch limits (ACLs) to end and prevent overfishing. As of the end of 2015, catch was successfully kept at or below 89 percent of ACLs. Management measures were implemented to address ACLs overages. Monitoring catch levels and keeping them in check annually helps reduce the chance of overfishing.

Despite the effectiveness of ACLs in preventing overfishing, some challenges remain. NOAA Fisheries has limited ability to control overfishing of international stocks, because they are fished in international waters and are exempt from ACL requirements. More than half of the stocks added to the overfishing list in 2015 were international stocks.

Improving Stocks—Rebuilding Fisheries

In 2015, NOAA Fisheries added two additional stocks to the list of rebuilt stocks. 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 that the stock can rebuild to its target level and can produce the maximum sustainable yield (MSY)—the largest long-term average catch that can be taken from a stock under prevailing environmental and fishery conditions. This keeps fishermen and waterfronts working while rebuilding stocks.

Forty-four stocks and stock complexes are currently under rebuilding plans. Under the MSA framework, 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. Eleven of the rebuilding stocks are no longer overfished, and they continue to be managed under their rebuilding plans.

Find current information on trends for stocks in rebuilding plans here.

U.S. Fisheries Management Exceeds International Guidelines for Ecolabelling

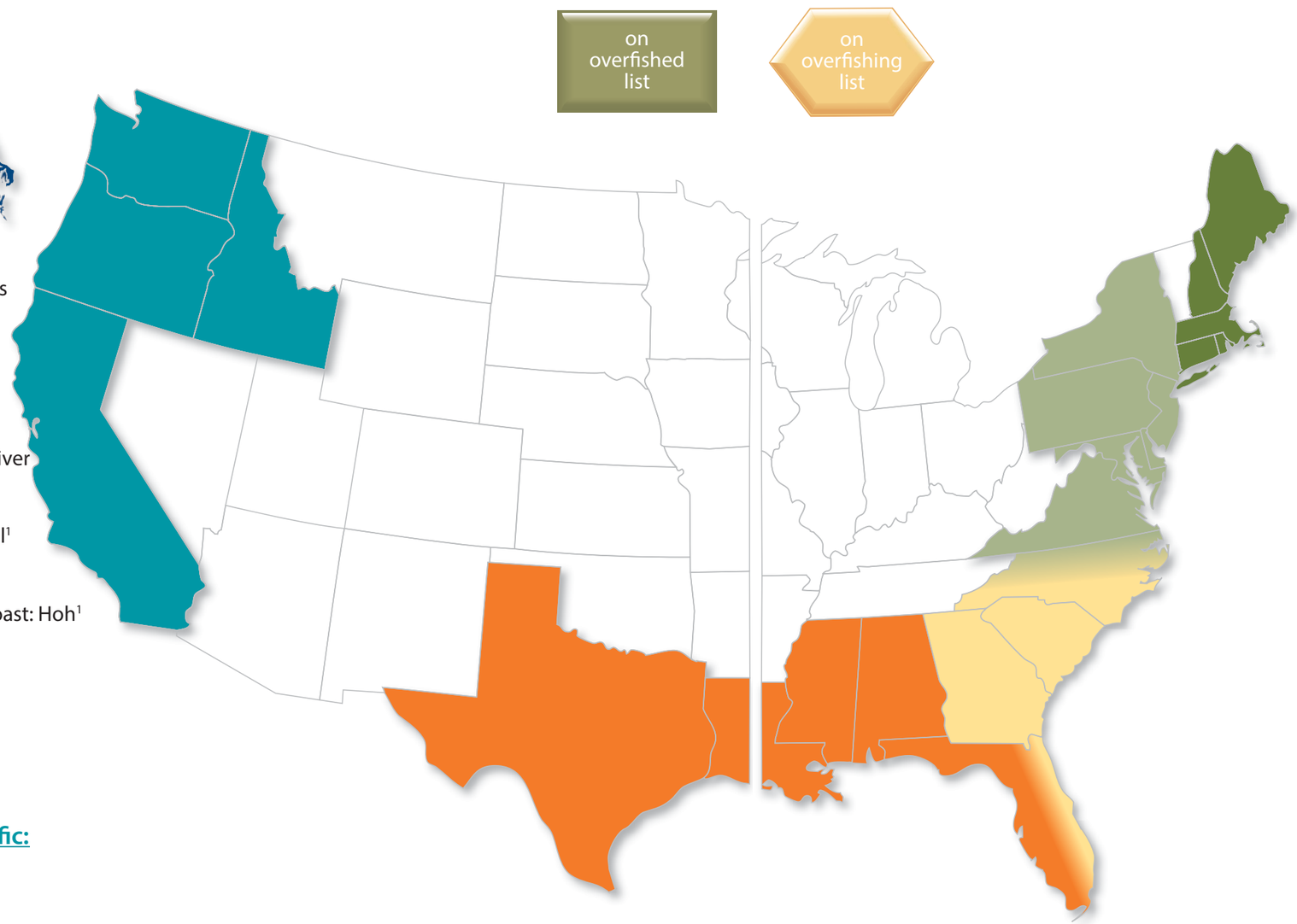
A recent assessment that compares standards under U.S. fisheries management to ecolabelling guidelines under the United Nations Food and Agriculture Organization identified key strengths of the U.S. system:

- Complying with national and international laws
- Developing and abiding by documented management approaches with frameworks at national or regional levels
- Incorporating uncertainty into stock reference points and catch limits while taking actions if those limits are exceeded
- Taking into account the best scientific evidence in determining suitable conservation and management measures with the goal of long-term sustainability
- Restoring stocks within reasonable timeframes

The study showed that U.S. standards and framework for managing fisheries under the MSA exceeded international guidelines set by the United Nations, further reinforcing the strength of the U.S. fisheries management system under the MSA.

Read more on this assessment on our website.

Stock Status by U.S. Region



North Pacific:

- Blue king crab - Pribilof Islands

Pacific:

- Pacific Ocean perch
- Yelloweye rockfish
- Swordfish - Eastern Pacific[1]
- Chinook salmon - Columbia River Upper River Summer[1]
- Chinook salmon - WA Coast: Willapa Bay Fall Natural[1]
- Chinook salmon - WA Coast: Grays Harbor Fall[1]
- Coho salmon - Washington Coast: Hoh[1]

Pacific and Western Pacific:

- Pacific bluefin tuna - Pacific[1]
- Bigeye tuna - Pacific[1]

Western Pacific:

- Striped marlin - Central Western Pacific[1]
- Seamount Groundfish Complex - Hancock Seamount[1]

Gulf of Mexico:

- Greater amberjack
- Gray triggerfish
- Red snapper

Caribbean:

- Goliath grouper
- Nassau grouper
- Queen conch

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 founder - Georges Bank
- Yellowtail flounder - S. New England/Mid-Atlantic
- Thorny skate - Gulf of Maine
- Atlantic halibut
- Atlantic salmon[1]
- Atlantic wolffish
- Ocean pout
- Winter flounder - Southern New England
- Winter flounder - Georges Bank

Highly Migratory Species:

- Blacknose shark - Atlantic
- Blue marlin - Atlantic[1]
- Dusky shark - Atlantic
- White marlin - Atlantic[1]
- Scalloped hammerhead - Atlantic
- Porbeagle shark - Atlantic
- Sandbar shark - Atlantic
- Bigeye tuna - Atlantic[1]
- Bluefin tuna - West Atlantic[1]
- Sailfish - West Atlantic[1]

Mid-Atlantic:

- Summer flounder

South Atlantic:

- Hogfish - Southeast Florida
- Red snapper
- Blueline tilefish
- Speckled hind
- Warsaw grouper
- Red porgy
- Snowy grouper

1. Stock is fished by U.S. and international fleets

The Science Behind Stock Status

Overfishing & Overfished

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

Maximum sustainable yield or **MSY**: The largest long-term average catch that can be taken from a stock under prevailing environmental and fishery conditions.

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

Overfished: A stock that has 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, and also 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.

Fishery management plans must specify objective and measurable criteria, or reference points, to determine when a stock is subject to overfishing or overfished. A scientific analysis of the abundance and composition of a fish stock and the rate of fishing mortality is called a stock assessment. Typically, a stock assessment undergoes peer review by independent scientists before it is accepted as the best scientific information available.

The councils use information from stock assessments to develop and recommend annual catch limits and other conservation and management measures. While catch limits are set annually, assessments are usually done less frequently. NOAA Fisheries uses stock assessments to determine whether catch limits have successfully ended or prevented overfishing. In other cases, if catch exceeds the overfishing limit, the stock is added to the overfishing list.

In 2015, NOAA Fisheries released a Stock Assessment Prioritization Plan that provides an approach for effectively allocating limited science resources to assess appropriate stocks.

2015 Rebuilt Stocks

Two Pacific coast groundfish stocks, canary rockfish and petrale sole, were declared rebuilt in 2015, adding to the list of rebuilding success stories.

Canary Rockfish

- Management measures to rebuild included revised catch limits and closures.
- Because canary rockfish are found in many different places, rebuilding measures included reducing fishing access to other valuable species like Dover sole and black cod.

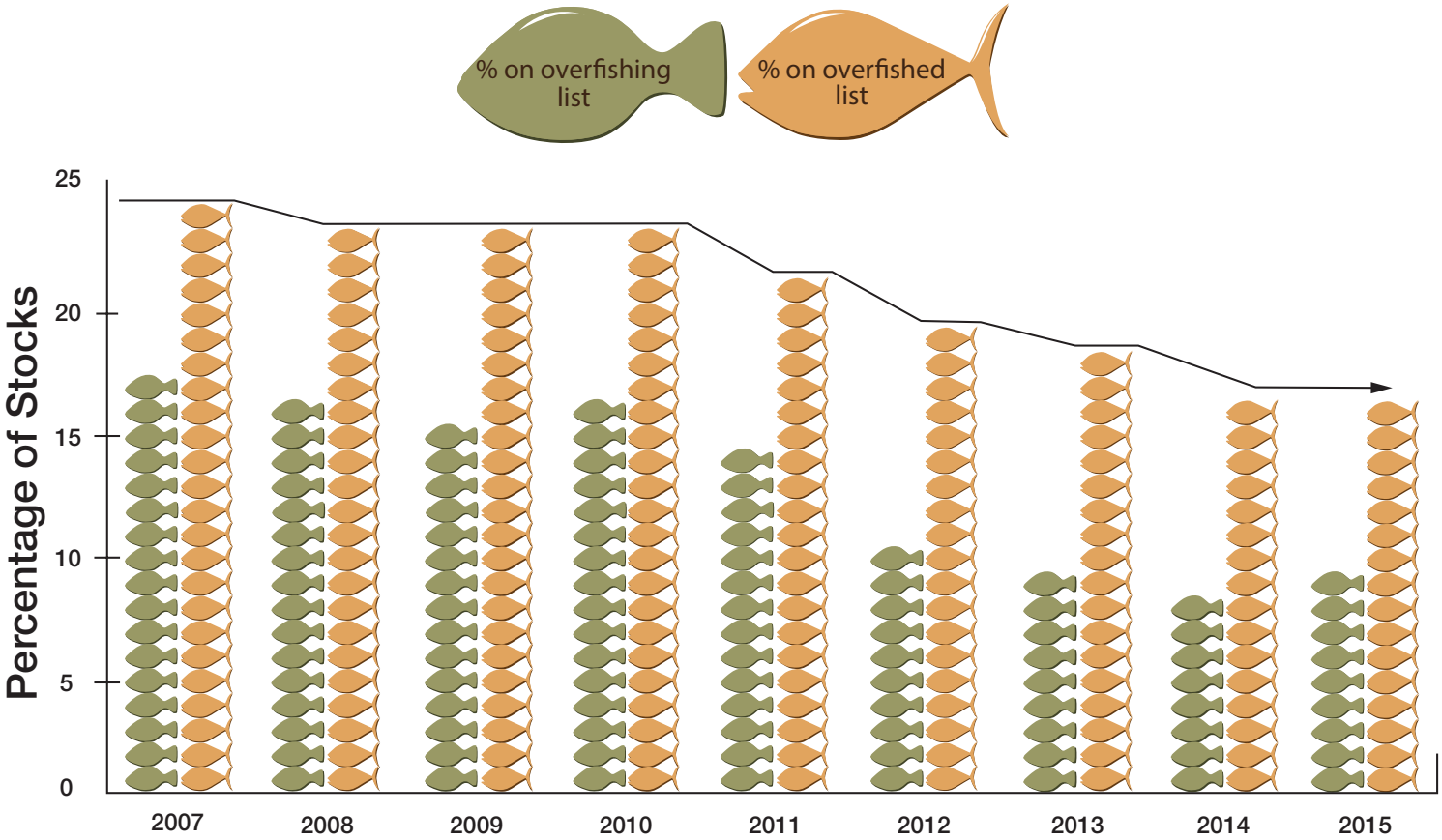
Petrale Sole

- Management measures included reducing catch levels by at least 50 percent in the 3 years following the overfished declaration in 2009.
- The most recent scientific information estimates that the petrale sole stock is above the target stock size for the first time since the early 1960's.

Now that the stocks are rebuilt, fishermen can look forward to fewer restrictions for both stocks and higher catch limits for canary rockfish.

Find the latest quarterly stock status updates on our website.

Stock Trends 2007 - 2015



Dynamic Fisheries Management

Managing fisheries sustainably is an adaptive process that relies on sound science, innovative management approaches, effective enforcement, and meaningful partnerships. Fisheries management occurs in a dynamic environment and amid increasingly changing ocean conditions. U.S. fisheries play an important role in the nation's economy providing opportunities for commercial, recreational, and subsistence fishing, and sustainable seafood for the nation. Sustainably managed fisheries also contribute to a healthy and resilient ecosystem.

NOAA Fisheries and our many partners continue to build on this successful approach by advancing policies and plans that will help us meet the challenges of today to face the future of tomorrow.

Read more about the status of our stocks and how NOAA Fisheries helps ensure sustainable fisheries.

NOAA Assesses Climate Vulnerability of Fish and Shellfish

NOAA scientists applied a new methodology to assess the climate vulnerability of fish and shellfish species. The study included 82 fish and invertebrate species in the Northeast. Among the results:

- Species were ranked according to their vulnerability to changes in abundance and distribution as a result of climate change
- Results will be used to help decision makers assess and manage their fisheries accordingly
- Additional species in other regional areas are scheduled for future assessments using this methodology

Read more on the climate vulnerability methodology on our website.

Adapting for the Future

NOAA Fisheries continues to adapt our science and management process in light of ecosystem factors. In 2015, NOAA Fisheries finalized a Climate Science Strategy to improve the production and use of climate-related information in fisheries management decisions. The strategy lays out steps the agency can take to increase the production, delivery, and use of climate-related information to marine and coastal resource managers, resource users, and others at regional and national scales. A key step in the strategy is to assess the vulnerability of fish stocks to climate change. NOAA Fisheries completed the first of these assessments in the Northeast and reported on the results in 2015.

Climate is just one important underlying ecosystem-related challenge that affects U.S. fisheries management. To further strengthen the ability of fisheries managers to account for and anticipate complex ecosystem interactions, NOAA Fisheries in 2015 released a draft Ecosystem Based Fishery Management Policy. When finalized, the policy will clarify the agency's direction, focus and priorities for managing fisheries in an increasingly complex and changing environment. Recently, we also released a draft National Bycatch Reduction Strategy in recognition of the important role that bycatch plays in managing our nation's fisheries and conserving protected species.

These efforts are just a few examples of how NOAA Fisheries is looking to the future to ensure the long-term sustainability of our fisheries and the communities that depend on them. On the 40th anniversary of the Magnuson-Stevens Act, we recognize that our dynamic, science-based management process is proving to be successful at ending overfishing and rebuilding stocks, 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.

U.S. Secretary of Commerce
Penny Pritzker

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www.fisheries.noaa.gov
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