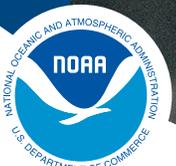




Status of Stocks 2023  
**Annual Report to  
Congress on the  
Status of U.S. Fisheries**

MAY 2024



**NOAA  
FISHERIES**

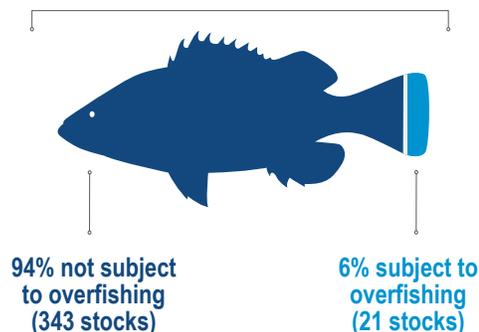
# Status of Stocks 2023

NOAA Fisheries is pleased to present the 2023 Report to Congress on the Status of U.S. Fisheries. This report highlights the work of NOAA Fisheries, the eight Regional Fishery Management Councils, and our other partners. In 2023, the number of stocks on the overfishing and overfished lists decreased, with the number of stocks on the overfishing list reaching an all-time low. There were 16 first-time stock status determinations, and we rebuilt one stock, bringing the total number of rebuilt stocks to 50 since 2000. We continue to implement management measures that end overfishing, rebuild overfished stocks, and sustain our fisheries for future generations. We accomplish our mission despite challenges, including a changing ocean climate and impacts to our working waterfronts and fishing businesses. Sound science, an increasing focus on climate-informed management, effective enforcement, meaningful partnerships, and public engagement drive our success in managing the most sustainable fisheries in the world.

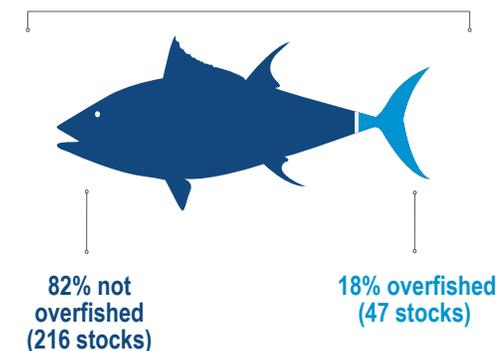
## Benefits of Sustainable Fisheries Management

Sustainable fisheries support thriving fishing communities, healthy marine ecosystems, and a strong economy. Commercial, recreational, subsistence, and ceremonial fishing provide a valuable food source, important outdoor activities, and cultural significance for the nation. U.S. commercial and recreational fishing provided 2.3 million jobs and generated \$321 billion in sales across the broader economy in 2022.

### 364 Stocks with Known Overfishing Status



### 263 Stocks with Known Overfished Status



### STOCK STATUS BREAKDOWN

We manage **506** stocks and stock complexes

We know the overfishing status of **364** stocks

We know the overfished status of **263** stocks

**343** not subject to overfishing

**21** subject to overfishing

**216** not overfished

**47** overfished

# The Year in Review

NOAA Fisheries manages 506 stocks or stock complexes in 45 fishery management plans. At the end of 2023, the overfishing list included 21 stocks, the overfished list included 47 stocks, and one stock was rebuilt, bringing the number of rebuilt stocks to 50 since 2000.

We determine the status of fish stocks and stock complexes through stock assessments and by comparing catch data to an overfishing reference level. Of the 506 stocks and stock complexes, 364 have a known overfishing status (343 not subject to overfishing and 21 subject to overfishing) and 263 have a known overfished status (216 not overfished and 47 overfished). Of the stocks most targeted by fishermen, 88 percent have a known overfishing status and 89 percent have a known overfished status. These stocks are contained in the [Fish Stock Sustainability Index](#).

Rebuilding our 50th fish stock was a major milestone for 2023. Snohomish coho salmon was determined to be overfished in 2018 and has now rebuilt to its sustainable level. A combination of responsive fishery management and habitat restoration helped to rebuild this important fish population. Snohomish coho salmon is the latest rebuilding success that dates back to 2000, when Atlantic sea scallop was the first stock declared rebuilt under the Magnuson-Stevens Act requirements.



*\*The number of managed stocks increased from 492 stocks/stock complexes in 2022 to 506 stocks/stock complexes in 2023. This increase in total number of stocks is partly responsible for the percentage decreases in 2023.*



A coho salmon leaps from the water. Credit: iStock

Another significant achievement this year includes nine first-time stock assessments for American Samoa bottomfish. Previously assessed as an 11-stock complex, the American Samoa bottomfish stock complex was determined to be overfished and subject to overfishing in 2020. Stock assessments conducted in 2023 incorporated new and improved data, allowing scientists to assess these bottomfish as seven individual stocks and two stock complexes (containing two stocks each), none of which were overfished or subject to overfishing.

Additional accomplishments include a fishery management plan amendment that allowed for first-time status determinations for six Pacific coast groundfish stocks. Five of these stocks were found to be not overfished, while quillback rockfish–California was determined to be overfished. Determining the status of previously unknown stocks advances our knowledge and provides managers the information they need to develop appropriate management responses. Finally, Atlantic chub mackerel had a first-time overfishing status determination (not subject to overfishing) using catch compared to its reference level.

# Summary of 2023 Changes

## 2023 OVERFISHING LIST

### Removed

\*American Samoa Bottomfish Complex  
 Atlantic mackerel - Gulf of Maine / Cape Hatteras  
 Cubera snapper - Gulf of Mexico  
 Gulf of Mexico Jacks Complex  
 Gulf of Mexico Mid-Water Snapper Complex

### Added

Summer flounder - Mid-Atlantic coast  
 Lane snapper - Gulf of Mexico

## 2023 OVERFISHED LIST

### Removed

\*American Samoa Bottomfish Complex  
 Coho salmon - Washington Coast: Strait of Juan de Fuca  
 Bluefish - Atlantic coast

### Added

Chinook salmon - Washington Coast: Queets Spring/Summer  
 Quillback rockfish - California (previously unknown)

### Rebuilt

Coho salmon - Puget Sound: Snohomish

## FIRST-TIME STATUS DETERMINATIONS

Atlantic chub mackerel - Mid-Atlantic coast (overfished - unknown, not subject to overfishing)  
 7 stocks and 2 stock complexes - American Samoa (not overfished, not subject to overfishing)  
 5 rockfish stocks - California, Oregon, Washington, and Pacific coast (not overfished, overfishing - unknown)  
 Quillback rockfish - California (overfished, overfishing - unknown)

*\*American Samoa Bottomfish Complex was previously assessed as a single complex that contained 11 stocks. The 2023 stock assessments evaluated the 11 stocks separately as seven stocks and two stock complexes (containing two stocks each).*



Scan this QR code to view the full list of 16 first-time status determinations.

## Ending Overfishing under Effective Laws

The Magnuson-Stevens Fishery Conservation and Management Act is the primary law that governs marine fisheries management in federal waters, and under this law the United States is an international leader in fisheries management. In 2023, approximately 94 percent of all stocks or complexes did not exceed their annual catch limits. When catch limit overages occur, NOAA Fisheries and the Councils take steps to ensure overages do not continue. Annually monitoring catch levels and working to keep them within established limits, paired with taking corrective measures when limits are exceeded, helps reduce the chance of overfishing. This also ensures long-term biological and economic sustainability.

This year, new data and updated stock assessments found that some stocks are now subject to overfishing and overfished. For example, a stock assessment showed that the catch level was too high for summer flounder. Additionally, a slight catch overage for lane snapper resulted in an overfishing listing. An updated stock assessment provided information that found Chinook salmon–

Washington Coast: Queets Spring/Summer is now overfished, and a first-time status determination for quillback rockfish–California found that this stock is overfished. Fisheries managers will develop appropriate stock-specific measures that will end overfishing immediately and rebuild overfished stocks.

## Success and Challenges in Rebuilding Fisheries

When a stock becomes overfished, a Council or NOAA Fisheries must develop a plan to rebuild the stock to a sustainable target level. Typically, the plan allows fishing to continue at a reduced level so the stock can rebuild to its target level and produce its MSY. This approach keeps the fishing industry working while stocks rebuild.

Forty-eight stocks or stock complexes are currently in rebuilding plans. NOAA Fisheries monitors rebuilding stocks and, through the fishery management process, adjusts measures to increase stock abundance to a target level that supports MSY. When a rebuilding stock increases above

the overfished threshold, we remove it from the overfished list but it remains under a rebuilding plan until it's fully rebuilt. In many rebuilding plans, fishing mortality is significantly reduced. But other factors—such as shifting oceanographic conditions related to climate change and new science that changes our understanding—may substantially impact rebuilding. Of the 48 stocks currently in rebuilding plans, eight are no longer overfished but remain in rebuilding plans.

Despite the complex challenges associated with fishery management, working with our partners and stakeholders we continually adapt our management response with innovative solutions using the most updated scientific information available. We are committed to reducing the number of overfished stocks and those subject to overfishing, and to rebuilding stocks that support sustainable fisheries in our changing climate.



Alaska fisher with a halibut catch. Credit: Josh Roper, Alaska Seafood Marketing Institute.

## Phrases to Know

*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 abundance is now at the target population size that supports its MSY.*

## What’s the difference?

*Overfishing is a direct result of fishing activities. Allowed to continue unchecked, overfishing can lead to an overfished population. Current management practices—such as annual catch limits and accountability measures—reduce the likelihood of this happening.*

*An overfished population is typically caused by overfishing, but other factors—including habitat degradation, pollution, climate change, and disease—can reduce the population size. Even when fishing is significantly reduced, these other factors may affect the stock’s ability to rebuild.*

# Overfishing and Overfished Stocks as of December 31, 2023

## ■ 47 On Overfished List

### North Pacific

- Blue king crab – Pribilof Islands
- Blue king crab – St. Matthew Island
- Snow crab – Bering Sea

### Pacific

- Chinook salmon – Klamath River fall
- Chinook salmon – Washington Coast: Queets Spring/Summer<sup>1</sup>
- Coho salmon – Queets<sup>1</sup>
- Pacific sardine - Northern subpopulation
- Quillback rockfish - California

### 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
- Guam Bottomfish Multi-species Complex
- ● Oceanic whitetip shark – Western/Central Pacific<sup>1</sup>
- Silky shark – Western/Central Pacific

### Gulf of Mexico

- ● Greater amberjack
- Cobia
- ● Gag - Gulf of Mexico
- Lane Snapper - Gulf of Mexico

### Caribbean

- Goliath grouper
- Nassau grouper
- Queen conch

## ● 21 On Overfishing List

### New England

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

### Highly Migratory Species

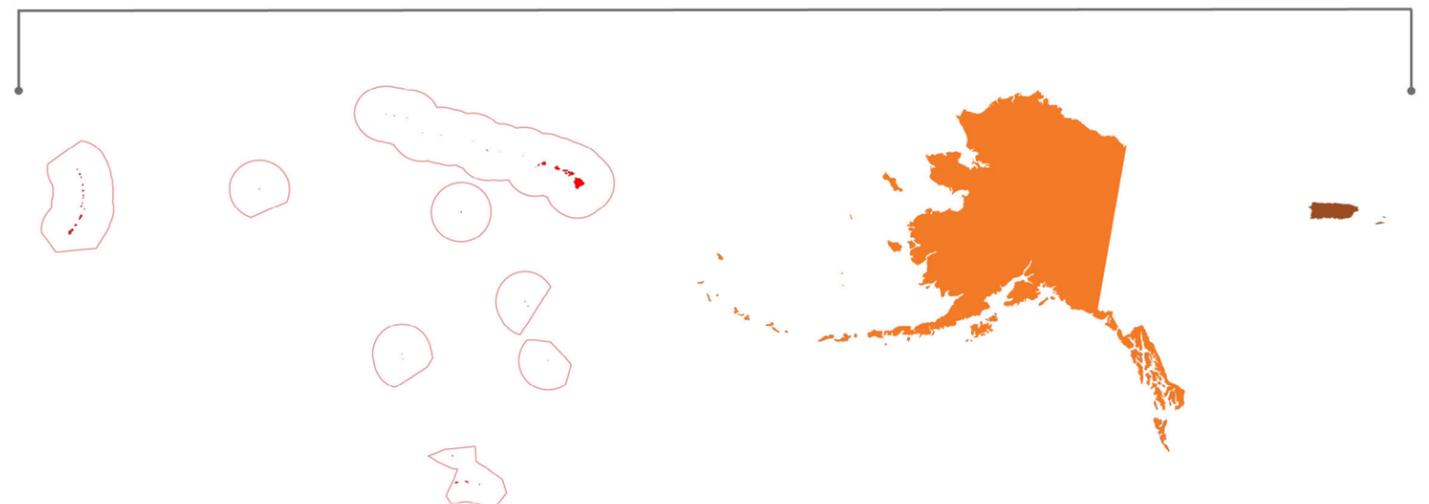
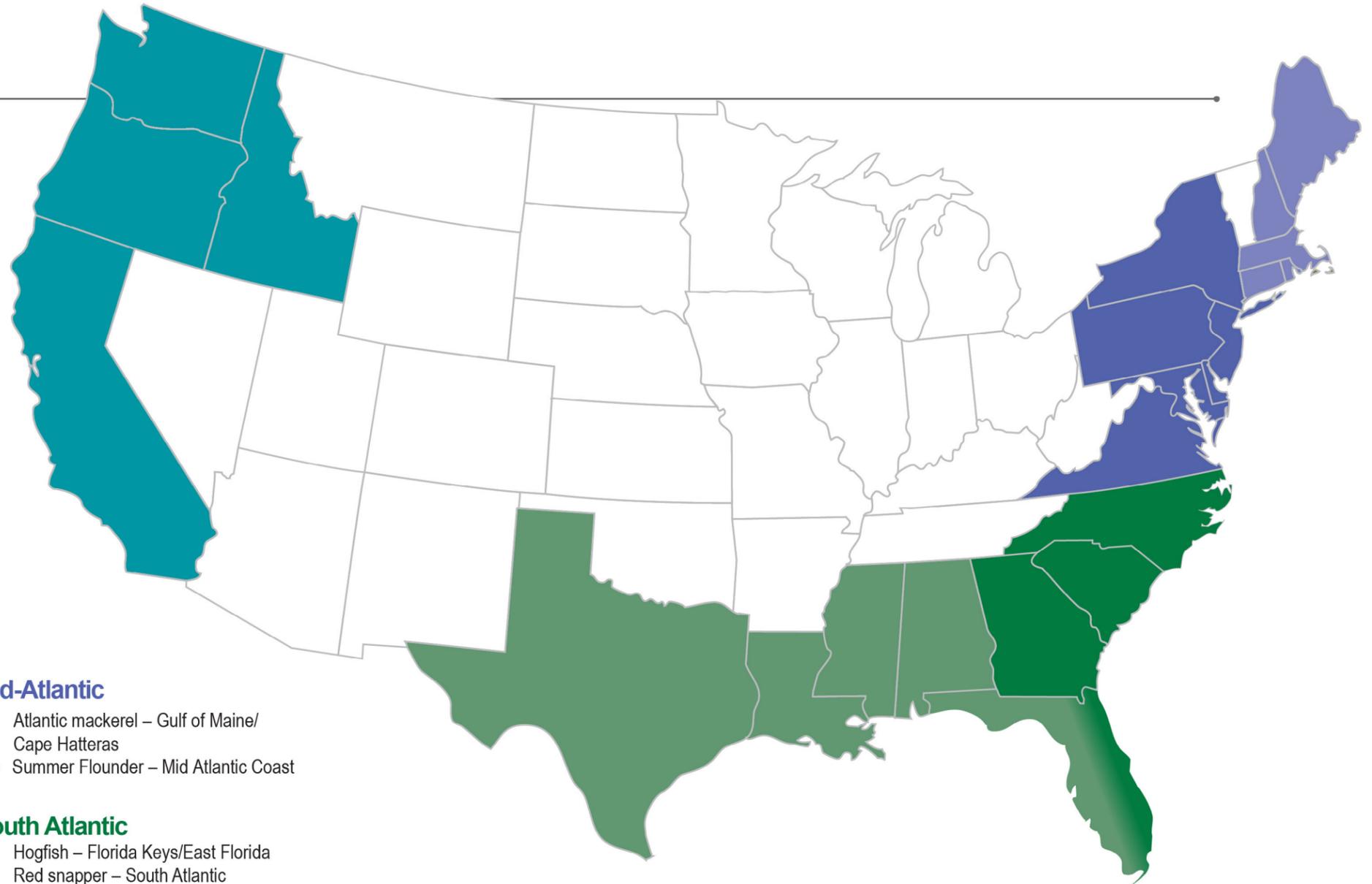
- ● Blacknose shark – Atlantic
- ● Blue marlin – Atlantic<sup>1</sup>
- ● Dusky shark – Atlantic
- White marlin – Atlantic<sup>1</sup>
- ● Scalloped hammerhead – Atlantic
- Porbeagle shark – Atlantic<sup>1</sup>
- Sandbar shark – Atlantic
- Bigeye tuna – Atlantic<sup>1</sup>
- ● Shortfin mako – North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

### Mid-Atlantic

- Atlantic mackerel – Gulf of Maine/Cape Hatteras
- Summer Flounder – Mid Atlantic Coast

### South Atlantic

- Hogfish – Florida Keys/East Florida
- ● Red snapper – South Atlantic
- Red porgy
- ● Snowy grouper
- ● Gag – South Atlantic
- Red grouper – South Atlantic



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

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

# The Science Behind Stock Status

A stock assessment is a scientific analysis of the abundance and composition of a fish stock, as well as the degree of fishing intensity. Stock assessments are subject to regional peer review as part of the process to ensure that we base management decisions on the best scientific information available. In fiscal year 2023, NOAA Fisheries completed 208 stock assessments.

Fishery management plans must specify objective and measurable criteria, called reference points, to determine if a stock is overfished or subject to overfishing. The Councils and NOAA Fisheries use information from stock assessments to calculate reference points and determine whether catch limits have successfully prevented or ended overfishing and whether a stock has become or remains overfished. For many stocks, NOAA Fisheries also uses a comparison of catch-to-overfishing-limit instead of using a stock assessment to determine if a stock is subject to overfishing. If the catch-to-overfishing-limit comparison is used, we make an annual overfishing determination. If we use a stock assessment, due to timing of the next stock assessment, it may take several years before we are able to determine if catch limits successfully ended overfishing. NOAA Fisheries is constantly improving catch accounting, data collection, and assessment science to expand our understanding of previously assessed stocks and gain insight into unassessed stocks.

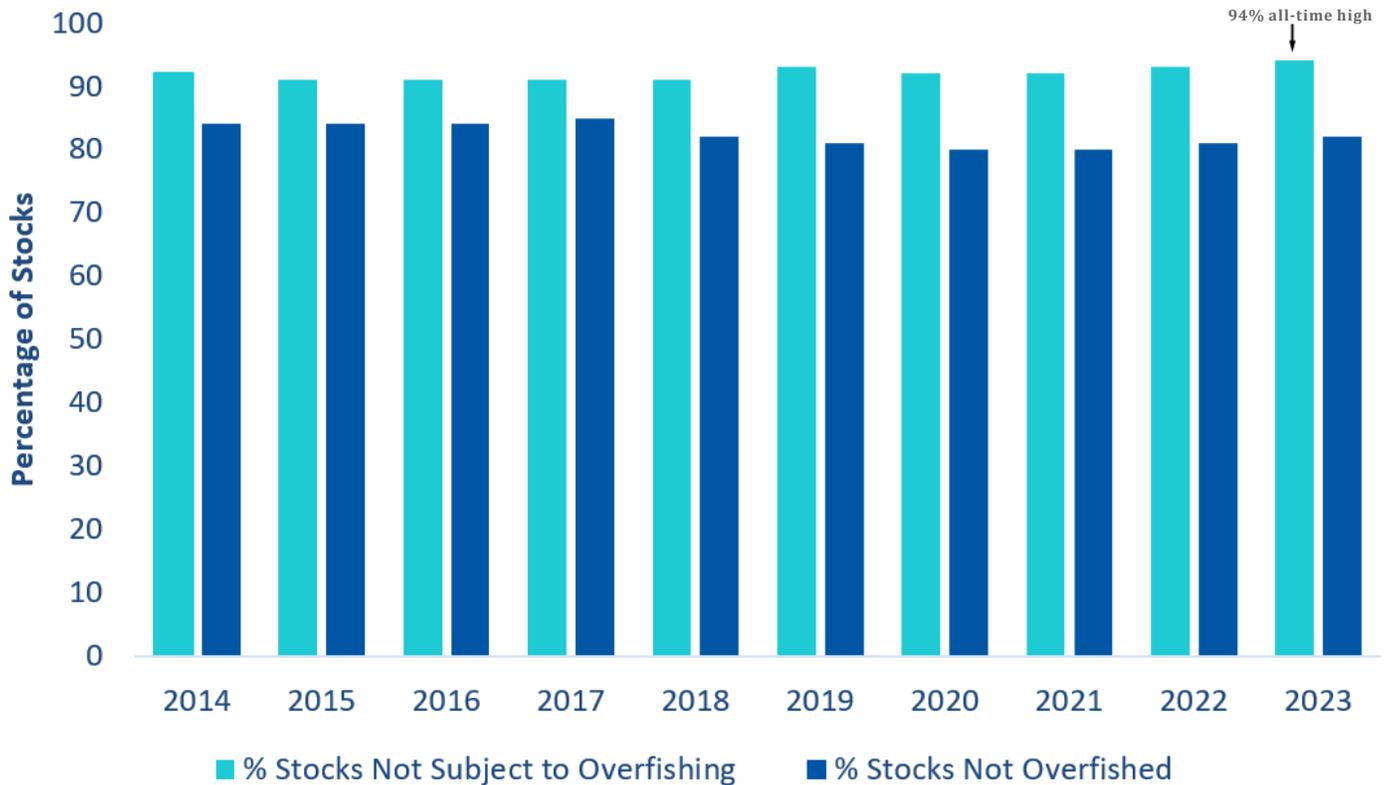
## Successful Rebuilding leads to Re-Opening of Fishing Areas



*Captain Yoshi Shimura, commercial non-trawl fisherman, with bocaccio and yellowtail rockfish. Credit: Captain Shimura.*

After two decades of closures that helped successfully rebuild nine Pacific coast groundfish stocks, 7,000 square miles of rockfish conservation areas off California and Oregon are now open to non-trawl commercial and recreational fishermen. Reopening these important historical fishing grounds will boost the commercial groundfish fishery that contributes more than \$158 million annually and the recreational groundfish fishery that generates approximately \$161 million annually to the local economy. These actions demonstrate the shared long-term commitment of NOAA Fisheries, the Pacific Fishery Management Council, and state and tribal co-managers in rebuilding groundfish stocks.

## Percentage of Stocks Not Subject to Overfishing and Not Overfished 2014–2023



## New Climate Vulnerability Assessments in the Gulf of Mexico and South Atlantic

As part of the NOAA Fisheries Climate Science Strategy, NOAA-led researchers recently completed vulnerability analyses of approximately 150 fish and invertebrate species in the Gulf of Mexico and South Atlantic. Findings predict that sea surface temperature, ocean acidification, sea surface salinity, and dissolved oxygen will be the primary environmental factors that increase the susceptibility of many of the species we manage. Impacted species include sharks, groupers, and invertebrates. These results will help support improved stock assessments, specify actions that may enhance some species’ resilience to climate change, and identify knowledge gaps to inform future research.



*Red grouper on a reef in the Atlantic Ocean. Credit: NOAA Fisheries.*

## Equity and Environmental Justice

NOAA Fisheries released its first-ever national Equity and Environmental Justice (EEJ) Strategy in 2023, a blueprint for how the agency will serve all communities more equitably and effectively. The strategy details how we will create an empowering environment to support our efforts, incorporate EEJ in agency policies and plans, ensure inclusive governance, and distribute benefits equitably. Through effective outreach and engagement, NOAA Fisheries will advance equal treatment, opportunities, and environmental benefits for all people and communities.



*Parent harvesting sockeye salmon with their 8-year old child. Credit: Alaska Seafood Marketing Institute.*

# Our Proud Tradition of Rebuilding Stocks and Sustaining our Fisheries

This year marks a major achievement in rebuilding our 50th stock. Through harvest quotas, size limits, and other management measures, we have ended overfishing and rebuilt stocks to sustainable levels for over two decades. Our fisheries support a strong economy and provide a healthy local source of food. In 2022, commercial fishermen harvested over 8.3 billion pounds of seafood valued at \$5.9 billion. In 2022, saltwater angling generated \$138 billion in sales impacts, \$45.1 billion in income impacts, \$74.9 billion in value-added impacts, and supported 692,000 jobs in the marine recreational fishing industry and across the broader economy. Also in 2022, U.S. commercial fisheries and the seafood industry generated \$183.4 billion in sales impacts, \$47.2 billion in income, \$74 billion in value-added impacts, and supported 1.6 million full and part-time jobs.

NOAA Fisheries continues to engage with partners to accomplish our goals and keep fisheries thriving across the country. We will continue to work with Congress, the Councils, interstate fisheries commissions, our state partners, and other stakeholders to maintain sustainable fisheries. This will help support a strong economy and create an environment that promotes equity and environmental justice.



*Angler catching fish. Credit: Return 'Em Right*



U.S. Secretary of Commerce

**Gina Raimondo**

Under Secretary of Commerce  
for Oceans and Atmosphere & NOAA  
Administrator

**Dr. Richard W. Spinrad**

Assistant Administrator for Fisheries

**Janet L. Coit**

MAY 2024

[www.fisheries.noaa.gov](http://www.fisheries.noaa.gov)

OFFICIAL BUSINESS

**National Marine  
Fisheries Service**

