



Status of Stocks 2020  
**Annual Report to  
Congress on the  
Status of U.S. Fisheries**

MAY 2021



**NOAA  
FISHERIES**

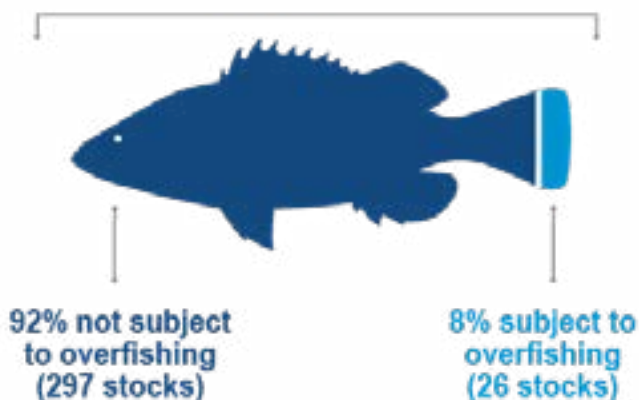
# Status of Stocks 2020

NOAA Fisheries is pleased to present the 2020 Report to Congress on the Status of U.S. Fisheries. This report highlights NOAA's 50 years of science, service, and stewardship of our nation's fisheries. NOAA Fisheries, the eight Regional Fishery Management Councils, and other partners made significant strides this year, despite an increase in the number of stocks on the overfishing and overfished lists. We continue to rebuild stocks, end overfishing, assess the status of new stocks, and execute robust management principles that will sustain our fisheries into the future.

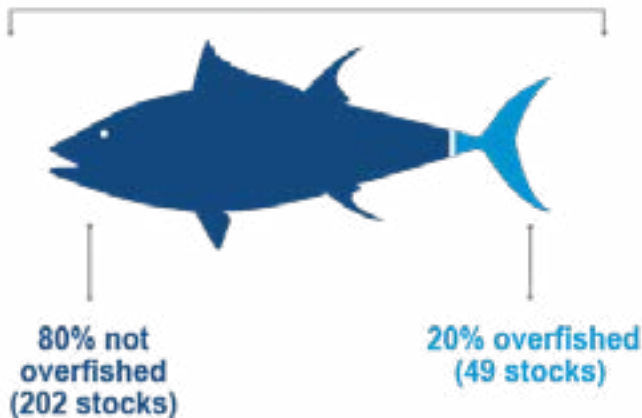
## Economic Benefits of Sustainable Fisheries Management

Sustainable fisheries increase the value of U.S. fisheries to the economy, support fishing communities, and maintain healthy marine ecosystems. U.S. commercial fisheries landed 9.3 billion pounds of seafood valued at \$5.5 billion in 2019. Saltwater recreational fishing remains a key contributor to the national economy with anglers taking more than 187 million trips in 2019. Sound science, innovative management approaches, effective enforcement, meaningful partnerships, and public engagement are the core concepts that contribute to our success.

### 323 Stocks with Known Overfishing Status



### 251 Stocks with Known Overfished Status



# The Year in Review

At the end of 2020, there were 26 stocks on the overfishing list and 49 on the overfished list. Since 2000, 47 stocks have been rebuilt.

NOAA Fisheries manages 460 stocks or stock complexes in 46 fishery management plans. Each year, we determine the status of fish stocks and stock complexes through stock assessments. Of 460 stocks and stock complexes, 323 (70 percent) have a known overfishing status and 251 (55 percent) have a known overfished status. Of the important stocks most targeted by fishermen, 89 percent have a known overfishing or overfished status. These stocks are part of the Fish Stock Sustainability Index (FSSI). In 2020, stock assessments led to known status determinations of seven previously unknown stocks, six of which were found to be not overfished.



# Summary of 2020 Changes

OVERFISHING LIST	
Removed	Added
Greater amberjack - Southern Atlantic Coast Gray triggerfish - Gulf of Mexico Greater amberjack - Gulf of Mexico Red grouper - South Atlantic	Americal Samoa Bottomfish Multi-species Complex Red Porgy - South Atlantic Gulf of Mexico Jacks Complex Cobia - Gulf of Mexico Lane snapper - Gulf of Mexico Golden tilefish - South Atlantic  <b>Previously Unknown</b> Oceanic whitetip shark - Central and Western Pacific Silky shark - Central and Western Pacific
OVERFISHED LIST	
Removed	Added
Snohomish coho salmon	American Samoa Bottomfish Multi-species Complex Guam Bottomfish Multi-species Complex Atlantic herring - Northwestern Atlantic Coast  <b>Previously Unknown</b> Oceanic whitetip shark - Central and Western Pacific



## Ending Overfishing under Effective Laws

Under the Magnuson-Stevens Fishery Conservation and Management Act, the United States has become an international leader in fisheries management. The law has been reauthorized twice since its enactment—once in 1996 and again in 2006.

In 2006, Congress added a requirement to use annual catch limits to end and prevent overfishing. In 2020, approximately 90 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 don't continue. Monitoring catch levels and keeping them in check on an annual basis helps reduce the chance of overfishing and ensures long-term biological and economic sustainability.



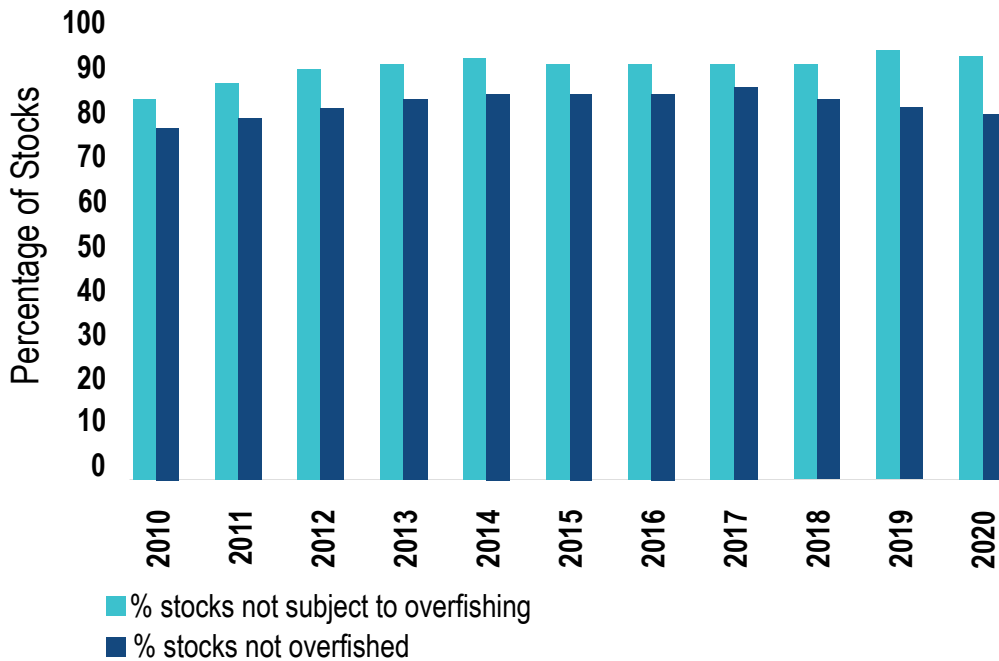
## Challenges in Fisheries Management

The stocks added to the 2020 overfishing and overfished lists illustrate several challenges inherent in fisheries management. This year, first-time stock assessments, highly variable population levels, and continued refinements in fisheries data were reasons for new listings. For example, American Samoa and Guam bottomfish stock assessments included new information that changed our understanding of current stock conditions and will now be used to craft responsive management measures.

Additionally, despite historically low fishing levels in recent years, Atlantic herring was added to the overfished list because, since 2013, reproduction has been steadily declining to record low levels. Finally, catch overages resulted in overfishing listings for some South Atlantic and Gulf of Mexico stocks. Advancing our scientific knowledge and adapting our management response is an ongoing process that involves all of our partners and stakeholders. Despite challenges, we continue to adopt innovative solutions to improve the overall status of our fisheries.



## Percentage of Stocks Not Subject to Overfishing and Not Overfished 2010–2020



## How We Rebuild Fisheries

When a stock becomes overfished, a Council (or, for Atlantic highly migratory species, NOAA Fisheries) must develop a rebuilding 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 maximum sustainable yield (MSY). This approach keeps fishermen and waterfronts working while stocks rebuild.

Forty-five stocks or stock complexes are currently in rebuilding plans. NOAA Fisheries monitors rebuilding stocks and, through the Council process, adjusts management measures 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, of 45 stocks with rebuilding plans, six are no longer overfished but continue to be managed under rebuilding plans.

## Overfishing and 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 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 to determine when a stock is overfished or subject to overfishing. These are called reference points. 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. In fiscal year 2020, NOAA Fisheries conducted 193 stock assessments.

The Councils and NOAA Fisheries use information from stock assessments to develop and recommend annual catch limits and other conservation and management measures. While catch limits are set for each year, assessments are often done less frequently. To determine whether catch limits have successfully ended or prevented overfishing, NOAA Fisheries may use either the fishing intensity metrics and reference points derived in a stock assessment or a comparison of catch to the overfishing limit. If the catch-to-overfishing-limit comparison is used, an overfishing determination is made annually. If a stock assessment is used, 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.



## Collaboration Leads to Better Science

Critical scientific data doesn't come only from scientists and laboratories. With first-hand information from commercial and recreational fishermen, NOAA Fisheries is learning more about key species and their habitats. For example, in response to fishermen reporting more Gulf of Mexico red snapper and Atlantic halibut in recent years, several studies were initiated. Initial study results released in 2020 found more abundant red snapper in flat habitat, such as mud or sand, than previously realized. This gave a boost to the estimated size of this population, and the data is being incorporated into an upcoming stock assessment. Similarly, the first of a three-part study of Atlantic halibut clarified our knowledge of reproduction and spawning seasons. Thanks to collaborative research with the fishing industry, these findings will be incorporated into future stock assessments and help inform fisheries management.



# Overfishing and Overfished Stocks as of December 31, 2020

## ■ 49 On Overfished List

### North Pacific

- Blue king crab – Pribilof Islands
- Blue king crab – St. Matthew Island

### Pacific

- Chinook salmon – Sacramento River fall
- Chinook salmon – Klamath River fall
- Coho salmon – Queets<sup>1</sup>
- Coho salmon – Juan de Fuca<sup>1</sup>
- Pacific sardine - Northern subpopulation

### Pacific and Western Pacific

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

### Western Pacific

- ● Striped marlin – Western/Central Pacific<sup>1</sup>
- Seamount Groundfish Complex – Hancock Seamount<sup>1</sup>
- ● American Samoa Bottomfish Multi-species Complex
- Guam Bottomfish Multi-species Complex
- ● Oceanic whitetip shark – Western/Central Pacific<sup>1</sup>
- Silky shark – Western/Central Pacific<sup>1</sup>

### Gulf of Mexico

- Greater amberjack
  - Cobia
  - Lane snapper
  - Gulf of Mexico Jacks Complex

### Caribbean

- Goliath grouper
- Nassau grouper
- Queen conch

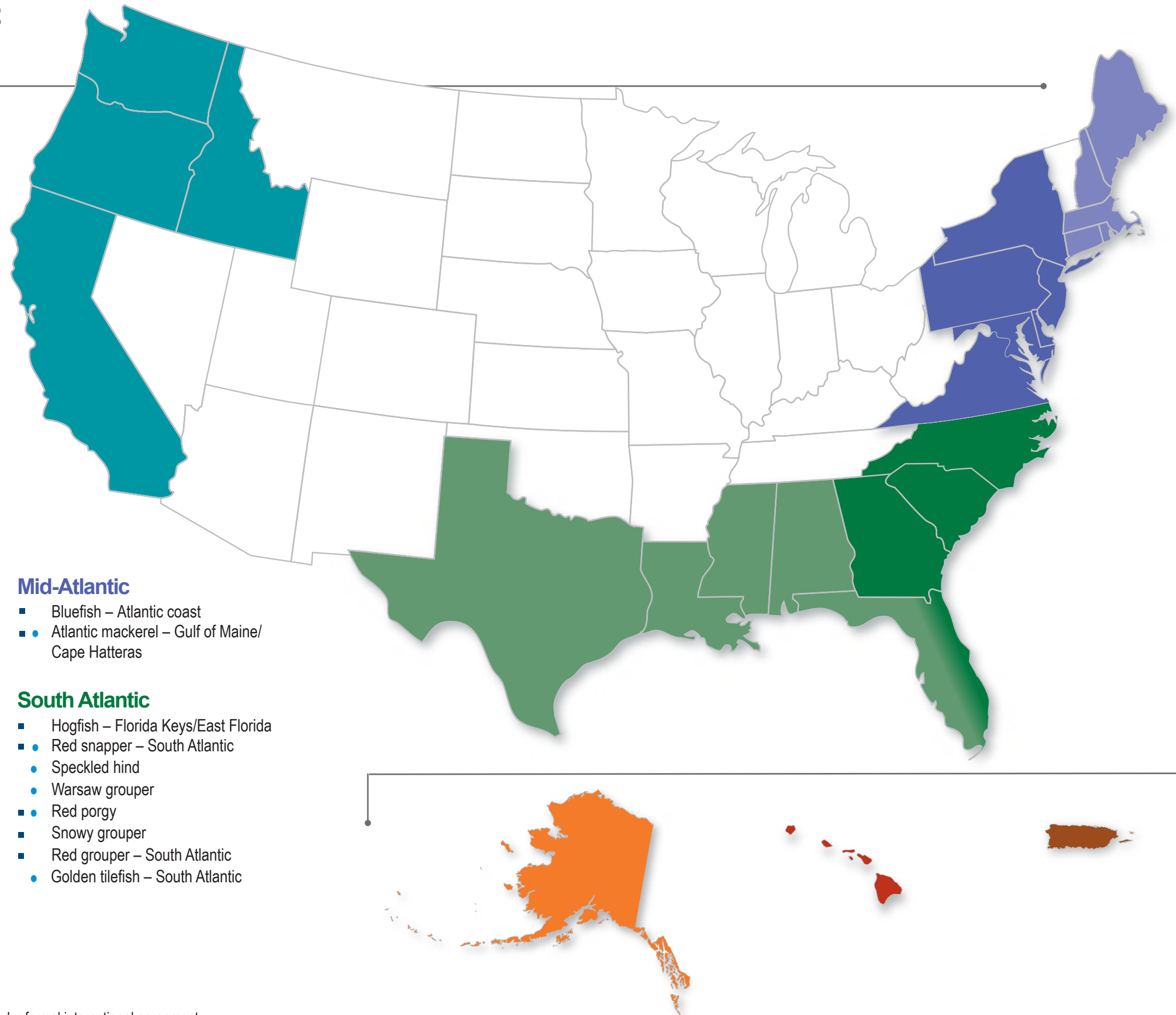
## ● 26 On Overfishing List

### 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
- Winter flounder – Southern New England
- Winter flounder – Georges Bank
- ● Red hake – Southern Georges Bank/Mid-Atlantic
- White hake – Gulf of Maine/Georges Bank
- Atlantic herring

### 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

- Bluefish – Atlantic coast
- ● Atlantic mackerel – Gulf of Maine/Cape Hatteras

### South Atlantic

- Hogfish – Florida Keys/East Florida
- ● Red snapper – South Atlantic
- Speckled hind
- Warsaw grouper
- ● Red porgy
- Snowy grouper
- Red grouper – South Atlantic
- Golden tilefish – 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.



# A Challenging Year

## Pandemic and Economic Relief

In 2020, the fishing industry faced unprecedented challenges from COVID-19. These impacts were far-reaching, affecting wild-caught commercial fisheries, recreational for-hire operators, seafood dealers, aquaculture operations, and tribal fisheries. A NOAA Fisheries economic analysis revealed broad declines in the U.S. fishing and seafood sector. For example, commercial fish landings revenues declined an average of 29 percent through the first half of 2020. To assist those impacted, NOAA Fisheries allocated fisheries assistance funding under the Coronavirus Aid, Relief, and Economic Security Act, also called the CARES Act. As of December 31, 2020, \$300 million had been obligated and approximately \$78 million had been disbursed.



## Maintaining the Mission

Many ship-based surveys, which collect data to inform catch levels and other fishery management decisions, were cancelled in 2020 due to COVID-19. In response, NOAA Fisheries scientists worked in a variety of ways to maintain survey continuity. For example, the agency deployed three unmanned wind and solar-powered Sailable Drones in the Bering Sea to collect information about the nation's largest commercial fishery, Alaska pollock. These Sailable Drones also collected important oceanographic and meteorological data during their 60-day mission, which informed weather forecasts.



## Shifting to a Virtual Workplace

COVID-19 also led to dramatic changes in both agency and Council operations. The vast majority of NOAA Fisheries staff worked from home full-time for most of 2020, forcing new and innovative solutions to our work to support commercial and recreational fishing. In many cases, for example, fishermen and dealers can now renew their permits online for the first time, some within 24 hours. In addition, the Councils quickly pivoted to virtual meetings, holding 30 online Council meetings in 2020. The online format allowed public engagement and enabled critical fishery management decisions to proceed.

## Our Proud Tradition of Sustainable Fisheries

More than 40 years of managing our nation's fisheries under the Magnuson-Stevens Fishery Conservation and Management Act has positioned NOAA Fisheries as a global leader in sustainable fisheries management and contributed significant value to the U.S. economy. Thanks to harvest quotas, size limits, and other management measures, consumers can be confident that U.S. seafood products are sustainably harvested. Our highest value wild-caught stocks in the United States, including Alaska pollock, sockeye salmon, and Atlantic sea scallop, are governed by science-based management measures that ensure a steady supply of seafood to the market. The Alaska pollock fishery, worth an estimated \$2.19 billion, is the second largest fishery in the world and provides nearly 30,000 jobs across the United States. We are also working to boost seafood production through efforts to enable more efficient and predictable aquaculture permitting, the creation of Aquaculture Opportunity Areas, and other initiatives.

NOAA Fisheries continues to engage with partners to accomplish the work necessary to keep fisheries thriving across the country. NOAA Fisheries is committed to working with Congress, the Councils, our state partners, and other stakeholders to end overfishing and rebuild stocks so that our sustainable fisheries continue to support a strong economy.





U.S. Secretary of Commerce  
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