NOAA FISHERIES

Status of Stocks 2013

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







A Message from the Assistant Administrator for Fisheries



Eileen Sobeck
Assistant Administrator for NOAA Fisheries

NOAA Fisheries is pleased to present the 2013 Report on the Status of U.S. Fisheries, pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA). This year's report highlights the continued progress that, collectively, NOAA Fisheries, the Regional Fishery Management Councils, and our stakeholders have made to end overfishing and fully rebuild our nation's fish stocks. In 2013, seven stocks came off the overfishing list and four stocks are no longer listed as overfished. Additionally, recent assessments show two stocks have rebuilt—bringing the total number of stocks rebuilt since 2000 to 34.

These results demonstrate the strength of the U.S. science-based management model under the MSA and the importance of ending overfishing as the key to addressing past overfishing problems. While new stocks have been added to both the overfishing and overfished lists this year, the status of many of these stocks was previously unknown. Managers now have the status information they need to develop plans to end overfishing and rebuild these stocks.

Sustainable management of our fish stocks is critically important to the nation's economy. Commercial fishing supports fishermen and fishing communities and provides Americans with a local source of healthy food. Recreational fishing is an important social activity for individuals and families, and is a critical economic contributor to local communities and regional economies. Combined, U.S. commercial and recreational saltwater fishing generated more than $199 billion in sales and supported 1.7 million jobs in 2012. Subsistence fishing provides an essential, culturally significant food source for many people.

By ending overfishing and rebuilding stocks, we are strengthening the value of fisheries to the economy, our communities, and marine ecosystems. To sustain this progress, we must continue to ensure solid, science-based determinations of stock status and better linkages to biological, socioeconomic, and ecosystem conditions. With the support of the Councils, commercial and recreational fishermen, states, and all of our other partners, we will strive to manage U.S. fisheries for the benefit of the nation.

Summary of Changes

STATUS	2012 (%)	2013 (%)
On the Overfishing List	29 (10%)	28 (9%)
On the Overfished List	41 (19%)	40 (17%)
Total Rebuilt since 2000	32	34

Status Determination Listings for All Stocks

OVERFISHING LIST	# (%) OF STOCKS/ STOCK COMPLEXES
Known status	**300**
Not subject to overfishing	272 (91%)
Subject to overfishing	28 (9%)
Unknown status	**178**
OVERFISHED LIST	**# (%) OF STOCKS/ STOCK COMPLEXES**
Known status	**230**
Not overfished	190 (83%)
Overfished	40 (17%)
Unknown status	**248**

For definitions of overfished and overfishing, please see page six.



A researcher with a black sea bass. The Southern Atlantic Coast stock of black sea bass was declared rebuilt in 2013. Credit: NOAA Fisheries

Summary of 2013 Results

Changes to the status of our nation's marine fish stocks:

- Seven stocks were removed from the overfishing list, while six stocks were added.
  - The overfishing status of four of the added stocks was previously unknown.
- Nine percent of stocks are on the overfishing list, compared with 10 percent in 2012.
- Four stocks were removed from the overfished list, and three were added.
  - The overfished status of two of the added stocks was previously unknown.
- Seventeen percent of stocks are on the overfished list, compared with 19 percent in 2012.
- Two stocks managed under rebuilding plans have rebuilt, bringing the total number of rebuilt stocks to 34 since 2000.

Of the 478 stocks and stock complexes managed in federal fishery management plans, we have information to make overfishing status determinations for 300 (63 percent) and overfished status determinations for 230 (48 percent). Of those stocks that contribute approximately 90 percent of total fishery landings, the overfishing status is known for 85 percent and overfished status is known for 79 percent. Details on all our managed stocks are available online at: www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries.

Continuing Improvement

Ending Overfishing Through Annual Catch Limits

In 2007, Congress enacted a requirement to use annual catch limits (ACL) to end and prevent overfishing. All federal fisheries, including stocks currently listed as experiencing overfishing and as overfished, are operating under ACLs. Stock assessments show that the number of domestic stocks experiencing overfishing continues to decline. NOAA Fisheries and the Councils are actively monitoring how well ACLs control catch and are working to prevent further overfishing.

Rebuilding and Improving Stocks

When it is determined that a stock is overfished, the relevant Council must implement a rebuilding plan. A typical rebuilding plan allows fishing to continue, but at a reduced level so that the stock will increase 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. Fifty stocks and stock complexes currently are under rebuilding plans, including 13 stocks that are no longer on the overfished list because they have increased in abundance and are not yet at the target level that supports MSY.

Black sea bass, a Southern Atlantic stock managed by the South Atlantic Fishery Management Council, is a recent rebuilding success story. This popular stock, which ranges from Cape Hatteras, North Carolina, to the Florida Keys, was declared overfished and a rebuilding plan put in place in 2006. Management measures such as a constant catch plan, as well as changes in the recreational bag limit and fish size limits for both the commercial and recreational fisheries,

led to an early recovery of the stock. As a result of rebuilding, annual catch limits have more than doubled. This is important to recreational anglers, charter boat captains, and commercial fishermen alike. According to the latest *Fisheries Economics of the U.S.* report, in 2012 recreational marine anglers in the South Atlantic states spent more than $6.5 billion, generating over 34,000 jobs in east Florida alone. Black sea bass is also an important commercial species and many fishermen expect to see incomes rise with increased catch limits for this stock.

NOAA Fisheries monitors the progress of all rebuilding stocks, and makes adjustments to plans if needed. Current information on fishing mortality and biomass trends for stocks in rebuilding plans is available online at: www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries.



Credit: Gail Smith, Alaska Department of Fish and Game

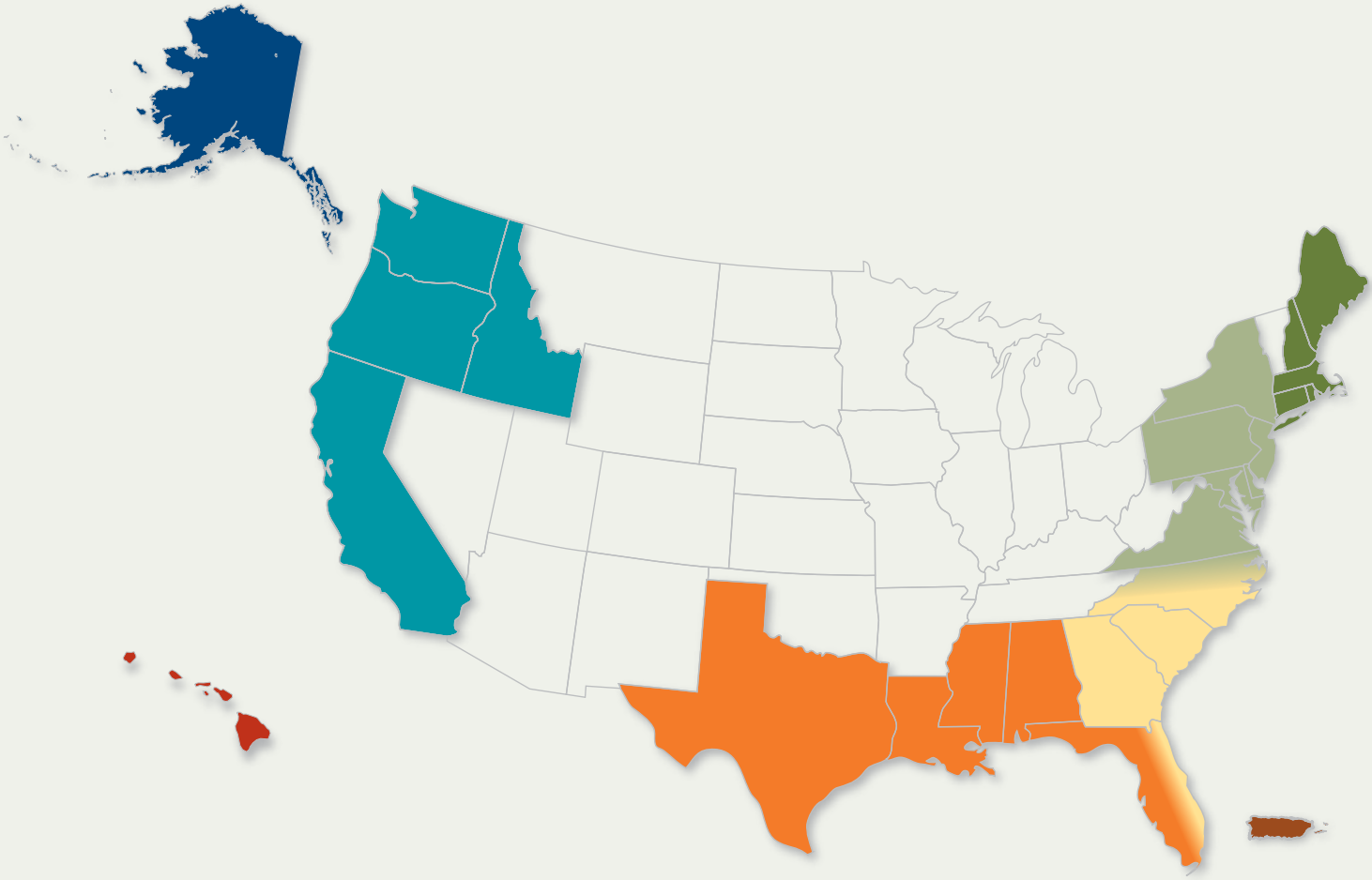
Summary of changes in stock status in 2013

OVERFISHING LIST	
THE FOLLOWING STOCKS ARE NO LONGER ON THE OVERFISHING LIST:	**THE FOLLOWING STOCKS WERE ADDED TO THE OVERFISHING LIST:**
White hake–Gulf of Maine/Georges Bank	Thorny skate–Gulf of Maine[1]
Red grouper–Southern Atlantic Coast	Winter skate–Georges Bank/Southern New England[1]
Black sea bass–Southern Atlantic Coast	Gulf of Mexico hogfish[2]
Gag–Gulf of Mexico	South Atlantic blueline tilefish[2]
Gray triggerfish–Gulf of Mexico	Gulf of Mexico Jacks Complex[2]
Greater amberjack–Gulf of Mexico	Striped marlin–Western and Central North Pacific[2,3]
Bering Sea/Aleutian Islands Octopus Complex	
OVERFISHED LIST	
THE FOLLOWING STOCKS ARE NO LONGER ON THE OVERFISHED LIST:	**THE FOLLOWING STOCKS WERE ADDED TO THE OVERFISHED LIST:**
Sacramento River fall Chinook salmon (rebuilt)	Pacific bluefin tuna–Pacific, PFMC/WPFMC[3,4,5]
White hake–Gulf of Maine/Georges Bank	Striped marlin–Western and Central North Pacific[2,3]
Red grouper–Southern Atlantic Coast	South Atlantic blueline tilefish[2]
Cowcod–Pacific Coast	
REBUILT LIST	
THE FOLLOWING STOCKS WERE REBUILT:	
Black sea bass–Southern Atlantic Coast	
Sacramento River fall Chinook salmon	

1. *Survey catches declined 20 percent averaged over 3 years.*
2. *Stock status was formerly listed as unknown.*
3. *These highly migratory stocks are fished by international fleets, in addition to the United States. The U.S. proportion of total catch for these stocks was 14% of total catch from 2006-2010.*
4. *PFMC–Pacific Fishery Management Council, WPFMC–Western Pacific Fishery Management Council*
5. *Stock size was estimated well below its threshold during a recent assessment.*

478 stocks and stock complexes are managed within 46 federal fishery management plans nationwide.

Stocks on the Overfishing List in 2013



North Pacific
- None

Pacific and Western Pacific
1. Bigeye tuna—Pacific*
2. *Pacific bluefin tuna—Pacific**

Western Pacific
1. *Striped marlin—Central Western Pacific**

Gulf of Mexico
1. Hogfish
2. Jacks Complex

Highly Migratory Species
1. *Albacore—North Atlantic**
2. *Blacknose shark—Atlantic*
3. *Blue marlin—Atlantic**
4. *Bluefin tuna—West Atlantic**
5. *Dusky shark—Atlantic*
6. Sailfish—West Atlantic*
7. *White marlin—Atlantic**
8. *Scalloped hammerhead—Atlantic*

New England
1. *Atlantic cod—Georges Bank*
2. *Atlantic cod—Gulf of Maine*
3. Haddock—Gulf of Maine
4. *Windowpane—Gulf of Maine/Georges Bank*
5. *Witch flounder*
6. *Yellowtail flounder—Cape Cod/Gulf of Maine*
7. *Yellowtail flounder—Georges Bank*
8. *Thorny skate—Gulf of Maine*
9. Winter skate—George Bank/Southern New England

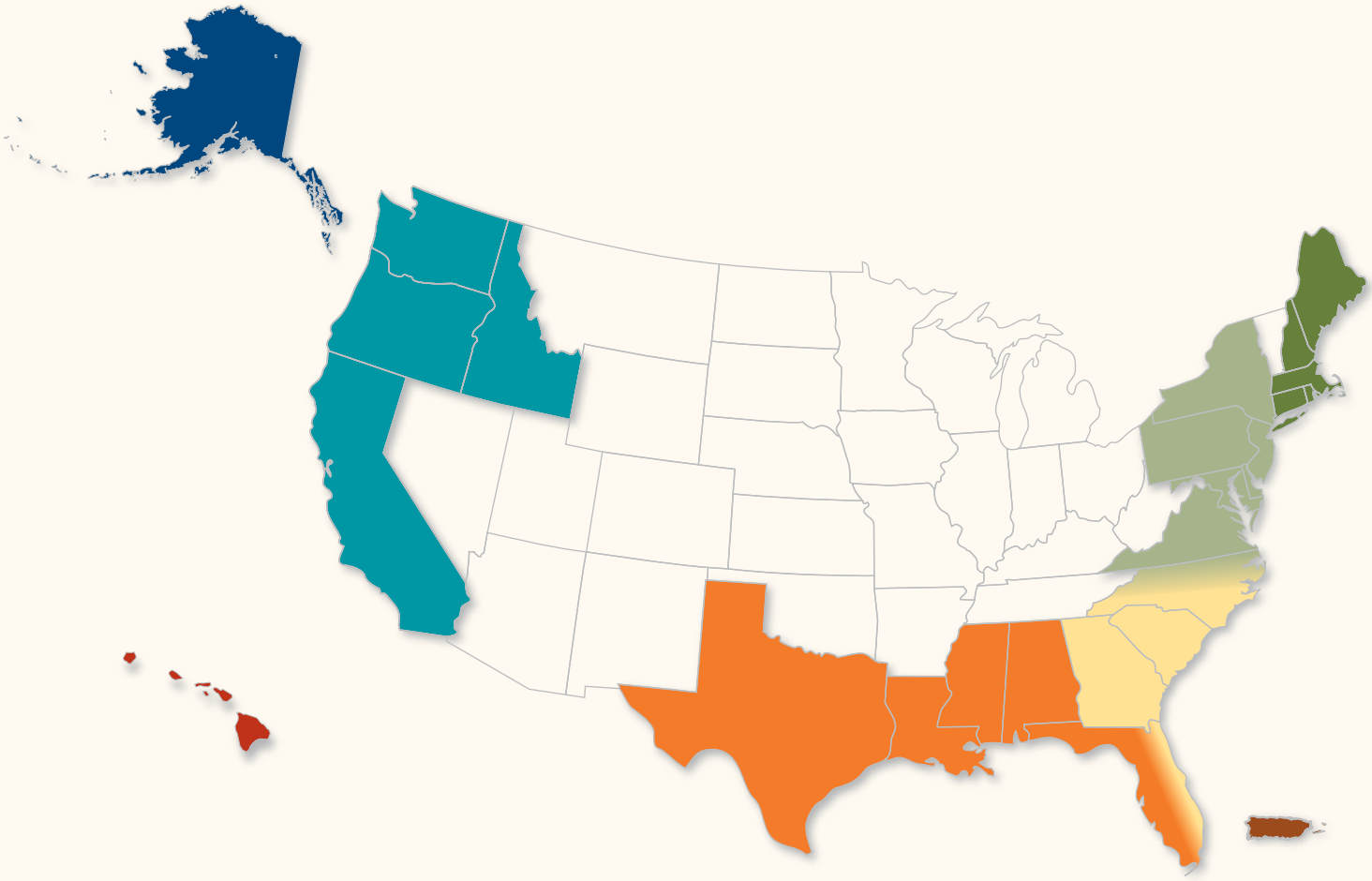
Mid-Atlantic
- None

South Atlantic
1. Gag
2. *Red snapper*
3. *Snowy grouper*
4. Speckled hind
5. Warsaw grouper
6. *Blueline tilefish*

Caribbean
- None

Stocks in italics are also on the overfished list.
* Stock is fished by U.S. and International fleets.

Stocks on the Overfished List in 2013



North Pacific
1. Blue king crab—Pribilof Islands

Pacific
1. Canary rockfish
2. Pacific ocean perch
3. Yelloweye rockfish

Pacific and Western Pacific
1. Pacific bluefin tuna—Pacific

Western Pacific
1. Striped marlin—Central Western Pacific
2. Seamount Groundfish Complex—Hancock Seamount

Gulf of Mexico
1. Gag
2. Gray triggerfish
3. Greater amberjack
4. Red snapper

Highly Migratory Species
1. Albacore—North Atlantic*
2. Blacknose shark—Atlantic
3. Blue marlin—Atlantic*
4. Bluefin tuna—West Atlantic*
5. Dusky shark—Atlantic
6. Porbeagle shark—Atlantic
7. Sandbar shark—Atlantic
8. White marlin—Atlantic*
9. Scalloped hammerhead—Atlantic

New England
1. Atlantic cod—Georges Bank
2. Atlantic cod—Gulf of Maine
3. Atlantic halibut
4. Atlantic salmon
5. Atlantic wolffish
6. Ocean pout
7. Thorny skate
8. Yellowtail flounder—Georges Bank
9. Yellowtail flounder—Cape Cod/Gulf of Maine
10. Windowpane—Gulf of Maine/Georges Bank
11. Winter flounder—Southern New England/Mid-Atlantic
12. Witch flounder

Mid-Atlantic
- None

South Atlantic
1. Red porgy
2. Red snapper
3. Snowy grouper
4. Blueline tilefish

Caribbean
1. Grouper Unit 1
2. Grouper Unit 2
3. Grouper Unit 4
4. Queen conch

* Stock is fished by U.S. and International fleets.

The Science Behind Stock Status

The MSA requires that a fishery management plan specify objective and measurable criteria, or reference points, for determining when a stock is subject to overfishing or overfished. A scientific analysis of the abundance and composition of a fish stock (stock assessment) evaluates the stock against its reference points. Stock assessments use the best information available, which may include data from fishery landings, scientific surveys, and biological and ecological studies. A stock assessment typically undergoes peer review by independent scientists before it is accepted as the best scientific information available. Generally, we use the stock assessment and the reference points to determine whether the stock is subject to overfishing or overfished. Information from the stock assessment is used by the Councils to recommend the annual catch limit for the stock.

Stock Status—What does it all mean?

Federal fishery management is based on the concept of maximum sustainable yield (MSY)—the largest long-term average catch that can be taken from a stock under prevailing environmental and fishery conditions. The target level of stock abundance is the biomass (population) that can produce MSY.

What is the difference between "overfishing" and "overfished?"

A stock that is subject to *overfishing* has a fishing mortality (harvest) rate higher than the rate that produces MSY. A determination of overfishing does not necessarily mean that the fishery is not sustainable or that the stock or its ecosystem is being impaired. These negative outcomes are associated with high levels of overfishing over a period of many years. Current management approaches, including annual catch limits and accountability measures to prevent overfishing, greatly reduce the likelihood that damaging levels of overfishing will occur.

A stock that is *overfished* has a biomass level depleted to a degree that the stock's capacity to produce the MSY is jeopardized. In some cases overfishing is the main cause for depletion of the stock, but other factors can affect the abundance of a fish stock and lead to an overfished listing. These factors include abnormal levels of disease, extreme population cycles, habitat degradation, and environmental changes such as climate, ocean acidification, and land-based pollution. When we determine that a stock is overfished, the Council must implement a plan to rebuild it to the level that can support the MSY.

What does "rebuilt" mean?

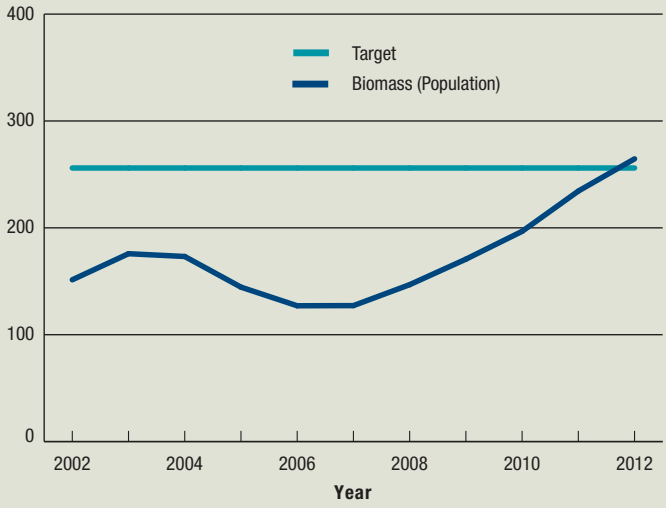
A rebuilt stock is one that was previously overfished and that has increased in abundance to the target level that supports its MSY.

Chinook salmon (Sacramento River fall stock) was removed from the overfished list and declared rebuilt in 2013. Credit: NOAA Fisheries



Recent Trends in South Atlantic Black Sea Bass

A rebuilding plan for South Atlantic black sea bass was put in place in 2006. The stock was declared rebuilt in 2013, with biomass (population) levels above the target.



The rebuilding of South Atlantic black sea bass illustrates the lows and highs of a stock in transition. As black sea bass started to rebuild, there was pressure to increase the catch limits. People were seeing more fish and they wanted to catch them. Because catch was held constant during the rebuilding years, the stock rebuilt early, and catch limits have more than doubled from levels set in the beginning of the rebuilding plan. For the fishermen who had to live with low limits so that black sea bass could rebuild, the new catch limits will be good news. Last year, both the recreational and commercial seasons ended by early fall. This year, fishermen should be able to fish much later into the winter.



Credit: NOAA Fisheries

FOR MORE INFORMATION

NOAA Fisheries Home Page
www.fisheries.noaa.gov

Stock Status Updates
See the latest quarterly update and supporting documents: www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries

FishWatch
Providing easy-to-understand science-based facts to help you make smart sustainable seafood choices: www.fishwatch.gov

Species Profile
Read about black sea bass management: http://sero.nmfs.noaa.gov/sustainable_fisheries/s_atl/sg/bsb

Economic Impacts
Read *Fishery Economics of the U.S. 2012*: www.st.nmfs.noaa.gov/economics/publications/feus/fisheries_economics_2012

Climate Vulnerability
www.st.nmfs.noaa.gov/ecosystems/climate/activities/assessing-vulnerability-of-fish-stocks

Habitat Blueprint
www.habitat.noaa.gov/habitatblueprint



Credit: NOAA Fisheries

Achieving Sustainability – Looking Ahead

U.S. fisheries play an enormous role in the nation's economy. When stocks are rebuilt, they provide more economic opportunities for commercial, recreational, and subsistence fishing. Rebuilt stocks also contribute to a healthy ecosystem. To continue our progress in ending overfishing and rebuilding stocks, we must ensure solid, science-based determinations of stock status and better linkages to biological, socioeconomic, and ecosystem conditions. It is also increasingly important that we better understand ecosystem and habitat factors, as resilient ecosystems and habitat form the foundation for robust fisheries and fishing jobs. NOAA is investing in efforts to better understand the effects of climate change on fisheries, reduce bycatch, and focus habitat conservation resources where they can have the greatest impact.

In addition, the MSA provides flexibility for bringing ecosystem considerations into fisheries management. This flexibility is one of the Act's strengths, allowing us to meet our responsibilities under the MSA in concert with related legislation, such as the Marine Mammal Protection Act and the Endangered Species Act. The alignment of measures to conserve habitat and protected species with measures to end overfishing and rebuild and manage fish stocks will be a key component of NOAA's success in implementing ecosystem-based fisheries management and toward continually strengthening the sustainable management of our fisheries.

We view sustainability not as an endpoint but as a dynamic process. This report demonstrates that fisheries management under the MSA is steadily and effectively working to address overfishing and rebuild stocks.



In 2013, red grouper (Southern Atlantic Coast) was removed from both the overfished and overfishing lists. Credit: Douglas E. Kesling, UNC-Wilmington, CIOERT

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