

Status of Stocks

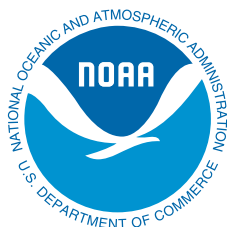
Report on the Status of U.S. Fisheries for 2011

NATIONAL MARINE FISHERIES SERVICE

2011 REPORT TO CONGRESS

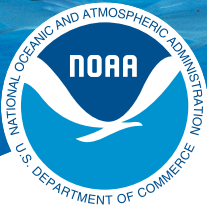
THE STATUS OF U.S. FISHERIES

As mandated by the Sustainable Fisheries Act amendment to
the Magnuson-Stevens Fishery Conservation and Management Act of 1996



May, 2012

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Office of Sustainable Fisheries



Status of Stocks - 2011

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

A Message from the NOAA Acting Assistant Administrator for Fisheries

I am pleased to present the Report on the Status of U.S. Fisheries for 2011. As the nation reaches a historic milestone in 2012—with the full implementation of annual catch limits (ACLs) and accompanying accountability measures for all domestic stocks—it is fitting this report is equally historic in the progress it documents toward rebuilding our nation’s fisheries.



In 2011, a record six stocks were determined to be rebuilt, with a decrease in the numbers of both overfished stocks and stocks experiencing overfishing. These results underscore the strength of our science-based management process, and clearly demonstrate we are actively turning the corner on ending overfishing and rebuilding our nation’s fisheries.

The results in 2011 reflect the tremendous efforts of fishermen, fishing communities, and the Regional Fishery Management Councils to make the difficult decisions and absorb the costs of conservation and investment in long-term economic and biological sustainability of the resource. This report also continues to illustrate the importance of assessments for stocks that are rebuilding to verify their status in a timely manner. In 2011, we reviewed the status of 214 stocks compared to 189 in 2010. Among these were eight stocks with a previously unknown status.

As envisioned by the 2007 Magnuson-Stevens Act, when the remaining ACLs are fully implemented this 2012 fishing season, U.S. fisheries management will be strengthened as an accountable and adaptable process that both prevents overfishing from occurring, and quickly responds if it does occur.

In closing, we will continue to work with the Councils, Interstate Marine Fisheries Commissions, and stakeholders to build on the 35 years of evolution and innovation in fisheries management that has become a global model of success. We appreciate the support of Congress, our state partners, and stakeholders as we continue this stewardship mission together.

Samuel D. Rauch III



Stocks at a Glance

Overfishing Status

- 222 stocks (86%) are not subject to overfishing
- 36 stocks (14%) are subject to overfishing

Overfished Status

- 174 stocks (79%) are not overfished
- 45 stocks (21%) are overfished

Rebuilt Status

- 6 stocks declared rebuilt, totaling 27 stocks rebuilt to date
- 51 stocks in rebuilding plans, with 6 additional plans in development

For complete information, go to www.nmfs.noaa.gov.

Summary of Changes

	2010	2011
Subject to Overfishing	40 (16%)	36 (14%)
Overfished	48 (23%)	45 (21%)
Rebuilt	21	27

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Figure 1. Map of stocks subject to overfishing in 2011.

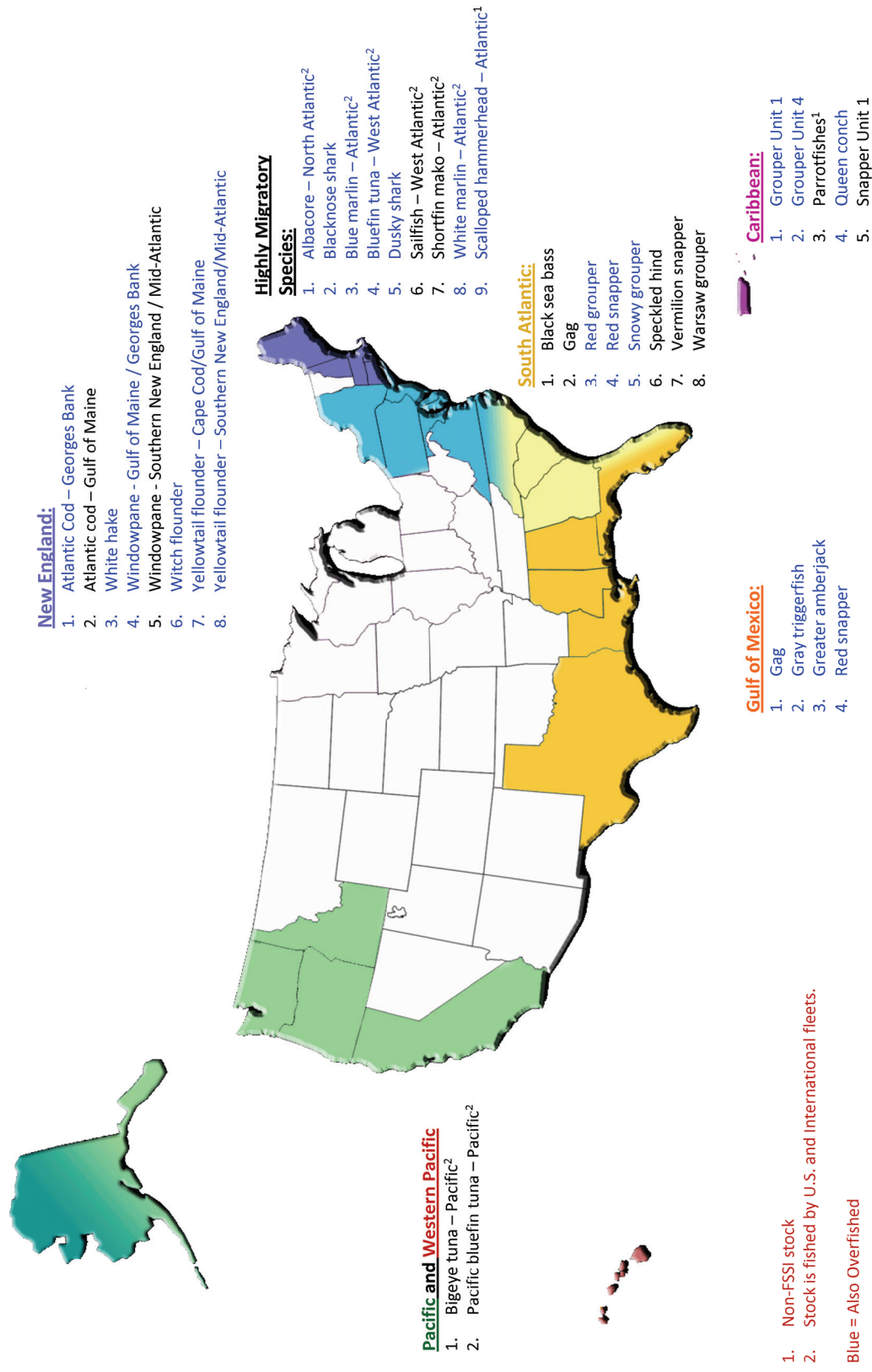
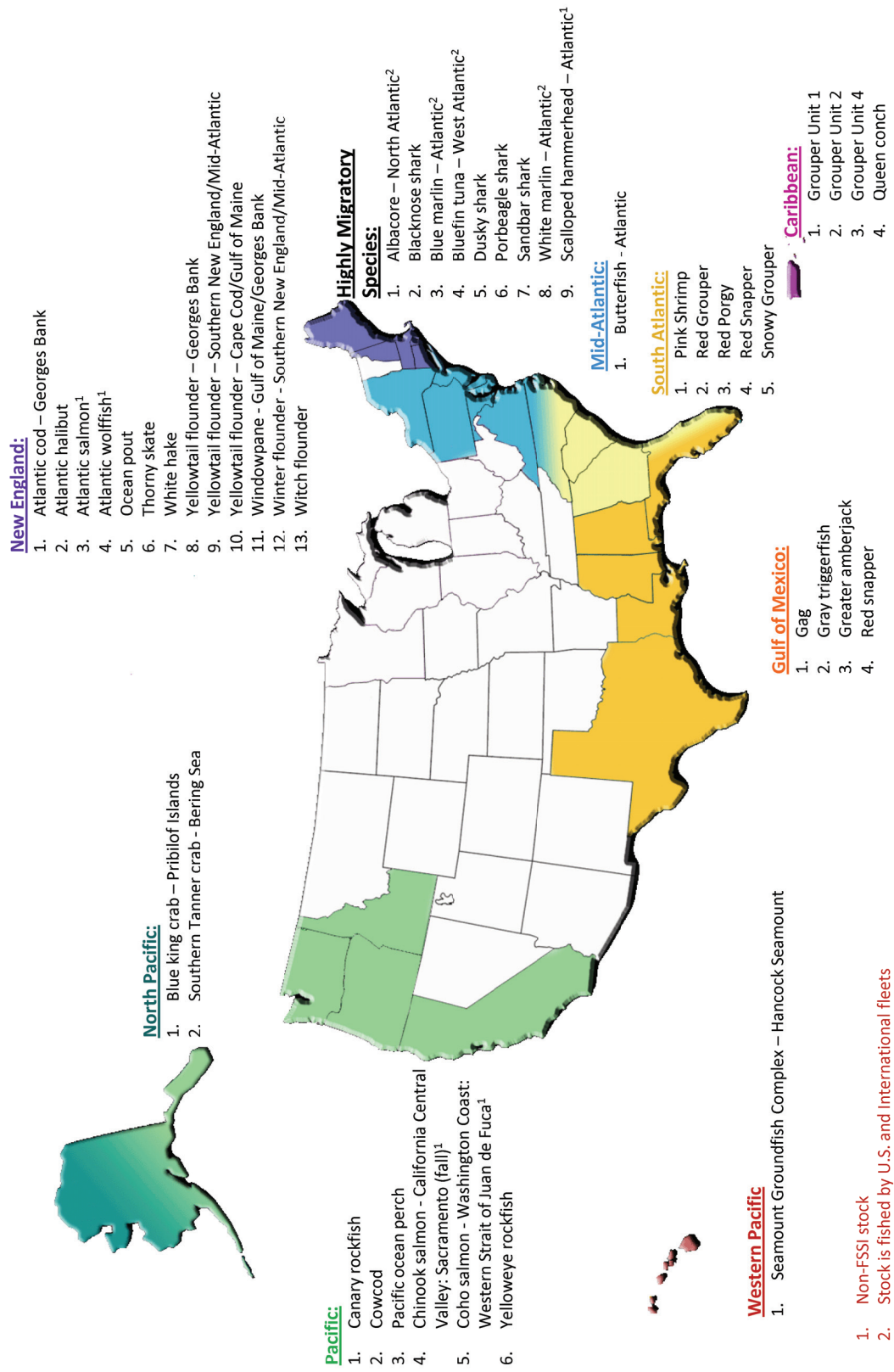


Figure 2. Map of overfished stocks in 2011.



Executive Summary

The Magnuson-Stevens Fishery Conservation and Management Act requires that NOAA's National Marine Fisheries Service (NMFS) report annually to Congress and the eight Regional Fishery Management Councils on the status of fisheries (Sec. 304(e)(1)). This report fulfills that requirement.

The information in this report was generated by the NMFS regional offices and science centers based on the most recent stock assessments as of December 31, 2011. Status determinations are generally made during a formal review using the best available scientific information from a scientific assessment and the status determination criteria specified in a fishery management plan.

Stocks identified in this report are characterized under two broad categories: (1) subject to overfishing and (2) overfished. A stock that is subject to overfishing has a fishing mortality (harvest) rate above the level that provides for the maximum sustainable yield (i.e., rate of removals is too high). A stock that is overfished has a biomass level below a biological threshold specified in its fishery management plan (i.e., the population is too low).

In 2011, NMFS managed 537¹ individual stocks and stock complexes within 45² federal fishery management plans nationwide. Determinations of both overfishing and overfished status could be made for 202 stocks and complexes. An additional 75 stocks or stock complexes have either a known overfishing determination or a known overfished determination. The number of stocks listed as subject to overfishing has decreased by 4 and overfished has decreased by 3, as compared to the 2010 report (see chart).

Summary of Changes

	2010	2011
Subject to Overfishing	40 (16%)	36 (14%)
Overfished	48 (22%)	45 (21%)

Overfishing

Of the 258 stocks or stock complexes for which an overfishing determination could be made, 36 (14%) are subject to overfishing and 222 (86%) are not subject to overfishing.

Overfished

Of the 219 stocks or stock complexes for which an overfished determination could be made, 45 (21%) are overfished and 174 (79%) are not overfished.³

Rebuilding

NMFS tracks the biomass trends for overfished stocks to monitor rebuilding progress. In 2011, six stocks have fully rebuilt to at least 100% of their B_{MSY} levels, bringing the total number of stocks rebuilt since 2000 to 27. More stocks were declared rebuilt in 2011 than in any other single year tracked.

¹ 528 stocks and stock complexes were reviewed in the 2010 report. This report modifies listings consistent with the adoption of annual catch limits and the inclusion of ecosystem component (EC) stocks. Since EC stocks are not managed, they do not have status determinations. For a full accounting of stocks and stock complexes modified, see Appendix I on the website.

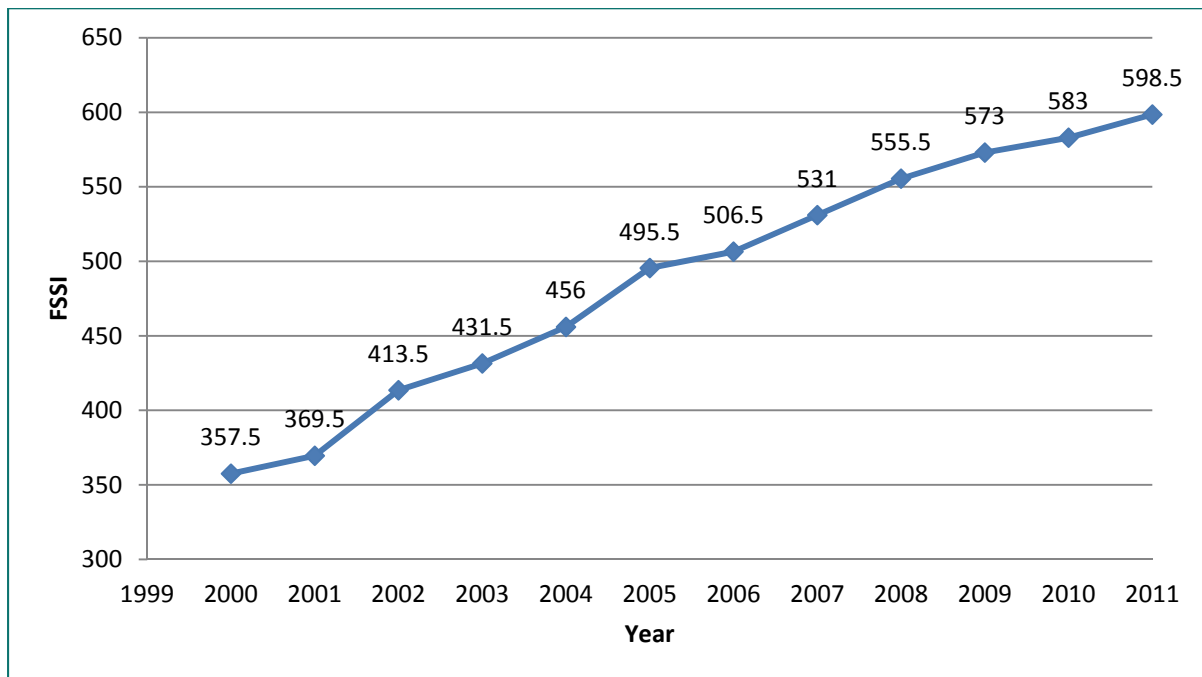
² This number does not include the Gulf of Mexico Aquaculture FMP. This FMP has no stocks managed in it and is otherwise not considered in this report. Effective October 24 2011, the Stone Crab FMP in the Gulf of Mexico – was repealed and its implementing regulations removed, as that fishery is managed primarily by the states (76 FR 59064, September 23, 2011).

³ This number includes 5 stocks that are approaching an overfished condition.

Tracking Progress

NMFS measures the sustainability of our Nation's fisheries through the Fish Stock Sustainability Index (FSSI). The FSSI measures the performance of 230 key stocks, and the score increases as additional assessments are conducted, overfishing is ended, and stocks rebuild to the level that provides maximum sustainable yield. The FSSI was first reported in 2005, with an end-of-year score of 495.5. The value of the FSSI has been calculated back to 2000. Out of 920 possible points, the index increased from 357.5 in 2000 to 598.5 in 2011 (see Figure 3). The 67% increase in the FSSI in 11 years represents significant progress in sustainably managing our fisheries. More information about the FSSI is available online at: <http://www.nmfs.noaa.gov/sfa/statusoffisheries/SOSmain.htm>.

Figure 3. Fish Stock Sustainability Index (FSSI) for 230 key stocks.



Introduction

This report describes the state of our Nation’s marine fisheries and the effectiveness of fisheries management under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), 16 USC 1801, et seq. This report fulfills the Congressional requirement in Sec. 304(e)(1) of the MSA for an annual report on the status of fisheries within each Fishery Management Council’s geographic area of authority and to identify fisheries that are overfished or approaching a condition of being overfished.

In 1996, the Sustainable Fisheries Act (SFA) emphasized the need to end overfishing, rebuild overfished stocks, and establish management plans designed to ensure biologically and economically sustainable fisheries. A stock that is subject to overfishing has a fishing mortality (harvest) rate above the level that provides for the maximum sustainable yield (i.e., rate of removals is too high). A stock that is overfished has a biomass level below its prescribed biological threshold (i.e., population size is too low). While the MSA establishes the term “overfished,” such status may occur due to environmental factors and may not be the result solely of overfishing.

In 2007, the Magnuson-Stevens Reauthorization Act (MSRA) added new requirements for annual catch limits (ACL) and accountability measures to end and prevent overfishing in all U.S. fisheries. These measures were required to be established by 2010 for all stocks subject to overfishing and by 2011 for all other stocks, with exceptions for stocks with annual life cycles or those managed under international agreements to which the United States is a party.

This report covers the managed marine fish stocks in the U.S. Exclusive Economic Zone⁴, including stocks that straddle international boundaries and highly migratory stocks. In response to the Congressional requirement, the report categorizes stocks according to their status. The report answers four questions which help illustrate the effectiveness of management measures in meeting the provisions of the MSA:

1. What stocks are or are not subject to overfishing?
2. What stocks are overfished or above their threshold levels?
3. What stocks are approaching an overfished condition?
4. How do this year’s determinations compare to last year?

Information on fishing mortality and biomass trends for stocks in rebuilding plans—which can show whether management measures to end overfishing are working and whether the biomass of the stock is rebuilding as planned—is available online at <http://www.nmfs.noaa.gov/sfa/statusoffisheries/SOSmain.htm>.



Additional information on many important federally managed fish stocks, particularly those of interest to seafood consumers, is available online at our FishWatch website: <http://www.fishwatch.gov>. FishWatch provides retailers and interested consumers with the most up-to-date facts about the science and management of the fisheries supporting sustainable seafood choices in the U.S. FishWatch is not an eco-label, but rather a neutral platform for presenting distilled scientific and management information about popular species of wild-caught and farm-raised seafood.

Overfishing
The rate of removal from a stock is too high.

Overfished
The population is too low, below a prescribed threshold.

⁴ The U.S. Exclusive Economic Zone generally extends from 3 to 200 nautical miles offshore and covers more than 2 million square miles.

Best Available Information

Objective and Measurable Criteria

The MSA requires that a fishery management plan (FMP) specify “objective and measurable criteria” for identifying the status of a stock of fish. These status determination criteria (SDC) are typically developed during a scientific assessment and specify two general reference points: a maximum fishing mortality threshold (MFMT) and a minimum stock size threshold (MSST). The MFMT corresponds to a mortality level that, if exceeded, results in overfishing. The MSST represents a stock size level, below which indicates that the stock is overfished. These reference levels should have a corresponding numerical estimate that is used to compare against estimated fishing mortality/catch level and stock size to provide the basis for status determinations.

The MSA also states that for stocks in a FMP, the status shall be determined using those specified criteria. Most stocks in this report have SDC specified in their FMP which serve as the basis to determine stock status⁵. Some stocks have defined SDC yet have never been assessed relative to them or the assessment failed to provide a conclusive determination about status.⁶ Still others may have no objective or measurable SDC.⁷

Best Available Science

An assessment is the analysis of the abundance and composition of a fish stock. The assessment informs managers on the appropriate level of harvest to ensure the sustainability of the stock. Stock assessments use data available from fishery landings, scientific surveys, and biological and ecological studies, and represent the best information we have on a stock’s status. An assessment typically undergoes thorough peer review before it is used by the Council’s Scientific and Statistical Committee to provide the Council with fishing level recommendations. Guidelines to comply with National Standard 2 of the MSA provide direction on how to implement the best scientific information available.

Applying the Results

Assessments examine a stock according to the reference points specified (i.e., the SDC). Occasionally, an assessment revises the reference points for a stock, if new information provides a better understanding of the relevant parameters. In such a case, the revised reference points represent the best scientific information available for that stock. Since assessment status determinations – and specifically changes identified in this report – guide management decisions, many FMPs automatically adopt and implement revisions to the reference points as their SDC when new assessments provide them. For those FMPs that do not do so automatically, a discrepancy develops between the requirements to list a stock based on the SDC or to provide the best scientific information available, as specified in the MSA. In order to provide the most recent best information on the status of a stock, NMFS provides status determinations using the best scientific information available (that is, the latest assessment results). NMFS encourages and supports the Councils in their efforts to amend FMPs as quickly as practicable to adopt the new reference points.⁸

Some of the determinations in this report use the results of peer reviewed stock assessments and some use other information – such as trawl survey data or total catch data – as specified by the SDC. Some SDCs apply to an individual stock; in other cases SDCs apply to a group of similar species harvested together or sharing a similar life history. These groups are referred to as stock complexes, units, or assemblages. Such groupings are useful when individual stocks cannot be assessed due to a lack of data. The status of individual stocks in a complex may be determined using the SDC of one or more appropriate indicator stocks in the complex, or the SDC may apply to the complex as a whole. Information on the methodology used for status determinations can be found in Appendix 1,

⁵Some stocks have status determinations based on criteria not contained in the FMP but on other criteria that is considered to be the best scientific information available. Alaska SDCs are generally specified in the annual Stock Assessment and Fishery Evaluation (SAFE) Report, rather than in the FMP itself.

⁶Such stocks are listed in this report as *unknown*.

⁷Such stocks are listed in this report as *undefined* because there is no basis for determining status.

⁸Until this is done, the official status will be based on assessment results and footnoted to indicate status relative to SDC in the FMP.

and information on the specific science used to make the determinations can be found in Appendix 4. These appendices are also available online at <http://www.nmfs.noaa.gov/sfa/statusoffisheries/SOSmain.htm>.

In 2011, NMFS reviewed status determinations on 214 stocks and stock complexes. Six of these stocks now have known overfishing determinations in 2011—that is, their overfishing determination was previously unknown. Four additional stocks have overfished determinations in 2011—that is, their overfished determination was previously unknown/undefined. Of those stocks with new determinations, five are not subject to overfishing and are not overfished. Management action is underway to address the stocks that were newly determined to be subject to overfishing or overfished.

This year’s report is based on assessments completed as of December 31, 2011. The status of all 537 stocks and stock complexes is summarized in Table 1.

Table 1. Number and status of FSSI and non-FSSI stocks in 2011 by Council.

Council	Stock Group	Total # of Stocks Reviewed	Overfishing					Overfished					
			Yes	No	Not Known	Not Defined	N/A	Yes	No	Approaching	Not Known	Not Defined	N/A
Caribbean	FSSI	8	4	1	3	0	0	4	0	1	3	0	0
	non-FSSI	16	1	0	14	1	0	0	0	1	14	1	0
	<i>Total</i>	<i>24</i>	<i>5</i>	<i>1</i>	<i>17</i>	<i>1</i>	<i>0</i>	<i>4</i>	<i>0</i>	<i>2</i>	<i>17</i>	<i>1</i>	<i>0</i>
Gulf of Mexico	FSSI	16	4	10	2	0	0	4	7	0	3	2	0
	non-FSSI	22	0	4	18	0	0	0	0	0	0	22	0
	<i>Total</i>	<i>38</i>	<i>4</i>	<i>14</i>	<i>20</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>7</i>	<i>0</i>	<i>3</i>	<i>24</i>	<i>0</i>
HMS*, Atlantic	FSSI	21	8	11	2	0	0	8	9	2	2	0	0
	non-FSSI	6	1	1	4	0	0	1	1	0	4	0	0
	<i>Total</i>	<i>27</i>	<i>9</i>	<i>12</i>	<i>6</i>	<i>0</i>	<i>0</i>	<i>9</i>	<i>10</i>	<i>2</i>	<i>6</i>	<i>0</i>	<i>0</i>
Mid-Atlantic	FSSI	11	0	10	1	0	0	1	9	0	1	0	0
	non-FSSI	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Total</i>	<i>11</i>	<i>0</i>	<i>10</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>9</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>
New England	FSSI	34	8	24	0	2	0	11	20	0	2	1	0
	non-FSSI	2	0	1	1	0	0	2	0	0	0	0	0
	<i>Total</i>	<i>36</i>	<i>8</i>	<i>25</i>	<i>1</i>	<i>2</i>	<i>0</i>	<i>13</i>	<i>20</i>	<i>0</i>	<i>2</i>	<i>1</i>	<i>0</i>
New England/Mid-Atlantic	FSSI	3	0	3	0	0	0	0	3	0	0	0	0
	non-FSSI	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Total</i>	<i>3</i>	<i>0</i>	<i>3</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>3</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
North Pacific	FSSI	35	0	35	0	0	0	2	28	0	0	5	0
	non-FSSI	29	0	21	6	1	1	0	4	0	4	21	0
	<i>Total</i>	<i>64</i>	<i>0</i>	<i>56</i>	<i>6</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>32</i>	<i>0</i>	<i>4</i>	<i>26</i>	<i>0</i>
Pacific	FSSI	48	0	33	14	1	0	4	32	0	9	3	0
	non-FSSI	119	0	23	49	9	38	2	27	0	48	4	38
	<i>Total</i>	<i>167</i>	<i>0</i>	<i>56</i>	<i>63</i>	<i>10</i>	<i>38</i>	<i>6</i>	<i>59</i>	<i>0</i>	<i>57</i>	<i>7</i>	<i>38</i>
Pacific/Western Pacific	FSSI	6	2	2	2	0	0	0	4	0	2	0	0
	non-FSSI	2	0	0	2	0	0	0	0	0	2	0	0
	<i>Total</i>	<i>8</i>	<i>2</i>	<i>2</i>	<i>4</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>0</i>	<i>4</i>	<i>0</i>	<i>0</i>
South Atlantic	FSSI	23	8	14	1	0	0	5	9	1	8	0	0
	non-FSSI	60	0	9	51	0	0	0	1	0	54	5	0
	<i>Total</i>	<i>83</i>	<i>8</i>	<i>23</i>	<i>52</i>	<i>0</i>	<i>0</i>	<i>5</i>	<i>10</i>	<i>1</i>	<i>62</i>	<i>5</i>	<i>0</i>
South Atlantic/Gulf of Mexico	FSSI	9	0	9	0	0	0	0	6	0	2	1	0
	non-FSSI	1	0	1	0	0	0	0	1	0	0	0	0
	<i>Total</i>	<i>10</i>	<i>0</i>	<i>10</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>7</i>	<i>0</i>	<i>2</i>	<i>1</i>	<i>0</i>
Western Pacific	FSSI	16	0	7	9	0	0	1	7	0	8	0	0
	non-FSSI	50	0	3	9	38	0	0	1	0	11	38	0
	<i>Total</i>	<i>66</i>	<i>0</i>	<i>10</i>	<i>18</i>	<i>38</i>	<i>0</i>	<i>1</i>	<i>8</i>	<i>0</i>	<i>19</i>	<i>38</i>	<i>0</i>
<i>Total</i>	<i>FSSI</i>	<i>230</i>	<i>34</i>	<i>159</i>	<i>34</i>	<i>3</i>	<i>0</i>	<i>40</i>	<i>134</i>	<i>4</i>	<i>40</i>	<i>12</i>	<i>0</i>
	<i>non-FSSI</i>	<i>307</i>	<i>2</i>	<i>63</i>	<i>154</i>	<i>49</i>	<i>39</i>	<i>5</i>	<i>35</i>	<i>1</i>	<i>137</i>	<i>91</i>	<i>38</i>
	<i>Total</i>	<i>537</i>	<i>36</i>	<i>222</i>	<i>188</i>	<i>52</i>	<i>39</i>	<i>45</i>	<i>169</i>	<i>5</i>	<i>177</i>	<i>103</i>	<i>38</i>

*HMS = highly migratory species. ** These two councils manage the Pacific halibut resource, which is managed by a treaty between the United States and Canada through recommendations of the International Pacific Halibut Commission (IPHC).

Not Known: Stocks for which there is an approved overfishing definition, but for which no determination can be made because of insufficient information.

Not Defined: Stocks contained in FMPs for which the overfishing definitions were fully disapproved, are still under review, or have yet to be proposed.

Overfishing Status

Overview

Of the 537 stocks or stocks complexes managed in 2011:

- 258 have a known overfishing status.
 - 222 (86%) stocks or stock complexes are not subject to overfishing.
 - 36 (14%) stocks or stock complexes are subject to overfishing.

- 279 have overfishing thresholds not defined or applicable, or the overfishing status is unknown.

Changes in Overfishing Status

Six NMFS regions had stocks with overfishing status changes from 2010 to 2011 (see Table 2).

Table 2. Changes in overfishing status from 2010 to 2011.

Region	Total # of stocks	Stock	Change from 2010-2011
Alaska	1	Golden king crab – Pribilof Islands	Not subject to overfishing (previously unknown)
Highly Migratory Species, Atlantic	1	Sandbar shark – Atlantic	No longer subject to overfishing
	1	Scalloped hammerhead – Atlantic	Subject to overfishing (previously unknown)
Northeast	2	Winter flounder - Georges Bank Winter flounder - Southern New England / Mid-Atlantic	No longer subject to overfishing
	2	Red hake - Gulf of Maine / Northern Georges Bank Winter flounder - Gulf of Maine	Not subject to overfishing (previously unknown)
Northwest	1	Longnose skate - Pacific Coast	Not subject to overfishing (previously unknown)
Southeast	1	Tilefish – Southern Atlantic Coast	No longer subject to overfishing
	1	Yellowedge grouper – Gulf of Mexico	Not subject to overfishing (previously unknown)
Southwest	1	Yellowfin tuna – Eastern Tropical Pacific	No longer subject to overfishing

Overfished Status

Overview

Of the 537 stocks or stocks complexes managed in 2011:

- 219 have a known overfished status.
 - 174 (79%) stocks or stock complexes are not overfished
 - 5 of these stocks are approaching an overfished condition
 - 45 (21%) stocks or stock complexes are overfished.
- 318 have overfished thresholds not defined or applicable, or the overfished status is unknown.

Changes in Overfished Status

Five NMFS regions had stocks with overfished status changes from 2010 to 2011 (see Table 3).

Table 3. Changes in overfished status from 2010 to 2011.

Region	Total # of stocks	Stock	Change from 2010-2011
Alaska	1	Gulf of Alaska Shallow Water Flatfish Complex	Not overfished (previously undefined)
Highly Migratory Species – Atlantic	1	Scalloped hammerhead – Atlantic	Now overfished (previously part of LCS* Complex and unknown)
Northeast	2	Winter flounder - Georges Bank Smooth skate - Gulf of Maine	No longer overfished
Northwest	1	Petrale sole - Pacific Coast	No longer overfished
	2	Greenspotted rockfish - Pacific Coast Spiny dogfish - Pacific Coast	Not overfished (previously unknown)
	1	Pacific ocean perch - Pacific Coast	Now overfished
	1	Coho salmon - Washington Coast: Queets	No longer overfished (rebuilt)
Southeast	1	Yellowedge grouper - Gulf of Mexico	Not overfished (previously unknown)
	1	Black sea bass – Southern Atlantic Coast	No longer overfished

* LCS – Large Coastal Shark

Biomass and Rebuilding

Biomass is an important measure of a stock's abundance and sustainability. For overfished stocks, tracking biomass trends is used as an indicator of rebuilding progress. The NMFS Fish Stock Sustainability Index⁹ (FSSI) established a ratio of the current stock biomass (B) to the biomass that supports the maximum sustainable yield (B_{MSY}) as an indicator of sustainability. Stocks with a B/B_{MSY} above 80% are considered to be within the range of natural fluctuation around B_{MSY} , which is defined as a long-term average.

Changes in Biomass Levels and Rebuilt Stocks

Five NMFS regions had stocks with biomass increases to above 80% of B_{MSY} from 2010 to 2011 (see Table 4). Six stocks have been declared rebuilt in 2011.

Table 4. Changes in biomass levels from 2010 to 2011.

Region	Total # of stocks	Stock	Change from 2010-2011
Alaska	1	Snow crab - Bering Sea	Rebuilt
	1	Walleye pollock - Eastern Bering Sea	$B/B_{MSY} > 80\%$
Northeast	2	Summer flounder - Mid-Atlantic Coast Haddock - Gulf of Maine	Rebuilt
	1	Longfin inshore squid - Georges Bank / Cape Hatteras	$B/B_{MSY} > 80\%$ (was previously not estimated)
	2	Silver hake - Gulf of Maine / Northern Georges Bank Little skate - Georges Bank / Southern New England	$B/B_{MSY} > 80\%$
	1	Silver hake - Southern Georges Bank / Mid-Atlantic	$B/B_{MSY} < 80\%$
Northwest	3	Chinook salmon - Northern California Coast: Klamath (fall) Coho salmon - Washington Coast: Queets Widow rockfish - Pacific Coast	Rebuilt
	1	Pacific hake - Pacific Coast	$B/B_{MSY} > 80\%$
	1	Spiny dogfish - Pacific Coast	$B/B_{MSY} > 80\%$ (was previously not estimated)
	1	Blackgill rockfish - Southern California	$B/B_{MSY} < 80\%$
Southeast	1	Yellowedge grouper - Gulf of Mexico	$B/B_{MSY} > 80\%$ (was previously not estimated)
Southwest/ Pacific Islands	1	Bigeye tuna - Pacific	$B/B_{MSY} > 80\%$

Biomass and Mortality Trends in Stocks under Rebuilding Plans

The most recent information on trends in fishing mortality (F) and biomass (B) for stocks under rebuilding plans is available online at <http://www.nmfs.noaa.gov/sfa/statusoffisheries/SOSmain.htm>.

⁹The FSSI is a performance measure developed by NMFS to assess the sustainability of 230 U.S. fish stocks selected for their importance to commercial and recreational fisheries.

Implementing Annual Catch Limits

With the reauthorization of the MSA in 2007, the Congress mandated NMFS and the Councils to implement ACLs, including measures to ensure accountability, at a level such that overfishing does not occur in a fishery. The MSA required ACLs that end overfishing in fisheries subject to overfishing by 2010, and in all other fisheries by 2011, with limited exceptions¹⁰. Over the last five years, NMFS, fishermen, the Councils, our partner organizations, the science community, and many others have been actively engaged in and dedicated to achieving this goal. As of December 31, 2011, 40 of the 45¹¹ FMPs have ACLs and corresponding accountability measures in place. The remaining five plans will have ACLs in place that are effective in the 2012 fishing year. Fishing years may start as late as September for some fisheries. More details on ACL implementation can be found here:

<http://www.nmfs.noaa.gov/stories/2012/01/docs/Annual%20Catch%20Limits%20Fact%20Sheet%20Final.pdf>

In the Fishery

Stocks that are actively targeted

Ecosystem Component

A non-target stock that is not subject to overfishing or overfished (or likely to become so), and generally not retained for sale or personal use

While complying with the ACL requirement, some Councils adjusted the listings of stocks contained in the management unit of their FMPs. These changes were done to more accurately account for stocks within a fishery versus those that are ecosystem component stocks. The MSA gives Councils considerable discretion in defining a “fishery” under their FMPs. Some FMPs include one or a few stocks, whereas others include hundreds of species in an effort to incorporate ecosystem approaches to management. NMFS considers all stocks in a FMP to be “in the fishery” unless a stock has been specifically identified through a FMP or FMP amendment as an “ecosystem component species.” Ecosystem component species, not a target of a fishery, are not required to have ACLs.

The net effect of these adjustments is to better comply with the intent of the MSA to apply ACLs to fisheries in an efficient management system. These adjustments can be seen in the numbers of stocks and complexes contained in this report, as well as by the inclusion of those listed as “ecosystem component” species in the report tables.

While most fisheries have ACLs in place, many have had them for only a short period – in some cases less than a full fishing year – as of the date of this report (December 31, 2011). Some fisheries have had an ACL in place for a full fishing year, but final data are not yet available to compare total landings to the ACL. Audits to ensure accuracy mean data may not be available until up to 6 months or more after the end of the fishing year. In other fisheries, assessments are required to determine if an ACL has truly ended overfishing on the stock. So while it may be possible to compare landings to the ACL, until an assessment is completed, it is not possible to change a status determination to “no longer subject to overfishing.” However, NMFS highlights one successful example of ACL implementation.

Sandbar shark – Effective ACL Implementation

The sandbar shark is managed as part of the large coastal shark complex in the Consolidated Highly Migratory Species FMP. Sandbar sharks are common both inshore and offshore in the western North Atlantic, ranging from southern New England to the Caribbean and Gulf of Mexico to southern Brazil. These sharks are known to migrate large distances.

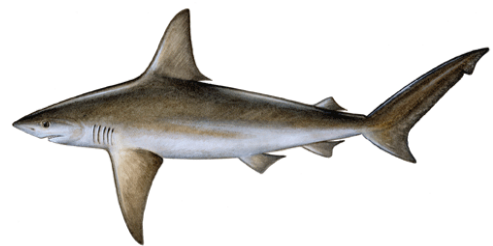


Illustration of Sandbar Shark by Diane Rome Peebles
<http://dnr.maryland.gov/mydnr/CreatureFeature/sandbarshark.asp>

Fishing mortality on sandbar shark was very low in 1960-1981 due to greatly reduced catches and effort during that period. Starting in 1982, fishing mortality always exceeded recommendations. According to the 2005/06 stock assessment, sandbar sharks were overfished and overfishing was

¹⁰Exceptions specified in reauthorized MSA section 104(b) are: unless otherwise provided for under an international agreement in which the United States participates, and species that have a life cycle of approximately 1 year unless the Secretary has determined the fishery is subject to overfishing of that species.

¹¹Excludes the Gulf of Mexico Aquaculture and Stone Crab FMPs. See footnote 2 on page 1.

occurring. This assessment served as the basis for this species' listings through the 2010 Status of U.S. Fisheries report.

Amendment 2 to the FMP established a revised 66-year rebuilding plan for sandbar shark. The plan restricted sandbar shark to a research only fishery and set a base annual commercial quota equal (or ACL) to 116.6 metric tons, dressed weight. This quota was allocated to the vessels operating in the research fishery. Fishing mortality dropped below prescribed levels in 2008 and 2009. The most recent assessment, finalized in 2011 and utilizing data from the fishery after Amendment 2 was put in place, indicates that overfishing has indeed ended for this species.

Table 5. Status history for sandbar shark.

Status in	Overfishing	Overfished	Rebuilding status
2000	Yes	Yes ¹²	39-year plan
2005 [@]	Yes	No	
2010 [^]	Yes	Yes	Year 3 of 66-year plan*
2011	No	Yes	Year 4 of 66-year plan

[@] Based on a 2002 assessment. [^] Based on the 2005/06 assessment. * Revised per Amendment 2 to the FMP.

¹² At this time, NMFS was unable to implement rebuilding measures under a court-approved settlement that prevented the commercial quota reduction until a peer review of the assessment was completed.

Status Determinations by Region

Northeast Region

Thirteen FMPs containing 50 stocks or complexes are managed by NMFS and the New England and Mid-Atlantic Fishery Management Councils. Within these FMPs, 8 stocks are subject to overfishing, 14 stocks are overfished, and no stocks are approaching an overfished condition (Table 6).¹³

New England	Mid-Atlantic
1. Atlantic Salmon	1. Atlantic Bluefish
2. Atlantic Sea Scallop	2. Atlantic Mackerel, Squid, and Butterfish
3. Northeast Multispecies	3. Atlantic Surfclam and Ocean Quahog
4. Northeast Skate	4. Spiny Dogfish
5. Atlantic Herring	5. Summer Flounder, Scup and Black Sea Bass
6. Red Crab	6. Tilefish
7. Monkfish	

Table 6. Northeast Region stocks that are subject to overfishing, are overfished, or are approaching an overfished condition.

Council	FMP	Stock	Overfishing condition	Overfished Condition	
				Overfished	Approaching
New England	Atlantic salmon	Atlantic salmon*		x	
	Northeast Multispecies	cod - Georges Bank	x	x	
		cod - Gulf of Maine	x		
		Atlantic halibut		x	
		Atlantic wolffish		x	
		ocean pout		x	
		white hake	x	x	
		windowpane - GOM/GB	x	x	
		windowpane - SNE/MA	x		
		winter flounder - SNE/MA		x	
		witch flounder	x	x	
		yellowtail flounder - Cape Cod/GOM	x	x	
		yellowtail flounder - Georges Bank		x	
yellowtail flounder - SNE/MA	x	x			
Northeast Skate	thorny skate - Gulf of Maine		x		
Mid-Atlantic	Atlantic Mackerel, Squid, and Butterfish	butterfish		x	

*No fishing is allowed in this fishery, or incidental harvest is limited to levels necessary to meet Endangered Species Act (ESA) requirements. A Final Recovery Plan for the Gulf of Maine Distinct Population Segment of Atlantic Salmon has been developed under the ESA.
GOM = Gulf of Maine, GB = Georges Bank, SNE = Southern New England, MA = Mid-Atlantic.

¹³Assessment results for 19 stocks in the Northeast Multispecies FMP will not be used to make determinations until the FMP is amended to reflect the SDCs recommended in the assessment.

Southeast Region

Seventeen FMPs containing 154 stocks or complexes are managed by NMFS and the South Atlantic, Caribbean, and Gulf of Mexico Fishery Management Councils. Within these FMPs, 17 stocks are subject to overfishing, 13 stocks are overfished, and three stocks are approaching an overfished condition (Table 7).

South Atlantic	Gulf of Mexico	Caribbean
1. Coral, Coral Reefs, and Live/Hard Bottom Habitats of the South Atlantic Region	1. Aquaculture	1. Corals and Reef Associated Invertebrates of Puerto Rico and the U.S. Virgin Islands
2. Dolphin Wahoo	2. Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic	2. Reef Fish Fishery of Puerto Rico and the U.S. Virgin Islands
3. Pelagic Sargassum Habitat of the South Atlantic Region	3. Coral and Coral Reefs of the Gulf of Mexico	3. Spiny Lobster Fishery of Puerto Rico and the U.S. Virgin Islands
4. South Atlantic Golden Crab	4. Gulf of Mexico/South Atlantic Spiny Lobster	4. Queen Conch Resources of Puerto Rico and the U.S. Virgin Islands
5. South Atlantic Shrimp	5. Gulf of Mexico Red Drum	
6. South Atlantic Snapper Grouper	6. Gulf of Mexico Shrimp	
	7. Reef Fish Resources of the Gulf of Mexico	

Table 7. Southeast Region stocks that are subject to overfishing, are overfished, or are approaching an overfished condition.

Council	FMP	Stock	Overfishing condition	Overfished Condition	
				Overfished	Approaching
South Atlantic	South Atlantic Snapper Grouper	black sea bass	x		
		gag	x		x
		red grouper	x	x	
		red porgy		x	
		red snapper	x	x	
		snowy grouper	x	x	
		speckled hind	x		
		vermillion snapper	x		
	Warsaw grouper	x			
	South Atlantic Shrimp	pink shrimp		x	
Gulf of Mexico	Reef Fish Resources of the Gulf of Mexico	gag	x	x	
		gray triggerfish	x	x	
		greater amberjack	x	x	
		red snapper	x	x	
Caribbean	Reef Fish Fishery of Puerto Rico and the USVI	Grouper Unit 1	x	x	
		Grouper Unit 2		x	
		Grouper Unit 4	x	x	
		Snapper Unit 1	x		x
		Parrotfish complex	x		x
	Queen Conch Resources of Puerto Rico and the USVI	queen conch	x	x	

USVI = United States Virgin Islands

Southwest Region

Two FMPs containing 18 stocks or complexes¹⁴ are managed by NMFS and the Pacific Fishery Management Council. Within these FMPs, two stocks are subject to overfishing, no stocks are overfished, and no stocks are approaching an overfished condition (Table 8).

Pacific
1. Coastal Pelagic Species
2. West Coast Highly Migratory Species

Table 8. Southwest Region stocks that are subject to overfishing, are overfished, or are approaching an overfished condition.

Council	FMP	Stock	Overfishing condition	Overfished Condition	
				Overfished	Approaching
Pacific / Western Pacific	U.S. West Coast Fisheries for Highly Migratory Species / Fishery Ecosystem Plan for Pacific Pelagic Fisheries of the Western Pacific Region	bigeye tuna - Pacific*	x		
		Pacific bluefin tuna – Pacific*	x		

*This stock also appears in Table 10 as a stock subject to overfishing in the Pacific Islands Region's *Pelagic Fisheries of the Western Pacific Region FMP*. Each of the 8 stocks shared between these two FMPs is listed only once in the support tables as a single stock managed under both FMPs. The Southwest and the Pacific Islands Regions, along with the Pacific and Western Pacific Fishery Management Councils, are working together to end overfishing in this stock.

¹⁴Total includes 8 pelagic species shared with the Pacific Islands Region.

Northwest Region

Two FMPs containing 155 stocks or complexes are managed by NMFS and the Pacific Fishery Management Council. In addition, Pacific halibut is managed jointly with the Alaska Region and the International Pacific Halibut Commission. Within these FMPs, no stocks are subject to overfishing, six stocks are overfished, and no stocks are approaching an overfished condition (Table 9).

Pacific
1. Pacific Coast Groundfish
2. West Coast Salmon

Table 9. Northwest Region stocks that are subject to overfishing, are overfished, or are approaching an overfished condition.

Council	FMP	Stock	Overfishing condition	Overfished Condition	
				Overfished	Approaching
Pacific	Pacific Coast Groundfish	Canary rockfish		x	
		cowcod		x	
		Pacific ocean perch		x	
		yelloweye rockfish		x	
	Pacific Coast Salmon	Chinook salmon - California Central Valley: Sacramento (fall)		x	
		coho salmon - Washington Coast: Western Strait of Juan de Fuca		x	

Pacific Islands Region

Five FEPs containing 66 stocks or complexes¹⁵ are managed by NMFS and the Western Pacific Fishery Management Council. Within these FEPs, two stocks or stock complexes are subject to overfishing, one stock or stock complex is overfished, and no stocks or stock complexes are approaching an overfished condition (Table 10).

Western Pacific
1. American Samoa Archipelago
2. Hawaii Archipelago
3. Mariana Archipelago
4. Pacific Pelagic Fisheries of the Western Pacific Region
5. Pacific Remote Island Areas

Table 10. Pacific Islands Region stocks that are subject to overfishing, are overfished, or are approaching an overfished condition.

Council	FEP	Stock	Overfishing condition	Overfished Condition	
				Overfished	Approaching
Pacific / Western Pacific	U.S. West Coast Fisheries for Highly Migratory Species / Fishery Ecosystem Plan for Pacific Pelagic Fisheries of the Western Pacific Region	bigeye tuna - Pacific*	x		
		Pacific bluefin tuna - Pacific*	x		
Western Pacific	Fishery Ecosystem Plan for the Hawaii Archipelago	Seamount Groundfish complex - Hancock Seamount**		x	

*This stock also appears in Table 8 as a stock subject to overfishing in the Southwest Region's *West Coast Highly Migratory Species FMP*. Each of the 8 stocks shared between these two FMPs is listed only once in the support tables as a single stock managed under both FMPs. The Southwest and the Pacific Islands Regions, along with the Pacific and Western Pacific Fishery Management Councils, are working together to end overfishing in this stock.

**This stock complex uses pelagic armorhead as the indicator species of a three-species seamount groundfish complex that includes raftfish and alfonsin. There is no U.S. fishery for any of the species in this complex.

¹⁵Total includes 8 pelagic species shared with the Southwest Region.

Alaska Region

Six FMPs containing 64 stocks or complexes are managed by NMFS and the North Pacific Fishery Management Council. In addition, Pacific halibut is managed jointly with the Northwest Region and the International Pacific Halibut Commission. Within these FMPs, no stocks or stock complexes are subject to overfishing, two stocks or stock complexes are overfished, and no stocks or stock complexes are approaching an overfished condition (Table 11).

North Pacific
1. Alaska Salmon
2. Alaska Weathervane Scallops
3. Bering Sea and Aleutian Islands (BSAI) Groundfish
4. BSAI King and Tanner Crab
5. Fish Resources of the Arctic Management Area
6. Gulf of Alaska Groundfish

Table 11. Alaska Region stocks that are subject to overfishing, are overfished, or are approaching an overfished condition.

Council	FMP	Stock	Overfishing condition	Overfished Condition	
				Overfished	Approaching
North Pacific	BSAI King and Tanner Crab	blue king crab - Pribilof Islands		x	
		Southern Tanner crab - Bering Sea		x	

BSAI = Bering Sea and Aleutian Islands

Atlantic Highly Migratory Species

One FMP containing 27 stocks or complexes are managed by NMFS. Within this FMP, nine stocks or stock complexes are subject to overfishing, nine stocks or stock complexes are overfished, and two stocks are approaching an overfished condition (Table 12).

Atlantic HMS
1. Consolidated Atlantic Highly Migratory Species

Table 12. Atlantic Highly Migratory stocks that are subject to overfishing, are overfished, or are approaching an overfished condition.

Council	FMP	Stock	Overfishing condition	Overfished Condition	
				Overfished	Approaching
Atlantic HMS	Consolidated Atlantic Highly Migratory Species	albacore - North Atlantic	x	x	
		blacknose shark - Atlantic	x	x	
		blue marlin - Atlantic	x	x	
		bluefin tuna - West Atlantic	x	x	
		dusky shark	x	x	
		Porbeagle shark		x	
		sailfish - West Atlantic	x		
		sandbar shark - Atlantic*		x	
		scalloped hammerhead – Atlantic	x	x	
		shortfin mako - Atlantic	x		x
		white marlin - Atlantic	x	x	
		yellowfin tuna - Atlantic			x

*This stock is part of the Large Coastal Shark complex, but is assessed separately.

Stock status comparison between 2010 and 2011

Table 13 and 14 present a comparison between fish stocks with determinations of subject to overfishing and overfished for 2010 and 2011, respectively.

Table 13. Comparison of stocks or stock complexes with “subject to overfishing” determinations in 2010 and 2011. Stocks in **GREEN** under “2010” were *removed* from the list in 2011. Stocks in **RED** under "2011" were added to the list in 2011.

COUNCIL	# of stocks reviewed in 2011	2010 (n=40)	2011 (n=36)
Caribbean	22	queen conch	queen conch
		Grouper Unit 1	Grouper Unit 1
		Grouper Unit 4	Grouper Unit 4
		Parrotfish complex	Parrotfish complex
		Snapper Unit 1	Snapper Unit 1
Gulf of Mexico	53	gag	gag
		gray triggerfish	gray triggerfish
		greater amberjack	greater amberjack
		red snapper	red snapper
Highly Migratory Species	24	albacore - North Atlantic	albacore - North Atlantic
		blacknose shark - Atlantic	blacknose shark - Atlantic
		blue marlin - Atlantic	blue marlin - Atlantic
		bluefin tuna - West Atlantic	bluefin tuna - West Atlantic
		dusky shark - Atlantic	dusky shark - Atlantic
		sailfish - West Atlantic	sailfish - West Atlantic
		SANDBAR SHARK - ATLANTIC**	-
		-	SCALLOPED HAMMERHEAD - ATLANTIC
		shortfin mako - Atlantic	shortfin mako - Atlantic
white marlin - Atlantic	white marlin - Atlantic		
New England*	36	cod - GB	cod - GB
		cod - GOM	cod - GOM
		white hake	white hake
		Windowpane – GOM/GB	Windowpane – GOM/GB
		Windowpane - SNE/MA	Windowpane - SNE/MA
		WINTER FLOUNDER - GB	-
		WINTER FLOUNDER - SNE/MA	-
		Witch flounder	Witch flounder
		yellowtail flounder - CC/GOM	yellowtail flounder – CC/GOM
yellowtail flounder - SNE/MA	yellowtail flounder - SNE/MA		
Pacific	168	YELLOWFIN TUNA - EASTERN PACIFIC	-
Pacific / Western Pacific	10	bigeye tuna - Pacific	bigeye tuna - Pacific
		bluefin tuna - Pacific	bluefin tuna - Pacific
South Atlantic	84	black sea bass	black sea bass
		gag	gag
		red grouper	red grouper
		red snapper	red snapper
		snowy grouper	snowy grouper
		speckled hind	speckled hind
		TILEFISH	-
		vermillion snapper	vermillion snapper
		warsaw grouper	warsaw grouper

*GB = Georges Bank; GOM = Gulf of Maine; SNE = Southern New England; MA = Mid-Atlantic; CC = Cape Cod.

**This stock is part of the Large Coastal Shark complex, but is assessed separately.

Table 14. Stocks or stock complexes with “overfished” determinations in 2010 and 2011. Stocks in GREEN under “2010” were removed from the list in 2011. Stocks in RED under “2011” were added to the list in 2011.

COUNCIL	# of stocks reviewed in 2011	2010* (n = 48)	2011 (n = 45)
Caribbean	22	Grouper Unit 1	Grouper Unit 1
		Grouper Unit 2	Grouper Unit 2
		Grouper Unit 4	Grouper Unit 4
		queen conch	queen conch
Gulf of Mexico	53	red snapper	red snapper
		greater amberjack	greater amberjack
		gray triggerfish	gray triggerfish
		gag	gag
Highly Migratory Species	24	albacore - North Atlantic	albacore - North Atlantic
		blacknose shark - Atlantic	blacknose shark - Atlantic
		blue marlin - Atlantic	blue marlin - Atlantic
		bluefin tuna - West Atlantic	bluefin tuna - West Atlantic
		dusky shark	dusky shark
		porbeagle shark	porbeagle shark
		sandbar shark - Atlantic**	sandbar shark - Atlantic**
		-	SCALLOPED HAMMERHEAD - ATLANTIC
white marlin - Atlantic	white marlin - Atlantic		
Mid-Atlantic	11	butterfish	butterfish
New England	36	Atlantic salmon	Atlantic salmon
		Atlantic halibut	Atlantic halibut
		Atlantic wolffish	Atlantic wolffish
		cod - GB	cod - GB
		ocean pout	ocean pout
		white hake	white hake
		windowpane - GOM/GB	windowpane - GOM/GB
		WINTER FLOUNDER - GB	-
		winter flounder - SNE/MA	winter flounder - SNE/MA
		witch flounder	witch flounder
		yellowtail flounder - CC/GOM	yellowtail flounder - CC/GOM
		yellowtail flounder - GB	yellowtail flounder - GB
		yellowtail flounder - SNE/MA	yellowtail flounder - SNE/MA
thorny skate - GOM	thorny skate - GOM		
SMOOTH SKATE - GOM	-		
North Pacific	63	blue king crab - Pribilof Islands	blue king crab - Pribilof Islands
		Southern Tanner crab - Bering Sea	Southern Tanner crab - Bering Sea
Pacific	168	canary rockfish	canary rockfish
		cowcod	cowcod
			PACIFIC OCEAN PERCH
		PETRALE SOLE	
		yelloweye rockfish	yelloweye rockfish
		chinook salmon - California Central Valley: Sacramento (fall)	chinook salmon - California Central Valley: Sacramento (fall)
		COHO SALMON - WASHINGTON COAST: QUEETS	
coho salmon - Washington Coast: Western Strait of Juan de Fuca	coho salmon - Washington Coast: Western Strait of Juan de Fuca		
South Atlantic	84	BLACK SEA BASS	
		red grouper	red grouper
		red porgy	red porgy
		red snapper	red snapper
		snowy grouper	snowy grouper
		pink shrimp***	pink shrimp***
Western Pacific	40	Seamount Groundfish complex - Hancock Seamounts	Seamount Groundfish complex - Hancock Seamounts

*GB = Georges Bank; GOM = Gulf of Maine; SNE = Southern New England; MA = Mid-Atlantic; CC = Cape Cod.

**This stock is part of the Large Coastal Shark complex, but is assessed separately.

***Pink shrimp are an annual crop. An advisory panel concluded that the apparent decline in pink shrimp abundance appears to be due to environmental factors rather than to overfishing.

An online version of this report is available at
<http://www.nmfs.noaa.gov/sfa/statusoffisheries/SOSmain.htm>

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Cover photo of Bering Sea snow crab being off-loaded, Dutch Harbor, AK. Photo courtesy of Forrest Bowers, Alaska Department of Fish and Game

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