

# Fish Stock Sustainability Index (FSSI)

## 2007 Quarter 4 Update through December 31, 2007

### Overview

The FSSI is a performance measure for the sustainability of 230 U.S. fish stocks<sup>1</sup> selected for their importance to commercial and recreational fisheries. The FSSI will increase as overfishing is ended and stocks rebuild to the level that provides maximum sustainable yield.

### FSSI Scoring Method

The FSSI is calculated by assigning a score for each fish stock based on the five following criteria:

<u>Criteria</u>	<u>Points Awarded</u>
1. "Overfished" status is known	0.5
2. "Overfishing" status is known	0.5
3. Overfishing is not occurring (for stocks with known "overfishing" status)	1.0
4. Stock biomass is above the "overfished" level defined for the stock	1.0
5. Stock biomass is at or above 80% of the biomass that produces maximum sustainable yield ( $B_{MSY}$ ) <sup>2</sup> (this point is in addition to the point awarded for being above the "overfished" level)	1.0

The maximum score each stock may receive is 4. The value of the FSSI is the sum of all 230 individual stock scores. The maximum total FSSI score is 920, achieved if all 230 stocks were to each receive a score of 4.

### Current FSSI Score

**2007 Quarter 4 Score = 531** (October 1, 2007 to December 31, 2007)

The following table summarizes the current FSSI score and where additional points can be gained to raise the score in the future.

<u>Criteria</u>	<u># Stocks</u>	<u>Current Points</u>	<u>Total Points Possible</u>	<u>Actions that Can Increase the Score</u>	<u>Potential Points to Gain</u>
<b>1. "Overfished" status is known</b> Overfished: 44 Not Overfished: 122	<b>166</b>	<b>83</b>	<b>115</b>	Determine the "overfished" status for the remaining 64 stocks	<b>32</b>
<b>2. "Overfishing" status is known</b> Overfishing: 39 Not subject to overfishing: 143	<b>182</b>	<b>91</b>	<b>115</b>	Determine the "overfishing" status for the remaining 48 stocks	<b>24</b>
<b>3. Overfishing is not occurring</b> (for stocks with known "overfishing" status)	<b>143</b>	<b>143</b>	<b>230</b>	End overfishing on the 39 stocks subject to overfishing. Ensure the 48 stocks (see #2 above) are not subject to overfishing.	<b>87</b>
<b>4. Stock biomass is above the "overfished" level defined for the stock</b> (for stocks with a known "overfished" status and that are "not overfished")	<b>122</b>	<b>122</b>	<b>230</b>	Increase the biomass above the overfished level for the 44 overfished stocks. Ensure the biomass for the 64 stocks (see #1 above) is above the overfished level.	<b>108</b>
<b>5. Stock biomass is at or above 80% of <math>B_{MSY}</math></b> (this point is in addition to the point awarded for being above the "overfished" level, criteria #4)	<b>92</b>	<b>92</b>	<b>230</b>	For the 44 overfished stocks and the 30 stocks that are not overfished (but biomass is not at or above 80% of $B_{MSY}$ ), increase biomass to at or above 80% of $B_{MSY}$ . Ensure the biomass for the 64 stocks (see #1 above) is at or above 80% of $B_{MSY}$ .	<b>138</b>
<b>TOTAL</b>		<b>531</b>	<b>920</b>		<b>389</b>

<sup>1</sup> The majority of species are assessed as a single stock; however, there are a few that are assessed as a stock complex, which contain a group of species with similar geographic distribution, co-occurrence in fisheries, and life history.

<sup>2</sup> Stocks rebuilding from a previously overfished condition are not awarded the fourth point until they reach  $B_{MSY}$ , as mandated by the Magnuson-Stevens Act. After they have been fully rebuilt, they may fluctuate within the 80% parameter and retain the score of 4 like the other non-rebuilding stocks.





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## Summary of Stock Status Determination Changes from October 1, 2007 through December 31, 2007

### Overview of overfishing status of FSSI stocks through December 31, 2007

- 182 stocks or stock complexes are known with respect to their overfishing status. Of these:
  - 143 stocks or stock complexes are not subject to overfishing.
  - 39 stocks or stock complexes have a fishing mortality rate that exceeds the overfishing threshold (i.e., is subject to overfishing).
- 48 stocks or stock complexes have overfishing thresholds not defined or applicable, or are unknown with respect to their overfishing status.

### Changes in overfishing status and/or score of FSSI stocks

- In the Northwest Region –
  - *Petrale Sole* is no longer subject to overfishing – score increased from 3 to 4.
  - *Splitnose Rockfish* is not subject to overfishing (was previously listed as unknown) – score increased from 0 to 1.5.
- In the Highly Migratory Species Division –
  - *Bigeye Tuna – Atlantic* is no longer subject to overfishing – score increased from 1 to 3 (see overfished changes).
- There are no changes to the other regions.

### Overview of overfished status of FSSI stocks through December 31, 2007

- 166 stocks or stock complexes are known with respect to their overfished status. Of these:
  - 122 stocks or stock complexes are not overfished (3 of these stocks are approaching an overfished condition).
  - 44 stocks or stock complexes are overfished.
- 64 stocks or stock complexes have overfished thresholds not defined or applicable, or are unknown with respect to their overfished status.

## Changes in overfished status and/or score of FSSI stocks

- In the Northwest Region –
  - *Blue Rockfish* is not overfished (stock was previously listed as unknown) – score increased from 0 to 1.5.
  - *Shortbelly Rockfish* is now above 80% of maximum sustainable yield – score increased from 3 to 4.
- In the Alaska Region –
  - *Blue King Crab - Saint Matthews Island* is no longer overfished (stock is still rebuilding) – score increased from 2 to 3.
  - *Tanner Crab - Eastern Bering Sea* is now rebuilt – score increased from 3 to 4.
  - *Walleye Pollock - Western/Central* is now below 80% of maximum sustainable yield – score decreased from 4 to 3.
  - *Walleye Pollock - Eastern Bering Sea* is now below 80% of maximum sustainable yield – score decreased from 4 to 3.
- In the Highly Migratory Species Division –
  - *Bigeye Tuna - Atlantic* is no longer overfished (stock is still rebuilding) – score increased from 1 to 3 (see overfishing changes).
- There are no changes to the other regions.

## Overview of overfishing status of non-FSSI stocks through December 31, 2007

- 61 stocks or stock complexes are known with respect to their overfishing status. Of these:
  - 59 stocks or stock complexes are not subject to overfishing.
  - 2 stocks have a fishing mortality rate that exceeds the overfishing threshold (i.e., is subject to overfishing).
- 236 stocks or stock complexes have overfishing thresholds not defined or applicable, or are unknown with respect to their overfishing status.

## Changes in overfishing status of non-FSSI stocks

- In the Northwest Region –
  - *Black Rockfish - South* is not subject to overfishing (was previously assessed as a North stock only, but is now assessed as a North and South stock).
- There are no changes to the other regions.

## Overview of overfished status of non-FSSI stocks through December 31, 2007

- 23 stocks or stock complexes are known with respect to their overfished status. Of these:
  - 22 stocks or stock complexes are not overfished (2 of these stocks are approaching an overfished condition).
  - 1 stock is overfished.
- 274 stocks or stock complexes have overfished thresholds not defined or applicable, or are unknown with respect to their overfished status.

## Changes in overfished status of non-FSSI stocks

- In the Northwest Region –
  - *Black Rockfish - South* is not overfished (was previously assessed as a North stock only, but is now assessed as a North and South stock).
- There are no changes to the other regions.