

Fish Stock Sustainability Index (FSSI)

2010 Quarter 4 Update through December 31, 2010

Overview

The FSSI is a performance measure for the sustainability of 230 U.S. fish stocks¹ selected for their importance to commercial and recreational fisheries. The FSSI will increase as stock status becomes known, overfishing is ended, and stocks increase 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}) ² (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

2010 Quarter 4 Score = 583 (October 1, 2010 to December 31, 2010)

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>
1. "Overfished" status is known Overfished: 43 Not Overfished: 136	179	89.5	115	Determine the "overfished" status for the remaining 51 stocks	25.5
2. "Overfishing" status is known Overfishing: 39 Not subject to overfishing: 154	193	96.5	115	Determine the "overfishing" status for the remaining 37 stocks	18.5
3. Overfishing is not occurring (for stocks with known "overfishing" status)	154	154	230	End overfishing on the 39 stocks subject to overfishing. Ensure the 37 stocks (see #2 above) are not subject to overfishing.	76
4. Stock biomass is above the "overfished" level defined for the stock (for stocks with a known "overfished" status and that are "not overfished")	136	136	230	Increase the biomass above the overfished level for the 43 overfished stocks. Ensure the biomass for the 51 stocks (see #1 above) is above the overfished level.	94
5. Stock biomass is at or above 80% of B_{MSY} (this point is in addition to the point awarded for being above the "overfished" level, criteria #4)	107	107	230	For the 43 overfished stocks and the 29 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 51 stocks (see #1 above) is at or above 80% of B_{MSY} .	123
TOTAL		583	920		337

¹ 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.

² 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.

Summary of Stock Status Determination Changes from October 1, 2010 through December 31, 2010

Overview of overfishing status of FSSI stocks through December 31, 2010

- 193 stocks or stock complexes are known with respect to their overfishing status. Of these:
 - 154 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).
- 37 stocks or stock complexes have overfishing thresholds not defined or applicable, or are unknown with respect to their overfishing status.

Overview of overfished status of FSSI stocks through December 31, 2010

- 179 stocks or stock complexes are known with respect to their overfished status. Of these:
 - 136 stocks or stock complexes are not overfished (4 of these stocks are approaching an overfished condition).
 - 43 stocks or stock complexes are overfished.
- 51 stocks or stock complexes have overfished thresholds not defined or applicable, or are unknown with respect to their overfished status.

Summary of Overfishing and Overfished Changes of FSSI Stocks

<u>Stock</u>	<u>Region</u>	<u>Previous Status</u>	<u>Current Status</u>	<u>Previous Total FSSI Score</u>	<u>Current Total FSSI Score</u>
Winter skate - Georges Bank / Southern New England	NE	B/Bmsy < 100%Bmsy*	B/Bmsy > 80%*	3	4
Pacific cod - Pacific Coast	NW	Overfishing – Unknown	Not Subject to Overfishing	0	1.5
Southern Tanner crab - Bering Sea	AK	Approaching Overfished Condition	Overfished	3	2
Red king crab - Pribilof Islands	AK	B/Bmsy > 80%	B/Bmsy < 80%	4	3
TOTAL FSSI SCORE				582.5	583

*Winter skate was listed as overfished in 2007, but subsequently the biomass increased before a rebuilding plan was implemented and the stock is no longer overfished. It has now been determined that this stock does not require a rebuilding plan and the stock is now at 93% Bmsy, so it is considered as being sustainably managed.

Overview of overfishing status of non-FSSI stocks through December 31, 2010

- 60³ stocks or stock complexes are known with respect to their overfishing status. Of these:
 - 59 stocks or stock complexes are not subject to overfishing.
 - 1 stock has a fishing mortality rate that exceeds the overfishing threshold (i.e., is subject to overfishing).
- 238 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 Alaska Region –
 - Kamchatka flounder - Bering Sea / Aleutian Islands is no longer contained in the Bering Sea / Aleutian Islands Arrowtooth Flounder Complex; it is now listed as a separate stock.
- There are no changes to any of the other Regions.

Overview of overfished status of non-FSSI stocks through December 31, 2010

- 28³ stocks or stock complexes are known with respect to their overfished status. Of these:
 - 23 stocks or stock complexes are not overfished (1 of these stocks are approaching an overfished condition).
 - 5 stocks are overfished.
- 270 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 Alaska Region –
 - Kamchatka flounder - Bering Sea / Aleutian Islands is no longer contained in the Bering Sea / Aleutian Islands Arrowtooth Flounder Complex; it is now listed as a separate stock.
- There are no changes to any of the other Regions.

FSSI stock status updates are posted quarterly at:

<http://www.nmfs.noaa.gov/sfa/statusoffisheries/SOSmain.htm#07>

³ This number includes Pacific halibut, which is managed by the International Pacific Halibut Commission.