Fish Assessment Report

July 17, 2012

NOAA FISHERIES SERVICE

FY2012 Quarter 3 (April – June)

Number of FSSI Stocks with Adequate Assessments = 133

Assessment Summary

This report summarizes the efforts of NOAA Fisheries to provide stock assessment advice needed to determine the status of fish stocks and to guide the setting of annual catch limits that will prevent overfishing and attain optimum yield. NOAA Fisheries tracks the number of Fish Stock Sustainability Index (FSSI) stocks with adequate assessments on a quarterly and annual basis. Adequate assessments are conducted at Level 3 or higher (see Box 1), validated by a regional review, and have been updated within the past five years.

FY2012 began in October 2011 with 57.4% of FSSI stocks (132/230) having adequate assessments (Figure 1). This number is antipated to remain at 132 stocks with adequate assessments through the end of FY2012, through a combination of new/improved fish assessments and updated assessments to replace those aging past the 5 year mark. Continued improvements to fish stock assessments are critical to support newly implemented annual catch limit regulations throughout the country in FY2012 and beyond. For a summary of changes (both positive and negative) to the list of FSSI stocks with adequate assessments in FY2012, please see Table 1.

Quarter 1 (October–December, 2011): Quarter 1 ended with 133 stocks with adequate assessments. Forty assessments were completed for FSSI stocks during the first quarter of FY2012 (Appendix A). A majority of these assessments were at the adequate level (Figure 2). Many Quarter 1 assessments were annual updates for stocks in the Alaska Region, several of which led to changes in stock/assemblage structure and accompanying changes in stock management. Several stocks on both the Pacific and Atlantic coasts were assessed in Quarter 1 as well, including updated assessments for black sea bass and tilefish on the Southern Atlantic Coast, which replaces expired assessments for both stocks and restores assessment adequacy.

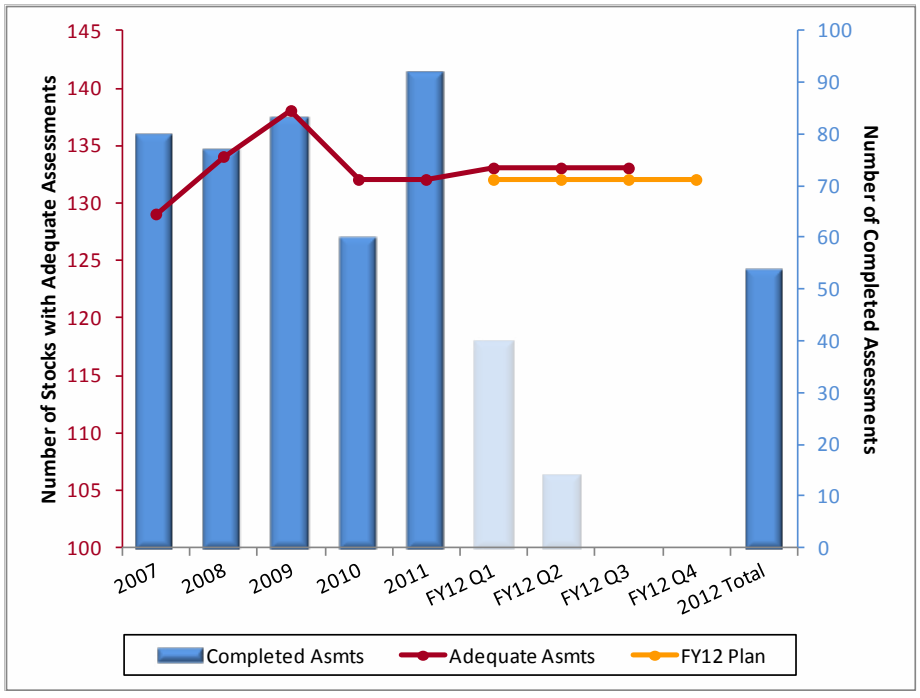

Figure 1. Recent and projected assessment activity for FSSI stocks.

Quarter 2 (January–March, 2012): A total of 14 assessments were completed during the second quarter of FY2012, which ended with 133 stocks with adequate assessments. Eleven update stock assessments were conducted by the Northeast Fisheries Science Center (NEFSC) under the new assessment framework recently developed in the Northeast region. This framework allows for conducting and peer reviewing operational stock assessments more rapidly and at greater frequency. Ad-

ditionally, the NEFSC completed a benchmark assessment for Gulf of Maine Atlantic cod, which led to new management measures for the stock developed in collaboration with industry partners and other stakeholders.

Quarter 3 (April–June, 2012): A total of 133 stocks have adequate assessments at the end of Quarter 3. Although no assessments were completed during the quarter, many assessments are underway and are expected to be completed during the final quarter of the fiscal year (July-September). The spring and summer months are also a busy time for field collection of fishery-independent survey data, which provides vital data inputs on abundance and life history for stock assessments.

Background

Fish stock assessments provide the technical information needed to support determination of a stock's status and to forecast the level of acceptable biological catch (ABC) that would prevent overfishing. The amount of data available to conduct stock assessments varies tremendously across the 500+ managed stocks and even within the 230 FSSI stocks. Generally, a minimally adequate assessment can be conducted where there is good information on the level of annual catch over time and there is an indicator of the degree of change in stock abundance over time (Level 3, see box below). Any assessment needs to be updated periodically to track natural fluctuations and to provide timely management advice. For the purposes of this report, five years is used as a nominal window beyond which the adequacy of an assessment is considered to have expired. In reality, many important stocks are updated more frequently. All assessments must deal with various shortcomings in the available data, and all assessments have uncertainty in their findings. Thus, assessments are expected to be validated by a regional review system before being considered as the best scientific information available regarding the status of the stock.

Assessment Highlight: National Academies Rebuilding Study

NOAA Fisheries Service is currently sponsoring a study being conducted by the National Academy of Sciences' Division on Earth and Life Sciences titled "Evaluating the Effectiveness of Stock Rebuilding Plans of the 2006 Fishery Conservation and Management Reauthorization Act". The study seeks to analyze the effects of the 2006 reauthorization of the Magnuson-Stevens Act, evaluate the success of rebuilding overfished stocks, and identify the changes that have been made to fisheries management in response to requirements associated with rebuilding. Much of the information necessary to perform these analyses are being provided to Academy scientists by NOAA Fisheries, supported in large part by the Species Information System (SIS). SIS is a national database maintained by NOAA Fisheries that archives data on stock assessments, status, and other important associated information. For more information on the Academy rebuilding study, please see http://dels.nas.edu/Study-In-Progress/Evaluating-Effectiveness-Stock-Rebuilding/DELS-OSB-10-03.

Box 1. Assessment levels, as defined in the *Stock Assessment Improvement Plan* (2001).

Level 0 – None; although some data may have been collected on this stock, these data have not been examined beyond simple time series plots or tabulations of catch

Level 1 – Index only; catch per unit of effort from commercial, recreational, or survey vessel data, or a onetime estimate of absolute abundance

Level 2 – Simple equilibrium models applied to life history information

Level 3 – Equilibrium and non-equilibrium production models aggregated both spatially and over age and size

Level 4 – Size / age / stage structure models

Level 5 – Assessment models incorporating ecosystem considerations (environmental variables, multispecies information, habitat) and spatial and seasonal considerations in addition to Levels 3 and 4

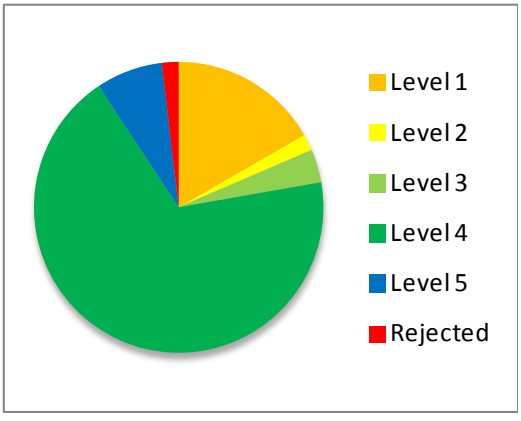

Figure 2. Level of assessments completed (54 total) for FSSI stocks in FY2012. 80% of FSSI stock assessments completed in FY2012 were completed at an adequate (i.e. Level 3 or greater) level.

Table 1. Assessments Expected to Impact the Number of FSSI Stocks with Adequate Assessments in FY2012.

Quarter	Fishery Council	Fishery Management Plan	Stock Name and Area	Adequate?		Change[1]	Notes on Assessment
				Previous	Current		
1	SAFMC	Snapper-Grouper Fishery of the South Atlantic Region	Black sea bass - Southern Atlantic Coast	No	Yes	+1	Replaces assessment that sunset in 2010
1	SAFMC	Snapper-Grouper Fishery of the South Atlantic Region	Tilefish - Southern Atlantic Coast	No	Yes	+1	Replaces assessment that sunset in 2009
1	NPFMC	Bering Sea/Aleutian Islands King and Tanner Crabs	Blue king crab - Saint Matthews Island	Yes	No	-1	Previous assessment rejected; new model not ready

[1]Includes stocks that were due to sunset in FY2012, and stocks that were expected to change adequacy but did not. See notes on assessment for additional information.