Fish Assessment Report

Revision – January 13, 2012

NOAA FISHERIES SERVICE

FY2011 Quarter 4 (July – September)

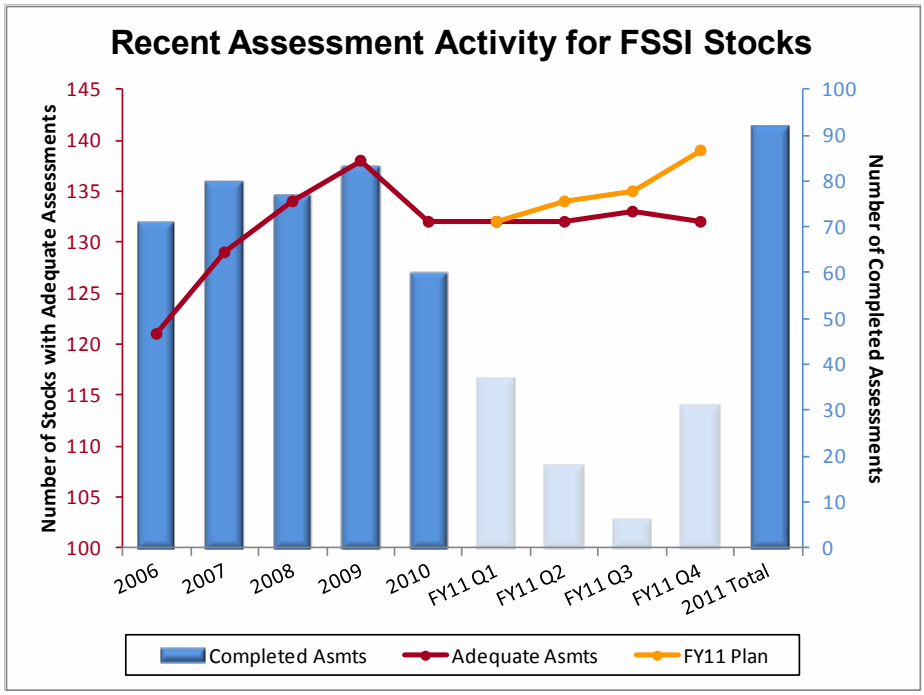
Number of FSSI Stocks with Adequate Assessments = 132

Assessment Summary

This report summarizes the efforts of NOAA Fisheries to provide stock assessment advice in support of fishery status determinations, setting annual catch limits, and management of sustainable fisheries. 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, next page), validated by a regional review, and have been updated within the past five years.

The fiscal year began in October 2010 with 132 out of the 230 FSSI stocks having adequate stock assessments. The target number of stocks with adequate assessments at the end of FY2011 was projected to increase 139; unfortunately, the final number of stocks at the end of the fiscal year with adequate assessments remained at 132, falling short of annual projections. Increasing assessment demands to support fishery conservation and management measures (i.e. annual catch limits, etc.), accompanied by changing review processes and ongoing budgetary constraints all contributed to this shortfall. For a summary of changes (positive and negative) to FSSI stocks with adequate assessments in FY2011, please see Table 1.

A total of 92 stock assessments was completed for FSSI stocks in FY2011; 65 (71%) of these were accepted as Level 3 or higher (i.e. adequate). Assessment activity highlights for FY2011 included: new adequate assessments for two stocks that had never before been assessed and previously had unknown status determinations; cooperation with other countries and Regional Fisheries Management Organizations on the assessment of transboundary and highly migratory stocks; continued development of refined assessment models that better quantify uncertainty, more accurately project catch and abundance, and provide improved advice to fisheries managers; refinement of stock structure information for Atlantic blacknose shark; updates to nine assessments that had recently sunset or were scheduled to sunset at the end of FY2011; and four "next generation" Level 5 assessments that linked the assessments to ecosystem factors.



Quarter 1 (October–December, 2010): A large number of assessments (37 total) was completed for FSSI stocks in the first quarter of FY2011, mostly on stocks in the Alaska Region (Appendix A). Many of these assessments were updates to existing stock assessments, and there was no net change to the number of stocks with adequate assessments in Quarter 1.

Assessments completed in the first quarter included a benchmark assessment for the overfished South Atlantic stock of red snapper and annual/biennial assessments of Alaska stocks necessary for the management of stocks in the Bering Sea, Aleutian Islands, and Gulf of Alaska. Several of these Alaskan assessments were conducted at the highest level possible (Level 5), incorporating ecosystem information such as environmental variables.

Quarter 2 (January–March, 2011): The second quarter concluded with a total of eighteen assessments completed for FSSI stocks. The number of stocks with adequate assessments was again 132 (Appendix A). One stock assessment (South Atlantic black sea bass) scheduled to be completed in the second quarter was postponed until Quarter 4 so more complete analyses could be conducted. Additionally, the assessment of longfin inshore squid on the Atlantic Coast did not meet the requirements for adequacy as expected. However, the second quarter did have a significant assessment achievement – the assessment of Pacific hake was upgraded to a "next generation" assessment by incorporating ecosystem considerations into the assessment model.

Quarter 3 (April–June, 2011): At the end of Quarter 3, the number of stocks with adequate stock assessments climbed to 133 (Appendix A). A total of six assessments of FSSI stocks was completed in the third quarter, five of them adequate (i.e. Level 3 or above). Third quarter stock assessment activity included a new adequate assessment for Gulf of Mexico yellowedge grouper, a stock that had never before been assessed and previously had unknown overfishing and overfished status determinations.

Quarter 4 (July–September, 2011): A total of 31 stock assessments was completed in Quarter 4 (Appendix A). A large number of additional assessments (17 total) was planned to be completed in Quarter 4; the work for these assessments was largely conducted during Quarter 4, but the assessments are undergoing final review and will not be considered final until Quarter 1 of FY2012. A new adequate stock assessment was completed in the fourth quarter for Pacific Coast spiny dogfish, a stock that had never been assessed before. Additionally, eight assessments were completed to update recently expired assessments or assessments that were scheduled to expire at the end of FY2011. For a complete listing of the current assessment status of all FSSI stocks, please see Appendix B. Information on planned assessments for FY2012 can be found in Appendix C.

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 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

Table 1. Summary of Assessments Expected to Impact the Number of FSSI Stocks with Adequate Assessments in FY2011

Quarter	Fishery Council	Fishery Management Plan	Stock Name and Area	Adequate?		Change[1]	Notes on Assessment
				Previous	Current		
2	HMS	Consolidated Atlantic Highly Migratory Species	Blue marlin – Atlantic	No	Yes	+1	Updated assessment replaces inadequate one
2	MAFMC	Atlantic Mackerel, Squid and Butterfish	Longfin inshore squid – Georges Bank / Cape Hatteras	No	No	0	Did not meet adequacy requirements
3	GMFMC	Reef Fish Resources of the Gulf of Mexico	Yellowedge grouper – Gulf of Mexico	No	Yes	+1	New adequate assessment
3	GMFMC	Reef Fish Resources of the Gulf of Mexico	Greater amberjack – Gulf of Mexico	Yes	Yes	0	Completed before previous assessment sunset
3	PFMC	U.S. West Coast Fisheries for Highly Migratory Species	Skipjack tuna – Eastern Tropical Pacific	Yes	No	-1	Sunset of previous assessment, new assessment not adequate
4	PFMC	Pacific Coast Groundfish	Blackgill rockfish – Southern California	No	Yes	+1	Replaces assessment that sunset last year
4	PFMC	Pacific Coast Groundfish	Dover sole – Pacific Coast	No	Yes	+1	Replaces assessment that sunset last year
4	PFMC	Pacific Coast Groundfish	Spiny dogfish – Pacific Coast	No	Yes	+1	New adequate assessment
4	HMS	Consolidated Atlantic Highly Migratory Species	Dusky shark – Atlantic	Yes	Yes	0	Completed before previous assessment sunset
4	HMS	Consolidated Atlantic Highly Migratory Species	Sandbar shark – Atlantic	Yes	Yes	0	Completed before previous assessment sunset
4	NEFMC	Northeast Multispecies	Winter flounder – Gulf of Maine	No	No	0	Did not meet adequacy requirements
4	NPFMC	Bering Sea/Aleutian Islands King and Tanner Crabs	Golden king crab – Aleutian Islands	No	No	0	New model not accepted for assessment
4	NPFMC	Bering Sea/Aleutian Islands King and Tanner Crabs	Southern Tanner crab – Bering Sea	No	No	0	New model not accepted for assessment
4	SAFMC	Snapper-Grouper Fishery of the South Atlantic Region	Black sea bass – Southern Atlantic Coast	No	No	0	Final results delayed until Q1 FY2012; replaces assessment that sunset last year
4	SAFMC	Snapper-Grouper Fishery of the South Atlantic Region	Tilefish – Southern Atlantic Coast	No	No	0	Final results delayed until Q1 FY2012; replaces assessment that sunset in 2009
4	GMFMC	Reef Fish Resources of the Gulf of Mexico	Gray triggerfish – Gulf of Mexico	Yes	Yes	0	Completed before previous assessment sunset
4	GMFMC	Reef Fish Resources of the Gulf of Mexico	Vermilion snapper – Gulf of Mexico	Yes	Yes	0	Completed before previous assessment sunset
4	PFMC / WPFMC	U.S. West Coast Fisheries for Highly Migratory Species / Pacific Pelagic Fisheries of the Western Pacific Region Ecosystem	Albacore – North Pacific	Yes	Yes	0	Completed before previous assessment sunset
4	SAFMC	Snapper-Grouper Fishery of the South Atlantic Region	Gag – Southern Atlantic Coast	Yes	No	-1	Sunset of previous assessment
4	SAFMC	Snapper-Grouper Fishery of the South Atlantic Region	Red porgy – Southern Atlantic Coast	Yes	No	-1	Sunset of previous assessment
4	GMFMC	Shrimp Fishery of the Gulf of Mexico	Pink shrimp – Gulf of Mexico	Yes	No	-1	Revision of previously reported information; new assessment is expected in Q1 FY2012
4	HMS	Consolidated Atlantic Highly Migratory Species	Blacktip shark – Gulf of Mexico	Yes	No	-1	Revision of previously reported information

[1]Includes stocks that were due to sunset in FY2011, and stocks that were expected to change adequacy but did not. See notes for additional information.