



New England Fishery Management Council

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To: Paul J. Howard, Executive Director
From: Scientific and Statistical Committee
Date: DRAFT

Subject: **Northeast Multispecies Acceptable Biological Catches for Fishing Years 2012-2014**

The Scientific and Statistical Committee (SSC) was asked to recommend Acceptable Biological Catch (ABC) for Northeast Multispecies stocks for fishing years 2012-2014.

- a) For the 12 analytical assessment stocks that have not been assessed since GARM III, provide an ABC for FY 2012 only. These stocks are GOM cod, GB cod, GOM haddock, GB haddock, CC/GOM yellowtail flounder, SNE/MA yellowtail flounder, witch flounder, American plaice, white hake, Acadian redfish, Atlantic halibut, and Atlantic wolffish.
- b) For the 3 index assessment stocks that have not been assessed since GARM III, provide an ABC for FY 2012-2014. These stocks are northern windowpane flounder, southern windowpane flounder, and ocean pout.
- c) For the 4 stocks that have been assessed since GARM III through the SARC process, provide an ABC for FY 2012-2014. These stocks are GB winter flounder, SNE/MA winter flounder, GOM winter flounder, and pollock. Note that pollock ABC have already been set and do not need to be updated.
- d) For GB yellowtail flounder stock that has been assessed since GARM III through the TRAC process, provide an ABC for FY 2012-2014 for the two alternative rebuilding strategies under consideration by the Council.

In order to meet this term of reference, the SSC met September 14, 2011 in Providence, RI and considered the following:

1. Groundfish Plan Development Team (PDT) Northeast Multispecies ABC recommendations for FY 2012-2014 memo dated September 2, 2011
2. Northeast Fisheries Science Center. 2008. Assessment of 19 Northeast Groundfish Stocks through 2007: Report of the 3rd Groundfish Assessment Review Meeting (GARM III), Northeast Fisheries Science Center, Woods Hole, Massachusetts, August 4-8, 2008. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 08-15.
3. Transboundary Resource Assessment Committee (TRAC). Eastern Georges Bank Cod Status Report. TSR 2011/02.
4. Transboundary Resource Assessment Committee (TRAC). Georges Bank Yellowtail Flounder Status Report. TSR 2011/01.
5. Transboundary Resource Assessment Committee (TRAC). Georges Bank Yellowtail Flounder 2011 Assessment reference document. Advance copy.
6. Northeast Fisheries Science Center. 2011. 52nd Northeast Regional Stock Assessment Workshop (52nd SAW) Assessment Summary Report. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 11-11.

7. Northeast Fisheries Science Center. 2011. 52nd Northeast Regional Stock Assessment Workshop (52nd SAW) Assessment Report. Advance copy.
8. Northeast Fisheries Science Center. 2011. 52nd Northeast Regional Stock Assessment Workshop (52nd SAW) Assessment Review Committee Summary Report and individual reviewers reports.
9. Presentations by Groundfish Plan Development Team members Tom Nies and Paul Nitscke.

The groundfish plan development team (PDT) recommended Overfishing Limit (OFL) and ABC for the 19 Northeast Multispecies stocks based on advice provided by the SSC during its August 2011 meeting.

Methods 1 – Stocks last assessed at GARM III with analytical assessment

The twelve stocks with analytical assessments last conducted during GARM III had FY 2012 ABC determined by projections conducted for Framework 44. These projections have been previously reviewed and approved by the SSC and thus were not updated. Given the SSC's apprehension on using medium term projections that do not take account of potential changes in stock dynamics since GARM III (i.e., high uncertainty associated with these projections demonstrated by the augmented PDT), the probability of overfishing and overfished status was not presented. Projection of results from GARM III assessments to 2013-2014 were deemed to be too unreliable for setting ABCs. Thus, no OFL or ABC values are recommended for 2013-2014 for these stocks. Assessments for these stocks will be updated during the winter of 2011/2012, which will provide ABC for FY 2013-2014.

For these 12 stocks, the 2012 OFL was computed as the median catch when the projected population was fished at F_{msy} , while the ABC was computed as the median catch when the projected population was fished at either $75\%F_{msy}$ or $F_{rebuild}$, whichever was lower. In lieu of an updated assessment or a strong basis for revising its previous recommendations, the SSC had no basis for altering its previous advice on OFL and ABC values for FY 2012. The only exception was Georges Bank cod, which had the 2012 OFL and ABC set equal to the 2011 values based on the recent results of the TRAC Eastern Georges Bank cod assessment, which indicated poor status of this management unit (see Technical Note below). For all twelve stocks, the SSC agrees with the OFLs and ABCs calculated by the PDT.

Methods 2 – Index-based assessments

The three stocks with index assessments last conducted during GARM III had FY 2012-2014 OFL and ABC determined by the application of relative F_{msy} or $75\%F_{msy}$ to the recent three year average of the survey index, respectively. This application was more uncertain than in past years due to the change of the survey vessel to the Henry B. Bigelow, which required a calibration factor to convert Bigelow catches to Albatross equivalents. Published and reviewed aggregate biomass calibrations were used to make this conversion. For all three stocks, the SSC agrees with the OFLs and ABCs calculated by the PDT.

Methods 3 – Stocks with recent assessments

The five stocks which have been assessed since GARM III used standard projection techniques to estimate the OFL and ABC values, except for GOM winter flounder (see Technical Note below). The pollock stock has OFL and ABC values already approved for 2012-2014, the results of which

are presented here for completeness. The SSC agrees with the OFLs and ABCs calculated by the PDT for the three winter flounder stocks, but makes a different recommendation for the Georges Bank yellowtail flounder ABC (see Technical Note below).

Technical Notes

1. Georges Bank cod – The recent stock assessment of Eastern Georges Bank cod, conducted by the Transboundary Resources Assessment Committee (TRAC) in June 2011, indicated poor status of this management unit, with low biomass and recruitment in recent years. Since the Eastern Georges Bank cod management unit is a subset of the Georges Bank stock, this information was deemed sufficient to deviate from the original GARM III projections. The choice was made to maintain the 2011 ABC (5,616 mt) instead of using the 2012 ABC that resulted from the default projections from the GARM III assessment (6,214 mt).
2. Ocean pout – There is a possibility that this stock has undergone a change in productivity due to the continued low survey values despite catches below the ABC in recent years. While it is not certain that the ABC being recommended is sustainable, the no possession limit in effect attempts to reduce bycatch of this stock and increase the probability of stock rebuilding. The SSC urges examination of the causes of this apparent change in productivity, its impact on reference points, and potential management strategies for such situations.
3. Georges Bank yellowtail flounder – The SSC recommendation of 1,150 mt for the 2012 ABC is the midpoint of the range recommended by TRAC (900-1,400 mt). This ABC balances the risk of overfishing and the probability of not causing a decline in stock abundance among the three projection scenarios considered in the TRAC. This ABC is consistent with allowing rebuilding for both rebuilding plans presented by the PDT and it is consistent with the TMGC negotiated catch quota (which should be less than or equal to the ABC recommended by the SSC) of 900 mt. The ABC for 2013 was set equal to the 2012 ABC in recognition of the uncertainty associated with this assessment and the knowledge that an update assessment will be conducted by TRAC in June 2012. Values for the 2014 OFL and ABC were not recommended for the same reason. Concerns on recent recruitment affect both the short-term projections and the rebuilding target (B_{msy}), so alternative assumptions of future recruitment would require re-estimation of B_{msy} . Therefore the SSC recommends consideration of a revised estimate of B_{msy} at the next benchmark assessment to account for lower recruitment in the last 30 years.
4. Gulf of Maine winter flounder – No analytical assessment was accepted for this stock during the SARC review process. Instead, stock biomass was estimated from the minimum swept area survey biomass using an assumed survey catchability coefficient of 0.6, which was derived from the Georges Bank winter flounder assessment. The OFL and ABC were estimated by applying F_{msy} or $75\%F_{msy}$, respectively, to the 2010 stock biomass. Similar to the index-based assessments, these OFL and ABC values were maintained for FY 2012-2014. The SSC notes that an alternative calculation using F_{msy} which assumes a catchability coefficient of 1.0, and therefore provides a conservative estimate of stock abundance, estimates a similar ABC value to that derived by the PDT. This alternative calculation supports the recommended ABC. The SSC suggests that this stock should be evaluated each year to determine the performance of this non-standard ABC calculation. Given the uncertainties in this assessment method and sensitivity of the estimates with small changes in the assumed gear efficiency, it may be advisable to select a more moderate catch.

The SSC recommends the following Overfishing Limits and Acceptable Biological Catches for the Northeast Multispecies Fishery (OFLs and ABCs include all catch: U.S., Canada, recreational harvest, etc., as calculated in the most recent assessments).

Stock	2010	2012		2013		2014	
	Catch	OFL	ABC	OFL	ABC	OFL	ABC
GB cod	3,903	7,311	5,616	N/A	N/A	N/A	N/A
GOM cod	9,325	11,742	9,018	N/A	N/A	N/A	N/A
GB haddock	25,900	51,150	39,846	N/A	N/A	N/A	N/A
GOM haddock	1,370	1,296	1,013	N/A	N/A	N/A	N/A
GB yellowtail flounder	1,160	1,691	1,150	2,136	1,150	N/A	N/A
SNE/MA yellowtail flounder	242	3,166	1,003	N/A	N/A	N/A	N/A
CC/GOM yellowtail flounder	633	1,508	1,159	N/A	N/A	N/A	N/A
Plaice	1,777	4,727	3,632	N/A	N/A	N/A	N/A
Witch flounder	849	2,141	1,639	N/A	N/A	N/A	N/A
GB winter flounder	1,544	4,839	3,753	4,819	3,750	4,626	3,598
GOM winter flounder	195	1,458	1,078	1,458	1,078	1,458	1,078
SNE/MA winter flounder	363	2,336	626	2,637	697	3,471	912
Redfish	1,852	12,036	9,224	N/A	N/A	N/A	N/A
White hake	2,219	5,306	3,638	N/A	N/A	N/A	N/A
Pollock	6,161	19,887	15,400	20,060	15,600	20,554	16,000
N windowpane	236	230	173	230	173	230	173
S windowpane	564	515	386	515	386	515	386
Ocean pout	127	342	256	342	256	342	256
Atlantic halibut	62	143	85	N/A	N/A	N/A	N/A
Atlantic wolffish	17	92	83	N/A	N/A	N/A	N/A

Catch in 2010 and recommended 2012 ABC for the Northeast Multispecies stocks for comparison (both catches of Georges Bank haddock and the 2012 ABC for pollock extend beyond the y-axis scale of the right panel).

