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New England Fishery Management Council

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 C. M. "Rip" Cunningham, Jr. *Chairman* | Paul J. Howard, *Executive Director*

MEMORANDUM

DATE: January 11, 2012
TO: Science and Statistical Committee
FROM: Paul Howard, Director
SUBJECT: GOM Cod; January 25, 2012 SSC Meeting Terms of Reference

Meeting Terms of Reference (TORs)

1. Gulf of Maine cod was assessed at SARC 53 in December, 2011. While the final assessment report has not yet been published, preliminary information indicates that the perception of stock status has changed dramatically since GARM III. The stock is now overfished, overfishing continues to occur, and the Overfishing Level (OFL) for FY 2012 could be a fraction of recent catches. If this occurs it will cause major disruption to the fishery, having severe consequences for fishermen and their communities.
2. Because of the implications of these preliminary results the Council is planning to deviate from its normal process for setting Acceptable Biological Catches (ABCs) and Annual Catch Limits (ACLs) for this stock. (The Council and SSC also will have to develop ABCs for twelve other groundfish stocks after operational assessments are completed in February 2012). Rather than ask the SSC to recommend an ABC for FY 2012–2014 at this meeting, the Council intends to follow a multi-step approach:
 - a) January 25: SSC meets to address the TORs (see paragraph 3 below)
 - b) February 1: Council meets, receives assessment report and SSC report, and considers requesting emergency action from NMFS to set interim catch levels and management measures. Based on the SSC report the Council identifies the scope of a future SSC meeting to set GOM cod ABCs for FY 2013 -2014.
 - c) TBD: The SSC meets in response to Council tasking and recommends ABCs for FY 2013 – 2014.
 - d) TBD: The Council establishes ABCs/ACLs for FY 2013 - 2014 and they are forwarded to NMFS for implementation.
3. Based on this planned approach, the SSC is directed to:
 - a) Review the GOM cod assessment and become familiar with its assumptions and results. This review is not intended to duplicate the peer review of SARC 53, nor is the SSC being asked to accept or reject this assessment. The intent of this review is to provide the opportunity for SSC members to become familiar with the assessment methodology and result.
 - b) Identify information that may influence interpretation of the assessment results. Specify whether the possible influence of these elements warrants a closer examination at a future SSC or other

meeting. Provide advice on the structure and timing of any future meeting the SSC believes is warranted. Examples of such information might include:

- 1) Fishery dependent CPUE;
 - 2) Natural mortality assumptions in light of evidence of predation mortality;
 - 3) Recreational catch estimates that may be revised;
 - 4) Assuming 100% mortality of hook caught and released fish (commercial and recreational);
 - 5) The assumed stock structure for cod off the Northeastern US and Atlantic Canada and recent information on stock structure;
 - 6) Uncertainty in survey calibration coefficients;
 - 7) The assumption of flat-topped survey selectivity;
 - 8) Report by Butterworth and Rademeyer, Jan. 2012 (information item 3a below) ; and
 - 9) Any other limitation deemed important.
- c) Review a range of catch levels for GOM cod provided by the Groundfish Plan Development Team (PDT) that are based on the following objectives. Approve catch assumptions used to develop these catches. Comment on the impacts of these catch levels on the stock (e.g. likelihood of stock collapse). These example catch levels may not meet legal or policy guidance.
- 1) $F=0$
 - 2) 75% of F_{MSY}
 - 3) F_{MSY}
 - 4) Constant catch that ends overfishing in 2, 3 or 4 years
 - 5) Catch that allows the current stock (e.g. 2010 or 2011, SSB or Jan-1 B) to grow ~10 percent annually from 2012 – 2014
 - 6) Catch that maintains current stock size (e.g. 2010 or 2011, SSB or Jan-1 B) through 2013
- d) Review PDT methods for estimating economic impacts of GOM cod catch levels.

Background Information

1. SAW 53 Documents (TOR 3a)
 - a. Gulf of Maine Atlantic cod (*Gadus morhua*) stock assessment updated through 2010 (November 11, 2011)
 - b. SARC 53 Summary Report (December 16, 2011)
 - c. SARC 53 Report from Center of Independent Experts by reviewer Ewen Bell (9 January 2012)
 - d. SARC 53 Report from Center of Independent Experts by reviewer Kenneth Patterson
 - e. SARC 53 Report from Center of Independent Experts by reviewer M. Kurtis Trzeinski
 - f. SAW 53 Working Paper 1. A review of factors affecting the survival of Gulf of Maine Atlantic cod (*Gadus morhua*) discarded at-sea; SARC 53 Gulf of Maine Atlantic Cod Data Working Group (Palmer et al., 2011).
 - g. 53rd SAW Assessment Summary Report

