



## New England Fishery Management Council

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John Pappalardo, *Chairman* | Paul J. Howard, *Executive Director*

**To:** Paul J. Howard, Executive Director  
**From:** Steve Cadrin, Chairman, Scientific and Statistical Committee  
**Date:** September 20, 2010

**Subject: Acceptable Biological Catch for Framework 22 to the Scallop Fishery Management Plan**

The Scientific and Statistical Committee (SSC) was asked to:

- 1) Review relevant aspects of the recent scallop assessment as they pertain to setting Acceptable Biological Catch (ABC) in the Scallop Fishery Management Plan.
- 2) Provide the Council with an ABC recommendation, based on the previously approved ABC control rule, for inclusion in Framework 22 (fishing years 2011 and 2012).

Based on the previous SSC recommendation for an ABC control rule, Amendment 15 states that “*the specific ABC control rule that will be used for the Scallop FMP will be based on setting ABC equivalent to the fishing rate that has a 25% probability of overfishing. These analyses will be based on a stochastic estimate of  $F_{max}$  that will be prepared by the Scallop PDT prior to each specifications package.*”

On August 25, 2010 the SSC reviewed information and associated presentations developed by the 50<sup>th</sup> Stock Assessment Workshop (SAW), the Scallop Plan Development Team (PDT) and previous SSC reports:

- 1) Scallop Terms of Reference memo
- 2) September 23, 2009 Report from the SSC
- 3) Quantifying the tradeoff between precaution and yield in the U.S. sea scallop fishery (D. Hart)
- 4) Sea Scallop Assessment Summary for 2010 (SAW50)
- 5) Draft Framework 22 measures under consideration
- 6) Scallop PDT recommendations for 2011 and 2012 ABCs

The SSC reviewed the SAW50 and PDT analyses and concluded that they provide the information needed for ABC recommendations. The SSC endorses the SAW50 Review Panel recommendation to define overfishing on the basis direct estimates of  $F_{MSY}$ , as intended in the Magnuson-Stevens Fishery Conservation and Management Act. The transition from using  $F_{max}$  as a proxy for  $F_{MSY}$  is consistent with the October 2008 advice from the SSC: “*Although  $F_{max}$  may be a reasonable proxy for  $F_{MSY}$ , the SSC recommends more explicit consideration of long-term sustainable yield, rather than maximizing yield-per-recruit.*” The SSC considers the SAW50 estimate of  $F_{MSY}$  to be based upon best scientific information available for management of the scallop fishery.

While some uncertainties are not accounted for in the stochastic analysis (e.g. spatial heterogeneity in fishing mortality, uncertainty in the magnitude of total 2010 catch, spatial population structure,

uncertainty in projected biomass, and minor retrospective inconsistencies) , the SSC concludes that the PDT's stochastic evaluation of current fishing mortality and  $F_{MSY}$  is a sufficient basis to derive ABC using the accepted control rule (i.e., 25% probability of overfishing). Note that the 'yield' in the PDT's calculations and the ABC recommendation includes dead discards and incidental mortality. Therefore, the realized frequency of overfishing may be more or less than expected from the risk analysis.

**The SSC recommends:**

- 1. The 50<sup>th</sup> Stock Assessment Workshop and Plan Development Team analyses provide the information needed for Acceptable Biological Catch recommendations. The new estimate of  $F_{MSY}$  is based upon the best scientific information available for management of the scallop fishery**
- 2. Acceptable Biological Catch for the scallop fishery is 31,279 mt in 2011 and 33,234 in 2012.**