



New England Fishery Management Council

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To: Paul J. Howard, Executive Director
From: Dr. Steve Cadrin, Chairman, Scientific and Statistical Committee
Date: February 11, 2009

Subject: Review of specific alternatives under consideration in Scallop Amendment 15

The SSC was asked to review and provide input on three aspects of Scallop Amendment 15:

- 1) methods for deriving Acceptable Biological Catch (ABC), Annual Catch Limit (ACL), and Annual Catch Target (ACT),
- 2) alternatives under consideration to modify the overfishing definition used in the Scallop FMP, and
- 3) to provide feedback on methods for analyzing the economic and social impacts of measures under consideration.

On February 6 2009, the SSC reviewed the Council request, an overview presentation by the scallop PDT, and five background documents:

1. Scallop Amendment 15 DEIS ó Description of alternatives under consideration only
2. Summary of ðhybridð overfishing definition alternative ó power point presentation
3. Economic trends in the scallop fishery (landings, revenues, prices etc.)
4. Summary of methods used for economic analyses
5. Summary of issues that will be considered in the social impact assessment

Methods for deriving ABC, ACL, and ACT

According to the recently published National Standard Guidelines (January 16 2009), ABC is the annual catch that accounts for the scientific uncertainty in the estimate of OFL (overfishing level, or catch associated with overfishing). The Scallop PDT presented a qualitative evaluation of scientific uncertainty and management uncertainty, and proposes an OFL-ABC-ACL-ACT process in which ABC is arbitrarily based on 90% of F_{max} to account for uncertainty in the estimate of OFL. The SSC agrees that the proposed general process for setting ACLs is appropriate, but some specific modifications are needed to comply with National Standard 1 Guidelines. The proposed ABC does not explicitly account for uncertainty, there is no quantified measure of uncertainty in OFL (including uncertainty in the F_{MSY} proxy as well as the projected stock biomass), and there is no evaluation of how the ABC method performs with respect to preventing overfishing. Therefore, there is no scientific basis for using 90% of F_{max} to derive ABC. The SSC recognizes that the scallop stock assessment has relatively low uncertainty, and given the current stock status and management system, there is relatively low risk of the resource being overfished. Although arbitrary decisions may be necessary for data poor situations, the scallop stock assessment is informative enough to support a quantitative evaluation of uncertainty. The SSC is providing technical feedback on the evaluation of uncertainty and preferred methods for deriving ABC, ACL and ACT directly to the Scallop PDT to support an ABC recommendation to be specified in September 2009. The Scallop PDT plans to present a modified analysis to the SSC for determining ABC.

SSC Recommendation:

1. **Managing the current fishery so that fishing mortality is less than F_{max} complies with National Standard 1 (preventing overfishing while achieving the optimum yield on a continuing basis).**
2. **At this time, no analysis has been provided to demonstrate that the proposed ABC complies with National Standard 1 Guidelines. Uncertainty in the estimate of OFL has not been quantified, and performance of alternative ABC methods with respect to preventing overfishing has not been evaluated. Therefore, a method to derive ABC will be recommended at a later date.**

Overfishing definition and target fishing mortality

The Scallop PDT proposes a hybrid approach to defining overfishing and target fishing mortality that combines the status quo overfishing definition (based F_{max} , the fishing mortality that maximizes yield-per-recruit, as a proxy for F_{MSY}), but includes a F_{target} that is based on time-averaging principles in access areas.

SSC Recommendation:

3. **Recognizing that there is no change to the proposed overfishing definition, and the target is based on methods recently reviewed by the SSC, the SSC repeats its October 2008 endorsement that the proposed method for deriving the target catch is scientifically sound. Using a time-averaged rate of fishing mortality is a reasonable approach to deriving target catch, provided that the Annual Catch Target (ACT) is less than or equal to the Annual Catch Limit (ACL).**
4. **With respect to the overfishing definition, the SSC repeats its advice from October 2008: “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. For example, aspects of long-term sustainable yield include: non-equilibrium conditions, stock-recruit relationship, conservation of spawning potential, density dependence, and environmental influences; all of which should be monitored as a condition managing the fishery based on F_{max} .”**

Methods for economic and social impacts of alternatives

SSC members reviewed the background documents, and briefly discussed the issue with the Scallop PDT. However, the SSC could not allocate enough time to adequately address the request at the February 6 2009 SSC meeting. Therefore, the matter will be the first item on the SSC's agenda for the March 17-18 2009 meeting. The SSC will continue to interact with the Scallop PDT in preparation of the March meeting.