

Briefing Item A: Mid-Atlantic Fishery Management Council  
Scientific and Statistical Committee Meeting Minutes  
Baltimore, MD  
October 27, 2009

The following members of the MAFMC SSC were in attendance: John Boreman (Chair), Tom Miller (Vice Chair), Marty Smith, Brian Rothschild, Chris Moore, Wendy Gabriel, Scott Crosson, Yan Jiao, and Mike Wilberg. Also in attendance were Fred Serchuk (NEFSC), Paul Rago (NEFSC), Katherine Sosebee (NEFSC), Lee Anderson (MAFMC), Rich Seagraves (MAFMC), Jim Armstrong (MAFMC), Chris Vanderweidt (ASMFC), and Eric Brazer (CCCHFD).

**Agenda Item 1: ABC Recommendation for Spiny Dogfish for Fishing Year 2010 (May 1, 2010 - April 30, 2011)**

**The SSC agreed by consensus to recommend that the ABC for spiny dogfish for fishing year 2010 be set at 10,064 mt based on  $F_{rebuild}=0.11$ . The SSC notes that because the stock has yet to be officially declared “rebuilt” by NMFS, it does not have the authority to exceed the rebuilding F.**

**The SSC notes that no consideration of management uncertainty is included in this advice.**

Rationale

Spiny dogfish was declared overfished in 1998 and is under a federal rebuilding plan. The most recent assessment update indicates that the spawning stock biomass (SSB) of spiny dogfish is 194,584 metric tons (mt). There is a high probability that this level exceeds the overfished definition for this stock, and thus spiny dogfish are likely not overfished. The estimated SSB is close to the calculated  $SSB_{max}$  (200,000 mt). The estimated fishing mortality rate for the most recent fishing year was  $F=0.117$ . Stochastic modeling indicates that this value does not overlap with the overfishing definition ( $F=0.39$ ). Thus the spiny dogfish stock is not experiencing overfishing.

Spiny dogfish spawning stock biomass (SSB) appears to have reached or exceeded the rebuilding target ( $SSB_{max} = 200,000$  mt adult female biomass) in the most recent years. The Agency had not made a determination that the stock was rebuilt even though the stock has reached or exceeded its rebuilding target. The SSC was informed accordingly that it was constrained to choose an F that could not exceed the rebuilding F,  $F=0.11$ . The SSC notes that spiny dogfish was declared “rebuilt” by the ASMFC in its jurisdiction in 2008. The SSC believes that an updated stock status determination by NMFS is warranted.

Until such time, the SSC is constrained by the rebuilding plan, which establishes  $F_{\text{rebuild}}=0.11$  as the OFL. The SSC recommends setting  $ABC=OFL$ . This approach provides a 50% risk that the realized catch will exceed the catch associated with the OFL. However, the recommended ABC (10,064) has a very low probability of exceeding the overfishing level and, of the options considered, had the highest probability of rebuilding the stock. Based on projections at  $F=0.11$ , there is a 61.2% chance that  $SSB_{2010}$  will exceed the biomass rebuilding target and SSB is expected to increase by 18.5% compared to 2009.

It is noted in the assessment update that although the population's long term dynamics (based on projections) are inherently uncertain, the projections are a useful guide for short term harvest policy. All of the projection scenarios exhibited a future decrease in SSB (beginning around 2012) resulting from the apparent protracted period of low recruitment during the period 1997-2003. Among the harvest scenarios considered, the  $F=0.11$  scenario minimized the low point in projected SSB resulting from this hiatus in recruitment.

#### Sources of Scientific Uncertainty

There are uncertainties in both the data and the models used to estimate population abundance, fishing mortality, and biological reference points. Commercial landings were assumed to be measured without error. In addition, discards represent a large source of fishing mortality relative to landings. Estimates of fishing mortality based on the stochastic method include the uncertainty associated with discard estimates and recreational landings and discards. Estimates of discards for the Canadian fishery are not available. The projection model, however, does not incorporate the magnitude of discard uncertainty in forecasts of future population size. Therefore, discard estimates represent a large source of uncertainty that is addressed in the assessment model but are not accounted for in the projection model. In addition, the assumed rates of discard mortality by gear type (i.e., trawls, gill nets, recreational hook and line) are uncertain.

No uncertainty in biological reference points was considered in harvest projections. In addition, stock projections assumed a linear relationship between adult female stock size and recruits. Alternative stock-recruitment relationships (i.e., Ricker function) should be considered in future projections.

The simple arithmetic average of stock size did not incorporate sampling variations in the underlying survey data or uncertainty in the size of the footprint of the average trawl tow. However, the stochastic model for swept-area biomass accounts for survey sampling design variability (i.e., variance of mean relative density estimate), inter-annual variation in density of the three year moving average, and the variability in the footprint of the average trawl tow. The variance in the calibration coefficient used to convert Bigelow survey indices to Albatross equivalents was incorporated in the analysis of fishing mortality in 2008 and

population size in 2009. These sources of uncertainty are incorporated into distribution of the initial population sizes used in the projection model

#### Special comments

The ABC recommendation for spiny dogfish for fishing year 2010 took into account scientific uncertainty only and did not account for management (i.e., implementation) uncertainty.

The ABC recommendation applies to all sources of fishing mortality on spiny dogfish in the Northwest Atlantic Ocean (i.e., US and Canadian landings and discards).

#### **Agenda Item 2: Role of SSC Members relative to the SAW/SARC process**

The Council has agreed, when possible, to provide an SSC member to Chair SARC meetings. In addition, the SSC has designated a member to serve as the species lead for each MAFMC managed species. Species leads were encouraged to attend assessment working group meetings early in the process to become familiar with the issues related to stock assessments for which they were given responsibility. The issue is what level of involvement/participation in the SAW working group is appropriate for SSC members. The consensus of the SSC was that SSC members should become fully engaged in the assessment working group process so that they not only become familiar with the assessments, but they also can provide value added to the assessment process and products through their contributions at the working group level. It is a far better outcome and better use of limited scientific resources and expertise to have SSC concerns or suggestions addressed by the Working Groups as early as possible in the process rather than at the SSC review and ABC specification level. However, once an SSC member becomes an active participant in the assessment process, it is inappropriate for them to serve as the SARC Chair.

#### **Agenda Item 3: Conditions for Council Remand of SSC ABC Recommendations**

The Council has requested SSC input on conditions where it would be appropriate for the Council to remand an SSC ABC recommendation back to them for reconsideration. The SSC agreed by consensus that one condition that clearly warrants SSC reconsideration of an ABC recommendation is when an error in computation has occurred. The SSC also agreed that a remand is warranted if the SSC did not address the terms of reference for the topic to which they are responding. This will require establishment of formal TORs for all requests directed to the SSC from the Council. Another condition discussed is when new information becomes available following an SSC ABC determination. While under special circumstances this condition might warrant reconsideration, the SSC concluded that, in general, consideration of information to be included in stock assessments should be introduced early in the stock assessment process and review of additional information not included in stock assessments or status updates would, in most

cases, be inappropriate. The last situation discussed was the case where the SSC did not have a quorum present when the ABC determination was made. There was general agreement that having a quorum present is a necessary prerequisite for ABC determinations. In order to insure that the SSC has a quorum present, SSC members could be provided with remote access to the meeting via conference call or other mechanisms to allow for their remote participation in the ABC discussions. It was also generally agreed that the SSC operates most effectively when meeting face to face and that members should make every attempt to attend the meetings in person. The use of the remote access option should be used only as a fall back provision to insure that a quorum of the SSC participates in the meeting. Council staff is working on a meeting schedule that allows for at least 3-6 months advance notice of upcoming SSC meetings. In summary, the following conditions for remanding ABC recommendations back to the SSC will be forwarded to the Council:

1. A computational error was subsequently detected that may affect the basis for an SSC ABC recommendation.
2. The SSC did not fully address the terms of reference provided by the Council for an ABC recommendation.
3. A quorum was not present at the meeting where the SSC formulated an ABC recommendation.

The SSC also agreed that a set of standard operating procedures needs to be developed to guide the operation of the SSC.

ACTION: Draft standard operating procedures for the SSC (Boreman, Miller, Seagraves)

#### **Agenda Item 4: Management Strategy Evaluation (MSE) Proposal Update**

Mike Wilberg gave a brief update on the status of the MSE proposal developed by the SUN Subcommittee. The proposal has been submitted to the MAFMC and the Council has committed to funding the project. Mike Wilberg and Tom Miller are currently seeking a Post Doc candidate to conduct this work.

#### **Agenda Item 5: Review of Council's Five Year Research Plan**

Council staff distributed a revised draft of the existing MAFMC Five Year Research Plan research plan for SSC review and comment. SSC discussion noted that the research needs list is heavily oriented to stock assessment needs and the Council plan should also address research needs relative to social/economic and protected resources issues.

ACTION: The SSC Species Lead should review the research needs list for their respective species and provide comments. Comments need to be received by **COB Friday November 20, 2009** for inclusion of the revised plan in the December Council meeting Briefing Book.