# SOUTH ATLANTIC FISHERY MANAGMENT COUNCIL

# SCIENTIFIC AND STATISTICAL COMMITTEE



SSC Meeting Report

June 3, 2015

1:00 – 3:00 pm

MEETING VIA WEBINAR

# **CONTENTS**

1.	INTRODUCTION	. 4
2.	PUBLIC COMMENT	. 4
3.	BLUELINE TILEFISH STOCK PROJECTIONS	. 4
4.	OTHER BUSINESS	. 8
5.	PUBLIC COMMENT	. 9
6.	REPORT AND RECOMMENDATIONS REVIEW	. 9
7.	ADJOURN	.9

## **DOCUMENTS**

Attachment 1. Projections 1, November 25, 2013

Attachment 2. Projections 2, April 7, 2014

Attachment 3. Projections 3, April 28, 2014

Attachment 4. Interpolated projection results, May 2014

Attachment 5. Updated length comps for MRIP and NC H&L

## **WEBINAR ACCESS**

Registration required to access the webinar is available through this link:

https://attendee.gotowebinar.com/register/1634019781014553345

After registering, you will receive a confirmation email containing information about joining the webinar.

#### SAFMC PUBLIC COMMENT PROCESS

#### Written comment:

Written comment on SSC agenda topics is to be distributed to the Committee through the Council office, similar to all other Council briefing materials. Written comment to be considered by the SSC shall be provided to the Council office no later than one week prior to an SSC meeting. For this meeting, the deadline for submission of written comment is 12:00 pm Wednesday, May 27, 2015.

SAFMC
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#### Verbal comment:

Two opportunities for comment on agenda items will be provided during SSC meetings. The first will be at the beginning of the meeting, and the second near the conclusion, when the SSC reviews its recommendations. Those wishing to comment should indicate such in the manner requested by the Chair, which may be through a show of hands or a written list if the number of interested parties is extensive, who will then recognize individuals to come forward and provide comment. All comments are part of the record of the meeting.

#### 1. INTRODUCTION

#### 1.1. Documents

Agenda

- 1.2. Action
- Introductions
- Review and Approve Agenda

#### 2. PUBLIC COMMENT

The public will be provided two opportunities to comment on SSC agenda items during this meeting. The first at the start of the meeting, and the final will be provided at the end during the review of recommendations. Those wishing to make comment should indicate their desire to do so to the Committee Chair.

Rusty Hudson provided some public comments.

## 3. BLUELINE TILEFISH STOCK PROJECTIONS

#### 3.1. Documents

Attachment 1. Projections 1, November 25, 2013

Attachment 2. Projections 2, April 7, 2014

Attachment 3. Projections 3, April 28, 2014

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Attachment 5. Updated length comps for MRIP and NC H&L

#### 3.2. Overview

The Council has requested that the SSC review the projections for blueline tilefish and determine whether they are still useful for management. Numerous concerns have been raised over several years regarding the stock projections. These include: the appropriateness of the assumed recruitment levels since the terminal year, the potential impacts of the deepwater closure occurring during the terminal year of 2011, landings consistently exceeding assumed and projected levels since the assessment was

conducted, and the possibility of continued changes in the timing and range of the directed fishery. At the December, 2013 meeting the SAFMC requested an updated assessment be conducted as soon as possible in order to address projection and other assessment concerns. Those concerns have only increased since then.

In January of 2014, the Science Center provided several options for getting blueline tilefish updated in a timely manner. The Council's preferred option was to replace a planned assessment of vermilion snapper in 2015 with blueline tilefish, using 2014 as the terminal year of data. However, the blueline assessment was then pushed back to 2016, with 2015 as the likely terminal year of data, when SEDAR 41 was delayed due to issues with the historical headboat landings. Other options considered were to swap out one of the SEDAR 41 stocks with blueline tilefish or to replace the 2014 gag update with blueline tilefish; the gag update has also since been delayed due to the issue with the historical headboat landings. At this time, the next blueline assessment is scheduled for delivery to the Council in January 2017 using a 2015 terminal data year.

## 3.3. Action

- Review blueline tilefish stock projections
- Identify uncertainties and discuss their impact on projection results and fishing level recommendations and management.
- Determine whether projection assumptions such as interim year landings are met, and comment on the consequences of this determination for fishing level recommendations and management.
- Determine whether existing projections represent Best Scientific Information Available, and whether they are adequate to support fishing level recommendations for both the current and future years.
- Provide guidance for revised projections, if necessary.
- Provide revised Fishing Level Recommendations, including ABC and OFL, if appropriate.

#### SSC RECOMMENDATIONS

Review blueline tilefish stock projections

The committee received a detailed presentation providing an overview of the projections prepared for blueline tilefish.

2. Identify uncertainties and discuss their impact on projection results and fishing level recommendations and management.

The Committee noted that each projection document includes a review of uncertainties and assumptions.

As with any projection situation, actual catches are an uncertainty, as are recruitment and abundance trends. These uncertainties increase as the time between the terminal assessment year and the projection period increases.

The lack of fishery dependent (and independent) survey information, particularly for those fish below the age of entry to the fisheries, adds to the uncertainty in recruitment in the last few years of the assessment. In this case, the 2007 cohort (age 1 in 2008) is the last one informed by data other than estimated SSB and the stock recruitment relationship.

Recruitment trends in the last years of the assessment were a point of discussion during reviews of initial projection results. It was cautioned that apparent strong age-1 year classes estimated from 2003-2007 were possibly the model's attempt to address the high catches coming from newly exploited areas North of Cape Hatteras, rather than simply indicating a period of favorable production. If that is the case, then the projections have an added uncertainty. The projection model cannot do as the assessment does, and add recruits in earlier years to explain recent continued landings levels, since the projection method does not take into account the observed age and length compositions nor the CPUEs that resulted in the observed landings.

The nature of stock projections is such that catches exceeding those used to derive the projections will result in lower estimated abundance, higher estimated fishing mortality F, and lower future yield.

The continued shifts observed in this fishery, first to areas North of Cape Hatteras, and most recently extending further North into areas off Virginia and Maryland, are adding to the uncertainties in the projections and exacerbating the spatial issues previously discussed regarding the assessment model. Continuation of this trend, and the magnitude of the fishery now observed in the Mid-Atlantic region was not foreseen when the assessment was completed and the projections prepared.

3. Determine whether projection assumptions such as interim year landings are met, and comment on the consequences of this determination for fishing level recommendations and management.

Landings levels used in the projections are a combination of assumptions, for the interim years between the last observed data and the first year of management, and fixed levels that take effect with management changes. Recent landings substantially exceeded assumed interim levels and chosen management levels, and as noted above, the effect of this change alone will be to reduce available yield in future years.

Continued northward shifts in the primary fishing effort may impact selectivity assumed for the projections, if the fish encountered in these areas have a different age and size composition. Also, the Data Workshop indicated some differences in size at age between the regions. The degree to which this will affect management recommendations is difficult to establish given the lack of abundance and composition information from the northern reaches. It is noted that some information from these areas is included in the assessment, and therefore addressed in the projections selectivities, since the shift had begun several years prior to the terminal assessment years.

The Committee agreed that conditions in the fishery have changed since the assessment model concluded. Unfortunately, due to the previously noted lack of population information from areas fishing effort has moved into, it remains unknown whether recent landings trends reflect a stock level productivity change, or simply reflect the impacts of the fishery exploiting 'new' (as in unseen in the assessment) biomass in new areas. It is also possible that the effort and resultant landings are simply continuing to drive the population to ever lower abundance. If there is a productivity change or fishery expansion into further new areas that is not addressed in the projections, the projection results will be biased, and will overestimate fishing mortality and underestimate yield and abundance. Anecdotal reports suggest that there was a biomass of blueline tilefish in the Mid-Atlantic areas since the 1980's which is being newly exploited by recent effort shifts.

Regardless of the causes, effort shifts have impacted landings and thus management. Therefore, the Council should reconsider the current level of landings allocated or set aside for landings outside the South Atlantic jurisdiction.

4. Determine whether existing projections represent Best Scientific Information Available, and whether they are adequate to support fishing level recommendations for both the current and future years.

The Committee agreed that the projections were properly prepared using accepted methods, incorporate typical assumptions and uncertainties, and reflect expected outcomes given the parameters with which they were prepared. However, given the concerns noted with continued shifts in the fishery since the assessment was completed, potential spatial patterns to the population and impacts of such patterns on productivity, and the inability of the projections to address effort shifts in the same manner as the assessment, the existing projections may not accurately reflect the population and fishery as they now exist, and therefore, cannot be considered Best Scientific

Information Available. Based on this decision the Committee recommends that revised projections be prepared.

Further, the SA SSC received a report from the MA SSC on June 1 that the MA SSC does NOT consider the assessment best available scientific information for management (in the MA). However, the SA SSC concluded in its recent meeting that, considering the fact that no new information is available the assessment should still be considered best available scientific information.

5. Provide guidance for revised projections, if necessary.

Request that the Center revise the projections to include observed landings through 2014 and the best estimate of landings for 2015 to provide OFL based on  $P^*=50\%$  and ABC based on fishing at  $P^*=30\%$ .

Given the recent landings north of Cape Hatteras, it is unknown if the biomass of an existing population in that region was fully accounted for in the assessment model.

Further exploratory projections are required to address productivity-spatial shift issues. The committee discussed developing alternatives based on varying recruitment levels, similar to the scenarios provided recently for king mackerel to address uncertainty in recent productivity trends. In this situation, applying higher recruitment to the terminal years is a way of approximating the solution used by the assessment model to explain high landings in the terminal year that are confounded with a shift in fishing area.

While the Committee ran short of time before it could fully vet specific alternatives or approaches, one suggestion was offered to base recruitment during the projection period on the levels estimated to support the landings increase observed since 2008. Average estimated age-1 recruitment is about twice as abundant during 2003-2008 as it is during the last years of the assessment and carrying into the years of the projection scenarios.

5. Provide revised Fishing Level Recommendations, including ABC and OFL, if appropriate.

The committee cannot provide revised fishing levels at this time, since revised projections are needed.

#### 4. OTHER BUSINESS

The SSC stresses the importance of the Blueline Tilefish update assessment, but expressed some concern about timing and how the outcome of the genetic study may impact the assessment type, e.g. is an update appropriate or not.

# 5. PUBLIC COMMENT

The public is provided an additional opportunity to comment on SSC recommendations and agenda items.

No public comments were received at this time.

## 6. REPORT AND RECOMMENDATIONS REVIEW

The Committee is provided an opportunity to review its report and final recommendations.

The final SSC report should be provided to the Council by 9 am on Tuesday, June 9, 2015 for distribution to the Council for its June meeting. Recognizing the short turn around required, the Council requests that, if the final report cannot be provided, SSC recommendations addressing the TORs be provided by 3 pm on June 9, 2015 so that they may be reported during the Snapper-Grouper Committee meeting along with other SSC recommendations from the April 2015 SSC meeting.

#### 7. ADJOURN