

Summary of Assessment Oversight Panel Meeting

May 20, 2019

Woods Hole, Massachusetts

The NRCC Assessment Oversight Panel (AOP) met to review the operational stock assessment plans for four stocks/species (scup, black sea bass, bluefish, monkfish). The stock assessments for these stocks/species will be peer reviewed during a meeting from August 5-7, 2019.

The AOP consisted of:

Mike Celestino, Atlantic States Marine Fisheries Commission, NJ Division of Fish and Wildlife

Jason McNamee, Chair NEFMC Scientific and Statistical Committee, RI Department of Environmental Management

Paul Rago, member of the MAMFC Scientific and Statistical Committee, NOAA Fisheries (retired)

Russell W. Brown, Population Dynamics Branch Chief, Northeast Fisheries Science Center, Woods Hole

Meeting Participants:

The participants in Woods Hole included: Mark Terceiro (NEFSC), Gary Shepherd (NEFSC), Tony Wood (NEFSC), Anne Richards (NEFSC), Michele Traver (NEFSC), Michael Simpkins (NEFSC), Steve Cadrin (SMASST), Fiona Hogan (NEFMC - staff), Larry Alade (NEFSC), Kathy Sosebee (NEFSC), Kiersten Curti (NEFSC), Brian Linton (NEFSC), Dan Hennen (NEFSC).

Remote participants via webinar included: Adam Nowalsky (MAFMC), Allison Murphy (GARFO), Cate O'Keefe (MADMF), Charles Perreti (NEFSC), Chris Batsavage (MAFMC), Chris Spires, Cynthia Ferrio (GARFO), Harvey Yekinson, James Dopin, Jason Boucher (DEDFW), Jennifer Courte, Kiley Dancy (MAFMC – staff), Jessica Blaylock (NEFSC), John Maniscalco (NYDEC), Julia Beaty (MAFMC – staff), Matt Seeley (MAFMC – staff), Mike Plaia (MAFMC – advisor), Nichola Merserve (MD-DMF), Rich Wong (DE-DFW), Steve Heins, Steven Doctor, Tony DeLernia (MAFMC), Victor Hartman (MAFMC – advisor), Vince Cannuli (MAFMC – advisor), Greg DiDomenico (MAFMC – Advisor).

Meeting Details:

This meeting represented the initial implementation of the newly approved Management Track stock assessment process outlined in the NRCC stock assessment guidance memo. Four background documents were provided to the Panel: (1) an updated prospectus for each stock; (2) an overview summary of all salient data and model information for each stock; (3) the NRCC Guidance memo on the Management Track Assessments; and (4) Operational Stock Assessment TORs for August 2019 review. The NRCC guidance memo was recognized as

particularly relevant during the deliberations of the AOP. Prior to the meeting, each assessment lead prepared a plan for their assessments. The reports were consistent across species and reflected both the past assessment and initial investigations. Before the meeting, the AOP panel met to preview the meeting and clearly outline the expectations of the panel.

The meeting began at 1:12 pm. Approximately 17 people participated in Woods Hole and another 25 individuals participated via teleconference and Webinar. There were some technical glitches with the audio portion of webinar/teleconference that required attention during the meeting.

The lead scientist for each stock gave a presentation on the data to be used, model specifications, evaluation of model performance, the process for updating the biological reference points, the basis for catch projections, and an alternate assessment approach if their analytic assessment was rejected by the peer review panel. In one case (monkfish) the stock was already being assessed using an “index-based” or “empirical” approach.

Common Issues Across the Species Reviewed:

For scup, black sea bass and bluefish a significant issue of concern is the introduction of the new recalibrated MRIP recreational catch estimates. For bluefish there seemed to be a simple rescaling across all years. The MRIP estimates have a temporal trend in rescaling which may pose problems for model performance for black sea bass. The most likely change is that the selectivity stanzas may need to be adjusted.

The proposed alternate assessment (Plan B) approach for scup, black sea bass and bluefish was a Loess smooth of survey index to adjust catch upwards or downwards based on recent trends. This should perform well for scup and bluefish, but for black sea bass an alternative to the proposed Plan B may be to use an area combined model (as opposed to the current two area assessment).

A question was raised about the designated length of the projections. It was decided that the AOP would inquire about the preference of the MAFMC (scup, black sea bass, bluefish) and recommend projection lengths most useful to the management process. As a result, the AOP is recommending 2 year projections for scup, black sea bass, and bluefish. Projections cannot be generated for monkfish given the current assessment approach.

Scup:

In the most recent stock assessment, spawning stock biomass was estimated to be approximately twice the SSB_{MSY} threshold and F is approximately 60% of the F_{MSY} threshold. The selectivity pattern for this stock has remained relatively stable over time. The discard to landings ratios have changed through time primarily due to dominate year classes passing through the population. The historically large 2015 year class is now fully recruited to the fishery so discards from this year class should decline.

During preliminary runs, the retrospective pattern from the previous assessment appears to degrade slightly with the inclusion of revised recreational catch data. The assessment will continue to use a continuous calibrated time series for the NEFSC multispecies bottom trawl survey (not splitting the Albatross and Bigelow time series). The AOP discussed the possibility of recommending a Level 2 peer review, but ultimately recommended a Level 3 review due to the revised recreational catch estimates.

Black Sea Bass:

Two separate ASAP models (north and south of Hudson Canyon) will be developed with the result combined for final stock status determination as was done in the most recent assessment. In the previous assessment, spawning stock biomass in 2015 was ~2.3 times SSB_{MSY} and F was approximately 75% of F_{MSY} .

In the southern area, the new MRIP catch estimates generally scale up across the time series. However in the northern area, there is a change in both scale and trend starting around 2010, and the 2011 year class seems to drive the catch in the north. There was some discussion about changing the M estimate for black sea bass if the model experiences diagnostic problems. Since the M parameter rescales the population and may change other key parameters, notably catchability, this should be done as a last resort. Given the temporal trend in the ratio of new to old MRIP estimates there may be some value in reconsidering introduction of one or more selectivity stanzas between 1989 and 2018.

Concern was expressed about the larger retrospective pattern in the northern area which may make this model unacceptable in this update. Potential solutions include increasing the CV on the non-trawl (recreational) catch input, reducing M in the northern area from 0.4 to 0.2 which conforms to the approximate minimum AIC in the northern ASAP likelihood profile (least preferred option), or eliminating the two-region approach and producing a single overall model. The combined model appears to perform about as well as the split model (northern and southern stock) and may be a viable alternative to the proposed Plan B if the split model has diagnostic problems.

During public comment, concern was expressed about considering the assessment history and noting that the single area ASAP model was not supported by the 2015 peer review. A major concern is that the stock appears to have a very strong 2015 year class. Concern was expressed that a simple index smoother is likely to miss the signals of incoming year class strength and may create similar catch and management problems that arose when the 2011 year class was not factored into catch projections.

The AOP recommended a Level 3 peer review based on the significant revisions to the recreational catch estimates and the potential for significant modifications to the existing ASAP models.

Bluefish:

The recreational fishery accounts for approximately 80% of the catch so revised recreational catch estimates will have a significant impact on the assessment. The assessment is likely to be a simple rescaling of the population since there does not appear to be any temporal trend in the ratio of new to old recreational catch estimates. Discards have a minor trend so problems could arise but these can probably be handled by changing selectivity. Another generic approach that was addressed for all species was to reduce the effective sample size for catch at age estimates (or equivalently, increasing the CV). This approach allows some deviation between the observed and predicted catch at age.

There is an issue with missing recreational discard length data for Rhode Island recreational discards for 2018. The AOP agreed that the assessment lead should do whatever is required to recover the data but if not possible some sort of imputation may be necessary. That decision should fall to the assessment lead.

It was noted in the last assessment that an $F_{40\%}$ reference point was set by the working group, and subsequently the peer review panel accepted those values. The MAFMC SSC then changed the reference point to $F_{35\%}$. The assessment lead plans to re-estimate the $F_{35\%}$ and the associated spawning stock biomass reference point.

The AOP recommended a Level 3 assessment review, given revised recreational catch estimates that may necessitate model changes (e.g. changes in CVs or implementation of selectively blocks to accommodate increased catch) may be necessary to achieve satisfactory performance. Additionally, the treatment of the missing length information may require additional review, so a level 3 Management Track would allow for these contingencies.

Monkfish:

Monkfish were previously assessed using a SCALE model (forward projecting age-structured model), but this approach was abandoned in 2016 when ageing methods were invalidated. The absence of a validated growth curve precludes any length or age based approaches. To date, various research efforts to address this have not been definitive. It appears that monkfish grow faster than predicted which may help explain its relatively stable productivity. The monkfish assessment was proposed as a “Plan B” assessment approach based on the last operational stock assessment review. The assessment lead plans to employ this approach for the 2019 assessment update.

The AOP recommended an expedited (Management Track Level 2) assessment to address potential ways of dealing with the missing 2017 survey information in the southern stock. This was recommended because of transparency concerns and the fact that the NEFMC sets 3 year specifications. In the last assessment the trend adjustment from the status quo were -2% in the north and -14% (or -11%) in the south. The PDT recommended no change in either area but that determination was based on expert judgment rather than a specific statistical threshold. It may be useful to get some input from the peer review panel on different techniques that can be used for the survey information, and there may be some discussion about tweaking the

sensitivity of the loess smooth to allow for more sensitivity to trend in the most recent years. The AOP recommends including existing research recommendations in the final report.

Major Recommendations:

In general, the AOP approved the plans presented, but highlighted a number of clarifications that are summarized below:

Stock	Lead	Major Recommendations
Overview of the Process	Russell Brown	The NRCC approved, generic Terms of Reference for operational stock assessment be used.
Scup	Mark Terceiro	Management Track Level 3 – Enhanced Review Incorporate new MRIP recreational catch estimates. Alternative assessment approach: Loess smooth of relevant survey indices 2 Year projections should be generated
Black Sea Bass	Gary Shepherd	Management Track Level 3 – Enhanced Review Incorporate new MRIP recreational catch estimates Alternate assessment approach: Consider a combined area model if the split area models are problematic or Loess smooth of relevant survey indices 2-Year projections should be generated
Bluefish	Tony Wood	Management Track Level 3 – Enhanced Review Incorporate new MRIP recreational catch estimates Attempt to recover missing length data for Rhode Island recreational discarded fish for 2018 Alternative assessment approach: Loess smooth of relevant survey indices 2-Year projections should be generated
Monkfish	Anne Richards	Management Track Level 2 – Expedited Review Address potential ways of dealing with the missing 2017 survey information in the southern stock Alternative approach is to recommend status quo catch.

In summary, the meeting was productive and a good implementation of the new assessment planning document. The meeting concluded at 4:30 pm. The peer review panel will meet from August 5-7, 2019 to complete their review.