Atlantic States Marine Fisheries Commission

Striped Bass Technical Committee Meeting

March 31, 2009
Baltimore, Maryland

Meeting Report

Members Present

Mike Brown (ME)	Russ Allen (NJ)	Charlton Godwin (NC)
Cheri Patterson (NH)	Desmond Kahn (DE)	Wilson Laney (USFWS)
Gary Nelson (MA)	Alexi Sharov (MD)	Gary Shepherd (NMFS)
Vic Crecco (CT)	Danny Ryan (DC)	
Carol Hoffman (NY)	Rob O'Reilly (VA)	

Staff and Guests

Nichola Meserve (ASMFC)	Jeffrey Horne (MD DNR)	Leonard Machut (VIMS)
Dick Brame (CCA)	Andrea Hoover (MD DNR)	Steve Meyers (NMFS)
David Gauthier (ODU)	Angelia Giuliano (MD DNR)	Beth Versak (MD DNR)

Overview
The Striped Bass Technical Committee (TC) met to elect a vice chair, review work completed for a list of seven tasks from the Striped Bass Management Board, discuss recent research findings on mycobacteriosis in the Chesapeake Bay, review trends in available fishery dependent and independent data, and discuss plans for the upcoming 2009 update stock assessment.

Committee Vice Chair
Wilson Laney was elected vice chair of the TC.

Discuss Analyses Completed in Response to Seven Board Tasks
The TC reviewed the preliminary analyses completed by individual members and determined additional work needing to be done. A due date of April 15 was set for this work, with a report completion date of April 22. The Final Report from the TC is attached.

TASK 1: Evaluate the effect of a range if percent increases (e.g., 15%, 20%, 25%) in the coastwide coastal commercial quota on the fishing mortality rate (F).

Previously, Gary Nelson had modeled the increase in average F of ages 8-11 from adding 15, 20, 25, and 30% to the commercial catch at age in the statistical catch at age (SCA) model, and Alexei Sharov had modeled the increase in average F ages 7+ and 8+ from adding 10, 15, 20 and 25% to the commercial quota of each state with an active commercial fishery. At the Board meeting in February, several states had requested that their commercial quotas, although not currently being used for commercial harvest, be included in the analyses. Gary and Alexei were assigned to the revisions. The TC discussed including other information for the Board, such as tag-based estimates of F or estimates of Z from all models, but decided against this.

The TC discussed the implications of the results. According to both analyses, the relative change in F resulting from the proposed range of increases is minimal (<0.02). However, the current value of fishing mortality, and its relation to the Ftarget and Fthreshold, is unknown. The TC is therefore unable to determine with certainty whether the expected increase in F would cause the current fishing mortality to exceed Ftarget or Fthreshold. The TC would prefer to make a recommendation for or against the proposed liberalization when the 2009 update assessment is complete this fall.

That said, the most current estimate of average F ages 8-11 from the SCA model is 0.31 in 2006; however, retrospective analysis of the SCA model, as well as tagged based estimates of F, indicate that the 2006 fishing mortality is below Ftarget (0.30). The risk of reaching Fthreshold (0.34) associated with that increase differs depending on the estimate of F in the terminal year. If the 2006 estimate of F from the SCA model is taken at face value, liberalizing the coastal commercial fisheries could increase F above Ftarget and near Fthreshold. However, if the 2006 estimate of F from the SCA model is overestimated, the risk is reduced. In additional to retrospective analysis of the SCA model and the tag-based estimates of F, the TC identified the following issues as bringing uncertainty to the estimate of F from the SCA model: uncertainty in recreational harvest estimates, possible underestimation of older age classes due to scale-based ageing error, and the assumption of constant natural mortality.

TASK 2: Determine which recreational size limit options are conservation neutral in terms of SSB/R to two fish at 28" that maintain the two fish creel limit but allow for one smaller fish and one larger fish to be kept.

Previously, Vic Crecco used the Thompson-Bell yield per recruit model to estimate conservationally equivalent recreational options. At the Board meeting in February, there was a question regarding the assumed value of full F in the analysis. The TC determined that the write-up should include the range of full Fs that the analysis was robust to. Due to some members' concerns that adoption of the alternative regulations would lead anglers to consume larger fish, the TC determined that Wilson Laney and Nichola Meserve would compile general information on state consumption advisories for the Board.

The TC also discussed uncertainty in the results from a number of issues, such as: 1) the assumption that the two fish creel is attained whereas the actual angler catch rate if closer to one; 2) that alternative methods, such as egg per recruit analysis, would not provide the same results; 3) that the partial recruitment vector would change after states adopted the alternatives; 4) the assumption that angler behavior, including discarding, would not change; 5) and the likelihood of increased ability to catch a legal sized fish. Consequently, the TC recommends that the results serve as a guide and that any state wishing to implement alternative coastal recreational regulations still be required to develop and submit a proposal for review by the TC.

TASK 3: Determine how wide the gap between point estimates of Ftarget and Fthreshold must be to ensure that they are statistically different and advise on how estimates of terminal F should be compared to the reference points particularly when the point estimate of terminal F is above Ftarget and below Fthreshold.

Previously, Des Kahn had provided a response advising that the Board continue to consult with the TC after each assessment, and that four issues be considered: 1) uncertainty in the terminal estimate of F due to a retrospective pattern of changing estimates; 2) uncertainty around the terminal year estimate due to 95% confidence interval; 3) uncertainty around the reference point: and 4) the tag-recapture F estimates.

The TC offered the following revisions for the write-up: remove Figure 3 (more confusing than informative); under consideration #2, add language that, based on Figure 2, there is ~30% chance that overfishing is occurring if F in 2006 from SCA model is accurate; add that other information (e.g., stock structure) should be considered when determining stock status; and consider including a t-test for statistical difference between Ftarget and Fthreshold.

TASK 4: Analyze catch data from wave 1 winter fisheries off North Carolina, Virginia, and Maryland to determine how this fishery affects the existing age structure of the striped bass population.

Previously, the Board was provided with the available estimates of wave 1 harvest in NC (1996-2004 from SAS, 2005-2008 from MRFSS), VA (1996-2006 from SAS), and MD (none), and Gary Nelson calculated the percent of total removals and harvest by age and in total for the NC/VA fisheries compared to coastwide totals.

At the meeting, Rob O'Reilly provided an update on efforts to estimate 2007 and 2008 wave 1 harvest for VA. Use of the previous method resulted in unreliable harvest estimates (363,820 lbs and 855,690 lbs) due to limited number of tag returns in NC in 2007 and 2008. Thus a revised method was used in which NC tag returns were averaged-up based on 2005/2006 tag returns and harvest, resulting in VA wave 1 harvest estimates of 121,273 lbs in 2007, and 190,153 lbs in 2008. Rob cautioned that these estimates are preliminary and uncertain. Consequently, the TC did not ask Gary to redo his analysis with 2007 or 2008 data.

The following revisions to the write-up were requested: explain the uncertainty in the harvest estimates from VA (and from NC prior to 2005); explain why MD wave 1 harvest estimates are not included; and explain that the TC would greatly prefer that the MRFSS estimate wave 1 harvest in VA (as well as MD).

TASK 5: Assess the long-term effects of recreational and commercial discards on the striped bass population and how changes in these rates would affect the age structure and female spawning stock biomass.

Previously, Gary Shepherd had answered the task by projecting changes in abundance (total, age 8+, and SSB) from changes in F (0.32, 0.34, and 0.4), due to limitation in the model to properly model changing discards. At the meeting, Gary suggested that the analysis could be improved by using female only selectivity when projecting female SSB, which the TC supported, but upon further consideration it was determined that most discards would likely be smaller fish, so the selectivity could be left as that for the overall fisheries.

The TC requested that additional projections with lower values of F be included.

Healthy, self-sustaining populations for all Atlantic coast fish species or successful restoration well in progress by the year 2015.

TASK 6: Analyze recreational regulatory options that could increase the proportion of age 15+ striped bass in the population to 3% and 5% using size and bag restrictions.

Previously, this task was not addresses. The TC discussed how essentially any regulatory changes that would reduce F would lead to an increase in age 15+ fish overtime. The task is vague because it does not include the desired time frame to achieve the increase to 3% and 5% age 15+. An analysis changing age at entry was suggested. The TC assumes that this task is just in relation to coastal recreational regulations. Vic Crecco was assigned the task.

TASK 7: Refine the age length data used for the 2007 assessment using the stored otolith/scale samples processed in 2008 from striped bass 31 inches and larger.

Previously, Des Kahn provided a response which discussed scale-based ageing error, the Commission's efforts to coordinate collection and/or processing of otoliths from striped bass 31"+, and results from a study converting the scale-based catch at age matrices from the 2007 assessment into age-based catch at age matrices using VA scale-otolith data and comparing ADAPT VPA results of F, abundance, recruitment, and SSB. The response suggested that the TC may be able to consider a similar conversion to age-based catch at age in this year's update assessment if adequate numbers and distribution of otoliths exist.

At the meeting, Alexei Sharov reviewed his and Andrea Hoover's summary report comparing otolith and scale ages from MA, NJ, MD, and VA and comparing catch at age matrices based on scale and otolith ages. The TC also discussed limitation in the data to convert to otolith-based catch at age matrices, such as that otolith samples are not available before 1999 and scale-otolith conversion matrices should be annual, and that not all states/regions have adequate samples and application of scale-otolith conversion matrices between states/regions is not ideal. It was also suggested that the results from the cited study's "base" and "corrected" ADAPT runs may be misleading because the base run did not use only VA ALKs to build the coastal catch at age matrices which was done for the corrected run.

The TC asked that the write-up include some discussion of the otolith-scale summary report, and the limitations of the data to switch to otolith-based catch at age matrices.

Review and Discuss Chesapeake Bay Mycobacteriosis Disease
Dave Gauthier presented and the TC discussed the article:
Gauthier DT, Latour RJ, Heisey DM, Bonzek CF, Gartland J, Burge EJ, Vogelbein WK. 2008. Mycobacteriosis-Associated Mortality in Wild Striped Bass (Morone Saxatilis) from Chesapeake Bay, USA. Ecological Applications, 18(7): 1718-1727.

The research suggests that mycobacteriosis is increasing mortality on older females in the Chesapeake Bay. Work by the researchers is continuing. The TC will continue to monitor this issue and consider the implications for stock assessment.

Review and Discuss Available Fishery and Index Trends
The TC quickly reviewed the indices for 2008 that were available. These included the juvenile abundance indices from NY (about average), NJ (below average), MD (below average), and VA (about average); the age-1 index from NY (about average); the aggregate index from NY (decline in last few years); and the age 8+ SSB index from MD (relatively flat). All the indices will be compiled and evaluated for the 2009 update assessment.

Plans for 2009 Update Stock Assessment
The TC was informed of the assessment schedule selected by the Tagging and Stock Assessment Subcommittees the previous day:

- Data Workshops will not be held (but planning calls may be)
- Assessment Workshops for both Subcommittees will be held the week of August 10-14
- The TC will meet during the week of September 14-18 to review the work
- Results will be presented to the Board in November

The TC discussed the latest on MRFSS effort and landings estimation and the possibility of considering an adjustment during the update assessment. There was not a consensus from the TC as to whether a run should be tried with adjusted recreational landings or not. Opponents voiced concern that a sensitivity run would become the preferred run. The TC discussed formally requested the MRFSS methodology from NMFS, sending a list of specific questions to NMFS, or having a NMFS representative attend a TC meeting in the future. The MRFSS methodology is available online, however, and the Assessment Science Committee may be the more appropriate group to address this issue. No action was taken.

Other Business
The TC briefly discussed the MD/VA/DC poaching case, and questioned whether landings in those jurisdictions would be modified. An answer was not provided – the case is still ongoing – but it was suggested that some of the illegal harvest originally cited by newspapers as being underreported might have just been misreported. The TC will continue to monitor the situation for assessment implications.

Adjourn

Healthy, self-sustaining populations for all Atlantic coast fish species or successful restoration well in progress by the year 2015.