



## Mid-Atlantic Fishery Management Council

800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
P. Weston Townsend, Chairman | Michael P. Luisi, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

September 22, 2023

Richard Methot, Ph.D.  
Senior Scientist for Stock Assessments  
National Marine Fisheries Service  
Office of Science and Technology  
Via email: richard.methot@noaa.gov

Dear Dr. Methot,

On behalf of the Mid-Atlantic Fishery Management Council (Council), thank you for the opportunity to submit comments on the draft *Technical Guidance for Estimating Status Determination Reference Points and their Proxies in Accordance with the National Standard 1 Guidelines*. I would also like to thank you for providing an overview of the of the new research and updated guidance outlined in the tech memo to the Council's Scientific and Statistical Committee (SSC) at their July 24-26, 2023 meeting. The comments offered in this letter reflect the discussion and input from the SSC during their September meeting.

The SSC commended the report's authors for developing a comprehensive document that captures the significant progress and improvement that has been made since the guidance document was originally developed in 1998, particularly for data-limited stocks. The report provides a very useful synthesis of approaches for defining reference points and the results of ongoing national and international research and it will be valuable to the SSC as it develops future acceptable biological catch (ABC) recommendations.

The SSC strongly supported the continued exploration and development of dynamic reference points that are responsive to changing environmental conditions as highlighted in the report. Such approaches must distinguish effects due to low stock size from longer-term changes in productivity. Moving average methods may be helpful in defining appropriate stanzas of productivity. The SSC also recommended additional detail and discussion on how to reconcile the different approaches to defining reference points for those stocks that are also managed by boarding countries (e.g., Atlantic Mackerel in Canada). This will likely require the development of more spatial analyses of fish populations and their fisheries.

The SSC commented on the importance of forecasting future conditions relevant to ABC specifications, particularly assumptions about future recruitment. The report suggests using trailing moving averages that will better define the forecast starting point; however, the SSC notes this approach will likely be inadequate if conditions continue to change in the future and are not reversible. An overarching concern is the identification of mechanisms underlying such changes. The SSC agreed with the report's practical solution to take a "weight of evidence" approach, involving comparisons of multiple single species assessments.

The tech memo acknowledges the importance of multispecies models, but does not have specific recommendations to guide their application. The SSC noted that management strategy evaluation (MSE) might be useful for interpreting trade-offs in analyses of multispecies approaches. MSE's can also provide guidance and potential consideration of important economic factors to help inform NS1 guidelines.

The SSC also noted that observations of life history attributes (e.g., maximum age, or age at maturity) can be biased by the intensity of fishing mortality and density dependent processes. Such considerations highlight the utility of long time series of data, comparative analyses with other stocks, sufficiently complex models, and process-oriented field studies. These same approaches are relevant to the assessment of closed areas (e.g., scallops) and potentially areas excluded by offshore energy development and additional guidance should be explored.

Thank you again for the opportunity for the Council and SSC to provide comments on the draft NS1 tech memo. Please contact me or Brandon Muffley of my staff if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Moore". The signature is fluid and cursive, with a large initial "C" and a long horizontal stroke at the end.

Christopher M. Moore, Ph.D.  
Executive Director  
Mid-Atlantic Fishery Management Council

cc: W. Townsend, M. Luisi, P. Rago