



New England Fishery Management Council

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Dr. John F. Quinn, *Chairman* | Thomas A. Nies, *Executive Director*

To: Thomas A. Nies, Executive Director
From: Scientific and Statistical Committee Subpanel for Groundfish Sector Review
Subject: Response to Terms of Reference for peer review of the Five-year Review of the Northeast Multispecies Sector Program
Date: September 16, 2020

The Scientific and Statistical Committee (SSC) Subpanel for Groundfish Sector Review met on August 27, 2020 via webinar. The SSC subpanel was made up of three members, Dr. Lindsey Williams (chair), Dr. Anna Birkenbach, and Dr. Hirotsugu Uchida. The subpanel peer review was focused on the following terms of reference (TORs):

- 1) Completeness of Analysis: Based on available information does the review for the period 2010-2015 address the following elements called for in the NOAA Guidelines for Conducting Reviews of Catch Share Programs?
- 2) Sufficiency of Analysis (technical sufficiency, scope, conclusions based on analysis)
- 3) Recommendations

To address the three TORs, the subpanel considered the following information:

- 1) Northeast Multispecies (Groundfish) Catch Share Review – Final Draft Report including the Executive Summary, Main Document, and Appendices
- 2) GMRI Report to NEFMC on 2019 Port Meetings for its Review of Sector Management
- 3) NOAA NMFS Guidance for conducting 5-year reviews (Morrison 2017)

Overall, the subpanel finds that documents provided to summarize the Five-year Review of the Northeast Multispecies Sector Program are an important new contribution to understanding this fishery and the sector program. The review team who worked to create the Final Draft Report should be commended for their work under time and resource constraints. While the peer review team recognizes and appreciates the work that went into this report, we also identify areas that should be considered for possible revisions and offer suggestions to be reviewed, along with GAP and PDT input on the Report, when designing and implementing future reviews.

A brief summary of our review based on each TOR is provided here with more detailed comments summarized in the following section. There are no minority reports; all comments were by consensus.

- 1) Completeness of Analysis: Based on available information, the review addresses the elements called for in the NOAA *Guidelines for Conducting Reviews of Catch Share Programs*.
- 2) Sufficiency of Analysis: Data and analyses included in the Draft Report are appropriate for evaluating progress in meeting the goals and objectives of the program. The review also adequately captures changes in the sector program since implementation and during the 2010-2015 review period. Conclusions of the report are supported by the analyses

provided. While sufficient for the purposes of this effort, the peer review team has identified some limitations that should be addressed in the future per this TOR.

- 3) Recommendations: The recommendations for future analysis and research would improve the understanding of the sector program's performance. In particular, the recommendations associated with improving data collection and monitoring efforts around socio-economic factors would be the most important for improved understanding of the Northeast Multispecies Sector Program.

In addition to this peer review response letter, the subpanel is also submitting comments directly on the Executive Summary and Main Document (see appendices). The comments provided by the subpanel directly on the documents should be considered in concert with this letter where possible for Report finalization and consideration in the establishment of protocols and plans for future program reviews. These include, for example, consistency of style and citations/references across section, clarification of when prices were inflation-adjusted versus not, and continued efforts to advance data presentation through graphs/charts versus text (as raised in the [2019 project on Consideration of Social Science by Council Members](#)). The reviewers also encouraged the Council to make sure that the Final Report be made widely available, including perhaps in [Nature Reports](#) or a similar outlet.

Detailed Responses to each TOR

TOR 1 - Completeness of Analysis: Based on available information does the review for the period 2010-2015 address the following elements called for in the NOAA Guidelines for Conducting Reviews of Catch Share Programs?

Overall response: Based on available information, the review addresses the elements called for in the NOAA *Guidelines for Conducting Reviews of Catch Share Programs*. A summary by element is provided below, but please see the overview table in the Executive Summary section of the Final Draft Report for the location of each element of the review within the Report.

TOR 1.1 - Purpose and need of the review – a discussion of discuss legal and policy requirements

Yes, the review addresses this element.

TOR 1.2 - Goals and objectives of the program, the FMP, and the MSA

Yes, the review addresses this element. Pages 2-3 include an extensive overview of goals and objectives. The reviewers appreciate that goals and objectives from Amendment 18 were included for consideration as well. The reviewers discussed Section 2.c (page 2), underscoring that “[t]he sector program, unlike other catch share programs nationally, does not have independent goals and objectives by which to measure success.” The review team noted that this fact about the Northeast Multispecies Sector Program adds to the challenge of creating a review report and assessing the completeness of such a report. For program design and review purposes, the review panel encourages the Council to explore this issue further in the future and consider defining specific goals and objectives for the Northeast Multispecies Sector Program which would also assist in planning for and designing appropriate data collection and monitoring efforts.

TOR 1.3 - History of management, including a description of management prior to the program's implementation, a description of the program at the time of implementation, including enforcement, data collection, and monitoring

Yes, the review addresses this element. This section was very detailed and was appreciated by the reviewers. It appears that this section is based heavily (and perhaps solely) on existing Council documents. While these are important sources, the reviewers recommend that in the future, reviews should account for other scholarly and grey literature on the implementation of the Northeast Multispecies Sector Program. As an example, the reviewers noted extensive management/fishery histories collected in various doctoral dissertations over the years that can help address this element in the future.

TOR 1.4 - A description of biological, ecological/environmental, economic, social, and administrative environments before and since the program's implementation

Yes, the review addresses this element. Extensive information was included but presentation of the information could be improved in the future. For example, presenting information in three-, six-, or nine-year intervals in various sections was not always consistent and could be hard for a reader to follow. We suggest more careful consideration of presentation of the data from various time periods in the future. In addition, this section appears to only draw on work from NOAA Fisheries (GARFO and NEFSC), and, as such, the reviewers recommend that a future effort review scholarly and grey literature for other potentially beneficial contributions. Overall, the reviewers appreciated this section and the general organization

TOR 1.5 - An analysis of the program's biological, ecological/environmental, economic, social, and administrative effects

Yes, the review addresses this element with some limitations based on available data and analyses. The Final Draft Report was cautious about making causal assertions based on included analyses, which is appreciated due to the limitations. The reviewers noted that some of the results could be interpreted by some readers as implying causality. As such, the reviewers recommend that the Final Report be more upfront about the limitations of the analyses. In many cases, the graphs and tables present simple before-and-after data points, and any trends occurring over this time period cannot be causally attributed to catch share implementation without controlling for other ecological, policy, or other changes that might also have contributed to them. Suggestions on more neutral language have been provided, along with recommendations for consideration regarding the timeframes of specific analyses.

TOR 1.6 - An evaluation of those effects with respect to meeting the goals and objectives of the program, including a summary of the conclusions arising from the evaluation

Yes, the review addresses this element with some limitations based on available data and analyses. The reviewers again discussed the challenges of making causal claims as noted in the TOR 1.5 discussion. As an example, the reviewers discussed Table 3 (stock status) and noted that this information is a statement of change, not of causality. The reviewers again discussed the challenge of not having specific goals and objectives for the Sector Program versus the overall Fishery Management Plan. The reviewers also discussed the possible future use of counterfactuals to better elucidate the impacts of catch shares by shedding light on how outcomes might have differed without the Sector Program. While the reviewers recognize that this scale of analysis can be labor- and data-intensive and falls outside of the scope of this report,

it raises important questions regarding feedback loops and linkages among policy, social, biological, oceanographic, and other factors and might be useful to consider for later reviews. An expanded literature search could help address this issue in the future, as there are several attempts to work on this in the scholarly literature. Additionally, surveying those who left the fishery to understand why they left (costs and benefits), would also be beneficial to capturing the full effects of the program (i.e., were those who left as well off or better than if they had stayed?). There are also possible ways to address this using employment data as is done in Norway (less reliance on surveys could increase validity).

TOR 1.7 - A summary of any unexpected effects, positive or negative, which do not fall under the program's goals and objectives

Yes, the review addresses this element.

TOR 1.8 - Identification of issues associated with the program's structure or function and the potential need for additional data collection and/or research

Yes, the review addresses this element (in particular, Sections 6a and 6b). See also TOR 3.

TOR 2 - Sufficiency of Analysis

Data and analyses included in the Draft Report are appropriate for evaluating progress in meeting the goals and objectives of the program. While sufficient for the purposes of this effort, the peer review team has identified some limitations that should be addressed in the future per this TOR. The review also adequately captures changes in the sector program since implementation and during the 2010-2015 review period. Conclusions of the report are supported by the analyses provided.

TOR 2.a - Technical sufficiency: Are data and analyses included appropriate for evaluating progress in meeting the goals and objectives of the program and of the MSA (Section 303A(c)(1)(G) of the Magnuson Stevens Fishery Management and Conservation Act? What limitations exist?

Data and analyses included in the Draft Report are appropriate for evaluating progress in meeting the goals and objectives of the program. The reviewers again discussed the challenge of evaluating progress without specific goals and objectives or a counterfactual and the need to be careful with insinuations of causality throughout the Final Draft Report (see TOR 1.5 and 1.6). The reviewers have also included several comments on specific analyses for consideration (see Appendices for report specific comments). As presented, we see just the before and after and are not able to draw causal links. From the information presented here, it is hard to separate out what changes are specific to the Sector Program and what changes would have happened anyway due to MSA-mandated policy changes. The reviewers discussed the importance of clear goals and objectives and a plan for the review and evaluation (and associated data needs identified ahead of time) so that future review teams do not face the same data and analysis challenges the team that developed this Final Draft Report faced. The reviewers discussed the example of the West Coast Catch Share program review that faced similar challenges on causality but had information on expectations for Program performance to consider. The reviewers also discussed the opportunity to better link across data and analysis to improve understanding. The reviewers recognize that there are ongoing efforts to improve data analyses and syntheses across groups (for example with

the State of the Ecosystem Report), to improve repeatability (for example NEFSC SSB survey and indicators work), and to bring in other types of data (for example the GMRI port meeting summary report). The reviewers underscored the importance of early and regular engagement with all types of stakeholders, not just as a source of data but to help design and define research/evaluation questions from the outset to ensure that future reviews address questions from a range of system participants. The reviewers also discussed the importance of ensuring the robustness of qualitative data collection efforts and improving transparency regarding these data collection and analysis methods.

TOR 2.b - Scope: Does the review adequately capture changes in the sector program since implementation and during the 2010-2015 review period?

Yes, but data and analysis limitations make the content that addresses this topic lighter than reviewers would have liked.

TOR 2.c - Conclusions based on analysis: Are the conclusions of the report supported by the analysis?

Yes, the key findings section summarizes the results which are supported by the analysis. The reviewers again underscore the challenge of assigning causality and encouraged the Final Draft Report authors to be careful with this language. The reviewers feel that those who worked to develop the Final Draft Report and the analyses that are included did what they could with the resources available. Without a framework that includes specific goals and objectives and associated data collection plans at the outset, this is the best that can be done at this time.

TOR 3 - Recommendations

The recommendations for future analysis and research would improve the understanding of the sector program's performance. In particular, the recommendations associated with improving data collection and monitoring efforts around socio-economic factors would be the most important for improved understanding of the Northeast Multispecies Sector Program.

TOR 3.a - Would the recommendations for future analysis and research improve the understanding of the sector program's performance?

The Final Draft Report includes a robust table of recommendations (Section 6.a). The reviewers agree that these recommendations would improve the understanding of the sector program's performance. As discussed earlier, the reviewers also suggest surveys and/or expanded data collection efforts on crew to better understand those who left the fishery and provide a fuller picture, along with efforts to explore counterfactuals (see also TOR 1.6). In addition, the reviewers recommend seeking input from industry regarding what questions they would like to see addressed as part of future evaluations. The reviewers also noted the potential value of data on intra-sector trades for improving our understanding of how the quota market is functioning. As noted above in TORs 1.2 and 2.a, the reviewers again noted the importance of defining a framework that includes Goals and Objectives for the Northeast Multispecies Sector Program in order to more clearly define expectations for the program and associated hypotheses to test. From there, it will become easier to define what data and analyses are needed to answer the associated evaluation questions. As examples, the reviewers discussed safety at sea, unintended consequences of the observer program, exit from the fishery, and other topics. Setting up review

plans/frameworks early in the process would be beneficial to all involved. The reviewers also noted the importance of ensuring that the topics raised in this and future reports be brought forward into the Council Research Priorities process and widely disseminated so that other researchers focused on the region can assist in data collection and/or studies that might help address the questions raised.

TOR 3.b - Which are the most important recommendations for improved understanding?

The reviewers noted the importance of all the areas of recommendations described in the report but felt that it was important for the Sector Program review and recommendations to focus especially on the socio-economic factors, as some of the other recommendations could be addressed through the Stock Assessment and other processes. Continued improvements of the social science surveys, indicator development, understanding of economic factors, distributional effects, and behavioral impacts were all areas of importance. These also include continued efforts to partner with entities outside government and benefit from the capacity present in academic and other research institutions as well. Being forward-thinking about methods and analyses could help shape data collection efforts for subsequent reviews and anticipate which issues will be important going forward. In addition, items that relate to the resiliency of the system are higher priority in the view of the reviewers (i.e., the ability to withstand social, environmental, and/or economic shocks). The reviewers also put a premium on efforts to better link the analyses to tie them together to tell a story to help industry, managers, and the public to understand what is happening in the fishery. The reviewers also recommended that efforts to link across data sources and analyses would be beneficial to focus on (for example through the State of the Ecosystem work or the new NOAA-BEA report on the ocean economy). Lastly, the recommendations that support more direct engagement with industry throughout the process are of key importance.

Attachments:

Appendix 1. Comments and suggestions on Executive Summary

Appendix 2. Comments and suggestions on Main Report

Appendix 3. Full Terms of Reference for Subpanel