New England Fishery Management Council
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MEETING SUMMARY

Risk Policy Working Group

June 18, 2025

12:30 p.m. Webinar

The New England Fishery Management Council's (NEFMC) Risk Policy Working Group (RPWG) met by webinar on June 18, 2025 to: 1) Discuss use of the Risk Policy in upcoming Council actions, focusing on the development of any refinements and/or clarifications to the Risk Policy Matrix and guidance for Plan Development Teams for 2025; 2) Discuss and make recommendations on the continued development of the Risk Policy, and review results and feedback from the Risk Policy weightings exercise at the April Council meeting; 3) receive an update on simulation testing to the Risk Policy; 4) discuss other business.

MEETING ATTENDANCE

Megan Ware (Chair), Dan Salerno (Vice-Chair), Jonathon Peros (Council Staff), Dr. Lisa Kerr, Dr. Jason McNamee, Dr. Naresh Pradhan, Dr. Jon Deroba, Melanie Griffin, Moira Kelly, Rick Bellavance, Dr. Joe Caracappa. Several members of the Council staff, along with other Council members and the general public joined the webinar.

Materials for the meeting can be found at this link.

KEY OUTCOMES

- The working group supported a two-phase approach for using and developing the risk policy.
    - In 2025, the Risk Policy use will include populating a revised Risk Policy matrix, and reliance on the new Risk Policy statement and description of stability. Factors will not be scored. This approach was described as Alpha phase.
    - Concurrently, the Council will continue to develop the Risk Policy through a Beta phase that includes simulation testing, refinement of factors and data, and responding to input and feedback being provided by various Council bodies.
- The working received an update on Risk Policy simulation testing from Dr. Roger Brothers and members of the project team. The working group agreed to address feedback from the project team over the summer, and to provide immediate feedback on issues of scaling, weighting, and use of certain factors.

- The working group agreed to the following next steps:
    - Assemble sub-groups to discuss and respond to feedback on factors provided by the Council, CESC, and simulation testing project team.
    - Assemble a Risk Policy use sub-group to develop instructions around how Council groups should use the risk policy in 2025. This includes guidance for PDTs, the SSC, APs, and Committees.
    - Council staff consider preparation of Risk Policy documents for possible regulatory flexibility action, and for spiny dogfish.
    - Work to further refine terminology and definitions to improve use and understanding of the Risk Policy.

The meeting began at 12:31 p.m.

WELCOME AND INTRODUCTIONS

Ms. Ware opened the meeting with a roll call and logistics updates. She acknowledged the Cheri Patterson has retired from New Hampshire Fish and Game, and noted that this will be Rick Bellavance's last meeting as he terms off the Council later this summer. Ms. Ware stated that discussions about re-populating the working group can occur following the election of officers at the September Council meeting. Ms. Ware reviewed the agenda for the working group.

RISK POLICY MATRIX AND SCORING

Mr. Jonathon Peros presented a recap of the weighting exercise that was completed at the April Council meeting. The presentation focused on the weighting process that the Council used, and the outputs from the exercise. The working group was reminded that weights are public records, and briefly reviewed the instructions that Council members were given to complete weightings. The Council provided weights for three scenarios: 1) all managed species / FMPs (Global); 2) Atlantic sea scallops; 3) Gulf of Maine haddock. When completing the weightings, Council members were instructed to apply a weight of critically important, the highest weight, no more than three (3) times. Mr. Peros noted that when comparing the average weights by factor and between exercises, the weights were largely similar. He noted that some Council members had expressed interest in using a Global weighting approach at the April meeting.

Working group members spoke to the continued need to refine and clarify the terminology being used to describe and apply the Risk Policy. The working group keyed into the results for weights for the recreational fishery characterization, with one member noting that the weights varied for this factor, and that it came out as the lower overall average weight for the full Council. Mr. Ware addressed the comments, and spoke to plans to revise the recreational fishery characterization questions, which could have factored into this outcome during the practice session.

Ms. Ware highlighted the success of the weightings exercise. Working group members generally supported completing one set of "global" weights to cover all Council managed resources, though some working group members felt that there was value in competing weights at a finer resolution (FMP or stock level). One working group member cautioned that completing weights at the stock level can blur the lines between the scoring process which is meant to be objective,

and the weightings process, which is a policy choice by the Council. The working group also supported developing communications around what use a "global" weighting approach would mean and look like.

POLICY MATRIX AND SCORING

Dr. Roger Brother presented on an going project focusing on evaluating the Council's new Risk Policy in the context of ABC Control Rules. The project is focused on qualitatively and quantitatively evaluating the performance of the Council's Risk Policy, and has three main objectives: 1) Evaluate the Council's updated Risk Policy and demonstrate factor scoring and potential for integration with ABC Control Rules. (Spring and Summer 2025); 2) Develop Management Strategy Evaluation (MSE) framework to evaluate the performance of the Risk Policy in the context of groundfish ABC Control Rules. (Summer and Fall 2025); 3) Work with the NEFMC project oversight team to co-develop priorities and alternative scenarios for the MSE and conduct simulation testing. (Fall and Winter 2025).

Dr. Brothers reviewed the scoring and weighting of factors before addressing how the Risk Policy can be integrated with the Council's existing ABC control rules. Two concepts were proposed: 1) A dynamic buffer between the OFL and ABC; and 2) Risk tiers that indicate alternative buffer levels or fundamentally different Control Rules by tier. Next, Dr. Brothers summarized the existing ABC control rules used by the Council.

The majority of the presentation focused on work being completed under project objective 1, and the team's initial scoring of factors across groundfish stocks. The team completed scoring of 5 of the 7 factors for groundfish stocks, and catalogued difficulties or challenges they encountered, along with issues in applying the rubric and metrics defined in the Risk Policy concept document. Following a review of the factor scoring, Dr. Brothers walked through a demonstration of applying Z-scores and carrying the results through to possible management advice. This analysis included sensitivities for the scaling of Z-scores (1, 2, 4), and the weights being used to derive Z-scores (uniform and NEFMC weights).

Key feedback from the project team is summarized by factor below:

SSB / Stock Status:

- Method: NOAA Fisheries' StockSmart was used compile assessment results over time for all stocks in the NE Multispecies FMP.
- Difficulties, Challenges, Considerations:
    - For empirical stocks, with unknown status, how to characterize the 5-year trend could be made more explicit (i.e., linear regression: significance, slope)?
    - The project team experienced challenges automating scoring using data from StockSmart. StockSmart only reports managed stocks, and does not report certain quantities for certain assessments due to stock-specific details.
    - There is potential for large variation in when SSB is close to a rubric threshold.
    - There can be a range of potential drivers the influence scoring other than a change in stock "health". These include changes made to and/or in the assessment model, revisions to reference points (e.g. SNE winter flounder).

Recruitment:

- Method: The project team used StockSmart to compile assessment results over time for all stocks in the NE Multispecies FMP. For individual stock assessments through time we characterized whether the age 1 abundance estimated in each of the last 5 years was above or below the timeseries mean. The team applied the Risk Policy rubric to dynamically characterize an SSB score over time.
- Difficulties, Challenges, Considerations:
    - There are aspects of the scoring guidelines in the rubric that are open to interpretation. In these instances, the project team made the following assumptions:
        - What does multiple large year classes mean? Assumed 3 or more.
        - How far above or below the mean is considered "large" or "small?"
        - What is an appropriate time frame to characterize "average?" Project team used the full time series.
        - How close to the mean is considered average?
        - What do you do when conditions for multiple scores are met simultaneously? For example, two years about the mean and two years below the mean.
    - Explicit criteria should be developed to identify when "recent changes in recruitment have been accounted for in reference points and/or stock projections" (default score to 0). The project team defaulted to 0 when:
        - Reference points assume recent average recruitment (e.g., SNE/MA yellowtail flounder).
        - Projections assume temporal auto-correlation in age-1 abundance (e.g. GOM haddock).
        - Projections assume a stock-recruitment relationship (e.g. SNE Atlantic cod).
    - Defining "large recruitment events" as above average and "low recruitment" as below average allows for potential misinterpretation. Sporadic or variable recruitment should be carefully considered. The current rubric doesn't address this effectively. A quantile-based approach to defining above, below, and average recruitment could help.

Recruitment:

- Method: The project team used the most recent stock assessment report to characterize the assessment type, magnitude of the retrospective pattern, and the number of uncertainties that were listed. Next, the team applied the scoring rubric for each stock.
- Difficulties, Challenges, Considerations:
    - The project team reported that the rubric was straightforward to follow, but they did need to make two assumptions to complete the scoring. First, for models like ASAP, that are analytical, but not state-space, the only determining criteria was the level of retrospective pattern. Second, for state-space analytical models (e.g., WHAM), the only element used for determining the factor score was the number of uncertainties listed in the assessment report.

- Potential issues flagged by the project team included: 1) There is not objective guidance informing which uncertainties are listed in stock assessment reports; 2) There is wide variation among stocks, that is unlikely to reflect meaningful differences; 3) The rubric does not consider that model results are "rho-adjusted" when there is a major retrospective pattern; 4) The rubric does not consider the magnitude of uncertainty in assessment results (e.g., estimated uncertainty bands SSB or R); 5) It is possible to have an empirical assessment that performs well.

Climate Vulnerability

- Method: The project team used the characterizations in Hare et al. (2016) in combination with the rubric from the Risk Policy Concept Document. The team did not score this dynamically over time.
- Difficulties, Challenges, Considerations:
  - The project team reported that the rubric was straightforward and that they did not make any additional assumptions.
  - The underlying data being used to score this factor is nearly 10 years old and is likely dated.
  - A new climate vulnerability analysis (CVA 2.0) is in development, and can be applied when ready.

Fish Condition

- Method: The team used the ecodata package in R to extract the Fish Condition data that underly the State of the Ecosystem reports. For each species/EPU combination the team stepped through years (2005-present) and recalculated the quantile classifications. The Risk Policy rubric was applied to dynamically score each stock over time.
- Difficulties, Challenges, Considerations:
  - The project team reported that the fish condition factor was straightforward to score using the rubric and the available data. However, it was not always easy to find a map of stock boundaries to determine which State of the Ecosystem EPUs should be considered. The team used both stock areas and distribution maps reported on NOAA's website to qualitatively assign each stock to an EPU (or multiple, if appropriate). For a unit stock like pollock, the team only used the GOM EPU.
  - Scores can fluctuate dramatically between successive years. The theoretical relationship between mean condition and risk tolerance is unclear and may vary across stocks. Assigning stocks to EPUs is not straight forward. In addition, for stocks that extend into multiple regions the rubric weights each region equally. Their distributions, however, are unlikely to be uniform throughout all regions.

Dr. Brothers specifically noted the potential for interdependence across factors as a potential source for double counting. He explained that the climate related shifts in productivity could be reflected in several factors (stock status, recruitment, climate vulnerability, and fish condition). Also, stocks with empirical assessments will score lower than those with analytical models for SSB, recruitment, and assessment type/performance.

With respect to the scoring rubric provided in the Risk Policy concept, the project team emphasized that the rubric was difficult to interpret for some factors, and noted that it is important to align the rubric with products that are being used. Finally, they suggested that the Council should clarify its intention of each factor, for example two factors deal with productivity (recruitment and condition).

Working group members expressed gratitude to Dr. Brothers and the project team, noting the substantial progress that has been made on simulation testing and the thoughtful feedback they had provided on the scoring rubric. Members of the working group asked clarifying questions about the impacts of uniform weighting versus the Council's weighting, and were curious how different the Z-scores and management advice were when applying the Council weights versus a uniform weight. The working group was also interested in how applying the commercial and recreational fishery characterization factors might change the outcomes that were presented at the meeting (5 factors vs. 7 factors).

The working group raised ideas of setting a maximum deviation from uniform weighting as a possible option, with an example of not allowing for the Z-score to move more than 25% away from a uniform distribution.

When asked if they needed any specific feedback from the working group, the project team stated that providing guidance around the inclusion of factors and data to use would be useful (e.g. the commercial and recreational factors were not yet included in outputs for the meeting). They also mentioned guidance around the use of the fish condition factor, and if there should be simulation runs without it. Input on the scaling of Z scores and the weighting outputs was also welcomed. Dr. Kerr also acknowledged the role of the project oversight team for this work, and said input would be coming from that group.

RISK POLICY USE AND DEVELOPMENT

Mr. Peros presented a staff recommendation to begin use of the risk policy and continue its develop in separate tracks work (phases). In the "Alpha Phase" the revised Risk Policy matrix will be populated using guidelines outlined in the Risk Policy concept, but the factors will not be scored. In the "Beta Phase" the Council and RPWG will continue to develop the Risk Policy, focusing on updates to the Risk Policy factors and guidelines for scoring (e.g. questions, data), weighting of factors by the Council, outcomes from the simulation testing, and the linkage of the Risk Policy with updated groundfish ABC control rules. These changes are anticipated to occur no earlier than 2026. Changes or adjustments to the Risk Policy will not be made on a rolling basis unless explicitly instructed by the Council. Mr. Peros also noted that there are several Council groups and projects that are interrelated and running on various timelines. This is different from the PDT-Committee structure, and the group discussed the options for addressing the feedback on the Risk Policy that is coming from a range of sources at different times.

Mr. Peros also noted that a follow-up from the CESC meeting was to have staff, the CESC Chair, and the RPWG Chair explore opportunities for Steering Committee engagement in Risk Policy implementation. The working group recommended that feedback should be in writing, and sent directly to Council staff if it is not included in a meeting summary (e.g. CESC). The group also supported having staff summarize the Council's discussions.

Feedback at the April Council on factors focused on the fish condition factor, along with interest in revisiting the questions used to score the commercial and recreational fishery characterization. There continues to be opportunity to adjust or change factors (combine, different data sources, different questions for PDTs to answer). At the CESC meeting, the participants raised several questions about how Z-scores are calculated and used, particularly in relation to control rules and their influence on management decisions. Mr. Peros stated that this highlighted a need for clearer guidance and explanation.

Other ongoing work includes the simulation testing and ABC CR development the Dr. Brothers presented on. Mr. Andrew Applegate on Council staff has been focused on assembling data for Risk Policy from a range of sources, and is exploring the integration of this data into Council documents (Annual Monitoring Reports). Finally, Mr. Peros noted that there may be some potential for to work with the NEFSC's EDAB group on the synthesis of data and information being assemble for stock assessments or as part of the ESPs.

The working group agreed to assemble sub-groups to respond to feedback on factor scoring, and to develop outreach materials to the PDTs, SSC, Advisory Panels, and Committees. Mr. Peros will follow-up on the application of the Risk Policy to upcoming Council actions, including a spiny dogfish action and a potential regulatory flexibility action.

Sub-Group	**Working Group Members**
Risk Policy Use Sub-Group (documentation and communication)	Jonathon, Moira, Melanie
SSB / Stock Status	Lisa, Jason
Recruitment	Lisa, Jason
Assessment Type	Dan, Moira
Climate Vulnerability	N/A, CVA 2.0 is moving forward.
Fish Condition	Joe, Jonathon
Commercial Fishery Characterization	Megan, Dan, Joe
Recreational Fishery Characterization	Megan, Moira
Scaling of weights and scores (for Z score)	Megan follow-up with Roger and Lisa

OTHER BUSINESS

Mr. Risk Bellavance thanked Ms. Ware and Mr. Salerno for their leadership of the group, and expressed gratitude for the opportunity to participate in this effort. No additional other business was discussed.

The meeting ended at 3:37pm.