



New England Fishery Management Council

50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492

Daniel Salerno, *Chair* | Cate O'Keefe, PhD, *Executive Director*

MEMORANDUM

DATE: November 12, 2025
TO: Cate O'Keefe, Ph.D., Executive Director
FROM: Scientific and Statistical Committee
SUBJECT: Response to Terms of Reference - Overfishing Limit and Acceptable Biological Catch for U.S./Canadian transboundary Northeast multispecies stocks for FY 2026

The Scientific and Statistical Committee (SSC) met in person and via webinar on October 22, 2025, to address Terms of Reference (TOR) for Northeast multispecies stocks that are managed jointly with Canada.

SSC members in attendance: Dr. Edward Camp (Vice-Chair), Dr. Anna Birkenbach, Dr. Adam Delargy, Dr. Adrian Jordaan, Dr. Lisa Kerr, Dr. Gareth Lawson, Dr. Jason McNamee, Dr. Richard Merrick, Dr. Mateja Nenadovic, Dr. Kevin St. Martin, Dr. Michelle Staudinger, Dr. Hiro Uchida, and Dr. John Wiedenman. Other SSC members contributed to the review of this report.

TERMS OF REFERENCE

- A. Review the recommendations from the Transboundary Management Guidance Committee (TMGC) based on results from the most recent U.S. and Canada stock assessments and information provided by Council staff.
- B. Confirm TMGC guidance for U.S. equivalent OFLs and ABCs for fishing year (FY) 2026 for the following stocks:
 - a. Georges Bank cod
 - b. Georges Bank haddock
 - c. Georges Bank yellowtail flounder

INTRODUCTION

The SSC received a presentation from the Council's Executive Director on recent updates to the processes for assessing and managing the U.S./Canada transboundary stocks.

In previous years, the TMGC typically negotiated the U.S./Canada allocations of transboundary stocks annually based on the historic proportions of fishery utilization and resource distribution

in the Eastern Georges Bank Management Area. In 2025, the TMGC process was changed to include only NOAA Fisheries officials representing U.S. interests, meeting with Canadian fishing industry representatives and officials from Canada's Department of Fisheries and Oceans. The resulting guidance requires confirmation from the NEFMC SSC to integrate into the Northeast Multispecies Fishery Management Plan.

The TMGC provided recommendations for Eastern Georges Bank cod and haddock catch advice based on the Integration of Science Advice for Transboundary Species (ISATS) process that considered domestic U.S. Georges Bank cod and haddock stock assessments and the Canadian Eastern Georges Bank cod and haddock stock assessments. Additionally, the TMGC provided recommendations for Georges Bank yellowtail flounder catch advice based on the U.S. 2025 management track stock assessment. The ISATS compiles, but does not seek to reconcile, domestic science advice products from each country. In 2025, the Georges Bank yellowtail flounder Management Track stock assessment peer review was conducted after the ISATS process and results were considered directly by the TMGC.

TERMS OF REFERENCE FINDINGS

The SSC recommends the following OFLs and ABCs for the transboundary stocks for FY 2026. For Georges Bank cod, the SSC recommends an OFL of 473 mt and an ABC of 473 mt, resulting in an allocation of 151 mt to the U.S. For Georges Bank haddock, the SSC recommends an OFL of 8,177 mt and an ABC of 8,177 mt, and an allocation of 4,425 mt to the U.S. For Georges Bank yellowtail flounder, the SSC recommends an OFL of 57 mt and an ABC of 57 mt, with an allocation of 31 mt to the U.S. These recommendations are consistent with the TMGC recommendations that consider but are not constrained by groundfish ABC control rules and the Council's Risk Policy. The recommended OFL and ABC aim to prevent overfishing.

RATIONALE INCLUDING SIGNIFICANT SOURCES OF UNCERTAINTY

Overall (cross-stock) comments

The SSC discussed the recent changes in the TMGC processes, noting some challenges of understanding the current process and the SSC's role in providing advice. The SSC discussed that the 2025 process included multiple structurally similar assessments of the same stocks at different spatial scales being conducted independently by the two countries. The SSC was concerned that this effort was resource-intensive and produced models that were not directly comparable, leaving the benefits of this process unclear. The SSC also was concerned that there could have been unintended negative consequences of eliminating the Transboundary Resources Assessment Committee (TRAC) process of reconciling the U.S. and Canadian scientific information and the involvement of U.S. fishing representatives in this process. Finally, the SSC was concerned that the current process could result in apportionment and allocation advice that is biologically unrealistic and has negative socioeconomic consequences (e.g., allocating 100% of cod to the Eastern Georges Bank area when cod are known to occur in Western GB).

Georges Bank Cod

Separate assessments were conducted by the U.S. and Canada, with the U.S. assessment focused on the whole bank and Canadian assessment on the Eastern Georges Bank (EGB). Both domestic

stock assessment models underwent peer review and represent the best available science. The U.S. assessment used data through 2023, and the Canadian assessment used data through 2024. These assessments have different spatial scales which complicates reconciling results, particularly as the smaller eastern Georges Bank unit was estimated by the Canadian assessment to have a greater spawning stock biomass (SSB) estimate than the U.S. modeled SSB estimate for the whole Georges Bank unit (10,900 mt vs 2,486 mt).

The TMGC agreed to use the 2025 Canadian EGB cod assessment as the basis for advice. During the U.S. pre-TMGC meeting, it was noted that the fleet structure used in the Canadian assessment was more representative of fishing behavior and practices for the purposes of management advice. The TMGC noted that the Canadian assessment incorporated the latest data and applied a fishing mortality strategy defined as a very low risk of preventable decline, consistent with TMGC's historical approach of reducing fishing pressure when stock productivity is poor.

The TMGC recommended a shared total allowable catch (TAC) of 473 mt for GB cod in the Eastern Georges Bank Management Area. Based on this guidance, the proposed GB cod FY 2026 OFL is 473 mt with an ABC set equal to the OFL. Applying the U.S./Canada resource sharing agreement results in a U.S. ABC of 151 mt (32%) and a Canadian TAC of 322 mt (68%).

The Northeast Fisheries Science Center (NEFSC) developed a biomass apportionment method to determine the portion of GB cod biomass distributed in the eastern Georges Bank management area. Application of the apportionment method indicated that 100% of GB cod biomass was distributed in the Eastern Georges Bank Management Area in 2026.

Georges Bank Haddock

Separate U.S. and Canadian assessments were conducted and peer reviewed in 2024 (U.S.) and 2025 (Canada) for GB haddock. Though the assessment scientists were not available to present their results, the appropriate reports were made available to the SSC, and the 2024 U.S. and Canadian stock assessments were reviewed by the SSC in October 2024, as they provided advice on the FY2025 Georges Bank haddock OFL/ABC.

The TMGC considered projections and catch advice from the two haddock assessments and selected the U.S. assessment as the preferred model, the Woods Hole Assessment Model (WHAM). The resulting FY 2026 F_{MSY} projected catch/OFL was 8,177 mt with an ABC set equal to the OFL. The SSC noted that the TMGC's recommended ABC does not align with the Council's ABC control rules (i.e., the $ABC = 75\% F_{MSY}$), but given the current stock status and that the ABC does not exceed the OFL, the recommended ABC is unlikely to result in overfishing for this stock.

The Canadian assessment considers EGB haddock as an individual stock, while the U.S. assessment includes the entire GB. To address the spatial differences, the NEFSC developed a biomass apportionment method to determine the portion of GB haddock biomass distributed within the EGB Management Area 3. In 2025, the method was updated to include additional survey strata. The apportionment method indicated that 75% of GB haddock biomass was in the EGB and 25% in the Western Georges Bank (WGB) Management Areas in 2026.

The spatial apportionment of biomass yielded an EGB ABC of 4,750 mt and WGB ABC of 3,427 mt.

The TMGC's most recent U.S./Canada resource sharing agreement produced allocation shares for EGB haddock of 21% (998 mt) to the U.S. and 79% (3,752 mt) to Canada.

In summary, the 2026 Georges Bank haddock ABC for the U.S. is 4,425 mt (i.e. 3,427 mt plus 998 mt) and the TAC for Canada is 3,752 mt.

Georges Bank Yellowtail Flounder

Georges Bank yellowtail flounder was assessed in 2025 only by the U.S. The assessment was completed by the NEFSC as a management track assessment, which updated the data and made slight methodological adjustments from the 2024 research track assessment that transitioned the assessment of this stock to using WHAM. The 2025 management track assessment was peer-reviewed in September 2025 and found to provide the best scientific information available. The SSC was provided the NEFSC 2025 Management Track Assessment Report and the (draft) 2025 September Management Track Peer Review Panel Report, as well as information from the TMGC.

The 2025 management track assessment found the Georges Bank yellowtail flounder to be overfished (2024 SSB at only 10% of the biomass target) and not undergoing overfishing (2024 fully selected mortality was 19% of the overfishing threshold). This represents a change from the previous assessment, in which overfishing status was unknown—though official status determination is determined by NOAA and has not yet occurred. Catches are exceptionally low, with total catch for the assessment of 12mt, including 1 mt U.S. landing and 0 mt Canadian landings, and with most post-2020 index values overlapping zero. The assessment assumed current and projected recruitment is and would remain lower than historic levels based on a change-point analysis of bottom temperature.

The 2025 Georges Bank yellowtail assessment was completed after the ISATS process, and so this stock was not subject to consideration by the Technical Science Coordination meeting or other ISATS processes, but was considered by the TMGC as well as the plan development team (PDT) and Council staff. The TMGC recommended a shared TAC of 57mt for the stock, noting that the stock is considered overfished by the U.S. and would be considered in the critical zone under the Canadian Precautionary approach. This catch level represents a substantial (72%) reduction over previous years but remains well above recent total catches. The U.S./Canada sharing agreement was determined to be 54% U.S. and 46% Canada, which resulted in a U.S. ABC of 31 mt for 2026.

There are a number of uncertainties. The greatest is that the very low catches in the fishery and survey indices make it difficult to track cohorts and may pose challenges for future assessments. Additionally, the peer review panel and the SSC each noted two potential uncertainties: (1) that state-space WHAM framework might make it difficult to decipher inferences of environmental vs. fishery effects on the stock, and (2) that environmental forecasting might be developed and these forecast environmental conditions might be integrated into future projected recruitment. Finally, the SSC noted that the changes in model-estimated biomass—though very small in

absolute terms—demonstrated substantial relative changes (first negative then positive) in 2019-2021.

ADDITIONAL COMMENTS AND RESEARCH RECOMMENDATIONS

Overarching (multi-species) comments

The SSC provides several research recommendations in addition to those already provided by recent review panels. Note that these are like the recommendations provided in 2024 and the SSC continues to provide these recommendations to NMFS/NEFSC.

The SSC suggests that the following be considered as overarching research recommendations:

- Consider joint cooperative science initiatives, like TRAC, that might produce more cohesive advice more efficiently.
- Evaluate options to address spatial scale mismatches between assessment approaches.
- Conduct institutional or policy analyses that evaluate the cases under which alterations of the TMGC process could improve incorporation of stakeholder knowledge and feedback.
- With respect to apportionment protocols, NMFS should consider the approaches recommended by the SSC at its July 2024 meeting now that the original approach to apportionment has been applied and found to need improvement. Recommendations included:
 - Consider survey seasonality and reevaluating equal survey weightings when averaging.
 - Evaluate the frequency at which no tows occur in a stratum and the impact of the assumption that a stratum with no tows has a mean of zero biomass.
 - Evaluate other time series modeling techniques, acknowledging that use of the loess smoother maintains consistency with the calculation of the US-Canada resource sharing allocation. Specifically, the SSC suggests exploring a time series model that provides predictions bound between 0 and 100 and that minimizes prediction error.

With respect to the allocation of quota for GB cod and haddock stocks, the increased observer coverage in the U.S. groundfish fishery resulting from the Northeast Multispecies Amendment 23 provides detailed information on the resource distribution on Georges Bank. These data can be used to evaluate the degree of alignment between the transboundary allocation of quota and the spatial pattern of past catches.

Georges Bank Cod

The spawning stock biomass estimates of the Eastern Georges Bank cod model are considerably greater than the SSB estimated by both the U.S. Georges Bank cod model despite a smaller stock area footprint. Several factors are likely contributing to scaling differences between the model estimates, including the impact of different footprints on the models, differences in natural

mortality (M) assumptions, and structural differences between the two models related to how uncertainty around data gaps is handled, all of which contribute to differences in model outputs. The SSC is concerned about the scaling of SSB between models and recommends further work within WHAM to reconcile differences between models and resolve preferred model specifications.

Georges Bank Haddock

With respect to the GB haddock WHAM assessment, the large fluctuations in this stock's abundance could lead to significant density dependent effects on growth and weight at age. This could impact performance of the stock assessment and projections if these population parameters are not regularly updated. The SSC recommends that the density dependent effects on growth should be examined in future assessments of the stock.

Georges Bank Yellowtail Flounder

The SSC recommended that managing Georges Bank yellowtail flounder as a bycatch-only stock be considered. However, the SSC acknowledged that coordination with Canada would be needed..

SUMMARY OF RECOMMENDATIONS

- 1. The SSC recommends an OFL of 473 mt, an overall ABC of 473 mt, and a U.S. ABC of 151 mt for Georges Bank cod for FY 2026.**
- 2. The SSC recommends an OFL of 8,177 mt, an overall ABC of 8,177 mt, and a U.S. ABC of 4,425 mt for Georges Bank haddock for FY 2026.**
- 3. The SSC recommends an OFL of 57 mt, an overall ABC of 57 mt, and a U.S. ABC of 31 mt for Georges Bank yellowtail flounder for FY 2026.**
- 4. The SSC recommends that the density dependent effects on growth should be examined in future assessments of the Georges Bank haddock stock.**
- 5. The SSC recommends NMFS consider the other approaches to apportionment recommended by the SSC at its July 2024 meeting now that the original approach to apportionment has been applied and found to need improvement.**
- 6. The SSC recommends NMFS use additional observer data to evaluate the degree of alignment between the transboundary allocation of quota and the spatial pattern of past catches.**

Stock	Fishing Year	OFL (mt)	ABC (mt)	US ABC (mt)
GB cod	2026	473	473	151
GB haddock	2026	8,177	8,177	4,425
GB yellowtail flounder	2026	57	57	31

DOCUMENTS

To address the TORs, the SSC considered the following information:

1. Presentation by Council Executive Director
2. NEFMC Executive Director to SSC Memo – FY2026 U.S. OFL and ABC for U.S./Canada Transboundary Stocks, October 16, 2025
3. DRAFT Transboundary Management Guidance Committee 2026 Guidance Document
4. Report - [Compilation of Scientific Advice for Eastern Georges Bank Cod and Haddock for Fishing Year 2026](#)
5. Presentation – Compilation of Scientific Advice for Eastern Georges Bank – U.S. Pre-TMGC Meeting, September 26, 2025
6. [September 2025 Management Track Assessment for Georges Bank Yellowtail Flounder](#)
 - a. [2025 Management Track Assessment Peer Review Report, October 4, 2023](#)
 - b. Stock Assessment Support Information [portal](#)*

REFERENCES

Applegate A, Cadrin SX, Hoenig J, Moore C, Murawski S, Pikitch E. 1998. Evaluation of existing overfishing definitions and recommendations for new overfishing definitions to comply with the Sustainable Fisheries Act. New England Fishery Management Council Report.

Froese, R. and D. Pauly. Editors. 2025. FishBase. World Wide Web electronic publication. www.fishbase.org, version (04/2025).

NEFSC. 2008. Assessment of 19 Northeast Groundfish Stocks through 2007: Report of the 3rd Groundfish Assessment Review Meeting (GARM III), Northeast Fisheries Science Center, Woods Hole, Massachusetts, August 4-8, 2008. U.S. Dept Commer, Northeast Fish Sci Cent Ref Doc. 08-15; 884 p + xvii.