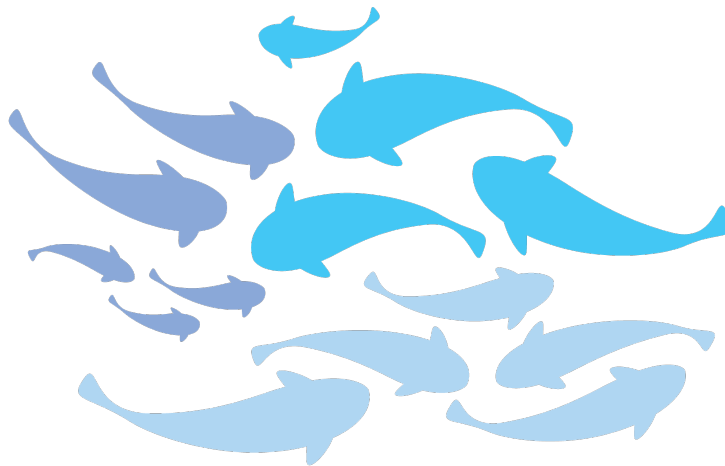


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Transboundary Resources Assessment Committee White Paper on Timing Challenges

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Overview

The Transboundary Resources Assessment Committee (TRAC) conducts and reviews stock assessments for the Gulf of Maine and Georges Bank region shared resources across the US-Canada boundary. TRAC meets annually, with the countries alternating as hosts, to review assessments for three species shared in that area: Eastern Georges Bank cod, Eastern Georges Bank haddock, and Georges Bank yellowtail flounder. The TRAC's science advice informs the Transboundary Management Guidance Committee (TMGC), which also meets annually after the TRAC, in its development of quotas for these species.

This options paper was written for discussion by TRAC, the Transboundary Management Guidance Committee (TMGC) and U.S./Canada Transboundary Steering Committee (SC) in 2022. This paper presents the current TRAC and TMGC schedule, including data delivery, work product deadlines, and meetings. This document also presents several possible changes to the current schedule that could alleviate timing constraints faced by TRAC scientists. It presents changes that could provide greater efficiency in the TRAC process and in both countries' post-TRAC domestic fishery management preparation and review schedules. This document is partially based on the previous Timing Options Paper released by TRAC in 2014.

Timing Challenges

TRAC

Since 2004, TRAC typically met in June. Since 2015, in response to time constraints related to the Northeast Fisheries Science Center (NEFSC) spring trawl survey and the availability of U.S. commercial catch statistics, TRAC has met during the first or second week of July, most recently from July 12-14, 2022. Table 1 (p. 6-7) summarizes the 2022 schedule for data availability, the TRAC meeting, management preparation, the US/CA meeting, and subsequent domestic management review of US/CA recommendations.

To provide the stock assessments at TRAC, the scientists use several different data streams. The United States provides commercial data and survey data. The commercial data includes catch data, which includes information sent by U.S. states via the Atlantic Coastal Cooperative Statistics Program (ACCSP), and observer data. The commercial data are currently processed on a rolling system and the data used in the stock assessments covers Jan 1-Dec 31 of the previous calendar year. Typically of the US commercial data, the raw observer data are not available until the end of March and the raw state catch data are not available before the end of April. Those data need to be compiled and processed to allocate the catch to different stock areas. In the past, that process took 4-6 weeks once the data was received. The US is developing a new commercial catch data processing system, the Catch Accounting and Monitoring System (CAMS). This system pulls together the array of commercial data into one overall system, and will be used to provide the data for TRAC in the future. The CAMS process is expected to run more quickly, so the delivery date of catch data should be earlier than in the past, presuming that the raw data are provided on time. Canadian commercial data are available for

processing by scientists once data entry is complete, which tends to occur in March of every year. Canadian commercial data are currently not considered a limiting factor in TRAC timing.

The Survey data operates on a spring cycle ending up to mid-May. It is then processed, quality control checked, and delivered 30 days later to the US scientists, which is mid-June. This year, at the Spring TRAC Meeting, it was proposed to be delivered on June 15th. As the latest data stream to come in, one of the options this paper proposes to alleviate timing constraints is to not use the same-year spring survey data but rather operate using a calendar year survey dataset.

Once the data are received by the TRAC scientists, they then process the data from their country and share it with their co-authors. The data are analyzed and presented in a working paper co-authored by the US/CA scientists. The scientists have a deadline of two weeks before TRAC to provide their working paper. During the two weeks directly preceding TRAC, two appointed reviewers, as well as other interested parties, review the three stock assessment working papers before the TRAC meeting in mid-July. However, under this schedule and the condition that NMFS spring survey data can be delivered on June 15th, there are only nine working days for TRAC scientists to receive data, conduct analyses, and prepare working papers. This year, the revised data and a new model of the Eastern Georges Bank Haddock assessment based on the U.S. Research Track Review process was used. When new data and modeling are involved, more than nine working days to complete the working papers is required. This schedule also does not allow any room for technical issues; in 2022 there was a five-day delay to receive the survey data due to technical issues, which provided only four working days for scientists to receive data, conduct analyses, and prepare working papers. This year, the ToRs were also only finalized by TMGC on June 24th, two working days before the working paper deadline. One option that could be discussed is to shift the time that the working papers are posted to one week before TRAC. This change would allow for greater accuracy and quality of the working papers, while providing sufficient time for reviewers to review the improved papers.

This year, due to technical issues (server failure), the U.S. shared the survey data with the Canadian (CA) database manager on June 20, 2022. CA scientists were able to access the U.S. survey data on June 22th. In 2022, due to technical issues (laptop failure) and conflicting schedules, the 2021 US fishery (catch) data was not able to be provided in time to be used in the working paper for Eastern Georges Bank cod, but was able to be used for the Eastern Georges Bank Haddock working paper. The current TRAC timing does not provide flexibility to compensate for a potential few days delay of technical challenges.

The working papers are finalized during and directly after TRAC into TRAC Status Reports (TSRs). TSRs are drafted during the last session of each TRAC meeting, and summarize the results and recommendations coming out of TRAC. These documents are essential to inform U.S. and Canadian understanding of the scientific recommendations of TRAC prior to and during the TMGC and SC meetings in the fall. The finalization of these documents, which include results of assessments, and recommendations for quota setting, have a target of approximately two weeks to complete, and is thus estimated in this schedule to have occurred by July 28. However, this deadline was not often

achieved in the past, and the TSRs are more likely to be completed by August 28. The TSR is not fully published until several months/years later to meet publication requirements for both DFO and NMFS, which include translation and accessibility.

The content of the Working Papers and Status Reports is decreed by the Terms of Reference (ToRs). These ToRs are decided by TMGC, with input from TRAC scientists. In 2022, there was a delay of TMGC agreed Terms of Reference for TRAC. This year, the ToRs were not agreed upon by the US/CA TMGC until June 24th. As this date was two days before the working paper deadline, it was difficult for the TRAC scientists to prepare their reports. Revised ToRs sometimes task TRAC scientists with providing additional information. There also have been instances where TOR changes were necessitated either by survey problems or requests from the TRAC scientists. Clarifying a ToR finalization deadline, as well as the potential types of ToRs that necessitate editing after the ToR deadline, is recommended. January 15th has been suggested as a potential date. For reference, in 2020 and 2021, ToRs were finalized in late May and late June, respectively.

The timing of TRAC itself is a challenge. Having TRAC meetings in the summer precludes Fisheries and Oceans Canada (DFO) staff from participating in the annual DFO summer survey and increases staff turn-over in the DFO groundfish group. Finally, work-life balance is impacted by this heavy workload during summer months. Staff who have families may be juggling childcare and vacation plans around a heavy workload and uncertain timelines that are required to be met by this process. Moving TRAC closer to the middle of the summer months means that staff are busy with this process in July for intensive preparation for TRAC and then August for preparation for TMGC.

TMGC and Post-TRAC Domestic Processes

Following the TRAC meeting and finalization of TSRs, both countries work within their respective domestic processes to prepare for the annual TMGC and Steering Committee (SC) meetings.

For the U.S. domestic process after the TRAC meeting, meetings occur of the New England Fishery Management Council (NEFMC)'s Groundfish (Northeast Multispecies) Plan Development Team (PDT), the Scientific and Statistical Committee (SSC), and Groundfish Committee. This schedule lists the PDT meeting during the third week of August, while the SSC is scheduled for the last week of August. The SSC meeting is a necessary step in the domestic process for the U.S. adoption of overfishing limits and acceptable biological catches for GB yellowtail flounder. The TSR for GB yellowtail flounder is used by the SSC. The deadline for SSC materials is one week in advance of the SSC meeting (i.e., this year by August 18, 2022). U.S. preparation for the TMGC and SC meeting concludes with a public pre-meeting of the U.S. TMGC delegation.

For Canada, the post TRAC/pre-TMGC industry meeting is held during the first week of August. Following this meeting, the Mandate for Negotiation Memo to the Minister of DFO is finalized, in order to gain approvals for what Total Allowable Catch levels the Canadian delegation has permission

to negotiate. A five-week time period is required by the Minister for review of this memo before the Canadian delegation is likely to receive the mandate approval. A meeting is then held with the Canadian Delegation to discuss the results of the approvals.

The TMGC and SC meetings in 2022 were September 12 through 14, 2022. The TMGC Guidance Document is drafted during the TMGC meeting and communicates the management recommendations to both Countries regarding allocation shares and the shared total allowable catch for each of the three transboundary groundfish stocks.

Once the TMGC and SC meetings are completed, TMGC recommendations are considered by each country, again within respective domestic processes. For the U.S., this occurs during a NEFMC Groundfish Committee meeting the day after the SC meeting (this year, on September 15) and a full meeting of the NEFMC, which occurred from September 26 through 29, 2022.

In Canada, TMGC recommendations are reviewed and domestic total allowable catches are approved via memo by the appropriate management authority (Regional Director General Maritimes Region or Minister), after the recommendations are considered by the Gulf of Maine Advisory Committee (GOMAC). This meeting takes place after the TMGC each year, typically in late September/early October. In 2022, it took place on October 7th. The Canadian Fishery opening is January 1st; therefore, the final decision for each stocks' quotas has to be made by the Minister or Regional Director General in advance of this date. If a decision is required by the Minister, five weeks are required for review of the recommendations, similar to the mandate memo.

Potential Spring Trawl Survey Changes

The US and Canada are currently in discussions in the International Council for the Exploration of the Sea Working Group on Northwest Atlantic Ecosystem Observations (ICES WGNAEO) about sharing spring survey responsibilities for Georges Bank. By using the same net and methods, each countries' survey results could be shared to create a single survey. DFO does not currently have a fall survey. This change would not be implemented until analyses confirm that the tows are indeed "interchangeable." Until then, the plan is to maintain the NOAA Fisheries (NMFS) survey samples on both sides of the Hague line. Note that this plan to share survey duties would introduce a change in how the allocation algorithm is conducted. Additional effort will be required if the surveys are to be combined.

Table 1. Current Transboundary Science & Management Schedule (2022). This table summarizes the 2022 schedule for data availability, the TRAC meeting, management preparation, the US/CA meeting, and subsequent domestic management review of US/CA recommendations.

Current Schedule: TRAC meeting in second week of July			2022				
	Action	Lapse Time	June	July	Aug	Sept	Oct
ToRs finalized	ToRs finalized		24				
Data Availability	Catch data available - US and Canada		15/ only for haddock				
	US NEFSC Spring survey data available		22				
	Age data complete and available - US and Canada		22				
TRAC	Assessment - Analysis and Working Document Preparation including time for review by coauthors	2 weeks intended	23-28				
	Working Document Posting		28-	8			
	Peer review Panel Review	2 weeks intended		1-11			
	TRAC meeting			12-14			
	TSRs posted	2 weeks intended			18 to mid-September		
	NEFMC PDT				15		
Management Preparation	NEFMC SSC				25		
	U.S. Pre-TMGC Meeting					5-9	
	DFO Industry Meeting				First week		

					of August		
	TMGC					12-13	
US/ CA Meeting	Steering Committee					14	
	NEFMC Groundfish Committee					15	
Management Review	NEFMC					26-29	
	GOMAC						7

Proposal 1: Shift TRAC two weeks later

Proposal 1, as shown in Table 2 below, would shift the TRAC meeting to the last week of July, which in 2023 would be July 25 through 27. This proposal would impact the timeline in a few ways. The DFO survey vessels are at sea throughout the months of July and August, and all members of the Groundfish Unit are used to staff these vessels, as they constitute the major users of these data. A meeting in late July is challenging for DFO as all support staff would be at sea and not available during the four weeks in preparation for the TRAC meeting. In addition, DFO assessment leads would be precluded from contributing to a major data collection program for Canadian stock assessments. This factor was considered when the 2nd week of July was decided for the TRAC meeting in 2014.

This proposal would add two weeks to the pre-TRAC meeting period that TRAC scientists use to conduct their analyses and prepare working documents if the data delivery was provided by June 15th. Under this proposal, the current scheduling for domestic management preparation meetings for the US could remain as is with four weeks available to carry out domestic processes and the TMGC and SC meeting timing unchanged. However, the Canadian process needs five weeks, because the briefing information that is shared with the Minister’s office is required to be received five weeks prior to TMGC.

Table 2. Proposed Timeline 1 for 2023

Proposal 1: TRAC meeting in last week of July		2023						
	Action	Lapse Time	January	June	July	August	September	October
ToRs finalized	ToRs finalized		1					
Data Availability	Catch data available - US and Canada			1 estimate; early May in future years				
	US NEFSC Spring survey data available			15 estimated				
	Fishery data Age data complete and available - US and Canada			1 estimated; early May in future years				
TRAC	Assessment - Analysis and Working Document Preparation including			15-	11			

	time for review by coauthors							
	Working Document Posting	2 weeks*			11			
	TRAC meeting				25 - 27			
	TSRs posted	2 weeks* *				10		
	NEFMC PDT					17 estimated		
Management Preparation	NEFMC SSC					22-24 estimated		
	U.S. Pre-TMGC Meeting					August 28 - September 8		
	DFO Industry Meeting					First week of August		
	TMGC						12-13	
US/ CA Meeting	Steering Committee						14	
	NEFMC Groundfish Committee						Unknown	
Management Review	NEFMC						26-28	
	GOMAC							7

*An option could be to shift the time that the working papers are posted to the reviewers and TRAC one week before TRAC.

** Assuming no delays in TSR preparations.

A date later than July 19-21 for TRAC is not possible for Canada because the briefing information that is shared with the Minister’s office is required to be received five weeks prior to TMGC. For Canadian Management Preparation, a shift in the TRAC meeting to the first week of August would require the DFO/Industry meeting to shift to the second week of August. The timing required to prepare the briefing post TRAC and after the Industry meeting, and to meet the required timelines for review by our Minister, would require a shift in timing for the TMGC and SC meetings to the last week of September. This would also require shifting the GOMAC meeting to the 2nd week of October. This proposal would also limit DFO science staff participation in the DFO Summer Survey and further

increase staff turn-over in the groundfish group. Additionally, the fishery opens January 1, and the decision on the total allowable catches also requires significant time for Ministers review and consideration. A date later than July 25-27 for TRAC is also not workable for the US because of the NEFMC tight deadlines, especially around the NEFMC Council Meeting.

Proposal 2: Remove Same Year U.S. Spring Survey from TRAC consideration

At the April 20, 2022 TRAC intersessional meeting, it was suggested that the TRAC could also consider changing the complement of surveys used in the assessments; i.e. remove the most recently conducted U.S. Spring survey in favor of the U.S. Spring Survey from the previous year for the haddock and cod working papers. As an example, the current complement of surveys intended to be used to estimate survey biomass for the Georges Bank Yellowtail Flounder Limiter Approach during the 2022 TRAC is the 2021 Fall U.S. Spring Trawl Survey, 2022 Spring U.S. Trawl Survey, and the 2022 Winter DFO Surveys. If Proposal 2 had been made and applied for 2022, the complement of surveys used for this approach would be the 2021 U.S. Spring Trawl Survey, 2021 U.S. Fall Trawl Survey, and the 2022 Winter DFO Survey. The intention would be to still use the commercial catch data from the prior calendar year. US commercial catch data were delayed in 2022, but such delays are not expected in the future using the new CAMS system and presuming that the raw data are not delayed in delivery.

This proposal would not result in modification of the TRAC/TMGC timeline; and so would avoid knock-on effects that result when the TRAC meeting is delayed as in Proposal 1. This proposal does not address the issue of when the US commercial data are available. This proposal would have limited impacts on current assessments for two of the three transboundary stocks which are assessed at TRAC. For EGB haddock assessment, the research track assessment already uses calendar year catch and survey data. The 2022 spring survey is currently used for indicators: maturity, recruitment, growth, survey biomass, and informing uncertainties of M in projections. For EGB cod, which currently uses the spring survey, a full model is not run but the data are used to ensure that DLMtool assumptions hold and that the operating models continue to reflect possible stock conditions.

For GB yellowtail flounder, the 2014 Empirical Approach uses three surveys to estimate survey biomass: U.S. Fall, U.S. Spring, and the DFO Winter survey. This proposal would result in a transition year where no new U.S. spring survey information would be available for use in TRAC assessments. If, in a year where this proposal was implemented, the results of one of the other available surveys (U.S. Fall Trawl Survey or DFO Winter Survey) became unavailable, then TRAC would be left with one survey of new available information. However, TRAC's yellowtail assessment has been functioning with just two surveys for the past few years due to various issues, and so it is possible for TRAC to accommodate such an event, although it is not the best option due to consistency issues. It is currently unclear how the three surveys would be combined to get a biomass estimate. For example, there would be a consistency problem with the determination of Georges Bank yellowtail flounder stock size. The current approach essentially averages the fall (Year - 1) and Spring (Year 1) surveys to get an estimate of year 1 biomass. This proposal would change that; the NMFS spring (Year -1) survey biomass estimate would be subject to mortality for nearly a full year before the DFO spring (Year 1)

survey. This proposal will require additional work by species leads to consider how/if to remove the spring surveys. However, if TRAC scientists do not need to include same-year spring survey data, they would be able to gain several weeks of extra time for TRAC scientists to conduct the assessments, which could help with timing challenges.

Table 4. Transboundary Management Schedule without Same-year Spring Surveys

Current Schedule: TRAC meeting in second week of July			2023					
	Action	Lapse Time	January	May	June	July	August	September
ToRs finalized	Final ToRs		1					
Data Availability	Catch data available - US and Canada				1 estimated; early May in future years			
	Last survey - DFO Winter			Early to mid may				
	Fishery Age data complete and available - US and Canada				1 estimated for 2023; early May in future years			
TRAC	Assessment - Analysis and Working Document Preparation including time for review by coauthors	3.5 weeks						

	Peer review Panel Review	2 weeks			27-	11		
	TRAC meeting					11-13		
	TSRs posted	2 weeks**					27	
Management Preparation	NEFMC PDT						Mid-August	
	NEFMC SSC						Mid-August	
	U.S. Pre-TMGC Meeting						Late August	
	DFO Industry Meeting						Early August	
	TMGC							12-13
US/ CA Meeting	Steering Committee							14
	NEFMC Groundfish Committee							Mid-September
Management Review	NEFMC							26-28
	GOMAC							Oct 7

** Assuming no delays in TSR preparations.

Conclusion

TRAC timing corresponds to major timing challenges for both US and Canadian TRAC members. The greatest challenge is currently for the TRAC scientists, who must analyze data and write working papers in a very short time period of one to two weeks at the end of June. The scientists also must present the analyses to the public during TRAC and are often tasked with providing additional information during the committee meeting. The scientists then must shepherd through the TSR to finalization in the following weeks of late July and early August, as input on the TSR is incorporated from TMGC members, reviewers, and other TRAC meeting participants. This paper proposes two options: shifting the TRAC meeting to later in July, and/or removing the Same Year U.S. Spring Survey from TRAC consideration. The arguments for or against these proposals are stated above. During the course of writing this white paper, other actions were uncovered that could be taken to help with timing challenges of the TRAC scientists. One action would be to shift the time that the working papers are posted to the reviewers and TRAC to one week before the TRAC meeting. Realistically, TRAC scientists may currently use this time anyway to deliver a quality product, and shifting the formal deadline a week later would reduce pressure on the TRAC scientists. Another action could be to clarify a ToR finalization deadline, as well as the potential types of ToRs that necessitate editing after the ToR deadline. This white paper has presented some of the timing challenges at TRAC, and explored the variables that can aid in solving those challenges. We hope that this information is valuable for TRAC and TMGC members in the future.

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