

U.S./Canada Transboundary Management Guidance Committee Recommendations

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Scientific and Statistical Committee

Boston, MA and by Webinar

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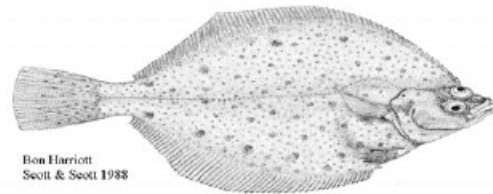
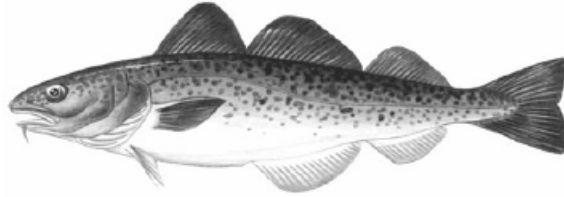
Discussion Order

1. U.S./Canada Science and Management Process
2. Transboundary Management Guidance Committee:
 1. Georges Bank Cod
 2. Georges Bank Haddock
 3. Georges Bank Yellowtail Flounder
3. U.S. FY2026 OFLs and ABCs

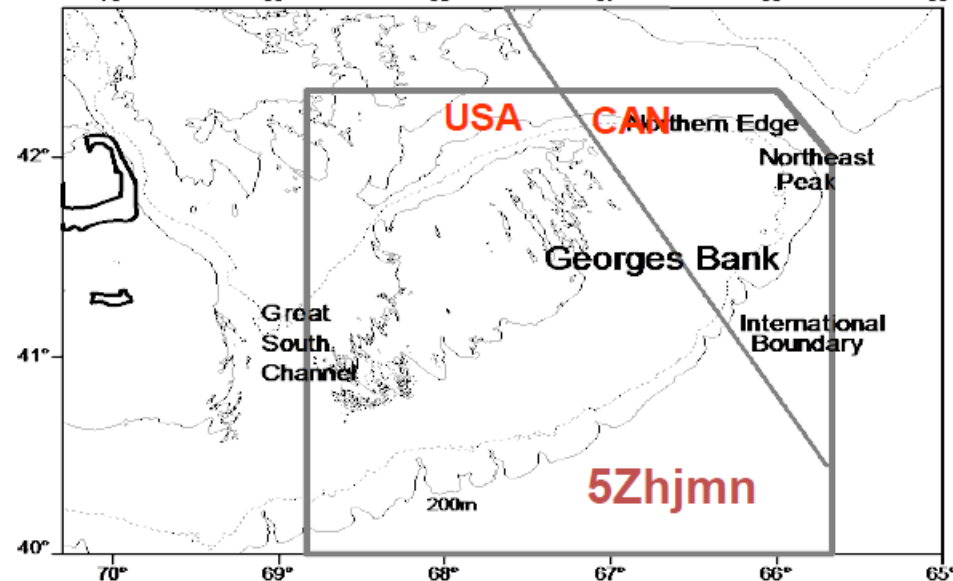
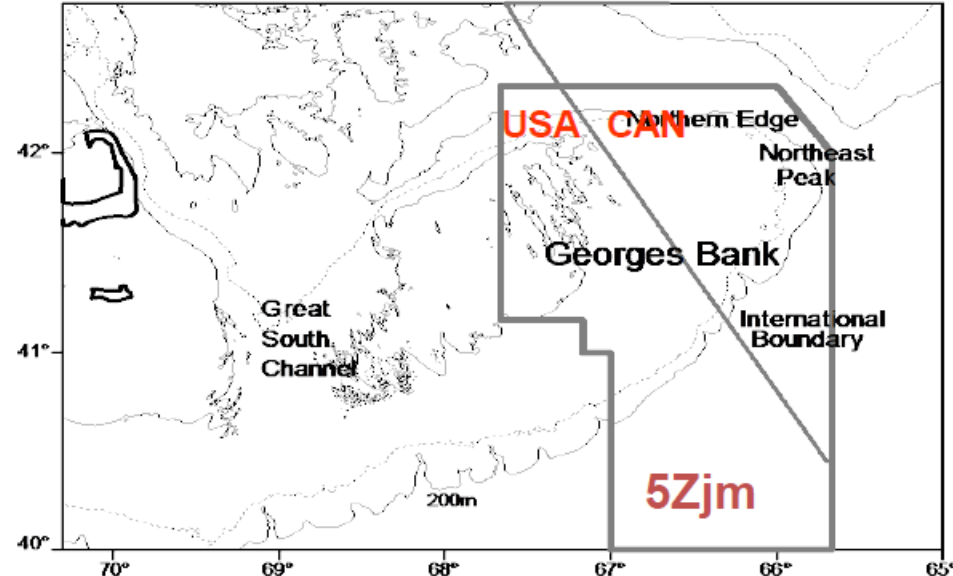
TERMS OF REFERENCE

- 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:
 - Georges Bank cod
 - Georges Bank haddock
 - Georges Bank yellowtail flounder

U.S./Canada Science and Management



Bon Harriott
Scott & Scott 1988



U.S./Canada Science and Management

- Prior to 2024, the Transboundary Resources Assessment Committee (TRAC) provided joint science advice for the Eastern Georges Bank Management Area for the three transboundary stocks (cod, haddock, and yellowtail)
- In March 2024, a “TRAC Improvement Workshop” was convened to develop a new process for the provision of science advice, which was approved by the U.S./Canada Steering Committee in May 2024.

U.S./Canada Science and Management

- New strategies to enhance collaboration and streamline advice
- Eliminated the annual TRAC meeting and replaced it with a process that compiles, but does not seek to reconcile, domestic science products for each country
- Integration of Science Advice for Transboundary Stocks (ISATS)
 - Includes a Technical Science Coordination meeting with stock assessment leads
 - Outcomes for U.S. and Canadian domestic assessments are compiled
 - Domestic assessments are considered equally as the basis for informing advice
 - 2025 process included Georges Bank cod and haddock
 - Georges Bank yellowtail flounder was completed after ISATS process through U.S. Management Track Assessment

U.S./Canada Science and Management

- TMGC is an advisory process to address how catches of transboundary stocks should be allocated to the U.S. and Canada within the Eastern Georges Bank Management Area.
- Includes U.S. industry members from the New England Council, NOAA officials, Canadian industry members, and Canada DFO officials
- In 2025, the role of the Council was replaced by NOAA's Principal Deputy Assistant Secretary for International Fisheries
- TMGC negotiated agreements for the three transboundary stocks
- Recommendations considered, but are not constrained by, groundfish ABC control rules and the Council's Risk Policy
- All TMGC recommendations considered stock status, resource conditions, and risk-averse management approaches

U.S./Canada Sharing Agreement

- U.S. and Canada rotate to complete the Resource Allocation shares calculation
- 2025 – Canada completed calculations to inform 2026 recommended Total Allowable Catches (TACs)
- The agreement is based on a combination of:
 - Historical utilization by each country – 10% weighting
 - Resource distribution from available trawl surveys – 90% weighting

$$\%share_{year,country} = (\alpha_{year} \times \%utilization_{year,country}) + (\beta_{year} \times \%resource\ distribution_{year,country})$$

where α_{year} = percentage weighting for utilization in year

β_{year} = percentage weighting for resource distribution in year

$$\alpha_{year} + \beta_{year} = 100\%$$

U.S./Canada Sharing Agreement

<i>Resource Utilization</i>										
		Cod	Haddock	Yellowtail						
USA		40%	45%	98%						
CANADA		60%	55%	2%						
<i>Resource Distribution</i>					<i>Weighting</i>		<i>Allocation Shares</i>			
	Survey Year	Cod	Haddock	Yellowtail	Fishing Year	Utilization	Distribution	Cod	Haddock	Yellowtail
USA	2020	27%	47%	57%	2022	10%	90%	28%	47%	61%
CANADA		73%	53%	43%				72%	53%	39%
USA	2021	25%	42%	48%	2023	10%	90%	26%	42%	53%
CANADA		75%	58%	52%				74%	58%	47%
USA	2022	27%	30%	36%	2024	10%	90%	29%	31%	42%
CANADA		73%	70%	64%				71%	69%	58%
USA	2023	21%	18%	43%	2025	10%	90%	23%	21%	48%
CANADA		79%	82%	57%				77%	79%	52%
USA	2024	31%	19%	49%	2026	10%	90%	32%	21%	54%
CANADA		69%	81%	51%				68%	79%	46%



U.S. Biomass Apportionment

- For cod and haddock, the Canadian assessment considers Eastern Georges Bank (EGB) as individual stocks, whereas the U.S. assessments include a larger portion of Georges Bank (GB)
- To address spatial differences, NEFSC developed a biomass apportionment method to determine the portion of cod and haddock biomass distributed within the Eastern Georges Bank Management Area
- Results are intended to be informational, not determinative
- Method reviewed by SSC in July 2024
- 2025 updates included:
 - Revised haddock methods to fully align apportionment with survey footprint used in the GB haddock assessment

U.S. Biomass Apportionment

2025 Apportionment Results

- Used data from 1992-2024

	EGB apportionment	Terminal year
GB Haddock	75%	2024
GB Cod	100%	2024

Georges Bank Cod OFL & ABC for FY2026

Georges Bank Cod

- U.S. – Georges Bank
 - WHAM
 - 2023 Research Track
 - 2024 Management Track
 - Data updated through 2023
 - High probability of overfished
 - Overfishing not occurring
- Canada – Eastern Georges Bank
 - WHAM
 - 2025 Framework
 - 2025 Assessment
 - Data updated through 2024
 - High probability of Critical Zone
 - Low fishing mortality

U.S./Canada Cod Model Comparison

- Spatial footprint:
 - GB and EGB models have different spatial footprints and are capturing different dynamics of the population and fisheries
 - Indications that the bulk of the biomass was on EGB in recent years
 - Differences in fishing pressure for full GB compared to EGB
- Natural mortality:
 - Differences in M assumptions with GB assuming constant M and EGB applying age-variant M
- Projections:
 - Differences in recruitment stanzas
 - Differences in application of process error in the projection years

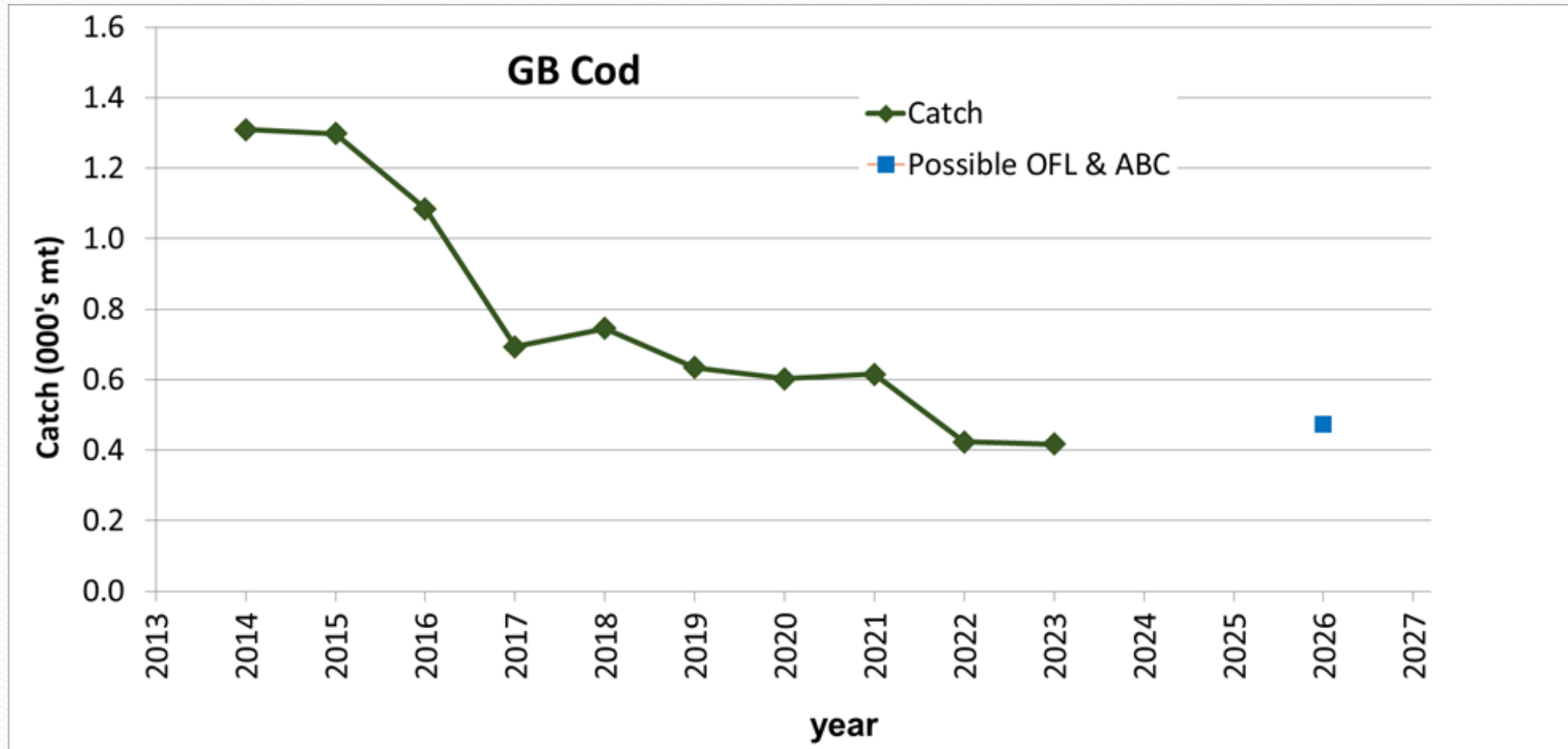
Georges Bank Cod

Model	Parameter	2024 Value	2025 Value	2026 Value
DFO EGB Cod Model Values (terminal year of data = 2024)	SSB (mt)	10,900	7,899	6,462
	F	0.030	0.041	0.052
	Catch (mt)	378	452	473
NMFS GB Cod 2024 Model Values (terminal year of data = 2023)	SSB (mt)	2,486 (929 – 6,653)	2,089 (499 – 8,739)	1,658 (277 – 9,937)
	F	0.152	0.233	0.233
	Catch (mt)	417	518	419
	Apportioned catch (mt) in EGB for 2026			419

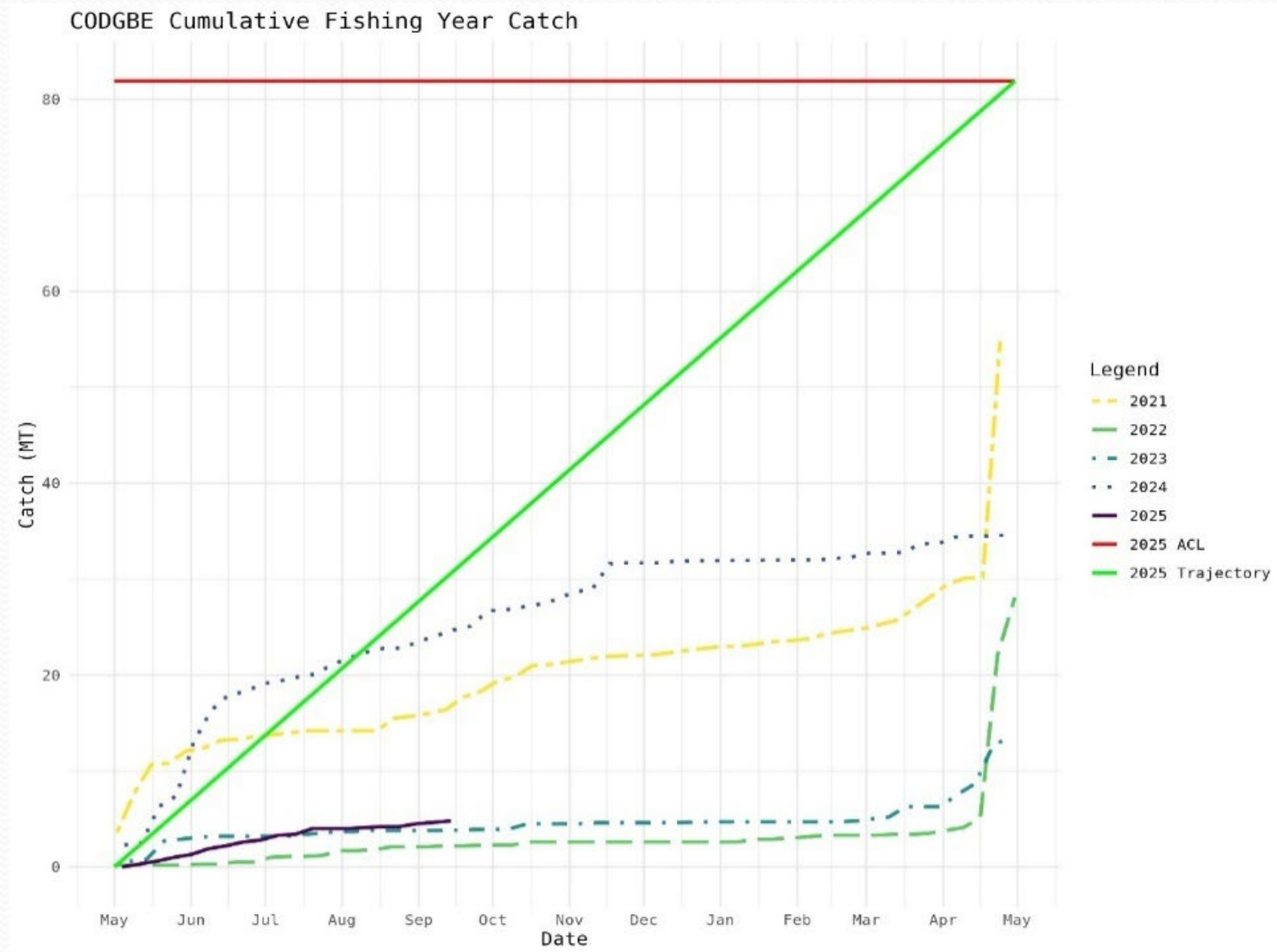
Georges Bank Cod

Year	Catch	Possible OFL & ABC
2014	1,310	
2015	1,298	
2016	1,085	
2017	693	
2018	745	
2019	634	
2020	603	
2021	615	
2022	423	
2023	417	
2024		
2025		
2026		473

Georges Bank Cod



Georges Bank EAST Cod



Georges Bank EAST Cod

	FY	Sector sub-ACL	Catch (mt)		Utilization (%)		Gross Rev (\$mil, 2024)	
			Realized	Predicted	Realized	Predicted	Realized	Predicted
GB Cod East	2012	159	67	N/A	0.42	N/A	0.3	N/A
	2013	90	33	71	0.37	0.74	0.1	0.3
	2014	145	69	67	0.47	0.46	0.4	0.3
	2015	121	82	30	0.68	0.24	0.4	0.1
	2016	135	82	35	0.61	0.77	0.5	0.1
	2017	143	44	52	0.31	0.36	0.3	0.3
	2018	252	106	89	0.42	0.35	0.6	0.5
	2019	183	66	59	0.36	0.32	0.4	0.4
	2020	183	57	132	0.31	0.72	0.2	0.7
	2021	182	56	40	0.31	0.22	0.2	0.2
	2022	156	28	24	0.18	0.83	0.2	0.1
	2023	131	13	23	0.10	0.68	<0.1	0.1
	2024	147	35	30	0.24	0.58	0.1	0.2

Georges Bank Cod Summary

- ISATS:

- “The most influential differences between the two cod models appear to be the impact of the different spatial footprints on the fundamental dynamics modeled and differences in how the catch value that is reported is estimated and what it represents.”

- TMGC:

- “Both countries agreed to use the 2025 Canadian assessment for EGB cod...”
 - This assessment incorporates the latest data and applies a fishing mortality (F) strategy defined as a very low risk of preventable decline
 - Consistent with TMGC approach of reducing fishing pressure when stock productivity is poor
 - Lowest ever agreed TAC
 - TAC will help to maintain some operations on EGB, but will continue to limit other fisheries in 2026

Georges Bank Cod Proposal

Fishing Year	Proposed OFL (mt)	Proposed ABC (mt)	U.S. ABC (mt)
2026	473	473	151

Georges Bank Haddock OFL & ABC for FY2026

Georges Bank Haddock

- U.S. – Georges Bank
 - WHAM
 - 2022 Research Track
 - 2024 Management Track
 - Data updated through 2023
 - Not overfished
 - Overfishing not occurring
- Canada – Eastern Georges Bank
 - WHAM
 - 2022 Research Track
 - 2025 Assessment
 - Data updated through 2024
 - High probability of Healthy Zone
 - Fref not exceeded

U.S./Canada Haddock Model Comparison

- Spatial footprint:
 - GB and EGB models have different spatial footprints and are capturing different dynamics of the population and fisheries
 - Different survey data inputs
 - GB model does not include DFO survey in all years due to limited coverage
- Natural mortality:
 - EGB estimates higher M for recent years, whereas GB model assumes constant M
 - GB accounts for natural variability in numbers-at-age over time, EGB does not
- Projections:
 - Differences in selectivity patterns in projections
 - Highly variable recruitment in haddock introduces uncertainty in both models

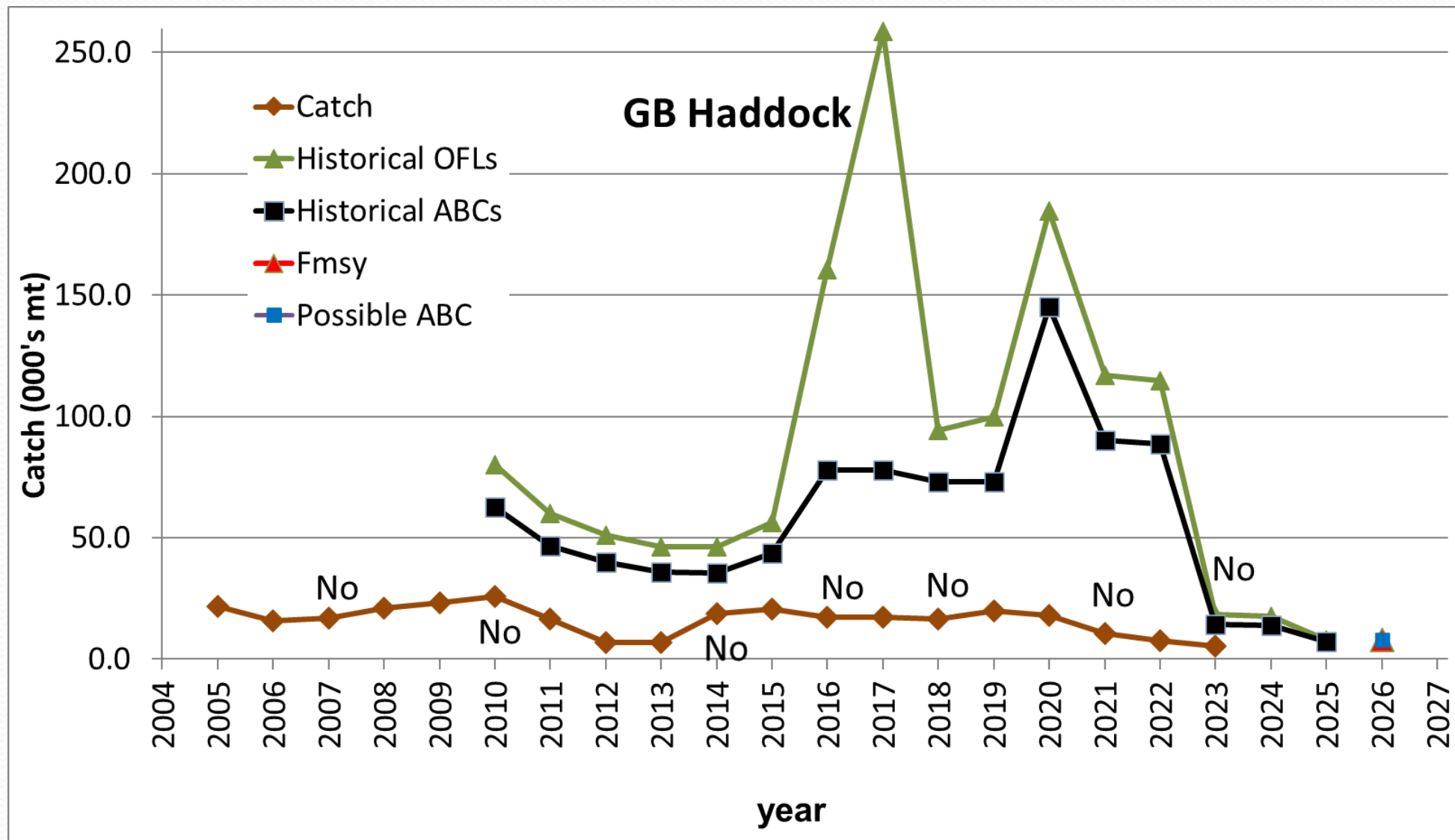
Georges Bank Haddock

Model	Parameter	2024 Value	2025 Value	2026 Value
DFO EGB Haddock Model Values (terminal year of data = 2024)	SSB (mt)	27,342	23,713	15,180
	F	0.311	0.534	0.339
	Catch (mt)	6,219	7,410	2,480–3,850 ¹
NMFS GB Haddock 2024 Model Values (terminal year of data = 2023)	SSB (mt)	34,180 (14,038 - 83,225)	34,516 (10,532 - 113,116)	36,029 (8,534 - 152,117)
	F ₅₋₇	0.316 (0.116 - 0.859)	0.264	0.264
	Catch (mt)	9,627	8,034 (2,430 - 26,570)	8,177 (1,956 - 34,188)
	Apportioned catch (mt) in EGB for 2026			6,133

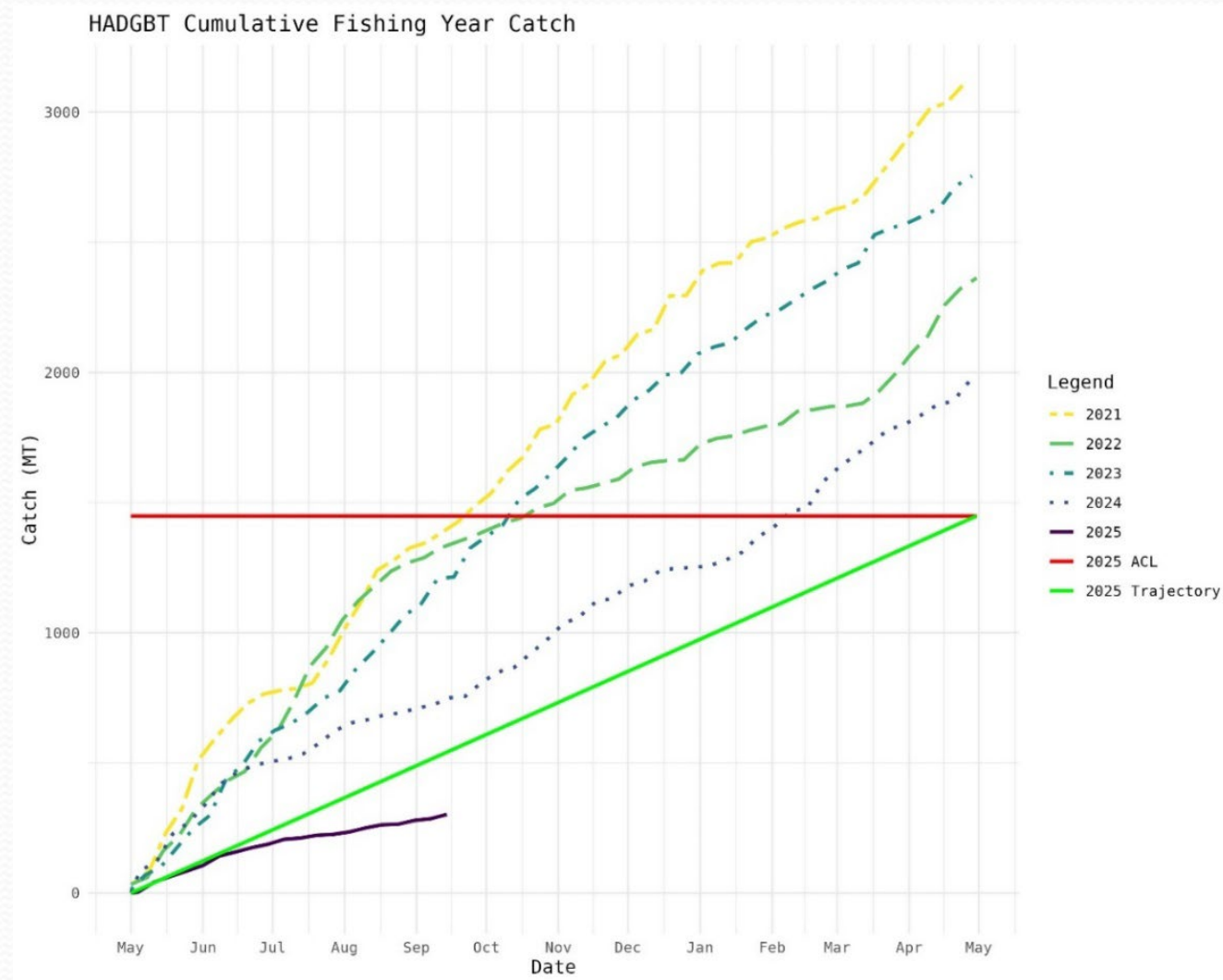
Georges Bank Haddock

Year	Catch	Historical OFLs	Historical ABCs	F_{MSY}	Possible ABC
2010	25,903	80,007	62,515		
2011	16,670	59,948	46,784		
2012	6,935	51,150	39,846		
2013	6,828	46,185	35,783		
2014	18,601	46,268	35,699		
2015	20,687	56,293	43,606		
2016	17,274	160,385	77,898		
2017	17,387	258,691	77,898		
2018	16,647	94,274	73,114		
2019	19,719	99,757	73,114		
2020	17,878	184,822	145,367		
2021	10,691	116,883	90,337		
2022	7,634	114,925	88,856		
2023	5,226	18,482	14,221		
2024		17,768	13,958		
2025		8,034	7,410		
2026				8,177	8,177

Georges Bank Haddock



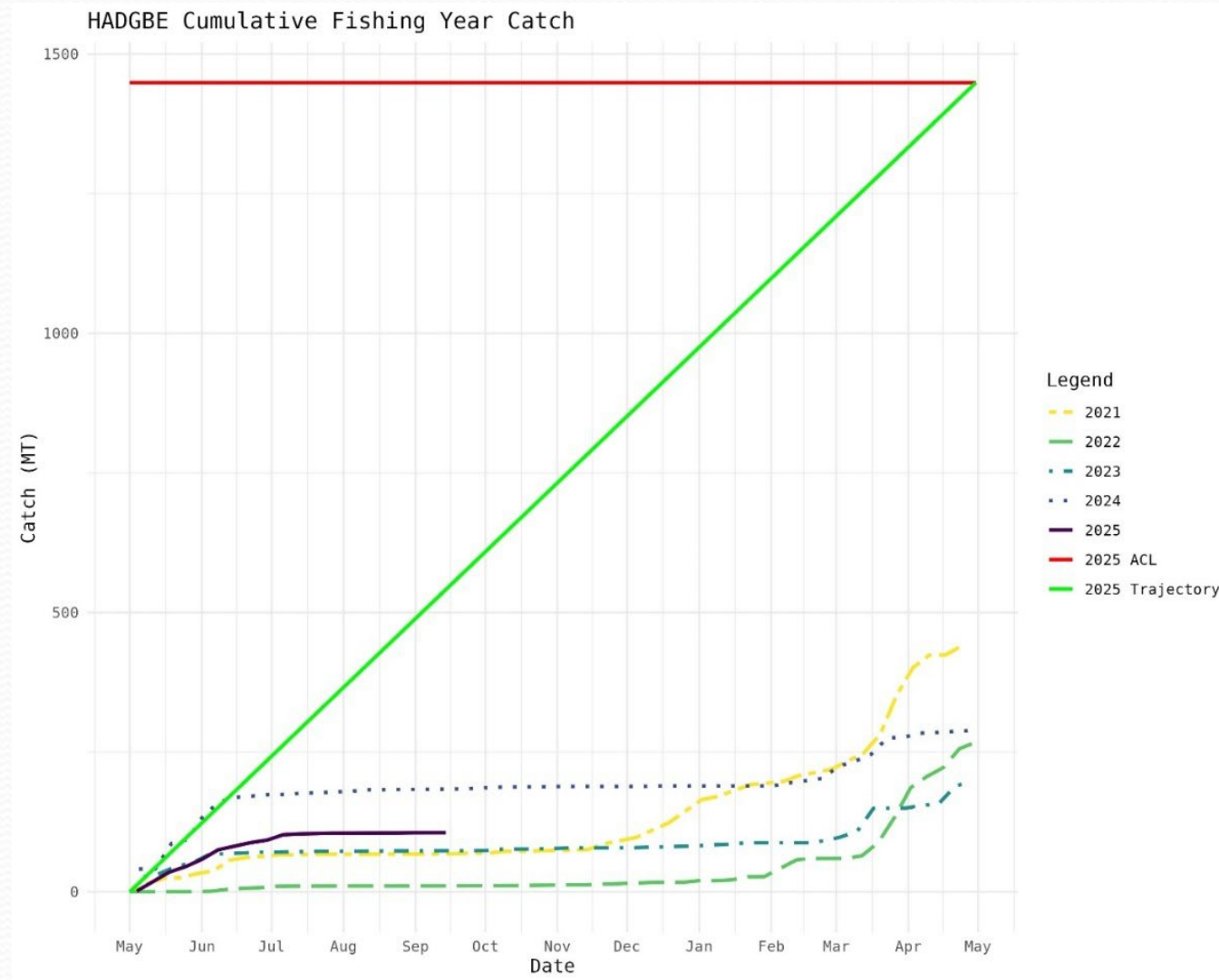
Total Georges Bank Haddock



Georges Bank WEST Haddock

	Sector sub-		Catch (mt)		Utilization (%)		Gross Rev (\$mil, 2024)	
	FY	ACL	Realized	Predicted	Realized	Predicted	Realized	Predicted
GB Haddock West	2012	19,251	626	N/A	0.03	N/A	3.8	N/A
	2013	24,908	2,167	1,185	0.09	0.05	7.7	5.7
	2014	18,666	3,523	793	0.19	0.04	11.2	3.6
	2015	16,206	3,293	4,495	0.20	0.28	10.1	14.7
	2016	34,156	3,006	4,511	0.09	0.13	9.3	12.3
	2017	22,968	3,208	4,787	0.14	0.21	7.8	12.4
	2018	28,857	4,135	3,628	0.14	0.13	9.4	9.0
	2019	38,003	4,368	4,160	0.11	0.11	11.1	8.6
	2020	103,849	5,783	4,426	0.06	0.04	15.0	9.0
	2021	67,829	3,116	4,425	0.04	0.06	8.7	10.2
	2022	67,837	2,099	3,001	0.03	0.04	7.7	8.2
	2023	9,354	2,554	3,120	0.27	0.33	6.9	11.1
	2024	3,897	1,677	2,406	0.43	0.71	5.4	7.6

Georges Bank EAST Haddock



Georges Bank EAST Haddock

	Sector sub-		Catch (mt)		Utilization (%)		Gross Rev (\$mil, 2024)	
	FY	ACL	Realized	Predicted	Realized	Predicted	Realized	Predicted
GB Haddock East	2012	6,861	366	N/A	0.05	N/A	1.6	N/A
	2013	3,742	579	566	0.16	0.14	1.7	2.5
	2014	9,454	1,536	365	0.16	0.04	4.4	1.6
	2015	15,045	1,058	1,107	0.07	0.20	2.6	3.5
	2016	15,063	549	1,574	0.04	0.09	1.4	4.2
	2017	29,288	407	1,016	0.01	0.03	0.8	2.5
	2018	15,488	623	618	0.04	0.04	1.2	1.6
	2019	14,762	716	464	0.05	0.03	1.4	0.8
	2020	15,861	563	692	0.04	0.04	1.3	1.4
	2021	6,267	443	481	0.07	0.08	1.4	1.0
	2022	6,539	256	381	0.04	0.06	0.6	1.0
	2023	1,475	190	533	0.13	0.36	0.4	1.5
	2024	2,858	289	362	0.10	0.12	0.6	1.9

Georges Bank Haddock Summary

- ISATS:

- “The most influential differences between the two haddock models appear to be the impact of adding 2024 data and assumptions regarding M.”

- TMGC:

- “Based on a review of the domestic assessment products provided by both countries...”
 - This stock is not overfished, overfishing is not occurring, and is considered to be in the healthy zone
 - A 36% decrease was considered a significant one-year reduction which corresponds to the Canadian assessment projections
 - The agreed TAC is below the apportioned U.S. advice but above the range of the Canadian advice based on the EGB assessment

Georges Bank Haddock Proposal

Fishing Year	Proposed OFL (mt)	Proposed ABC (mt)	U.S. ABC (mt)
2026	8,177	8,177	4,425

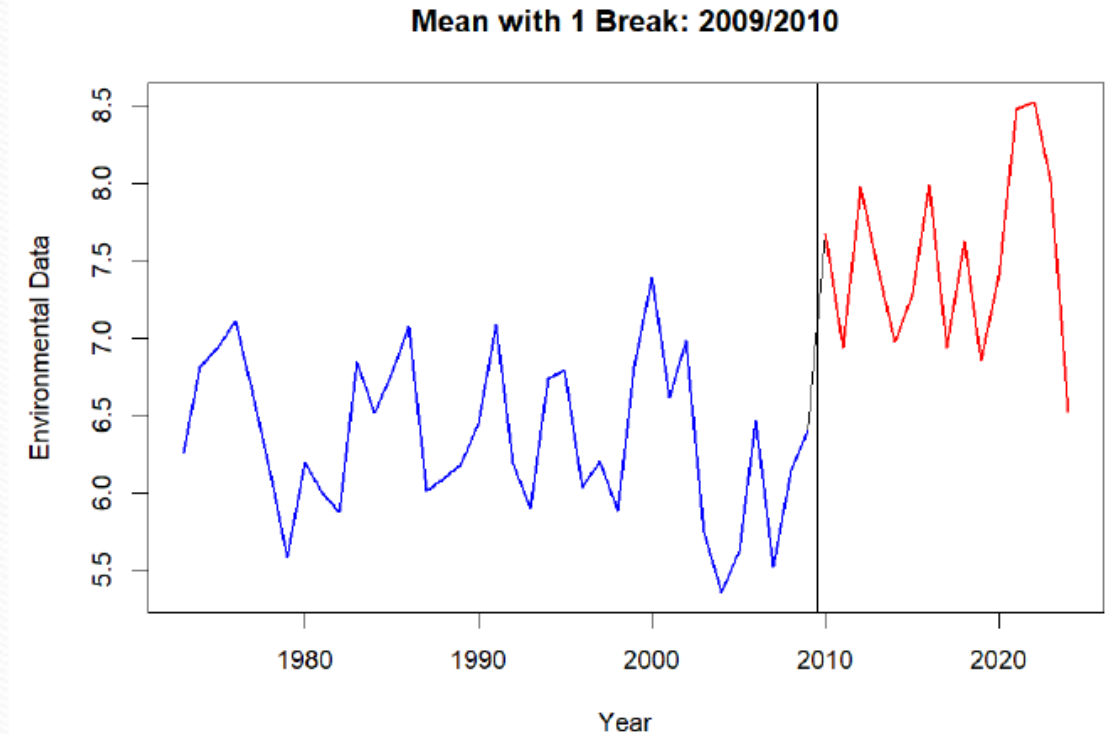
Georges Bank Yellowtail OFL & ABC for FY2026

Georges Bank Yellowtail

- U.S. – Georges Bank
 - WHAM
 - 2024 Research Track
 - 2025 Management Track
 - Data updated through 2024
 - Overfished
 - Overfishing not occurring

U.S. Yellowtail Model

- Ages 1-6+
- Fleet
 - Single commercial
- Indices
 - NEFSC Spring (1973-2024)
 - NEFSC Fall (1973-2024)
 - DFO (1987-2024)
- Recruitment
 - Beverton-Holt
 - Change point analysis on bottom water temperature time series conducted to inform most recent recruitment conditions
- Natural Mortality
 - Age-variant



Georges Bank Yellowtail

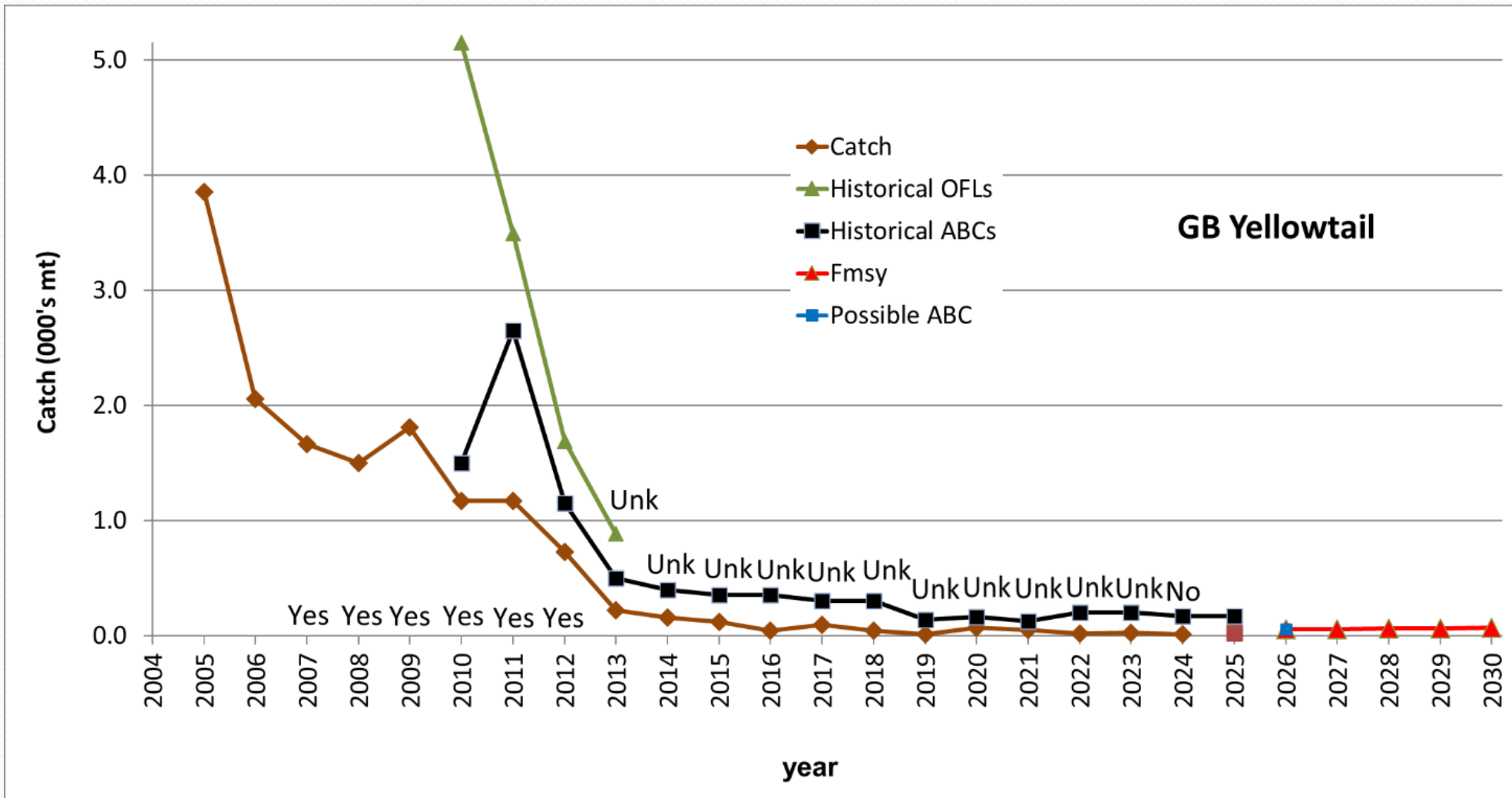
Year	Catch (mt)	SSB (mt)	F_{Full}
2025	22	655 (230 - 1,860)	0.034

Year	Catch (mt)	SSB (mt)	F_{Full}
2026	57	646 (190 - 2,198)	0.09
2027	57	654 (180 - 2,374)	0.09
2028	60	699 (181 - 2,707)	0.09

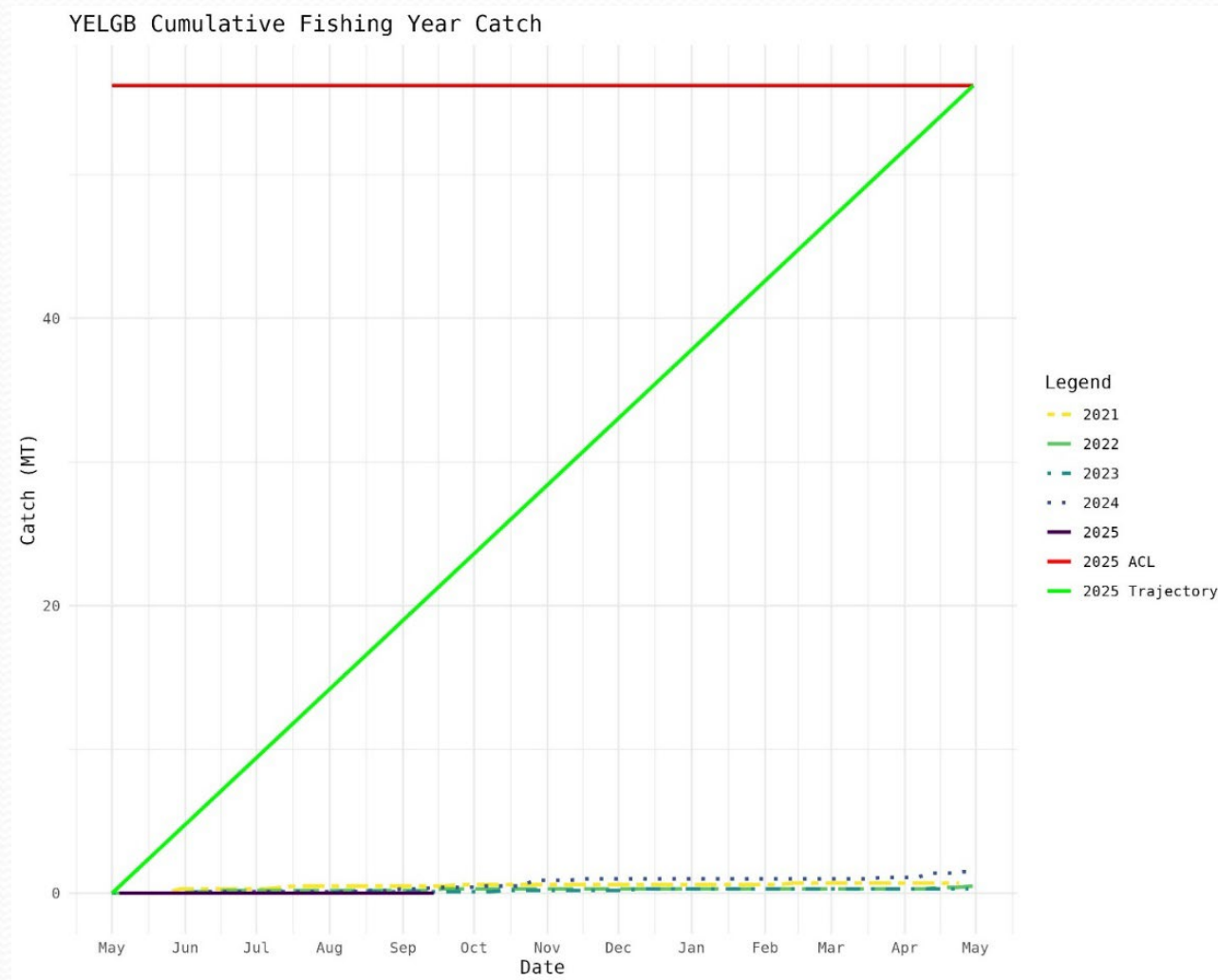
Georges Bank Yellowtail

Year	Catch	Historical OFLs	Historical ABCs	Catch Assumption	F_{MSY}	Possible ABC
2010	1,170	5,148	1,500			
2011	1,171	3,495	2,650			
2012	725	1,691	1,150			
2013	218	882	500			
2014	159	undefined	400			
2015	118	undefined	354			
2016	44	undefined	354			
2017	95	undefined	300			
2018	45	undefined	300			
2019	8	undefined	140			
2020	68	undefined	162			
2021	51	undefined	125			
2022	15	undefined	200			
2023	25	undefined	200			
2024	12	undefined	168			
2025		undefined	168	22		
2026					57	57
2027					57	
2028					60	
2029					64	
2030					69	

Georges Bank Yellowtail



Georges Bank Yellowtail



Georges Bank Yellowtail

	FY	Sector sub- ACL	Catch (mt)		Utilization (%)		Gross Rev (\$mil, 2024)	
			Realized	Predicted	Realized	Predicted	Realized	Predicted
GB Yellowtail Flounder	2012	364	201	180	0.55	0.57	0.7	N/A
	2013	100	46	340	0.46	0.97	0.3	1.3
	2014	252	54	167	0.21	0.66	0.3	0.8
	2015	192	36	55	0.19	0.28	0.1	0.3
	2016	207	23	22	0.11	0.10	0.1	0.1
	2017	160	31	18	0.19	0.11	0.1	0.1
	2018	167	27	37	0.16	0.22	0.1	0.2
	2019	83	3	37	0.04	0.45	<0.1	0.1
	2020	93	5	27	0.05	0.29	<0.1	0.1
	2021	59	1	2	0.01	0.04	<0.1	<0.1
	2022	94	1	1	0.01	0.02	<0.1	<0.1
	2023	80	<1	<1	0.01	0.01	<0.1	<0.1
	2024	55	2	<1	0.03	0.01	<0.1	<0.1

Georges Bank Yellowtail Summary

- TMGC:

- “Canadian science and resource management authorities agreed that U.S. science would provide catch advice...”
 - Assessment is an improvement from the previous empirical-based “Limiter” approach
 - This stock is overfished, and overfishing is not occurring
 - Stock status based on Canadian reference points remains unknown, but is assumed the stock would be in the critical zone
 - Recent survey values and stock biomass remain low and productivity is poor
 - Recent fishery catches remain well below recent quotas
 - TAC advice is deemed appropriate as it represents a decrease from the recent quota

Georges Bank Yellowtail Proposal

Fishing Year	Proposed OFL (mt)	Proposed ABC (mt)	U.S. ABC (mt)
2026	57	57	31

FY2026 Proposed OFLs and ABCs

Stock	Fishing Year	Proposed OFL (mt)	Proposed ABC (mt)
Georges Bank Cod	2026	473	473
Georges Bank Haddock	2026	8,177	8,177
Georges Bank Yellowtail Flounder	2026	57	57