

SUBMISSION TO THE
NUNAVUT WILDLIFE MANAGEMENT BOARD
FOR

Information:

Decision:

Recommendation: X

Issue: Total allowable catch levels for Greenland halibut in Subarea 0 for the 2026 and 2027 fishing seasons.



Figure 1. Greenland halibut (*Reinhardtius hippoglossoides*).

Background

A commercial fishery for Greenland halibut (GHL) exists outside of the Nunavut Settlement Area (NSA) in Northwest Atlantic Fishery Organization (NAFO) Subarea (SA) 0, which is divided into a northern region, Division 0A (Baffin Bay) and a southern region, Division 0B (Davis Strait). The commercial fishing season for GHL starts on January 1st and ends December 31st. A map illustrating NAFO Subareas and Divisions relevant to the GHL fishery can be found in Appendix 1.

The GHL stock in SA 0 is part of a transboundary stock shared between Canada (Divisions 0A and 0B) and Greenland (Divisions 1A to F offshore). At the request of both countries, the NAFO Scientific Council (SC) provides advice on stock status and sustainable harvest levels. NAFO does not regulate this stock; Canada and Greenland are responsible for regulation in their own domestic waters. Canada and Greenland have a longstanding informal agreement that the Total Allowable Catch (TAC) levels be established based on the NAFO SC stock assessment, and then be divided 50/50 between the two countries.

For the 2025 fishing season, the SA 0 GHL TAC was set at 16,502.5 tonnes (t). A breakdown of the current TAC between NAFO Divisions is shown in Table 1.

Table 1. Breakdown of the 2025 Greenland halibut Total Allowable Catch Allocation in tonnes (t) between NAFO Divisions in Subarea 0.

Fishing Area	Fleet/Interest	2025 Allocation (t)
NAFO Division 0A	Nunavut Special Allocation	8,604.99
	Inshore fisheries development	100.00
	Total 0A Quota	8,704.99
NAFO Division 0B	Nunavut Special Allocation	3,840.59
	Nunavik Special Allocation	402.82
	Enterprise & Special Allocation Holders	2,654.10
	Fixed Gear Competitive	900.00
	Total 0B Quota	7,797.51
Subarea 0 Total	Division 0A + 0B Quota	16,502.50

In 2024 the SA 0 TAC was fully harvested.

Commercial harvesting of GHL within Division 0A is entirely designated to Nunavut (NU) interests. In 2006 the Nunavut Wildlife Management Board (the Board) motioned to allocate 100 t of the Division 0A offshore quota for inshore fisheries development within the NSA; the motion was supported by the Minister of Fisheries and Oceans Canada (the Minister) and 100 t was allocated for the 2006 fishing season. Since the initial decision, the 100 t inshore quota has consistently been maintained and deducted from the Division 0A offshore quota for exploratory purposes. The Board has previously noted the importance of surveying and assessing the utilization of the 100 t Division 0A inshore allocation. In 2024 one on-ice exploratory Stage II licence was issued to access the 100 t Division 0A inshore allocation with a quota of 3 t, of which over 50% was harvested. Data and samples received from licence holders is currently being processed. DFO has initiated conversations with Board staff on this topic and is committed to working together to optimize inshore fisheries development opportunities.

Science Information

In February 2025, Canada and Denmark (on behalf of Greenland) requested that the Scientific Council (SC) provide an overall assessment of status and trends in the total stock area throughout its range and to specifically provide risk-based advice on a range of TAC options for 2026 and 2027. Further, it was requested that stock status should be evaluated in the context of management requirements for long-term sustainability and the advice provided should be consistent with NAFO's Revised (2024) Precautionary Approach Framework (PAF).

A population model (Stochastic Production in Continuous Time, SPiCT model) was accepted by NAFO SC in 2024 for the SA 0+1 (offshore) GHL stock and used to assess the status of this stock during the June 2024 and 2025 NAFO SC meetings. Inputs to this model included landings data and a standardized index of exploitable stock biomass from annual survey data collected by Canada and Greenland.

Stock assessment surveys were not conducted in 2018, 2020 or 2021 because the survey vessel was decommissioned in winter 2018 and the replacement vessel was completed in spring 2022. A survey was completed in 2019 using a commercial vessel, but it was not considered comparable to previous surveys. The lack of calibration between the previous survey vessel (*RV Paamiut*) and new survey vessel (*RV Tarajoq*) means that data from the two vessels cannot be combined into a single dataset to explore long-term trends in stock dynamics, which has created uncertainty about stock status. A spatial model was used in 2024 and 2025 to estimate annual total fishable biomass throughout the stock area from

surveys by Canada and Greenland; the model includes a vessel factor to incorporate the change in survey vessel into the analysis. Science continues to explore a model-based approach to combine the two survey time series; a model-based conversion would be expected to reduce interannual variability in the total fishable biomass estimates by making a single calibration between vessels instead of including vessel effects as an additional variable in the model.

Based on model results, NAFO SC provided risk-based harvest level scenarios for SA 0+1 (offshore) GHL for 2026 and 2027 in the assessment report found in Appendix 2. Harvest level scenarios describe future projections of the standing stock biomass (B) under different fishing mortality levels (fishing pressure, F).

NAFO SC advice for catch levels for 2026 and 2027 is as follows:

[NAFO SC] Recommendation for 2026 and 2027:

Scientific Council projected the fishing mortality scenarios defined for stocks in the Healthy Zone of the PA Framework, and three additional harvest levels requested by a Coastal State [Canada]. For all these scenarios the probability that the stock falls below B_{lim} in 2028 was <1% and below $B_{trigger}$ was less than 10%.

F_{target} corresponds to catches of 30,243 t and 30,153t in 2026 and 2027, respectively. These catch levels have risks of 35% and 36% of exceeding F_{lim} , respectively.

It should be noted that the science advice is no longer providing a prescriptive TAC, but rather a range of harvest level scenarios for consideration. Further, NAFO SC is not advocating for the “grey box” recommendation as in past years. More clearly, “ F_{target} ” as defined in the grey box of the science report is not an explicit recommendation, it is a model output under NAFO’s PA framework chosen to highlight a fishing level associated with long-term stability.

Consultation

The Eastern Arctic Groundfish Stakeholder Advisory Committee (EAGSAC) was created as one of a series of measures to ensure the fisheries governance regime for groundfish in the NAFO SA 0 is publicly accountable, predictable and transparent. It provides a forum for discussion and an opportunity for members to provide advice and recommendations to DFO on the management and policies related to SA0 Greenland halibut (GHL). EAGSAC membership includes Co-management Organizations, Rights Holders, Commercial Fishery Associations, Commercial Harvesters, Environmental Organizations and Other Government Organizations.

An EAGSAC meeting was held on August 19, 2025, for members to share their views on the published NAFO SC science advice pertaining to SA 0 GHL TAC levels for the 2026 and 2027 fishing seasons. A meeting summary, including members’ views can be found in Appendix 3. Members were also invited to provide their views to the Department in writing.

Although there was no advocacy for a specific TAC amount by meeting participants, many highlighted the economic importance of the fishery, including strong catch performance in 2025 and confidence in the health of the stock. Meeting participants indicated that they were not prepared to offer a position on the TAC levels at the meeting and instead would provide the department with a formal written statement at a later date.

Since the meeting, the Nunavut Fisheries Association (NFA) and Government of Nunavut (GN) provided a joint position (Appendix 4) recommending that the 2026 and 2027 TAC level be set at F_{msy} , (rate of fishing at the Maximum Sustainable Yield for the stock) for a global harvest of 35,328 t for 2026 and 34,618 t for 2027. The NFA and GN believe the NAFO SC report provides clear evidence that the GHL stock remains in excellent health, with a current biomass well above B_{msy} (total fish biomass for Maximum Sustainable Yield). Additionally, the NFA and GN stress that the science assessment model underestimates biomass while overestimating fishing mortality as documented in the NAFO SC report.

Oceans North is advocating for the TAC to be set at F_{target} fishing levels that result in the long-term sustainability of the stock.

We anticipate that additional perspectives will be received in the coming weeks and will provide the board with a verbal update at the November NWMB meeting.

Recommendation

TAC decisions take into consideration many factors, including: conservation; science advice; economic impacts; co-management and stakeholder views; land claim obligations and international considerations.

The NAFO PA Framework does not emphasize the preference for any harvest scenario and does not set risk thresholds for harvest advice; the catch scenario table provided in the NAFO SC advice identifies risk levels associated with different levels of fishing mortality to facilitate risk-based decision making.

Potential options for 2026 and 2027 could include:

- Implementing a TAC in line with F_{target} , which is a level of fishing mortality that was tested for long term maintenance of stocks in the NAFO PA Framework healthy zone. F_{target} corresponds to TACs of 30,243 t and 30,153 t in 2026 and 2027 of the global harvest level for SA0 + 1 (offshore), respectively, with risks of 35% and 36% of exceeding F_{lim} , respectively, and a TAC of 15,121.5 t and 15,076.5 t for Canada, respectively.
- Maintain the previous year's TAC (33,005 t global harvest and 16,502.5 t for Canada) for 2026 and 2027. This option would provide operational stability for industry, eliminating fluctuation of the TAC over 2 years, but is associated with a greater risk of exceeding F_{lim} by 44% in 2026 and 2027, compared to a TAC in line with F_{target} .
- Implement a TAC in line with F_{msy} corresponding to TACs of 35,328 t and 34,618 t in 2026 and 2027, respectively of the global harvest level, with risks of 50% of exceeding F_{lim} for each year and a TAC of 17,664 t and 17,309 t for Canada, respectively. This option would provide additional quota for industry over the 2 years but is associated with an elevated risk of exceeding F_{lim} compared to the first two options.

As per Article 15, Part 3.4 of the *Nunavut Agreement*, DFO is seeking the advice of the NWMB for management decisions with respect to:

1. The TAC for Greenland halibut in SA0 (offshore);
2. TAC distribution between OA and OB; and
3. The allocation of quota between fleets, including the inshore quota for fisheries development.

Prepared by: Matt Martens, Senior Regional FM Officer, Jeff Adam, Senior Regional FM Officer, and Kevin Hedges, Research Scientist, Arctic Region, Fisheries and Oceans Canada.

Date: September 2, 2025

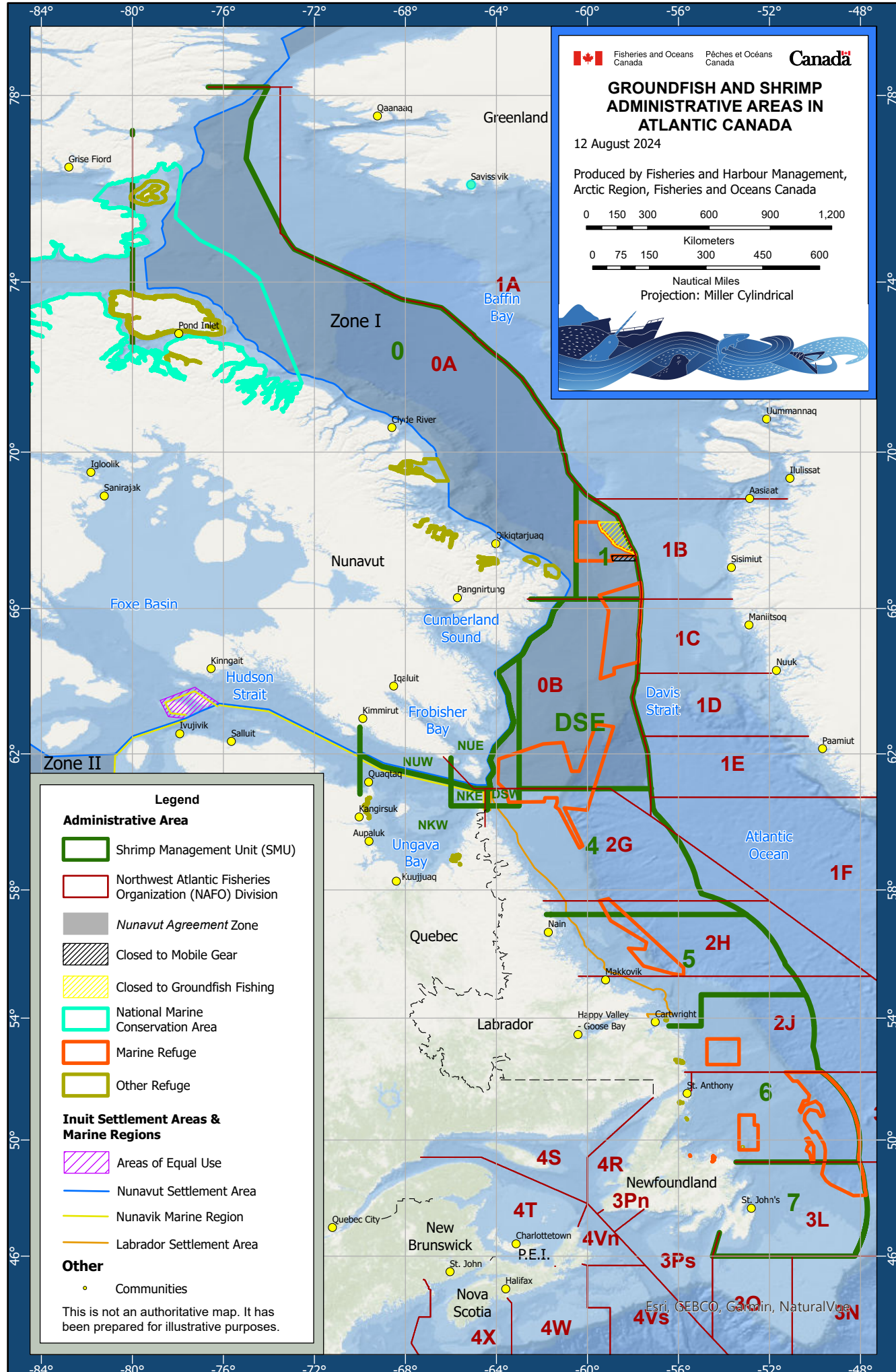
Appendices

Appendix 1 – Map of groundfish and shrimp administrative areas in Atlantic Canada

Appendix 2 – NAFO SC summary sheet

Appendix 3 – Meeting summary of EAGSAC member views on 2026 and 2027 Greenland halibut TAC

Appendix 4 – Joint Response from NFA and GN on 2026 and 2027 Greenland halibut TAC



Fisheries and Oceans Canada / Pêches et Océans Canada

GROUNDFISH AND SHRIMP ADMINISTRATIVE AREAS IN ATLANTIC CANADA

12 August 2024

Produced by Fisheries and Harbour Management, Arctic Region, Fisheries and Oceans Canada

0 150 300 600 900 1,200
Kilometers

0 75 150 300 450 600
Nautical Miles

Projection: Miller Cylindrical

Legend

Administrative Area

- Shrimp Management Unit (SMU)
- Northwest Atlantic Fisheries Organization (NAFO) Division
- Nunavut Agreement Zone
- Closed to Mobile Gear
- Closed to Groundfish Fishing
- National Marine Conservation Area
- Marine Refuge
- Other Refuge

Inuit Settlement Areas & Marine Regions

- Areas of Equal Use
- Nunavut Settlement Area
- Nunavut Marine Region
- Labrador Settlement Area

Other

- Communities

This is not an authoritative map. It has been prepared for illustrative purposes.

Appendix 2

Greenland halibut in Subarea 0+1 (offshore)

Advice June 2025 for 2026 – 2027











Recommendation for 2026 and 2027

Scientific Council projected the fishing mortality scenarios defined for stocks in the Healthy Zone of the PA Framework, and three additional harvest levels requested by a Coastal State. For all these scenarios the probability that the stock falls below B_{lim} in 2028 was <1% and below $B_{trigger}$ was less than 10%.

F_{target} corresponds to catches of 30,243 t and 30,153t in 2026 and 2027, respectively. These catch levels have risks of 35% and 36% of exceeding F_{lim} , respectively.

Management objectives

Canada and Denmark (on behalf of Greenland) requested an assessment of stock status and advice consistent with NAFO's Precautionary Approach Framework (PAF).

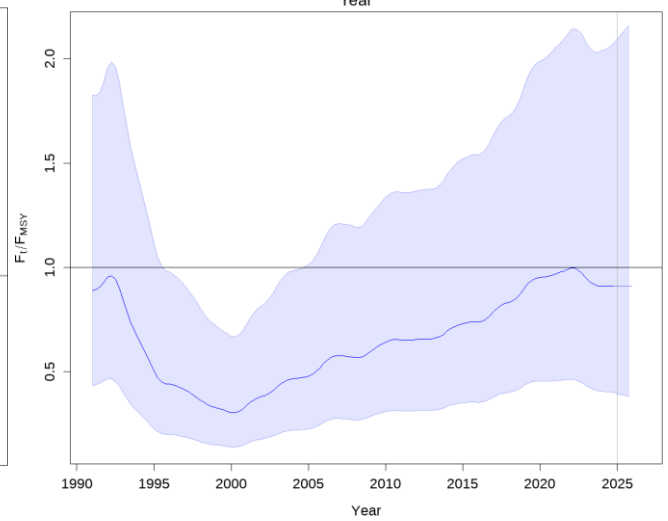
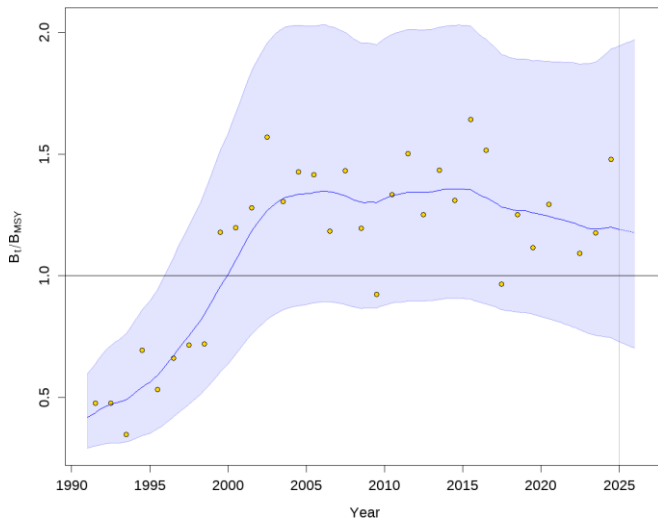
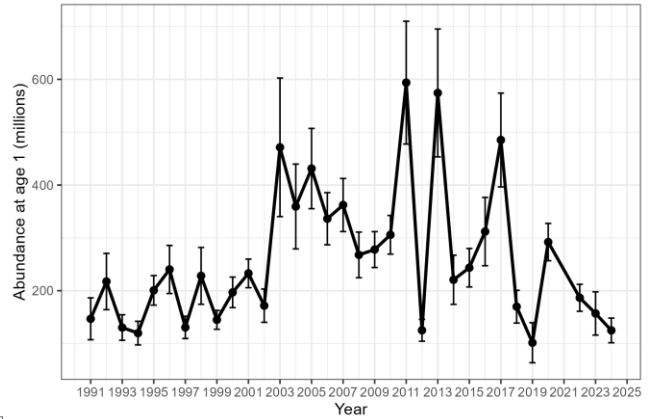
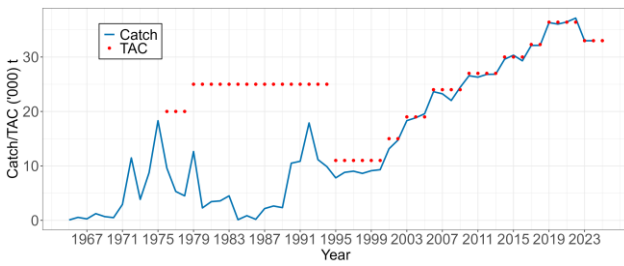
Convention Principle	Status	Comment	
Restore to or maintain at B_{msy}		$B > B_{msy}$	 OK
Eliminate Overfishing (Stock)		$F < F_{lim}$	 Intermediate
Eliminate Overfishing (Ecosystem)		TCl undefined	 Not accomplished
Apply Precautionary Approach		All PA reference points defined	 Unknown
Minimize harmful impacts on living marine resources and ecosystems		Directed fishery, VME closures in effect, Effectiveness of bycatch regulations uncertain	
Preserve marine biodiversity		Cannot be evaluated	

Management unit

The Greenland halibut stock in Subarea 0 + 1 (offshore) is part of a larger population complex distributed throughout the Northwest Atlantic.

Stock status

Median biomass is above B_{msy} ($B/B_{msy} = 1.2$), the probability of being below B_{lim} (30% B_{msy}) is less than 1%, and the probability of being below $B_{trigger}$ (75% B_{msy}) is 3%. Fishing mortality is below F_{msy} ($F/F_{msy} = 0.91$), the probability of being above F_{lim} (F_{msy}) is 42%, and the probability of being above F_{target} (85% F_{msy}) is 57%.



Reference points

B_{lim} is 30% B_{msy} . $B_{trigger}$ is 75% B_{msy} . F_{lim} is F_{msy} . F_{target} is 85% F_{msy} .

Projections

Medium-term projections were carried forward to the year 2028 for catch scenarios with catch = TAC = 33,005 t for 2025. Constant F values were applied from 2026-2027 at several levels of F including $F=0$, the three levels suggested for stocks in the Healthy Zone (75% F_{msy} , 85% F_{msy} , and F_{msy}), and three catch levels requested by Coastal States ($F_{status\ quo}$, current TAC, and 2019-2022 TAC).

For the $F_{status\ quo}$ projections, the probability that $F > F_{lim}$ in 2027 was 51%. At 75% F_{msy} , the probability that $F > F_{lim}$ in 2027 was 26%. Projected at the level of 85% F_{lim} , the probability that $F > F_{lim}$ in 2027 was 36% and for F_{msy} projections, this probability increased to 50%. For projections at the current TAC (33,005 t) and the 2019-2022 TAC (36,370 t) the probability that $F > F_{lim}$ in 2027 was 44% and 54%, respectively. For biomass projections, in all scenarios the probability of biomass being below B_{lim} in 2028 was less than 1%. The probability of biomass being below $B_{trigger}$ in 2028 ranged from 4% to 9% for the six explored fishing scenarios, except the $F=0$ scenario. The probability that biomass in 2028 is greater than biomass in 2025 is between 27% and 52% for all projections, excluding the $F=0$ scenario.

Projections with Catch ₂₀₂₅ = 33,005 t		
Year	Yield ('000t) median	Projected Relative Biomass (B/B _{msy}) median (80%CI)
F=0		
2025	33005	0.87 (1.19, 1.64)
2026	0	0.84 (1.18, 1.65)
2027	0	0.97 (1.30, 1.74)
2028	-	1.10 (1.42, 1.83)
F = 0.75F _{msy}		
2025	33005	0.87 (1.19, 1.64)
2026	26811	0.84 (1.18, 1.65)
2027	27043	0.84 (1.19, 1.67)
2028	-	0.85 (1.20, 1.69)
F = 0.85F _{msy}		
2025	33005	0.87 (1.19, 1.64)
2026	30243	0.84 (1.18, 1.65)
2027	30153	0.83 (1.17, 1.66)
2028	-	0.82 (1.17, 1.68)
F = F _{msy}		
2025	33005	0.87 (1.19, 1.64)
2026	35328	0.84 (1.18, 1.65)
2027	34618	0.80 (1.15, 1.65)
2028	-	0.77 (1.13, 1.65)
F = F _{status quo}		
2025	33005	0.87 (1.19, 1.64)
2026	35502	0.84 (1.18, 1.65)
2027	34768	0.80 (1.15, 1.65)
2028	-	0.77 (1.13, 1.65)
Current TAC		
2025	33005	0.87 (1.19, 1.64)
2026	33221	0.84 (1.18, 1.65)
2027	32789	0.81 (1.16, 1.65)
2028	-	0.79 (1.15, 1.66)
2019-2022 TAC		
2025	33005	0.87 (1.19, 1.64)
2026	36834	0.84 (1.18, 1.65)
2027	35906	0.81 (1.16, 1.65)
2028	-	0.79 (1.15, 1.66)

Catch 2025 = 33,005 t								
		Healthy Zone				Coastal State Request		
		F=0	F = 0.75F _{msy}	F = 0.85F _{msy}	F = F _{msy}	F status quo	Current TAC	2019-2022 TAC
Yield (50%)	2025	33005	33005	33005	33005	33005	33005	33005
	2026	0	26811	30243	35328	35502	33005	36370

	2027	0	27043	30153	34618	34768	33005	36370
P(F>F _{lim})	2025	42%	42%	42%	42%	42%	42%	42%
	2026	<1%	25%	35%	50%	51%	44%	54%
	2027	<1%	26%	36%	50%	51%	44%	54%
P(B<B _{lim})	2025	<1%	<1%	<1%	<1%	<1%	<1%	<1%
	2026	<1%	<1%	<1%	<1%	<1%	<1%	<1%
	2027	<1%	<1%	<1%	<1%	<1%	<1%	<1%
	2028	<1%	<1%	<1%	<1%	<1%	<1%	<1%
P(F>F _{target})	2025	57%	57%	57%	57%	57%	57%	57%
	2026	<1%	39%	50%	65%	65%	59%	68%
	2027	<1%	39%	50%	64%	64%	59%	68%
P(B<B _{trigger})	2025	3%	3%	3%	3%	3%	3%	3%
	2026	4%	4%	4%	4%	4%	4%	4%
	2027	<1%	4%	5%	6%	6%	6%	7%
	2028	<1%	4%	6%	8%	8%	7%	9%
P(B ₂₀₂₈ >B ₂₀₂₅)		96%	52%	42%	30%	29%	34%	27%
(B ₂₀₂₈ -B ₂₀₂₅)/B ₂₀₂₅		96%	1%	-12%	-31%	-32%	-23%	-37%
P(B ₂₀₂₇ >=B ₂₀₂₅)		89%	48%	42%	33%	33%	36%	31%
P(B ₂₀₂₇ <B ₂₀₂₅)		12%	52%	59%	67%	67%	63%	69%

Assessment

A Stochastic Production model in Continuous Time (SPiCT) was used for the assessment of this stock. Input to this model include landings data and a standardized index of exploitable stock biomass from combined survey data.

The next assessment is expected to be in 2027.

Human impact

Mainly fishery related mortality has been documented. Other sources (e.g. pollution, shipping, oil-industry) are undocumented.

Biology and Environmental interactions

No specific studies were reviewed during this assessment.

Ecosystem sustainability of catches

The impact of bottom fishing activities on VMEs in SA 0 was assessed in 2016. Three areas have been designated as marine refuges, that exclude bottom contact fisheries: Disko Fan, Davis Strait, and Hatton Basin. Areas in SA 1 have also been closed to bottom fishing to protect benthic habitats.

Greenland halibut is included in the piscivore guild. There are no EPU's nor TCIs defined for this region. The ecosystem sustainability of catches cannot be evaluated. Greenland Shark is a bycatch species of concern in the SA 0+1 (offshore) fishery given its low reproductive rate, slow growth rate and limited ecological information.

Fishery

Catches were first reported in 1965. Catches increased from 1989 to 1992 due to a new trawl fishery in Div. 0B with participation by Canada, Norway, Russia, and the Faeroe Islands and an expansion of the Div. 1CD fishery

with participation by Japan, Norway, and the Faeroe Islands. Catch declined from 1992 to 1995 primarily due to a reduction of effort by non-Canadian fleets in Div. 0B. Since 1995 to 2024 catches were near the TAC and increased in step with increases in the TAC, with catches reaching a high in 2022. Catches decreased following a decrease in TAC in 2023.

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TAC	30.0	32.3	32.3	36.4	36.4	36.4	36.4	33.0	33.0	33.0
SA 0	14.1	15.9	16.0	18.3	17.9	19.1 ²	18.3 ²	16.4 ²	16.5 ²	
SA 1	15.2	16.2	16.2	18.0	18.1	17.3	18.8	16.6	16.5	
Total STACFIS ¹	29.3	32.1	32.2	36.3	36.0	36.4	37.2	33.0	33.0	

¹ Based on STATLANT, with information from Canada and Greenland authorities to exclude inshore catches.

² STACFIS estimate using 1.48 conversion factor for J-cut, tailed product.

Sources of information

SCR 25/020,021,030,031; SCS 25/012.

**2026 and 2027 Greenland Halibut (GHL) Total Allowable Catch (TAC)
Eastern Arctic Stakeholder Advisory Committee (EAGSAC) Member Views
Meeting Discussion Summary**

August 19, 2025

Chair – Matt Martens, Senior Regional Fisheries Management (FM) Officer, Arctic Region (AR), Fisheries and Oceans Canada (DFO)

EAGSAC Member Participants

Commercial Fishery Associations:

Nunavut Fisheries Association (NFA) – Derek Butler, representing:

- Arctic Fishery Alliance (AFA)
- Baffin Fisheries Coalition (BFC)
- Cumberland Sound Fisheries Ltd (CSFL)
- Qiqiktaaluk Corporation (QC)
- Northern Coalition (NC) – Alastair O’Rielly, representing:
 - Makivvik
 - Labrador Fishermen’s Union Shrimp Company Ltd. (LFUSC)
 - Torngat Fish Producers Co-operative Society Ltd.
 - Nunatsiavut Group of Companies
 - Qiqiktaaluk Corporation (QC)
- Atlantic Groundfish Council (AGC) – Steve Devitt, representing:
 - Harbour Grace Shrimp Co. Ltd
 - Ocean Choice International
 - Newfoundland Industrial Development Corporation/Icewater
 - Clearwater Seafoods Ltd (CW)
 - Nordic Ltd.

Participants

- AFA - Harry Earle, Joeli Qamanirq, Lootie Toomasie
- LFUSC – Tom Perry
- TriNav Fisheries Consultants representing AFA – Dave Bollivar
- BFC – Chris Flanagan, Peter Adams, Paul Loder
- QC - Peter Keenainak, Jerry Ward
- Makivvik – Tony Wright
- Nunatsiavut Group of Companies – Erin Everard
- Harbour Grace Shrimp Co. Ltd – Derrick Dalley
- Clearwater Seafoods Ltd. – Catherine Boyd

Co-Management Organizations

- Nunavut Wildlife Management Board (NWMB) – Leigh Gustafson

Environmental Non-Government Organizations

- Oceans North – Brynn Devine

Government Organizations

- Government of Newfoundland and Labrador – Samantha Coombs
- Government of Nunavut – Zoya Martin, Delia Young

DFO Representatives

- Science – AR
 - Dr. Kevin Hedges, Tracey Loewen, Chantelle Sawatzky, Sheila Atchison
- International Fisheries Policy
 - Justyna Zegarmistrz
- Fisheries Management
 - Sandra Moore AR, Jeff Adam AR, Caitlin Meyer AR, Jessica DeGrave AR, Robyn Lee (Newfoundland (NL), Robyn Morris NL)
- Policy and Economics (P&E) – Ontario and Prairies (OP)
 - Josh Humphreys, Collin Gyles, Eva Leckie
- Conservation & Protection
 - Tyson Russell AR, Rory MacDonald AR, Dion Brown (International)
- Data Management & Licensing AR
 - Roger Hince

Purpose of Meeting:

For EAGSAC members to share their views on the Northwest Atlantic Fisheries Organization (NAFO) Subarea 0 Greenland Halibut (GHL) TAC level for 2026 and 2027. The meeting also afforded EAGSAC members an opportunity to ask DFO Science questions and seek clarification on the science advice from the NAFO Scientific Council (SC) for SA0+1 (offshore) GHL for 2026 and 2027.

Discussion:

Science advice

DFO Science (Kevin Hedges) provided answers and clarifications to stakeholder questions and comments regarding the NAFO SC advice.

Question	Response
There have been issues with deep water tows conducted by DFO in NAFO 2+3. Can you confirm if the Tarajoq can get to the deep water sites for the multi-species survey?	No issues with the Tarajoq getting down to our stations in the deepest stratum and keeping its net on the bottom. The vessel has been performing extremely well.
Which survey indices or surveys feed into the juvenile recruitment index?	The current recruitment index comes from Greenland’s small fish and shrimp survey from 1C and 1D. With the switch to the Tarajoq and bacalao trawl DFO also added a 200 to 400 m stratum. We are now seeing more juvenile fish and are getting a better representation of juvenile GHL in Canadian waters, but we only have three years of data. The data collected on small GHL in Canadian waters has

	<p>not been used yet, but the intention is to use in the future.</p> <p>At present, the Greenland Small Fish and Shrimp Survey provides the Age 1 recruitment index.</p>
Is this just for inshore, or includes offshore as well?	Yes, this includes the offshore.
What is the justification for the NAFO SC's recommendation to reduce the TAC by 3000 tonnes?	NAFO SC is not advocating for the "grey box" recommendation in the <i>Report of the Scientific Council Meeting, 29 May – 12 June 2025</i> which can be found here (page 53). "F target" is not a recommendation, it is a model output under NAFO's precautionary approach (PA) framework showing a fishing level associated with long-term stability. The science advice is the full harvest/risk table, and not a prescriptive TAC. The medium-term projections table (page 56) allows fisheries managers to make a risk informed decision.
When reading the document one gets the impression that is this is the recommended level of harvest for the next two years.	That was not the intention. NAFO SC was asked in developing the new PA framework not be prescriptive. NAFO SC specifically avoided using the word recommends. In the advice section F target corresponds to catches of 30,000 tons. These catch levels have risks of 35% and 36% of exceeding F lim. There's no statement that NAFO SC recommends fishing at this level. It's just a factual statement of what the harvest levels and risks of exceeding F lim would be at F target.
In the harvest/risk scenario table (medium-term projections table), is there a missing P for probability in the third row, and if not, can you explain that?	It is not an error. That row shows anticipated percentage change in biomass (2025–2028), not a probability. Other rows are probabilities.
Are probabilities of stock biomass being greater versus smaller just inverses?	This year, yes, probabilities of "greater/no change" and "lesser" were both calculated, summing to approximately 100%, largely due to the coastal state requests. Last year's table was different.
What's different in this year's model vs. last year's?	The same stochastic surplus production model in continuous time (SPiCT) and spatial biomass model adopted in 2024 were used this year.
What adjustments have been made in the model?	The only change is one more year of data. The presentation of results differs because of the revised NAFO PA framework requirements and inclusion of the coastal state scenarios.
Why does F target TAC decrease approximately 90 tonnes between 2026 and 2027?	This is due to F target (= 85% of FMSY). FMSY is re-estimated each year with new data. Catch levels vary to maintain constant fishing mortality – lower if stock declines, higher if stock grows.
Where are model biases documented?	Sensitivity analyses are in the full NAFO assessment

	(not the summary sheet). A 2024 review evaluated the SPiCT model before adoption. Annual updates test performance with new data but the foundational review is not repeated.
The model underestimates biomass and overestimates mortality. Why is this the case, and how significant?	That is a known bias of SPiCT type models. The SPiCT model is a precautionary model, but the overestimates are not large. These items should be noted when interpreting results.
For the probabilities in the second set of rows in the table (probability of $F > F_{lim}$), say for the 2022 TAC level, there is a 54% chance F (mortality) will be greater than F_{lim} . Is the inverse true that there is a 46% chance that F will be less than F_{lim} ? Is this the correct interpretation?	Yes, because that is the split in the probability distribution.
Is exploitation rate calculated, or only mortality?	Only fishing mortality is calculated. No explicit exploitation rate provided.
At what average age do the fish recruit to the fishery?	It varies whether Canada's ages or Greenland's ages are used because they are not exactly the same. Since the model is not age-structured, no exact recruitment age is tracked.
What is the length at recruitment?	Exploitable biomass is defined at 35 cm fork length, which is when GHL become catchable in the gear. This is the size at recruitment which has been used as an input into the model.

TAC Views

Representative / Organization	View on TAC
Leigh Gustafson (NWMB)	No comments or questions at this time.
Chris Flanagan (BFC)	No comment on TAC level.
Samantha Coombs (Gov. of Newfoundland & Labrador)	No questions; will submit written comments.
Tom Perry (LFUSC)	No TAC comment at meeting; will provide written submission (targeting Aug 27).
Alastair O'Rielly (NC)	It is good to see the approach now in terms of outlining the various harvest scenarios, potential harvest levels and probabilities. It provides a useful context to facilitate advice from industry and for the management decisions. Not ready to take a position; will review information with members before providing advice. Need to balance economic opportunity with conservation.
Dave Bollivar (TrivNav Fisheries representing AFA)	Found Kevin's clarifications helpful; will review further with members and submit written views. Not ready to state TAC position.
Jerry Ward (QC)	No position at meeting; will review with industry. Written views to be

	provided jointly through NC and NFA. Notes that further representation can be made at the November NWMB meeting.
Catherine Boyd (CW)	Stressed that catch rates this season have been “phenomenal”; stock appears very healthy. AGC not yet aligned on a position; will finalize by September 12.
Derek Butler (NFA)	Stated for record that NFA is leaning toward coastal state request levels, not F=75% MSY. Emphasized stock is very healthy and fishery provides significant economic benefits to Nunavut and Indigenous stakeholders. Will provide written submission.
Steven Devitt (AGC)	AGC will submit a written TAC position. Requested clear list of departmental deadlines.
Zoya Martin (GN)	Reiterated NFA’s concerns. Suggested F target outputs may be biased (model underestimates biomass, overestimates mortality). GN may recommend moving TAC back toward previous higher harvest levels, given healthy status. Will submit written advice (target Aug 27).

Action:

- Meeting summary will be provided.
- Written submissions from EAGSAC members regarding TAC recommendations due to the Department by **Wednesday, August 27th, 2025**; after August 27th the Department will still accept written submissions but they will be provided as a verbal update to the NWMB at the Board’s meeting on November 5th.
- DFO will continue to accept written submissions to the Department that will contribute to the Minister TAC decision memorandum by **Friday, September 12th, 2025**.
- DFO-Science to follow up with what the approximate age of Greenland Halibut is at recruitment (it is already established that 35 cm fork length is the length used for the model at recruitment).
- At 35 cm total length, GHJ are ~6-7 years old (see figure 6 in: [Assessment of the Greenland Halibut Stock Component in NAFO Subarea 0 + 1 \(Offshore\)](#))
- DFO to provide reference link to 2023 NAFO model bias/performance analysis document: [Applying a stochastic surplus production model \(SPiCT\) to the East Greenland Stock of Northern Shrimp](#)

Appendix 4



August 27, 2025

Hon. Joanne Thompson, MP, PC
Minister of Fisheries
Fisheries and Oceans Canada
200 Kent St
Station 15N100
Ottawa ON K1A 0E6

Via email: DFO.Minister-Ministre.MPO@dfo-mpo.gc.ca

Dear Minister:

We are pleased to write to provide our views on the Subarea 01 TAC levels for 2026 and 2027 for Greenland Halibut, in response to DFO's Eastern Arctic Groundfish Stakeholder Advisory Committee (EAGSAC) update of August 12, 2025 requesting our views.

The NAFO Scientific Council Report of June 2025 ((NAFO SCS Doc. 25/13, Serial No. N7664) provides clear evidence that the Greenland Halibut stock remains in excellent health. As the report demonstrates, across all catch scenarios provided there is less than a 1% chance of the stock falling below *Blim*, the threshold at which serious harm to the stock could occur. Furthermore, there is less than a 7% chance of the stock declining below *Btrigger* in 2027, the level at which it would move into the cautious zone within the NAFO Precautionary Approach Framework. Current biomass remains well above *Bmsy*, with the *B/Bmsy* ratio estimated at 1.20, placing the stock firmly within the Healthy Zone of the Precautionary Approach Framework.

Additionally, the assessment model consistently under-estimates biomass while over-estimating fishing mortality, as documented in the NAFO SC June Report. This inherent conservatism means all TAC options provide additional protections beyond the stated risk levels. Additionally, fisheries performance continues to remain robust, with broadly distributed and historically high catch rates demonstrating the stock's continued productivity.

Given the above, a fishery Total Allowable Catch (TAC) based on *Fmsy* represents the optimal balance between conservation and sustainable utilization. This approach would ensure continued economic and social benefits to adjacent and dependent Nunavut communities, who are majority Inuit. An *Fmsy*-based TAC remains entirely consistent with both Canada's and NAFO's Precautionary Approach Frameworks. Notably, even at *Fmsy* fishing levels, projections indicate a one-third probability that biomass will actually increase by 2027-2028 compared to 2025 levels.

For the above reasons, and the stock's placement in the healthy zone, a reinstatement to the 2022 TAC level is a plausible option. That is clearly defensible.

Our position, however, is to recommend that the 2026 and 2027 TAC levels be set at *Fmsy* (35,328t and 34,618 mt respectively) as contained in Table 1.2 at page 105 of the NAFO SC June meeting report. This recommendation is grounded on compelling scientific evidence that demonstrates the stock's robust health and minimal risk profile.

The *Fmsy* TAC level effectively balances conservation objectives with sustainable resource utilization while avoiding any material risk of stock harm. Given the robust health of this resource, there are no scientific grounds for constraining its optimal economic use. Conversely, there are compelling reasons to fully utilize this healthy and productive stock for the benefit of dependent communities.

Thank you for your consideration.

Qujannamiik,

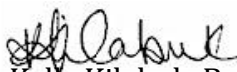


Hon. David Akeeagok

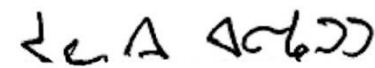
Minister of Community Services, Government of Nunavut



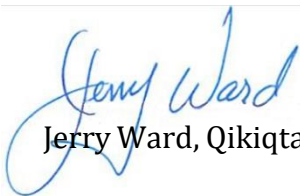
Joeli Qamanirq, Arctic Fishery Alliance




Kelly Kilabuk, Baffin Fisheries



Julai Alikatuktuk, Chair of NFA Board, Cumberland Sound Fisheries



Jerry Ward, Qikiqtaaluk Corporation



Derek Butler, Nunavut Fisheries Association



August 25, 2025

Submission on 2026/27 TAC recommendations for GHL Subarea 0

Attn: Nunavut Wildlife Management Board

Introduction

Oceans North is a charitable organization that fosters science- and community-based conservation in the Arctic and Atlantic regions of Canada, as well as western Greenland. Our goal in all fisheries processes in which we participate is to ensure that depleted fish populations are rebuilt wherever possible and that they support future generations of fishers while contributing to a functional marine ecosystem. We appreciate the opportunity to provide input on the Total Allowable Catch for Greenland halibut in NAFO Subarea 0 +1 offshore for the 2026/2027 fishing seasons.

Goal of long-term sustainability

We are pleased that this offshore Greenland halibut stock now has an accepted model assessment tool and acknowledge the hard work of NAFO Scientific Council (SC) members in achieving this goal. The 2025 NAFO SC assessed the stock as being in the healthy zone according to the NAFO Precautionary Approach Framework, with a low (<1%) probability of the stock being below B_{lim} and risk of fishing mortality being above F_{msy} at 42%.

Greenland halibut are of significant value to the region in many ways. As a species, they play a critical role in Arctic ecosystems as a benthic-pelagic predator, helping transport nutrients throughout the water column and acting as an important prey item for narwhal, beluga, and seals. The fishery further adds tremendous economic value to northern communities, providing employment opportunities and financial benefits as one of the most lucrative groundfish fisheries in the region.

We appreciate that with the stock in the healthy zone there may be strong desires to ramp up the fishery to maximize short-term profits. However, given the significant value of the fishery combined with below-average recruitment indices in recent years,

we suggest following lower-risk TAC recommendations that would benefit the sustainability of the stock in the long-term.

We are therefore recommending **TAC be set at F_{target} fishing levels that result in the long-term stability of the stock**, corresponding to catch levels of 30,243 t and 30,153t in 2026 and 2027, respectively.

Thank you for your consideration of this submission.

Sincerely,

Katie Schleit
Fisheries Director
Oceans North