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The effect of excluding EU 3L survey from the proposed Greenland halibut MP's TAC computations

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Summary

An historical comparison of exclusion compared to inclusion of the EU 3L survey from the proposed Greenland halibut MP shows a difference which is always less than 6%.

Key words: Greenland halibut; management procedure; survey omission; TAC

Introduction

The EU 3L survey is one of five series used to compute the TAC in the proposed MP. The proposed new Greenland halibut CMP is composed of a target component that averages the most recent 3 years of survey data and a slope component taken over the most recent 5 years of survey data. The proposed Exceptional Circumstances criteria in the event of missing survey data are: i) a series missing for 2 of the last 5 years, or ii) more than 2 values missing for the most recent year.

Table 1 lists the survey biomass indices available over the 2011-2023 period. For the 2025 TAC computation, survey data to 2023 are used and since the 2020, 2021 and 2022 EU 3L survey values are missing, Exceptional Circumstances will be triggered. This paper investigates the effect on the TAC of including and excluding the EU 3L survey data from the proposed MP.

Methods and Discussion

To investigate the effect of the missing EU 3L survey data on the TAC, past "theoretical" TACs were computed using the proposed CMP, including and excluding the EU 3L survey data. The TACs computed using the proposed CMP including and excluding the EU 3L survey are compared in Table 2. The catch in the previous year was used as TAC_{y-1} in the formula. The percentage differences each year are shown in the last column.

For the computation of the TAC in year *y*, survey data up to year *y*-2 are included. Hence for the 2017 entry in Table 2, survey data over the 2011-2015 period are used. The 2022 TAC is the last TAC for which enough data points are available from the EU 3L survey to make the requisite calculation, since the MP is using data up to 2020 (one data point missing).

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Conclusion

Over the six years considered, the effect of the missing EU 3L survey data on the TAC is always less than 6%.

Table 1. Survey biomass indices (mean weight (kg) per tow) for Greenland Halibut in Sub-Area 2 and Divisions 3KLMNO used in the proposed CMP. Note: "n.s" is "not surveyed".

	Canadian 2J3K autumn	Canadian 3LNO autumn	EU 3M 0-1400m	EU 3L	EU 3NO
2011	26.74	2.21	26.15	14.61	7.09
2012	23.50	1.71	19.20	14.67	7.37
2013	29.79	2.53	19.11	17.31	5.46
2014	33.34	n.s	23.92	24.09	6.24
2015	22.29	0.87	47.52	23.90	9.49
2016	18.54	1.31	28.30	21.27	8.80
2017	15.10	1.25	42.67	34.83	16.63
2018	17.05	1.89	29.80	21.75	7.88
2019	16.28	1.87	16.89	29.70	8.82
2020	15.84	2.71	13.23	n.s	n.s
2021	21.15	n.s	16.31	n.s	8.09
2022	n.s	n.s	13.49	n.s	10.28
2023	To come	To come	27.46	23.80	10.93

Table 2. TACs in year y, computed using the proposed CMP, including and excluding the EU 3L survey series, and using the previous year's catch as the TAC_{y-1} in the formula.

		TAC in year y		
	Catch in year y-1	Including EU 3L	Excluding EU 3L	% difference
2017	14875	14566	14041	-3.6
2018	14760	14312	13820	-3.4
2019	16630	16099	15227	-5.4
2020	16481	16167	16044	-0.8
2021	16307	15858	15469	-2.5
2022	15039	14566	14806	1.6