Greenland halibut in Subarea 0+1 (offshore)
Advice June 2020 for 2021 – 2022

Recommendation for 2021 and 2022

Scientific Council advises that there is a low risk of Greenland halibut in Subarea 0 + 1 being below B_{lim} if the TAC for 2021 and 2022 remains at 36 370 tonnes.

This year, for the first time, this catch advice is exclusive of catches taken in the inshore areas of Divisions 1B-F, for which separate advice is provided.

There is no scientific basis with which to provide separate advice for the offshore areas of Div. 0A+1AB and Div. 0B+1C-F. The SC advises that consideration be given to the distribution of effort in each area to avoid localized depletion.

Management objectives

Canada and Greenland adopted a total allowable catch (TAC) of 36 370 t for 2019 and 2020. Canada requests that the stock status should be evaluated in the context of management requirements for long-term sustainability and the advice provided should be consistent with the precautionary approach.

Convention objectives	*Status*	*Comment/consideration*
Apply Precautionary Approach	🟢	Stock well above B_{lim}
Minimise harmful impacts on living marine resources and ecosystems	🟡	Fishing closures are in effect in SA0 and Div. 1A. No specific measures.

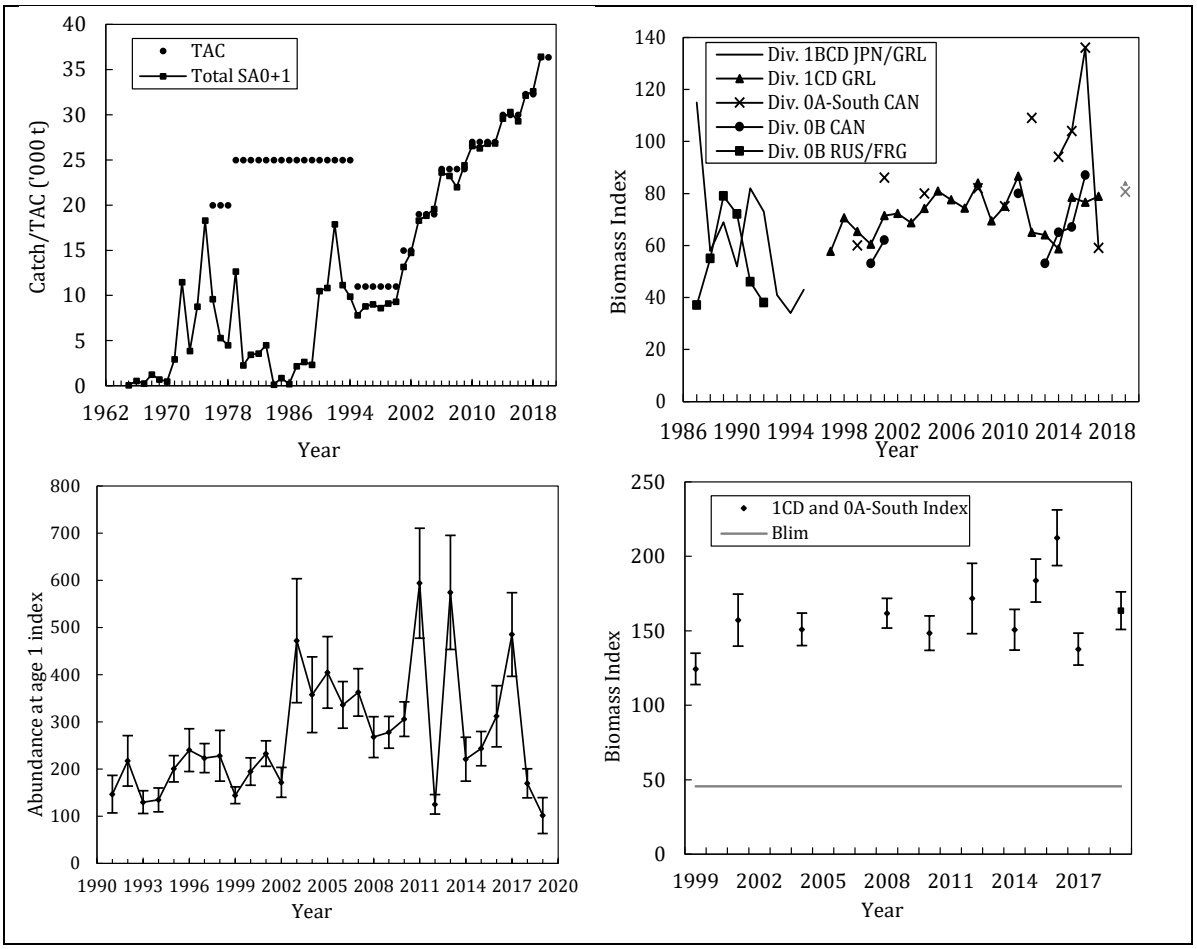
🟢 OK
🟡 Intermediate

Management unit

The Greenland halibut stock in Subarea 0 + 1 (offshore) is part of a larger population complex distributed throughout the Northwest Atlantic. From 2020, separate assessments are made on the inshore management units.

Stock status

The combined 1CD and 0A-South biomass index has been above B_{lim} throughout the time series, 1999 to 2017. The combined biomass index is not available for 2018, and the 2019 value is not used to assess stock status because its comparability with the earlier time series is questionable. The index of age 1 in the last two years is considerably lower than in previous years, however, there have been high abundances in 2011, 2013 and 2017. It is unclear if the age 1 abundance index is representative of future recruitment but it is considered to contribute to the perception of overall stock status.



Reference points

Age-based or production models were not available for estimation of precautionary reference points. In 2014 a preliminary proxy for B_{lim} was set as 30% of the mean for the combined 0A-South + 1CD survey biomass index for years 1999 to 2012.

Assessment

The assessment is qualitative with input from research surveys (total biomass and abundance indices, an index of age 1 fish, and length frequency distributions) and fishery length frequencies.

The next assessment is expected to be in 2022.

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

Fishery

Catches were first reported in 1964. Catches increased from 1989 to 1992 due to a new trawl fishery in Div. 0B with participation by Canada, Norway, Russia and Faeroe Islands and an expansion of the Div. 1CD fishery with participation by Japan, Norway and Faeroe Islands. Catch declined from 1992 to 1995 primarily due to a

reduction of effort by non-Canadian fleets in Div. 0B. Since 1995 catches have been near the TAC and increasing in step with increases in the TAC, with catches reaching a high of 36 446 tonnes in 2019.

Recent catch and TACs ('000 tonnes)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
TAC	27	27	27	30	30	30	32.3	32.3	36.4	36.4
SA 0	13.2	13.3	13.4	14.9	15.4	14.1	15.9	16.4	18.4	
SA 1	13.1	13.5	13.5	14.7	14.9	15.2	16.2	16.2	18.0	
Total STACFIS[1]	26.3	26.8	26.9	29.6	30.3	29.3	32.1	32.6	36.4	

[1]Based on STATLANT, with information from Canada and Greenland authorities used to exclude Divs. 1A-F and 0B inshore catch.

Effects of the fishery on the ecosystem

No specific information available. General impacts of bottom trawl gear on the ecosystem should be considered.

Basis for Advice

A quantitative assessment of risk at various catch options is not possible for this stock; therefore, it is not possible to quantitatively evaluate the sustainability of the TAC. There was no biomass index available for 2018 and there is uncertainty in the comparability of the 2019 estimate, therefore, the ICES Harvest Control Rule 3.2 for data limited stocks was not applied. TAC advice in 2020 is based on a qualitative review of available data.

Special comments

The research vessel that had been used to conduct 0A-South and 1CD surveys from 1997 to 2017 was retired and there was no survey in 2018. A survey was conducted in 2019 with a commercial vessel, however, data reviewed suggest the change in vessel had an effect on the catchability at depths > 700 m, where Greenland halibut are known to be abundant. In addition the earlier timing of the 0A-South survey in 2019 likely resulted in an unknown portion of the stock being beyond the survey area. As a result the comparability between 2019 and previous surveys is questionable and the results were not recommended for use in the 2020 assessment.

Although the survey used to provide the age 1 abundance index also experienced vessel changes in 2018 and 2019, the results are considered to be comparable with those from earlier years.

Sources of information

SCR 20/06, 07, 12, 15, 18, 19, 32, 34, 37; SCS Doc. 20/10, 12, 13)

2020 Canadian Request:

Canada again encourages the Scientific Council to continue exploring opportunities to develop risk-based advice, including the implications of catch differing from the TAC (e.g. +/- 5-15%) on the stock's long-term trajectory.

Response: A quantitative assessment of risk at various catch options is not possible for this data limited stock that is assessed using a qualitative assessment of biomass and abundance indices. Whereas differences of up to 5% are unlikely to pose a risk to the stock at this time, systematic exceedances of the TAC may not be sustainable in the medium to long term.

2020 Denmark (Greenland) Request for advice:

The Scientific Council is requested to consider the possibility for providing a separate advice for 1 B-1 F inshore.

Response: Scientific Council reviewed data on Greenland halibut tagging research, parasitology and historical catches by month for fjord areas within Divisions 1B-F. Offshore movement appears to be limited and linked primarily to areas in the Denmark Strait. In addition, these inshore fjord fisheries have undergone cycles in catch levels on the scale of 1 to 2 decades, suggesting local depletion of offshore recruitment in sink, or primarily sink stocks. Scientific Council concluded that advice could be provided for these inshore stock

components, separate from the larger Subarea 0 and 1 offshore stock component. Advice for divisions 1B-1F inshore is given in section VII.2.a.