

1 Introduction

1.1 Terms of Reference (ToR)

1.1.1 Specific ToR

2019/2/FRSG05 **The North-Western Working Group** (NWWG), chaired by Kristján Kristinsson, Iceland, will meet: Online (WebEx) 23–28 April 2020 to:

- a) Address generic ToRs for Regional and Species Working Groups for all stocks, except stocks mentioned in ToR b).

and during November 2020 by correspondence to:

- b) Address generic ToRs for Regional and Species Working Groups for Capelin (*Mallotus villosus*) in subareas 5 and 14 and Division 2.a west of 5°W, Cod (*Gadus morhua*) in Subdivision 5.b.1 (Faroe Plateau), Cod in Subdivision 5.b.2 (Faroe Bank,) Haddock (*Melanogrammus aeglefinus*) in Division 5.b (Faroes grounds) and Saithe (*Pollachius virens*) in Division 5.b (Faroes grounds).

The assessments will be carried out on the basis of the stock annex. The assessments must be available for audit on the first day of the meeting.

Material and data relevant for the meeting must be available to the group on the dates specified in the 2020 ICES data call.

NWWG will report by 13 May and 7 November 2020 for the attention of ACOM.

1.1.2 Adaptions to expert groups' generic terms of reference for spring 2020.

In light of the disruptions caused by COVID 19 in 2020, the generic terms of reference for the FRSG stock assessment groups have been re-prioritised. This applies to expert groups that feed into the spring advice season process. ACOM is encouraging expert groups to use virtual meetings (e.g. webex) and subgroups to deliver the high priority terms of reference.

High Priority for spring 2020 advice season

- c) Conduct an assessment on the stock(s) to be addressed in 2020 using the method (analytical, forecast or trends indicators) as described in the stock annex and produce a brief report of the work carried out regarding the stock, summarising where the item is relevant. **Check the list of the stocks to be done in detail and those to roll over.**
 - i) Input data and examination of data quality;
 - ii) Where misreporting of catches is significant, provide qualitative and where possible quantitative information and describe the methods used to obtain the information;
 - iii) For relevant stocks (i.e., all stocks with catches in the NEAFC Regulatory Area) estimate the percentage of the total catch that has been taken in the NEAFC Regulatory Area in 2019.
 - v) The developments in spawning stock biomass, total stock biomass, fishing mortality, catches (wanted and unwanted landings and discards) using the method described in the stock annex;

- vi) The state of the stocks against relevant reference points;
- vii) Catch scenarios for next year(s) for the stocks for which ICES has been requested to provide advice on fishing opportunities;
- viii) Historical and analytical performance of the assessment and catch options with a succinct description of quality issues with these. For the analytical performance of category 1 and 2 age-structured assessment, report the mean Mohn's rho (assessment retrospective (bias) analysis) values for R, SSB and F. The WG report should include a plot of this retrospective analysis. The values should be calculated in accordance with the "Guidance for completing ToR viii) of the Generic ToRs for Regional and Species Working Groups - Retrospective bias in assessment" and reported using the ICES application for this purpose.
- d) Produce a first draft of the advice on the stocks under considerations according to ACOM guidelines. Check list to confirm whether the stock requires a concise advice sheet or a traditional advice sheet.
- f) Prepare the data calls for the next year update assessment and for planned data evaluation workshops;
- j) Audit all data and methods used to produce stock assessments and projections.

Medium Priority for spring 2020 advice season

- a) Consider and comment on Ecosystem and Fisheries overviews where available;
- b) For the aim of providing input for the Fisheries Overviews, consider and comment for the fisheries relevant to the working group on:
 - i) descriptions of ecosystem impacts of fisheries
 - ii) descriptions of developments and recent changes to the fisheries
 - iii) mixed fisheries considerations, and
 - iv) emerging issues of relevance for the management of the fisheries;
 - e) Review progress on benchmark processes of relevance to the Expert Group; High for application.

Low Priority for spring 2020 advice season

- c iv) Estimate MSY proxy reference points for the category 3 and 4 stocks
- g) Identify research needs of relevance for the work of the Expert Group.
- h) Review and update information regarding operational issues and research priorities and the Fisheries Resources Steering Group SharePoint site.
- i) Take 15 minutes, and fill a line in the audit spread sheet 'Monitor and alert for changes in ecosystem/fisheries productivity'; for stocks with less information that do not fit into this approach (e.g. higher categories >3) briefly note in the report where and how productivity, species interactions, habitat and distributional changes, including those related to climate-change, have been considered in the advice. ACOM would encourage expert groups to carry out this term of reference later in the year through a webex.

1.2 NWWG 2020 work in relation to the generic ToR

Because of the disruptions caused by COVID 19 in 2020 the physical meeting in Tórshavn, the Faroe Islands, was cancelled and the meeting was held remotely.

To reduce the workload the Ministry of Industries and Innovation in Iceland decided that Iceland would be without ICES advice for the 2020/2021 fishing year for stocks considered local (see letter in Figure 1). For NWWG, these stocks are cod (cod.27.5a), haddock (had.27.5a), saithe (pok.27.5a), herring (her.27.5a) and Icelandic slope beaked redfish (reb.27.5a14). In this report only tables (landings, survey indices and results of the assessment) were updated. Furthermore, the advice sheets for these stocks were not updated.

This year the meeting focused therefore only on five stocks: West Greenland inshore cod, East Greenland cod, Greenland halibut, golden redfish, and Greenland slope beaked redfish. For all stocks discussed during the meeting, the NWWG adopted the assessment which formed the basis for stock status and the premise for the forecasts. Based on the assessments the group produced a draft advice (abbreviated form) for all stocks.

There is no advice in 2020 for West Greenland offshore cod, shallow pelagic beaked redfish, and deep pelagic beaked redfish. Only catch tables for these stocks were updated.

The fisheries overview for the Icelandic Ecoregion was published in December 2019. Ecosystem overview for Greenland and Fisheries Overview for the Greenland and Faroese ecoregion are scheduled to be published in December 2020.



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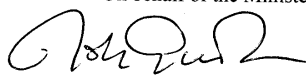
Reykjavík March 12, 2020
Reference: ANR20030188/15.09.00

Subject: ICES advice to Iceland

The Ministry of industries and innovation is aware of the actions taken by ICES in reaction to the COVID19 outbreak which means a considerable reduction in the output of the organization. After consultation with the Marine and Freshwater Research Institute the Ministry has decided that Iceland can in light of the unprecedented circumstances be without ICES advice for the 2020/2021 fishing year on stocks considered local to Iceland as listed below. Therefore Iceland will not need updated advice sheets nor updates of expert group reports on the stocks listed. This is expected to reduce considerably travelling of Icelandic experts and the workload of both MFRI and ICES.

Cod in 5a
Haddock in 5a
Saithe in 5a
Herring in 5a
Beaked redfish in Subarea 14 and Division 5.a, Icelandic slope stock.
Ling in 5a
Tusk in 5a14
Greater silver smelt in 5a14
Blue ling in 5a14

On behalf of the Minister of Fisheries and Agriculture


Jóhann Guðmundsson

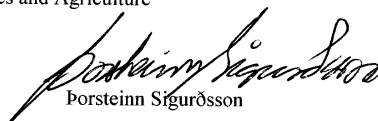

Þorsteinn Sigurðsson

Figure 1. Letter from the Ministry of Fisheries and Agriculture stating that Iceland will not seek advice for the 2020/2021 fishing year for stocks that are considered local in Icelandic waters.

1.3 Mohn's Rho

Generic Term of Reference c)-viii).

Mean Mohn's Rho for category 1 stocks for F_{BAR} , spawning-stock biomass (SSB) and Recruitment for the four stocks discussed during the April meeting, and the three demersal Faroese stocks. The plots are shown in relevant chapters.

Stock	Code	Term. year	Retro years	F_{bar}	SSB	Recr
Faroese saithe	pok.27.5b	2019	5	-0.04	0.32	0.52
Faro Plateau cod	cod.27.5b	2019	5	-0.14	0.07	1.78
Faroese haddock	had.25.5b	2019	5	-0.18	0.14	0.49
Inshore West Greenland cod	cod.21.1	2019	5	0.058	-0.222	-0.406
East Greenland, South Greenland cod	cod.2127.1f14	2019	5	0.024	0.010	-0.123
Greenland halibut	ghl.27.561214	2019	5	0.030		
Golden redfish	reg.27.561214	2019	5	0.0252	-0.0186	-0.2194

1.4 NWWG 2020 work in relation to the specific ToR

There are no specific ToR's for NWWG 2020. The group will meet remotely 2-6 November 2020 to discuss the assessment and produce a draft of advice for capelin, Faroese cod, Faroes haddock and Faroes saithe.

1.5 Assessment methods applied to NWWG stocks

The methods applied to assess the stock status of the NWWG stocks covers a wide range from descriptive to age based analytical assessments as follows:

Stock	Assessment model	Input*	Advice
Faroe Bank cod	Qualitative evaluation	Survey	No advice in 2020
Faroe Plateau cod	SAM	Survey	November 2020
Faroe haddock	SAM	Survey	November 2020
Faroe saithe	SAM	CPUE	November 2020
Iceland saithe	ADCAM (statistical catch-at-age)	Survey	No advice in 2020
Iceland cod	ADCAM (statistical catch-at-age)	Survey	No advice in 2020
Iceland haddock	Adapt type model	Survey	No advice in 2020
Iceland herring	NFT-Adapt	Survey	No advice in 2020
Capelin	Linear regression	Survey	November 2020
Inshore West Greenland cod	SAM	Survey	June 2020
East and South Greenland cod	SAM	Survey	June 2020
Offshore West Greenland cod	Descriptive	Survey	No advice in 2020
Greenland halibut	Stock production model (Bayesian)	Survey + CPUE	June 2020
Golden redfish	GADGET (age-length based cohort model)	Survey	June 2020
Iceland slope <i>S. mentella</i>	DLS category 3.2	Survey	No advice
Deep pelagic <i>S. mentella</i>	Gadget	Survey	No advice in 2020
Shallow pelagic <i>S. mentella</i>	Qualitative evaluation	Survey	No advice in 2020
Greenland Slope <i>S. mentella</i>	DLS category 3.2	Survey	June 2020

* Landings or landings by age are input to all assessments

1.6 Audits

All audits were completed. The auditors found the work of the assessment and advice satisfactory.

1.7 Recommendations

There are five recommendations addressed to the group.

Recommendation from ADGANW (ID 96): *In general, to have four assessments for the different cod stocks in Greenlandic waters and around Iceland is questionable. There is often not enough stock specific information supporting these assessments. To combine assessments should be considered in future benchmarks.* The group has proposed a benchmark for the three Greenland cod stocks in 2022 where the issue will (partly) be discussed.

Recommendation from ADGANW (ID 98): *pok.27.5a to get the Harvest Rates (and not F) in historical plots during NWWG 2020.* There is no advice required for this stock from ICES this year. The recommendation was therefore not discussed during the WG meeting.

Recommendation from ADGANW (ID 99): *Reb.27.5a14. It may be a good idea to have a 2 year advice. WG to think of another year range that may reflect more redfish dynamics. Check for other rules for category 3 stocks that may be better?* There is no advice required for this stock from ICES this year. The recommendation was therefore not discussed during the WG meeting. Other assessment methods are currently being explored (Gadget) and will be presented to the group next year. It should also be noted that there is an ongoing genetic study exploring the relationship of beaked redfish along the east Greenland slope with the Icelandic slope. All samples have been collected and sent for analysis. Results from this study is expected later this year.

Recommendation from ADGPOUTRED (ID 158): *The stock reb.2127.dp needs to be benchmarked.* The group will address this recommendation in November 2020. There is currently no new data available or proposed assessment method proposed to recommend a benchmark meeting.

Recommendation from ADGPOUTRED (ID 160): *Any new data or genetic studies concerning reb.2127.dp should be encouraged given the lack of information on this stock. This should be presented at NWWG in preparation for future benchmark initiatives.* No new genetic data are available to address stock structure. Regarding the survey index and recalculation WGIDEEPS will discuss this matter at a meeting scheduled 25-27 August 2020. It is recommended that ICES Secretariat get this work on the indices reviewed before NWWG-II so it can be discussed when the WG meets in November.

1.8 Benchmarks and workshops

The assessments of Icelandic cod and plaice in Icelandic waters are proposed to go through a benchmark in 2021 (dates to be decided).

Benchmark of golden redfish, which was scheduled to be benchmarked in 2020, has been postponed to 2022. Issue list for golden redfish has already been prepared.

The group further recommends that East Greenland, inshore and offshore West Greenland cod stocks to be benchmarked in 2022. Condensed issue lists were prepared and are listed in the relevant report sections.

The group further recommends that capelin should be benchmarked in 2022.

1.9 Chair

This is the third and final year for Chair, Kristján Kristinsson, Iceland. Teunis Jansen, Greenland/Denmark, was nominated for the position of chair for 2021–2023. The group supported this nomination at the meeting in November.