North-East Atlantic Commission

NEA(20)04

Report on the Use of the Framework of Indicators in 2020

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1. At its 2018 Annual Meeting, the North-East Atlantic Commission (NEAC) adopted a multi-annual Decision regarding the salmon fishery in Faroese waters for 2018 / 2019, 2019 / 2020 and 2020 / 2021 (NEA(18)12rev_final) The Commission also adopted a Framework of Indicators (FWI), developed by ICES, in order to identify if there had been any significant change in previously provided multi-annual management advice for the Faroese salmon fishery. Under the multi-annual Decision, the Commission decided not to set a quota for the salmon fishery in the Faroese Fishery Zone in 2018 / 2019 and again in 2019 / 2020. The Decision would also apply in 2020 / 2021 unless application of the FWI showed that there has been a significant change in the indicators used and a reassessment of the catch advice is required.

2. The Commission agreed that each NEAC Party should again nominate a representative to serve on the FWI Working Group in 2020. The representatives appointed were Svein Magnason (Denmark (in respect of the Faroe Islands and Greenland)), Michael Millane (European Union), Peder Fiske (Norway) and Igor Samokhvalov (Russian Federation). Michael Millane served as the Group's co-ordinator. The Group worked by correspondence to co-ordinate the data collection and apply the FWI, as revised and updated by ICES in 2019, and its report is attached.

3. The Group has concluded that 'the results of the NEAC FWI assessment in 2020 (based on indicator values for 2019) do not suggest that the PFA forecast for 2019 has been under-estimated. Therefore, the FWI Working Group concludes that no reassessment of the existing management advice for the Faroese fishery is required from ICES in 2020'.

4. In light of the Group's conclusions, ICES has been informed that items 2.4 (provision of catch options or alternative management advice) and 2.5 (updating of the Framework of Indicators) of the Request for Scientific Advice from ICES, CNL(19)11, that relate to the North-East Atlantic Commission do not need to be addressed in 2020. The multi-annual Decision, NEA(18)12rev_final, adopted in 2018 will, therefore, continue to apply in 2020 / 2021.

5. The arrangement for applying the FWI again appeared to work well and within the timescale proposed by the Commission. We are grateful to the FWI Working Group for its work in 2020.

Secretary
Edinburgh
06 April 2020

NASCO – NORTH EAST ATLANTIC COMMISSION

REPORT OF THE FRAMEWORK OF INDICATORS WORKING GROUP 2020

Introduction:

At its Annual Meeting in Portland, USA in 2018, NASCO's North East Atlantic Commission (NEAC) adopted a multi-annual Decision for the Faroese salmon fishery for 2018 / 2019, 2019 / 2020 and 2020 / 2021 (NEA(18)12rev_final), together with an updated Framework of Indicators (FWI). This Decision indicated that no quota would be set for the salmon fishery in the Faroese Fisheries Zone for 2018 / 2019, and that it would also apply in 2019 / 2020 and 2020 / 2021 unless the application of the FWI shows that a reassessment is warranted.

The FWI is used in the intermediate years of a multi-year catch agreement to provide an interim assessment of the robustness of the pre-fishery abundance (PFA) forecasts provided by ICES, and to determine whether a full reassessment of stock status and new catch advice might be required. NASCO has previously agreed (NEA(13)11) that when the Faroese fishery is closed the FWI should only be used to signal the need for a reassessment where there is an under-estimate of forecast abundance (i.e. when a potential harvest might otherwise be available). The rationale for this is that if the FWI signaled that PFA had been overestimated, any new assessment would be even less likely to signal a fishery option.

ICES advised in 2018 (CNL(18)08rev) that, since only the Northern NEAC 1SW salmon and the two Southern NEAC stock complexes (1SW and MSW) are currently forecast to be below conservation limits, thus resulting in no catch option in the Faroes, the indicators for Northern NEAC MSW salmon would not need to be included in the FWI assessments in 2019 and 2020 to determine whether new catch advice might be required. A full reassessment would, however, be required if any of the other three, the Northern NEAC 1SW salmon or one of the two Southern NEAC stock complexes suggested an increase in PFA abundance which is above the 75th percentile of the forecast PFA.

The Commission agreed (NEA(18)13) that the FWI, as updated by ICES in 2018, would be used in 2019, and that the same procedure for applying the FWI as used for the previous multi-annual Decision would apply during the new measure. Under this arrangement, a small group comprising one representative from each member of the Commission would work by correspondence to co-ordinate the data collection and application of the FWI. The Secretary would contact the Parties to seek their nominations for the Group and liaise with the co-ordinator and report the findings to the Parties and to ICES in January in each year when the FWI is applied.

The Working Group responsible for applying the FWI in 2020 comprised:

Peder Fiske	Norway
Svein Magnason	Denmark (in respect of the Faroe Islands and Greenland)
Michael Millane (co-ordinator)	European Union
Igor Samokhvalov	Russian Federation

The Group was asked to complete their tasks before the end of January 2020 and to liaise with NASCO who would present their findings to the Parties and to ICES (Annex 1).

Work of the Working Group:

Michael Millane agreed to act as co-ordinator of the FWI Working Group for 2020. Requests for data to populate the FWI were sent to representatives from each of the North East Atlantic Commission (NEAC) countries which had indicator data sets included in the FWI. Returns were collated (Annex 2), and the co-ordinator then circulated the completed FWI worksheet for 2020 (Annex 3) and the draft report to the Working Group for their review and agreement.

Framework of Indicators Analysis – 2020:

The FWI worksheet was revised and updated by ICES in 2018. The FWI currently includes data for Northern NEAC maturing (1SW) salmon and for Southern NEAC both maturing (1SW) and non-maturing (MSW) salmon. There are thus three distinct 'management units' / stock complexes within the framework, and within these there are variable numbers of indicator data sets. Thus:

Northern NEAC 1SW salmon – 6 indicator data sets

Southern NEAC 1SW salmon – 7 indicator data sets

Southern NEAC MSW salmon – 8 indicator data sets

The Northern NEAC data sets derive from Norway and Finland. The Southern NEAC data sets derive from UK (Scotland), UK (N. Ireland), UK (England & Wales) and Iceland (South and East). The FWI Working Group noted that the majority of the data sets used in applying the FWI in 2020 contained preliminary values.

Each Working Group member has reviewed the raw data (Annex 2) and the FWI assessment spreadsheet (Annex 3) and confirmed their agreement with the following summary of the findings.

Northern NEAC 1SW salmon – Data were available for all six indicators for the Northern NEAC 1SW stock complex. None of the indicators suggested that the PFA forecast may have been an under-estimate. The aggregate indicator 'scores' for the 1SW stock complex are therefore consistent with the PFA forecast and do not signal the need for a reassessment in 2020.

Southern NEAC 1SW salmon – Data were available for all seven indicators for the Southern NEAC 1SW stock complex. None of these indicators suggested that the PFA forecast may have been an under-estimate. The aggregate indicator 'scores' for the 1SW stock complex are therefore consistent with the PFA forecast and do not signal the need for a reassessment in 2020.

Southern NEAC MSW salmon – Data were available for all eight of the indicators for the Southern NEAC MSW stock complex. None of these indicators suggested that the PFA forecast was an under-estimate. The aggregate indicator 'scores' for the MSW stock complex are therefore consistent with the PFA forecast and do not signal the need for a reassessment in 2020.

Conclusion:

The results of the NEAC FWI assessment in 2020 (based on indicator values for 2019) do not suggest that the PFA forecast for 2019 has been underestimated. Therefore, the FWI Working Group concludes that no reassessment of the existing management advice for the Faroese fishery is required from ICES in 2020.

NEAC FWI Working Group
31st January 2020

Annex 1. Notification from NASCO of representation on the FWI Working Group

From: NASCO <hq@nasco.int>
Sent: 18 December 2019 19:15
To: Svein Magnason <SveinM@uvmr.fo>; Michael Millane <Michael.Millane@fisheriesireland.ie>; Peder Fiske <peder.fiske@nina.no>; igor_s@pinro.ru
Subject: Framework of Indicators Working Group for the North-East Atlantic Commission

To: FWI Working Group

Dear All,

We are most grateful to you all for serving on the North-East Atlantic Commission's Framework of Indicators Working Group. There is one change to the membership of the Group. Michael Millane has replaced Ian Russell as the representative of the European Union on the Group as Ian has now retired and I would like to thank Michael for agreeing to participate in the work of the Group.

The members of the Working Group are now as follows:

Denmark (in respect of the Faroe Islands and Greenland)	Svein Magnason
European Union	Michael Millane
Norway	Peder Fiske
Russian Federation	Igor Samokhvalov

Ian Russell served as the Group's Co-ordinator from 2013. The Group will, therefore, need to appoint a new Co-ordinator. The Co-ordinator will liaise with the NASCO Secretariat and I ask that the Group's findings be reported to us no later than **31 January 2020** so that I can inform the Parties to the North-East Atlantic Commission and ICES of your findings. I attach a copy of the Group's report from 2019, NEA(19)03.

Kind regards

Dr Emma Hatfield

Secretary

NEA14.696

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Annex 2. Data inputs for the NEAC Indicator Framework - 2019.

Indicators		Country	2019
Northern NEAC 1SW PFA			
1	Estimated returns of 1SW salmon to Norway (PFA)	Norway	135000
2	Return rate of 1SW salmon River Imsa (% survival)	Norway	3.1
3	Return rate of 1SW hatchery-origin salmon River Imsa (% survival)	Norway	1.1
4	Count of returning 1SW salmon - River Akujoki	Finland	24
5	Count of returning 1SW salmon - River Nausta	Norway	800
6	Catch of 1SW salmon in the Rivers Teno and Näätämöjoki	Finland	2628
Southern NEAC 1SW PFA			
1	Returning stock estimate - 1SW salmon River Tamar	UK (England & Wales)	1472
2	Returning stock estimate - 1SW salmon River Frome	UK (England & Wales)	358
3	Estimated returns of 1SW salmon - River North Esk	UK (Scotland)	4675
4	Return rate of 1SW salmon River Bush (% survival)	UK (N. Ireland)	2.799
5	Estimated returns of 1SW salmon to freshwater - River Bush	UK (N. Ireland)	502
6	Returning stock estimate - 1SW salmon River Dee	UK (England & Wales)	519
7	Return rate of 1SW salmon River Dee (% survival)	UK (England & Wales)	1.05
Southern NEAC MSW PFA			
1	Estimated returns of 2SW female salmon - River Baddoch	UK (Scotland)	11
2	Estimated returns of 2SW female salmon - River Girnoch	UK (Scotland)	9
3	Returning stock estimate - MSW salmon River Itchen	UK (England & Wales)	152
4	Returning stock estimate - 1SW salmon River Itchen	UK (England & Wales)	323
5	Returning stock estimate - MSW salmon River Frome	UK (England & Wales)	117
6	Returning stock estimate - 1SW salmon River Frome	UK (England & Wales)	358
7	Catch of MSW salmon - River Ellidaar	Iceland (South & East)	53
8	Estimated returns of 2SW salmon - River North Esk	UK (Scotland)	4307

Notes:
2019 indicator values are preliminary data.
Data relate to wild fish unless otherwise indicated.

Annex 3. Indicator Framework sheet for 2020 (indicator data sets for 2019).

FWI NEAC	2020	Indicators suggest:	PFA forecast OK or overestimated

Indicators for Northern NEAC 1SW PFA

	Insert data from 2019 here	Nreg	Slope	Intercept	r^2	Median PFA in 2019	12.5%ile	87.5%ile	Reassess in year 2020? Outside 75% conf.lim. below	Outside 75% conf.lim. above	Outside 75% confidence limits below	Outside 75% confidence limits above
1 Returns all 1SW NO PFA est	135000	34	0.552774	-65761.51	0.94	315813	61639.37	155983.82	-1	-1	NO	NO
2 Survivals W 1SW NO Imsa	3.1	34	0.000011	-3.08	0.46	315813	-3.70	4.71	0	-1	Uninformative	NO
3 Survivals H 1SW NO Imsa	1.1	35	0.000006	-0.87	0.32	315813	-1.90	3.82	0	-1	Uninformative	NO
4 Counts all Akujoki (1SW)	24	15	0.000138	-8.74	0.32	315813	-6.98	76.90	0	-1	Uninformative	NO
5 Counts all NO Nausta (1SW)	800	20	0.001660	263.72	0.22	315813	-145.78	1721.84	0	-1	Uninformative	NO
6 Catch rT&N 1SW FI	2628	19	0.015134	734.795	0.46	315813	-3151.48	14179.99	0	-1	Uninformative	NO
								Sum of scores	-1	-6		
											Indicators do not suggest that the PFA forecast is an overestimation.	Indicators do not suggest that the PFA forecast is an underestimatio

Indicators for Northern NEAC MSW PFA

	Insert data from 2019	Nreg	Slope	Intercept	r^2	Median PFA in 2019	12.5%ile	87.5%ile	Reassess in year 2020? Outside 75% conf.lim. below	Outside 75% conf.lim. above	Outside 75% conf.lim. below	Outside 75% conf.lim. above
1 PFA-MSW-CoastNorway		34	0.347271	-2431.03	0.85	509027	137517.28	211161.75	0	0	Uninformative	Uninformative
2 Orkla counts		17	0.013444	-3450.23	0.56	509027	1380.32	5406.38	0	0	Uninformative	Uninformative
3 Counts all NO Nausta		20	0.004011	-1337.29	0.34	509027	-144.29	1553.03	0	0	Uninformative	Uninformative
4 Returns all 2SW NO PFA est		24	0.230916	14443.76	0.42	509027	60903.63	203069.02	0	0	Uninformative	Uninformative
5 Catch W rT&N 2SW FI		19	0.007122	-1574.3	0.32	509027	-683.90	4785.89	0	0	Uninformative	Uninformative
								Sum of scores	0	0		
											Indicators suggest that the PFA forecast is an overestimation.	Indicators suggest that the PFA forecast is an underestimatio

Indicators for Southern NEAC 1SW PFA

		Insert data from 2019	N reg	Slope	Intercept	r^2	Median PFA in 2019	12.5%ile	87.5%ile	Reassess in year 2020? Outside 75% conf.lim. below	Outside 75% conf.lim. above	Outside 75% conf.lim. below	Outside 75% conf.lim. above
1	Ret. 1SW UK(E&W) Tamar M	1472	24	0.001432	1602.12	0.21	559386	1026.17	3780.20	-1	-1	NO	NO
2	Ret. W 1SW UK(E&W) Frome M	358	45	0.000509	-86.67	0.40	559386	-323.04	719.49	0	-1	Uninformative	NO
3	Ret. W 1SW UK(Sc.) North Esk M	4675	37	0.006373	2890.55	0.67	559386	3232.61	9678.93	-1	-1	NO	NO
4	Surv. W 1SW UK(NI) Bush M	2.799	29	1.81E-05	-9.62266	0.61	559386	-8.63	9.60	0	-1	Uninformative	NO
5	Ret. Freshw 1SW UK(NI) Bush	502	43	0.000562	525.54	0.23	559386	36.73	1642.67	-1	-1	NO	NO
6	Ret. W 1SW UK(E&W) Dee M	519	26	0.003126	-652.873	0.5	559386	-467.85	2659.74	0	-1	Uninformative	NO
7	Surv coast 1SW UK(E&W) Dee M	1.05	22	2.51E-06	0.050839	0.28	559386	-0.58	3.49	0	-1	Uninformative	NO
									Sum of scores	-3	-7		
												Indicators do not suggest that the PFA forecast is an overestimation.	**Indicators do not suggest that the PFA forecast is an underestimatio**

Indicators for Southern NEAC MSW PFA

		Insert data from 2019	N reg	Slope	Intercept	r^2	Median PFA in 2019	12.5%ile	87.5%ile	Reassess in year 2020? Outside 75% conf.lim. below	Outside 75% conf.lim. above	Outside 75% conf.lim. below	Outside 75% conf.lim. above
1	Ret. W 2SW UK(Sc.) Baddoch NM	11	30	0.000055	-10.62	0.38	488161	2.22	30.67	-1	-1	NO	NO
2	Ret. W 2SW UK(Sc.) Girnoch NM	9	46	0.000045	4.59	0.39	488161	-3.40	56.18	0	-1	Uninformative	NO
3	Ret. W MSW UK(E&W) Itchen NM	152	30	0.000325	-98.19	0.33	488161	-32.83	154.07	0	-1	Uninformative	NO
4	Ret. W 1SW UK(E&W) Itchen NM	323	30	0.000733	-153.86	0.29	488161	-28.13	436.12	0	-1	Uninformative	NO
5	Ret. W MSW UK(E&W) Frome NM	117	45	0.000790	95.58	0.30	488161	-100.66	1063.19	0	-1	Uninformative	NO
6	Ret. W 1SW UK(E&W) Frome NM	358	45	0.000673	169.47	0.24	488161	-80.21	1076.60	0	-1	Uninformative	NO
7	Catch W MSW Ice Ellidaar NM	53	46	0.000117	-37.84	0.54	488161	-38.19	76.42	0	-1	Uninformative	NO
8	Ret. W 2SW UK(Sc.) North Esk NM	4307	37	0.007984	1458.933	0.51	488161	2881.61	7831.01	-1	-1	NO	NO
									Sum of scores	-2	-8		
												Indicators do not suggest that the PFA forecast is an overestimation.	**Indicators do not suggest that the PFA forecast is an underestimatio**