



North-East Atlantic Commission

NEA(17)3

Report on the Use of the Framework of Indicators in 2017

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1. At its 2015 Annual Meeting, the North-East Atlantic Commission (NEAC) adopted a multi-annual Decision regarding the salmon fishery in Faroese waters in 2015/2016, 2016/2017 and 2017/2018, (NEA(15)10). 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 Faroes Fishery Zone in 2015/2016. The Decision would also apply in 2016/2017 and 2017/2018 unless application of the FWI showed that there has been a significant change in the indicators used and a re-assessment 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 2017. The representatives appointed were Jóannes Hansen (Denmark (in respect of the Faroe Islands and Greenland)), Ian Russell (European Union), Peder Fiske (Norway) and Igor Samokhvalov (Russian Federation). Ian Russell 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 2016, and its report is attached.
3. The Group has concluded that 'the results of the NEAC FWI assessment in 2017 (based on indicator values for 2016) do not suggest that the PFA forecast for 2016 has been under-estimated. Therefore, the FWI Working Group concludes that no re-assessment of the existing management advice for the Faroes fishery is required from ICES in 2017'.
4. In light of the Group's conclusions, ICES has been informed that items 2.5 (provision of catch options or alternative management advice) and 2.6 (updating of the Framework of Indicators) of the Request for Scientific Advice from ICES, CNL(16)12, that relate to the North-East Atlantic Commission do not need to be addressed in 2017. The multi-annual Decision, NEA(15)10, adopted in 2015 will, therefore, continue to apply in 2017/18.
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 2017.

Secretary
Edinburgh
7 April 2017

NASCO – NORTH EAST ATLANTIC COMMISSION

REPORT OF THE FRAMEWORK OF INDICATORS WORKING GROUP 2017

Introduction:

At its annual meeting in Goose Bay, Canada in 2015 the NASCO North East Atlantic Commission (NEAC) adopted a multi-annual decision for the Faroes salmon fishery for 2015/16, 2016/17 and 2017/18 (NEA(15)10), 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 2015/16, and that it would also apply in 2016/17 and 2017/18 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 Faroes 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 over-estimated, any new assessment would be even less likely to signal a fishery option.

The results of the NEAC FWI assessment in 2016 (based on indicator values for 2015) concluded that the results were consistent with the previous PFA forecast for 2015 for two of the four stock complexes, that the forecast of PFA was an over-estimate for one stock complex (Southern NEAC 1SW salmon), but that the forecast of PFA for Northern NEAC MSW salmon was an under-estimate. As such, the FWI triggered a re-assessment by ICES of the management advice for the Faroes fishery for the 2016/17-2018/19 fishing seasons. ICES was also requested to update the FWI used to identify any significant change in the previously provided multi-annual management advice. The subsequent advice from ICES (CNL(16)9) indicated that there were no mixed-stock fisheries options on the NEAC complexes at the Faroes in the fishing seasons 2016/2017 to 2018/2019. At its annual meeting in Bad Neuenahr-Ahrweiler, Germany, in 2016, the NEAC therefore agreed (NEA(16)11) that the Decision adopted in 2015 would continue to apply to the fishery in 2016/17, and that it would also apply in 2017/18 unless the application of the FWI shows that a re-assessment is warranted.

ICES advised in 2016 (CNL(16)9) that, since it is currently only the status of the Southern NEAC stock complexes which results in the zero catch options at Faroes, the FWI applied in January 2017 should be based only on these two stock complexes. A change in the status of the Northern NEAC stock complexes alone would not lead to a change in the previous advice. The Commission therefore agreed (NEA(16)11) that the FWI as updated by ICES in 2016, and based only on the Southern NEAC stock complexes, would be used in 2017.

The Commission previously agreed (NEA(15)10) that the same procedure for applying the FWI, as used during 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 will work by correspondence to coordinate the data collection and application of the FWI.

The Working Group responsible for applying the FWI in 2017 comprised:

Jóannes Hansen	Denmark (in respect of the Faroe Islands and Greenland)
Peder Fiske	Norway
Igor Samokhvalov	Russian Federation
Ian Russell (coordinator)	European Union

The Group was asked to complete their tasks before the end of January 2017 and to liaise with NASCO who would present their findings to the Parties and to ICES (Annex 1).

Work of the Working Group:

Ian Russell agreed to act as coordinator of the FWI Working Group for 2017. 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 coordinator then circulated the completed FWI worksheet for 2017 (Annex 3) and the draft report to the Working Group for their review and agreement.

Framework of Indicators Analysis – 2017:

The FWI worksheet was revised and updated by ICES in 2016. The FWI now includes data from Southern NEAC only, but is further divided by sea-age into maturing (1SW salmon) and non-maturing (MSW salmon) components. There are thus two distinct ‘management units’ / stock complexes within the framework, and within these there are variable numbers of indicator data sets. Thus:

- Southern NEAC 1SW salmon – 6 indicator data sets
- Southern NEAC MSW salmon – 10 indicator data sets

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 2017 were 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.

Southern NEAC 1SW salmon - Data were available for all six indicators for the Southern NEAC 1SW stock complex. Only one of these indicators suggested that the PFA forecast may have been an under-estimate. The aggregate indicator ‘scores’ for the 1SW stock complex are consistent with the forecasts and do not signal the need for a re-assessment in 2017.

Southern NEAC MSW salmon – Data were available for all ten 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 suggest a possible over-estimation of PFA. However, in keeping with the agreement reached at NASCO in 2013 (NEA(13)11), a re-assessment is only signaled where the indicators suggest the forecast of PFA was under-estimated. Thus, the indicators for this stock complex also do not signal the need for a re-assessment in 2017.

Conclusions:

The results of the NEAC FWI assessment in 2017 (based on indicator values for 2016) do not suggest that the PFA forecast for 2016 has been under-estimated. Therefore, the FWI Working Group concludes that no re-assessment of the existing management advice for the Faroes fishery is required from ICES in 2017.

**NEAC FWI Working Group
25th January 2017**

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

From: hq@nasco.int [mailto:hq@nasco.int]

Sent: 13 January 2017

To: Framework of Indicators Working Group NEAC

Subject: FWI Working Group – North East Atlantic Commission

Dear All

Thank you for agreeing to serve on the North-East Atlantic Commission's Framework of Indicators Working Group. There have been no changes to the representation on this Working Group since last year.

The members of the Group are as follows:

Denmark (in respect of the Faroe Islands and Greenland)	Jóannes Hansen
European Union	Ian Russell
Norway	Peder Fiske
Russian Federation	Igor Samokhvalov

I would ask that you appoint a Coordinator to liaise with the NASCO Secretariat and that the Group's findings be reported to us no later than 31 January 2017 so that I can inform the North-East Atlantic Commission and ICES of your findings. Ian Russell has served as Coordinator for the Group's work since 2013. I attach a copy of the Group's report from 2016, NEA(16)3.

Best regards

Peter Hutchinson
Secretary

NEA14.448

NASCO
11 Rutland Square
Edinburgh
EH1 2AS
UK

Tel: Int +44 131 228 2551
Fax: Int +44 131 228 4384
e-mail: hq@nasco.int
website: www.nasco.int

Annex 2. Data inputs for the NEAC Indicator Framework - 2016.

DATA INPUTS FOR THE NEAC FWI			
Indicators for Southern NEAC 1SW PFA			2016
	Indicator data set	Country	
1	Returning stock estimate - 1SW salmon River Itchen	UK (England & Wales)	249
2	Returning stock estimate - 1SW salmon River Frome	UK (England & Wales)	561
3	Estimated returns of 1SW salmon - River North Esk	UK (Scotland)	5,020
4	Return rate of 1SW salmon River Bush (% survival)	UK (N. Ireland)	6.70%
5	Estimated returns of 1SW salmon to freshwater - River Bush	UK (N. Ireland)	2,011
6	Returning stock estimate - 1SW salmon River Dee	UK (England & Wales)	1,161
Indicators for Southern NEAC MSW PFA			
	Indicator data set	Country	
1	Estimated returns of 2SW salmon - River Baddoch	UK (Scotland)	5
2	Estimated returns of 2SW salmon - River Girnoch	UK (Scotland)	13
3	Estimated returns of 1SW salmon - River North Esk	UK (Scotland)	5,020
4	Returning stock estimate - MSW salmon River Itchen	UK (England & Wales)	112
5	Returning stock estimate - 1SW salmon River Itchen	UK (England & Wales)	249
6	Returning stock estimate - MSW salmon River Frome	UK (England & Wales)	216
7	Returning stock estimate - 1SW salmon River Frome	UK (England & Wales)	561
8	Catch of MSW salmon - River Ellidaar	Iceland (South & East)	24
9	Estimated returns of MSW salmon to freshwater - River Bush	UK (N. Ireland)	151
10	Estimated returns of 2SW salmon - River North Esk	UK (Scotland)	7,734
Notes:			
	2016 indicator values are preliminary data		
	Data relate to wild fish unless otherwise indicated		

Annex 3. Indicator Framework sheet for 2017 (indicator data sets for 2016).

FWI NEAC		2017		Indicators suggest:		PFA forecast OK or overestimated						
Indicators for Northern NEAC 1SW PFA												
Insert data from 2016 here							Reassess in year 2017?					
	N reg	Slope	Intercept	r ²	Median PFA in 2016	12.5%ile	87.5%ile	Outside 75% conf.lim.		Outside 75% confidence limits		
								below	above	below	above	
1 Returns all 1SW NO PFA est	255260	32	0.574829	-88479.71	0.95	630816	230948.47	317314.48	-1	-1	NO	NO
2 Survivals W 1SW NO lmsa	2.9	32	0.000012	-3.75	0.46	630816	-0.32	8.01	0	-1	Uninformative	NO
3 Survivals H 1SW NO lmsa	1.5	33	0.000006	-1.12	0.30	630816	-0.16	5.55	0	-1	Uninformative	NO
4 Counts all NO Øyensåa (1SW)	3215	17	0.002353	574.91	0.27	630816	1004.81	3114.11	-1	1	NO	YES
5 Counts all NO Nausta (1SW)	1744	18	0.002012	-34.97	0.28	630816	333.48	2134.62	-1	-1	NO	NO
6 Catch rT&N 1SW FI	8255	17	0.0139136	1689.7437	0.39	630816	1851.30	19081.99	-1	-1	NO	NO
						Sum of scores			-4	-4		
											Indicators do not suggest that the PFA forecast is an overestimation.	Indicators do not suggest that the PFA forecast is an underestimation.
Indicators for Northern NEAC MSW PFA												
Insert data from 2016 here							Reassess in year 2017?					
	N reg	Slope	Intercept	r ²	Median PFA in 2016	12.5%ile	87.5%ile	Outside 75% conf.lim.		Outside 75% conf.lim.		
								below	above	below	above	
1 PFA-MSW-CoastNorway	211073	32	0.358088	-14199.06	0.87	631049	176983.63	246560.66	-1	-1	NO	NO
2 Orkla counts	6131	17	0.013501	-3554.63	0.57	631049	3071.09	6859.07	-1	-1	NO	NO
3 Counts all NO Nausta	1744	18	0.003915	-1315.88	0.34	631049	294.82	2014.50	-1	-1	NO	NO
4 Returns all 2SW NO PFA est	166963	22	0.2436223	1221.1683	0.49	631049	88946.43	220971.12	-1	-1	NO	NO
5 Catch W rT&N 2SW FI	3562	17	0.0068946	-1388.331	0.32	631049	103.49	5821.54	-1	-1	NO	NO
						Sum of scores			-5	-5		
											Indicators do not suggest that the PFA forecast is an overestimation.	Indicators do not suggest that the PFA forecast is an underestimation.
Indicators for Southern NEAC 1SW PFA												
Insert data from 2016 here							Reassess in year 2017?					
	N reg	Slope	Intercept	r ²	Median PFA in 2016	12.5%ile	87.5%ile	Outside 75% conf.lim.		Outside 75% conf.lim.		
								below	above	below	above	
1 Ret. W 1SW UK(E&W) Itchen M	249	28	0.000283	8.58	0.23	724326	-37.02	464.44	0	-1	Uninformative	NO
2 Ret. W 1SW UK(E&W) Frome M	561	43	0.000540	-25.75	0.37	724326	-172.41	902.87	0	-1	Uninformative	NO
3 Ret. W 1SW UK(Sc.) North Esk M	5020	35	0.006730	4017.16	0.61	724326	5683.84	12100.57	1	-1	YES	NO
4 Surv. W 1SW UK(NI) Bush M	6.7	27	2.153E-05	-10.18085	0.56	724326	-4.24	15.07	0	-1	Uninformative	NO
5 Ret. Freshw 1SW UK(NI) Bush	2011	41	0.000684	450.65	0.26	724326	165.10	1726.39	-1	1	NO	YES
6 Ret. W 1SW UK(E&W) Dee M	1161	24	0.0035444	-418.4296	0.31	724326	425.69	3871.99	-1	-1	NO	NO
						Sum of scores			-1	-4		
											Indicators do not suggest that the PFA forecast is an overestimation.	Indicators do not suggest that the PFA forecast is an underestimation.
Indicators for Southern NEAC MSW PFA												
Insert data from 2016 here							Reassess in year 2017?					
	N reg	Slope	Intercept	r ²	Median PFA in 2016	12.5%ile	87.5%ile	Outside 75% conf.lim.		Outside 75% conf.lim.		
								below	above	below	above	
1 Ret. W 2SW UK(Sc.) Baddoch NM	5	28	0.000034	3.21	0.47	459472	5.81	31.69	1	-1	YES	NO
2 Ret. W 2SW UK(Sc.) Gironch NM	13	44	0.000037	8.50	0.43	459472	-3.68	54.37	0	-1	Uninformative	NO
3 Ret. W 1SW UK(Sc.) North Esk NM	5020	35	0.007469	6670.32	0.46	459472	6378.71	13825.63	1	-1	YES	NO
4 Ret. W MSW UK(E&W) Itchen NM	112	28	0.000095	51.90	0.09	459472	-15.53	206.87	0	-1	Uninformative	NO
5 Ret. W 1SW UK(E&W) Itchen NM	249	28	0.000353	89.89	0.21	459472	1.38	502.49	-1	-1	NO	NO
6 Ret. W MSW UK(E&W) Frome NM	216	43	0.000779	32.17	0.48	459472	-116.34	896.88	0	-1	Uninformative	NO
7 Ret. W 1SW UK(E&W) Frome NM	561	43	0.000666	113.77	0.39	459472	-107.23	946.97	0	-1	Uninformative	NO
8 Catch W MSW Ice Ellidaar NM	24	44	0.000094	-26.25	0.57	459472	-39.19	73.07	0	-1	Uninformative	NO
9 Ret. Freshw 2SW UK(NI) Bush	151	40	0.000144	58.98	0.23	459472	-9.86	259.70	0	-1	Uninformative	NO
10 Ret. W 2SW UK(Sc.) North Esk NM	7734	35	0.0036431	4586.9979	0.21	459472	3042.31	9479.53	-1	-1	NO	NO
						Sum of scores			0	-10		
											Indicators suggest that the PFA forecast is an overestimation.	Indicators do not suggest that the PFA forecast is an underestimation.