

North-East Atlantic Commission

NEA(19)08

Presentation of the ICES Advice to the North-East Atlantic Commission

sal.neac.all Atlantic salmon from Northeast Atlantic

Photo by Jaakko Erkinaro

Terms of Reference



2. With respect to Atlantic salmon in the North-East Atlantic Commission area:

- 2.1 describe the key events of the 2018 fisheries;
- 2.2 review and report on the development of age-specific stock conservation limits, including updating the time-series of the number of river stocks with established CLs by jurisdiction;
- 2.3 describe the status of the stocks, including updating the time-series of trends in the number of river stocks meeting CLs by jurisdiction



The Framework of Indicators was applied in 2019 and there was no indication of underestimated abundance forecasts. A full reassessment was not required in 2019 and the 2018 ICES advice remains valid. Consequently, there are no mixed stock fisheries options on the NEAC complexes at the Faroes for the fishing seasons 2018/2019 to 2020/2021

Background



• Northeast Atlantic Commission (NEAC) stocks are combined into two groups for the provision of management advice for fisheries at West Greenland and Faroes

Southern group (Southern NEAC) :

- UK (Scotland)
- UK (England and Wales)
- UK (N. Ireland)
- Ireland
- France
- Iceland (south/west region)
- Total of 7 stock units



Northern group

(Northern NEAC) :

- Russia
- Finland
- Norway
- Sweden
- Iceland (north/east region)
- Total of 11 stock units

2.1 Key Events 2018 Fisheries: Catch



- No significant changes in the gear types used. No fishery Faroes since 2000
- NEAC Reported Nominal Catch: 960 t
 - 136 t Southern NEAC (lowest in time series)
 - 824 t Northern NEAC
- Unreported catch: 279 t

Table 1: sal.neac.all

	Southern NEAC	Northern NEAC	Faroes	Total NEAC
2018 nominal catch	136 t	824 t	-	960 t
Catch as % of NEAC total	14%	86%	-	
Unreported catch	13 t	266 t	-	279 t
Location of catches			-	
% in-river	48%	56%	-	55%
% in estuaries	26%	0%	-	4%
% coastal	26%	44%	-	41%



Figure 1: sal.neac.all

2.1 Key Events 2018 Fisheries: Catch



• 1SW salmon constituted 50% of the total catch in S-NEAC and 60% in N-NEAC in 2018



Figure 2: sal.neac.all

2.1 Key Events 2018 Fisheries: Exloitation Rate



- Exploitation rates have decreased since the early 1980s
- Rates on 1SW and MSW salmon have become similar



2.2 Stock Conservation Limits (CLs) and Spawner Escapement Reserves (SERs)



- National CLs summed to four NEAC stock complexes
- SER (Spawner Escapement Reserves)
 - Number of fish prior to fisheries to meet CLs when they return to homewaters
 - CLs increased to account for natural mortality (M = 0.03 per month) between 1 January of first winter and return to homewaters

Complex	Sea age group	CL (number of fish)	SER (number of fish)	
Northern NEAC	1SW	131 753	166 564	
	MSW	119 717	203 658	
Southern NEAC	1SW	600 500	761 074	
	MSW	292 241	493 022	

Table 3: sal.neac.all

2.2 Stock Conservation Limits (CLs) and Spawner Escapement Reserves (SERs)



- Nine jurisdictions with river-specific CLs
- Time-series of CLs
- Iceland one river since 2000
- number of rivers with CLs
 number assessed
 number meeting or exceeding CLs

Figure 4: sal.neac.all



2.3 Stock Status



- Pre-Fishery Abundance (PFA) : abundance at 1 January of first winter at sea
 - by sea age group (maturing 1SW and non-maturing 1SW (MSW) salmon)
 - by stock complex (Northern NEAC and Southern NEAC) and individual country
- PFA relative to SER (Spawner Escapement Reserve: CLs adjusted for natural mortality)
- Spawners relative to CLs

Risk Assessment Framework

- Full Reproductive Capacity :
 - lower bound of the 90% confidence interval of the estimate above reference point
 - equivalent to a probability of at least 95% of meeting reference point
- At Risk of Suffering Reduced Reproductive Capacity:
 - lower bound of the confidence interval is below reference point, but the midpoint is above
- <u>Suffering Reduced Reproductive Capacity:</u>
 - midpoint is below reference point



2.3 Stock Status: 2018 Northern NEAC (N-NEAC)



PFA N-NEAC:

- Declining trend
- PFA > SER
- Both complexes at full reproductive capacity

Figure 5: sal.neac.all



Spawners N-NEAC:

- Spawners > CLs
- Both complexes at full reproductive capacity
- 1SW spawners improved over timeseries low in 2017

2.3 Stock Status: 2018 Southern NEAC (S-NEAC)

PFA S-NEAC:

- Declining trend
- PFA < SER
- Both complexes suffering reduced reproductive capacity



Spawners S-NEAC:

- Declining trend since 2016
- Spawners < CLs
- Both complexes suffering reduced reproductive capacity



Figure 5: sal.neac.all



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Figure 6: sal.neac.all

2.3 Stock Status: 2018 PFA by Jurisdiction



Mat. 1SW: full reproductive capacity

PFA Northern NEAC

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- Mat. 1SW: full reproductive capacity in ٠ UK (N. Ireland), others suffering reduced reproductive capacity
- Non-mat. 1SW: full reproductive ٠ capacity in UK (England and Wales and N. Ireland), others at risk or suffering reduced reproductive capacity

PFA of maturing and non-maturing 1SW by country





2.3 Stock Status: 2018 1SW by Jurisdiction



Northern NEAC 1SW spawners

- full reproductive capacity: Norway and Sweden
- at risk: Iceland and Tana/Teno
- suffering reduced reproductive capacity: Russia

Southern NEAC 1SW spawners

- full reproductive capacity: UK (N. Ireland)
- others suffering reduced reproductive capacity



2.3 Stock Status: 2018 MSW by Jurisdiction



Northern NEAC MSW spawners

- full reproductive capacity: Norway, Sweden and Iceland
- suffering: Tana/Teno and Russia

Southern NEAC MSW spawners

- full reproductive capacity: UK (England and Wales, N. Ireland)
- suffering reduced reproductive capacity: France, Ireland, and UK (Scotland)



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2.3 Stock Status: Trends in Rivers Meeting CLs



• Spawners assessed against CLs

Table 4: sal.neac.all

Country /Jurisdiction	Number of rivers with CLs	Number of rivers assessed for compliance	Number of rivers attaining CL	% of assessed rivers attaining CL	Trend statement			
Northern NEAC								
Russia	85	8	7	88	No trend			
Finland/Norway (Tana/Teno)	25	15	6	40	Increasing			
Norway	439	191	170	89	Increasing			
Sweden	24	23	7	30	Stable (2016 to 2018 only)			
Southern NEAC								
UK (Scotland)	173	173	84	49	Decreasing			
UK (Northern Ireland)	19	16	7	44	Increasing			
UK (England and Wales)	64	64	14	22	Decreasing			
Ireland	143	143	41	29	Decreasing			
France	35	35	21	60	Stable			

Figure 4: sal.neac.all



- ••• number of rivers with CLs
- number assessed
- ... number meeting or exceeding CLs

2.3 Stock Status: Return Rates (Marine Survival)



- 1SW declining trend since 1980
- 2SW no trend
- Little improvement of stock status over time
- Mainly a consequence of continuing poor survival in the marine environment



16



17

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