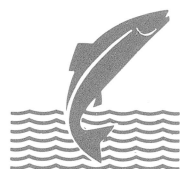


NOTES ON CONTRIBUTION OF THE COUNTRIES
OF ORIGIN OF ATLANTIC SALMON TO THE
FAROESE AND WEST GREENLAND FISHERIES
(Preliminary Report)

Þór Guðjónsson

Reykjavík 1989

VMST-R/89034



VEIÐIMÁLASTOFNUN

INSTITUTE OF FRESHWATER FISHERIES

VAGNHÖFÐA 7 - 112 REYKJAVÍK - ICELAND

NOTES ON CONTRIBUTION OF THE COUNTRIES
OF ORIGIN OF ATLANTIC SALMON TO THE
FAROESE AND WEST GREENLAND FISHERIES
(Preliminary Report)

Þór Guðjónsson

Reykjavík 1989

VMST-R/89034

CONTRIBUTING COUNTRIES TO THE FAROESE SALMON FISHERY

All the salmon producing countries bordering the eastern North Atlantic are contributing to the Faroese salmon fishery in varying amount depending at least partly on the size of the home-water fishery. In Table 1 the average home-water catches in metric tonnes are listed for 10 years periods 1969-1978 and 1979-1988 as well as for the 20 years period 1969-1988. This shows also the percentage of the catch of each country of the total catch. Catch figures for Spain are missing. It is to be expected that individual countries will have comments to make on possible variations from the percentage figures in the Table.

It is interesting in this context to look at recapture figures from a tagging experiment that was carried out in Faroese waters by scientists from the Faroes during the years 1969-1976 when 1949 salmon were tagged. 87 (4.5%) of them were recaptured in six European countries, one north of the Faroes and three off West Greenland. The recaptures in individual countries are listed in Table 2 with the percentage of the total recaptures as well as the average weight in tonnes of salmon caught in the same countries during that period. This Table shows that the percentage of recaptures is considerably higher than the percentage catches in Norway and Scotland but lower for Ireland. These three main salmon producing countries caught about 91% of the tagged fish.

CONTRIBUTING COUNTRIES TO THE WEST GREENLAND FISHERY

Contributing countries to this fishery are found on both sides of the North Atlantic. Most of the salmon caught in West Greenland waters are fish in their second year in the sea or older. About half of the catch is originated in Canada and the U.S. and the other half in the European countries. Tagging experiments have shown that salmon from most salmon producing

countries are found in West Greenland waters. Scotland and England seem to be the largest contributors to the fishery after Canada and then comes Ireland of the European countries. A few salmon from Norway and Sweden have been caught there and also from France, Spain and Iceland but none from U.S.S.R. or Finland.

Tagging of salmon caught at sea off West Greenland was carried out during the years 1965-1972, 4657 fish in number see Table 3. Recaptures of 93 fish were made in countries on both sides of the Atlantic, 28 in Canada and 66 in Europe. Most of them were caught in U.K. or 44 (66.7%), 16 (24.2%) in Ireland, one (1.5%) in Iceland, two (3.1%) in France and three (4.5%) in Spain. The recapture rate is rather high for France and Spain when the low catches in these countries are considered. The results of this tagging experiment may give some idea about the contribution of the European countries to the fishery.

CONTRIBUTION OF ICELAND TO THE WEST GREENLAND AND FAROESE FISHERIES.

The ocean currents in Icelandic waters are mainly of two origins, i.e. the Gulf Stream (Irminger current), which carries warm water to the South and West Coasts and a branch to the North Coast, and the East Greenland current, which is a cold current off the North and Northeast Coasts. Hypothetically smolts and post-smolts follow the main ocean currents on their way to the main feeding grounds. Thus it is to be expected that smolts produced by rivers in the South and West Iceland will enter the Gulf Stream and follow the main branch to the west and on to the south towards the Irminger Sea. The grilse will return to the rivers from this area where there is no ocean fishery for salmon. The multi-sea-winter (MSW) fish will most likely migrate on to West Greenland and the ones that are not caught there will return to the home streams. The catches of

salmon in the South and West of Iceland are 73% of the total catch in the country. The grilse number on the average for the years 1967-1988 about 23,000 fish, weighing about 76 tonnes and the MSW fish caught are about 15,000 and weighing about 91 tonnes.

The smolts produced in the rivers of North and Northeast Iceland are expected to migrate with the East Greenland current to Eastern North Atlantic waters. The total catch of salmon in these parts of the country has during the previously mentioned period been about 14,000 fish weighing about 62 tonnes. The pattern of migration of Icelandic salmon in the sea has been supported by tag returns.

Table 1. Nominal average catches of salmon in homewaters by countries in tonnes (round fresh weight) based on Report of the Working Group on North Atlantic Salmon. ICES, CM 1989/Assess: 12

	<u>1969 - 1978</u>		<u>1979 - 1988</u>		<u>1969 - 1988</u>	
	Tonnes	%	Tonnes	%	Tonnes	%
France	36	0.6	23	0.5	30	0.5
England	395	6.4	363	7.1	379	6.7
Scotland	1501	24.3	1065	20.7	1283	22.7
Ireland	1740	28.2	1210	23.6	1475	25.1
N.-Ireland	191	3.1	110	2.1	151	2.7
Norway	1429	23.3	1549	30.2	1489	26.3
Sweden (West coast)	20	0.3	33	0.6	27	0.5
Finland	57*	0.9	43	0.8	50	0.9
U.S.S.R.	568*	9.2	509	9.9	539	9.5
Iceland	<u>228</u>	<u>3.7</u>	<u>229</u>	<u>4.5</u>	<u>229</u>	<u>4.1</u>
	6165	100.0	5134	100.0	5652	100.0
Canada	2223		1649		1941	
U.S.A.	<u>< 2</u>		<u>3</u>		<u>< 3</u>	
	2235		1652		1944	
Faroes	25***		575		300	
W.Greenland	1903		922		1413	
E.Greenland	<u>< 5**</u>		<u>< 4</u>		<u>< 4</u>	
	1933		1501		1717	

* Average figure for 7 years.

** " " " 3 "

*** " " " 9 "

Table 2. Recaptures of salmon tagged in Faroese waters during the years 1969 - 1976 and the average catches of salmon in the countries of recaptures through the same year.

	Recaptures		Average weight of salmon caught in tonnes	
		%		%
Iceland	0	-	219	3.45
U.S.S.R	1	1.15	568	8.94
Norway	31	35.63	1469	23.13
Sweden (West coast)	2	2.30	22	0.35
Scotland	33	37.93	1569	24.71
England and Wales	5	5.75	408	6.43
Ireland	15	17.24	1849	29.12
N.Ireland	0	-	206	3.24
France	0	-	ca. 40	0.63
	87	100.00	6350	100.00

Table 3. Recaptures from North America and Europe of salmon tagged at West Greenland 1965 to 1972.

TAGGING YEAR	CAN	U.K.	IRE	ICE	FRA	SPA	NA	EU	TOTAL
	TOTAL								
1965	1	-	-	-	-	-	1	-	1
1966	1	3	-	-	-	-	1	3	4
1967	1	1	2	-	-	-	1	3	4
1968	1	-	-	-	-	-	1	-	1
1969	7	4	2	-	-	1	7	7	14
1970	1	1	1	-	-	-	1	2	3
1971	4	2	3	-	-	1	4	6	10
1972	12	33	8	1	2	1	12	45	57
TOTAL	28	44	16	1	2	3	28	66	94
%		66.7	24.2	1.5	3.1	4.5		100.0	

References

- Anon, 1981. Report of the North Atlantic Salmon Working Group. ICES, C.M. 1981/M10. 17 pp.
- Anon, 1989. Report of the Working Group on North Atlantic Salmon, ICES, C.M 1989/Assess:12. 127. pp.
- Gudjónsson, Th. 1982. Laxveiðar í Norður-Atlantshafi, Freyr, 2: 86-93. Reykjavík.
- Gudjónsson, Th. 1988. Laxgöngur í úthafinu. Hafbeit, Ráðstefna í Reykjavík, 1988. 44-61.
- Jensen, J. M. 1980. Recaptures of salmon at West Greenland tagged as smolts outside Greenland waters. Rapports et Procés-Verbaux des Réunions, ICES/ICNAF Joint Investigation on North Atlantic Salmon. Ed. B.A. Parrish and Sv. A. A. Horsted. Conseil International pour L Exploration de la Mer, 114-121.
- Swain, A. 1980. Tagging of salmon smolts in European rivers with special reference to recaptures off West Greenland in 1972 and earlier years. Rapports et Procés-Verbaux des Réunions, ICES/ICNAF Joint Investigation on North Atlantic Salmon. Ed. B.A. Parrish and Sv. A. A. Horsted. Conseil International L Exploration de la Mer, 93-113.
- Tómassom, Tumi. 1989. The effect of ocean fishing on the salmon run in Laxá í Aðaldal, Icelamd, in 1989. Institute of Freshwater Fisheries, Northern Division, Hólar, VMST-N/89017. 6 pp.

ANNEX 1

DRAFT PROPOSAL

for contributions of the salmon producing countries to the Faroese and West Greenland salmon fisheries based on results of tagging experiments and nominal average catches in home-waters during the period 1979-1988. The contribution of each country is calculated on the basis of quotas of 550 metric tonnes for the Faroese fishery and 840 tonnes for the West Greenland fishery.

	Faroese fishery		W-Greenland fishery		Total	
	%	Tonnes	%	Tonnes	Tonnes	%
Norway	61.61	338.9	-	-	338.9	24.4
W-Sweden	2.07	11.4	-	-	11.4	0.8
Scotland	13.28	73.0	25.0	210.0	283.0	20.3
England	5.20	28.6	8.3	69.7	98.3	7.1
Ireland	17.35	95.4	12.1	101.7	197.1	14.2
Iceland	0.49	2.7	0.8	6.7	9.4	0.7
France	-	-	1.6	13.4	13.4	1.0
Spain	-	-	2.2	18.5	18.5	1.3
Canada	-	-	47.3	397.3	397.3	28.6
U.S.	-	-	2.7	22.7	22.7	1.6
	<u>100.00</u>	<u>550.0</u>	<u>100.0</u>	<u>840.0</u>	<u>1390.0</u>	<u>100.0</u>

Thór Gudjónsson, 13 December 1989

ANNEX 2

Estimated total gutted weight of salmon in each weight group in the Faroese fishery in February 1985 and February 1988 (Gutted weight is converted to round fresh weight by factor 1.1)

<u>Weight groups</u>	<u>Catch figures X</u>	<u>February 1985</u>	<u>February 1988</u>
< 2.5	2.00	6,472	6,346
>=2.5 <3	2.75	1,432	7,048
>=3.0 <4	3.50	37,020	792
>=4.0 <5	4.50	12,713	2,418
>=5.0 <7	6.00	6,432	3,108
>=7.0 <9	8.00	13,904	1,928
>=9.0	10.00	<u>10,150</u>	<u>900</u>
Gutted weight		88,123	22,540
Round fresh weight		96,935	24,794

Total catch for 1984/1985 season was 664 tonnes. 96,935 tonnes amount to 10.1% of the total catch.

Total catch for 1987/1988 season was 204 tonnes. 24,794 tonnes amount to 12.2% of the total catch.

References:

Anon. ICES, C.M. 1986/M2

" " , C.M. 1989/M2

Thór Gudjónsson, December 1989