North-East Atlantic Commission

NEA(16)4

Mixed-Stock Fisheries

(Tabled by the European Union)

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1) Brief description of existing MSFs

EU - Ireland

There are currently two managed mixed-stock fisheries in Ireland, Killary Harbour and Castlemaine harbour. A third mixed-stock fishery, Tullaghan Bay, operated until 2013.

Killary Harbour
In the case of the Killary Harbour fishery, there are two contributing river stocks (Delphi and Erriff) both of which are meeting and exceeding their conservation limits (CL). The Standing Scientific Committee on Salmon (SSCS) undertake a risk assessment for the common estuary which results in a higher requirement for spawners in both rivers than simply combining the CLs for the rivers to ensure simultaneous attainment of CLs in both rivers.

Castlemaine Harbour
The mixed-stock fishery in Castlemaine Harbour Co. Kerry was closed over the 2007 to 2010 period as the fishery was perceived to exploit salmon from a range of rivers entering Castlemaine Harbour. A pilot fishery was conducted in the mixed-stock area of Castlemaine in 2010 to provide genetic samples for analysis of the rivers contributing to the fishery. Results revealed that the Castlemaine fishery almost exclusively exploited salmon from three rivers entering Castlemaine harbour: the Laune, Caragh and Maine, all of which were meeting and exceeding CL. The Castlemaine fishery has operated since 2011 from the total available surplus of the three contributing rivers. For the mixed-stock Castlemaine fishery to operate, the total available surplus for the three rivers combined was reduced in a common estuary analysis to ensure that each river would meet CL simultaneously. The mixed-stock Castlemaine fishery and the draft net and rod angling fishery on the three rivers all exploit salmon from this reduced surplus calculation.

Tullaghan Bay
A draft net fishery operated in Tullaghan Bay up to 2013 predominantly exploiting stocks from the Owenmore, Carrowmore and the Owenduff rivers which were exceeding their conservation limits. A common estuary risk assessment was also undertaken for Tullaghan Bay, resulting in a higher requirement for spawners than simply combining the CLs for the rivers to ensure simultaneous attainment of CLs.

The SSCS reviewed the operation of the Tullaghan Bay draft net fishery in 2012 and noted that the fisheries are mostly confined to the immediate vicinity of the Owenmore/Carrowmore and Owenduff river mouths and there was only a relatively small mixed-stock fishery in the bay. The SSCS advised that it was therefore not appropriate to apply a risk analysis for a mixed-stock fishery in Tullaghan Bay. In its advice provided for the 2013 & 2014 seasons, the SSCS therefore did not advise a common estuary surplus for Tullaghan Bay. With regard to the SSCS 2015 scientific advice, the Owenmore river was only meeting 90% of CL (209 salmon deficit) and management advised that no commercial fishery should take place in the upper part of Tullaghan Bay in the vicinity of the Owenmore river. Therefore no mixed-stock commercial fishery took place in Tullaghan Bay in 2015 as one of the contributing stocks (Owenmore) failed to meet its conservation limit.

EU - Finland

The salmon fishery in the main stem of the large River Teno, including both various netting methods and angling, is exploiting more than 20 genetically different populations of salmon from different tributaries and areas of the main stem.

CLs are now established for 24 populations of the Teno stock complex. Target attainment evaluations are now available for nine tributaries (partly including and combining lower order tributaries) and the main stem of the river.

EU - Sweden

Sweden has taken the following management measures to phase out mixed-stock fisheries on wild salmon stocks:

- sport fishing at sea mainly targets sea trout. The fishing mortality for salmon was estimated to be very low in this fishery even before a bag limit was introduced in 2014. It is estimated that the bag limit will result in virtually no fishing mortality of salmon in sport fishing at sea;
- until 2011, there were commercial trap net fisheries on the Swedish coast, situated near or in the estuary of a river with compensatory (hydropower stations) releases of fin-clipped smolts. Since 2013, only catches of fin-clipped salmon are allowed in trap net fisheries and all wild salmon shall be released alive. This fishery was previously partly an MSF but it is not expected to be an MSF in future as only catches of fin-clipped salmon are allowed. Since 2012 there have been no trap net fisheries operating;
- gill net fishing in the sea at depths <3 m is not expected to be an MSF. Since 2013, such fishing is strictly regulated with respect to effort, period and mesh size. Marine protected areas are located near wild salmon rivers. In these areas no gill net fishery is allowed irrespective of the depth;
- a ban on gill net fishing for salmon in remaining coastal waters with a depth >3m has been implemented from 2014 to phase out mixed-stock fisheries targeting salmon stocks. Catch statistics revealed that despite the ban, catches in the coastal fishery did not decrease in 2014, the reason being attributed to illegal fishing. The Swedish Agency for Marine and Water Management filed a law suit against the responsible fishermen. There has been no reported MSF or illegal gill net fisheries during 2015 in coastal waters with a depth > 3m.

Mixed-stock fisheries exist in the two rivers (River Lagan and Göta älv) with releases of reared salmon in the main watercourse and natural smolt production in tributaries. New fishing rules are planned to be implemented in 2017 or 2018.

EU - UK (England and Wales)

Fishery	Method	No. nets in 2015	Status
Anglian Coast:	Drift nets	20	Being phased out
Severn Estuary:	Putchers	5 [a]	Historic rights apply
	Lave nets	26 [a]	Being reduced to 15 nets
	Draft nets	1 [a]	Being phased out
North East Coast:	Drift nets	12 [b]	Being phased out; due for closure in 2022
	T&J nets	52 [b]	Being phased out

[a] Subject to catch limits in 2015
[b] 3 joint licences included in both categories

EU - UK (Scotland)

A package of new conservation measures took effect from 31 March 2016. One of the key aspects of the new the regulations concerns prohibiting any killing of salmon in coastal waters for a period of three years due to the mixed-stock nature of the fishery and limited data on the stock composition of the catch.

2) Recent catch data

EU - Ireland

Ballinakill (Killary harbour) Mixed-Stock Fishery (Erriff and Bundurragha) – mean 5 Yr catch = 378 salmon (1t).

Castlemaine Mixed-Stock Fishery (Laune, Caragh and Maine) – mean 5 Yr catch = 804 salmon (2.2t).

Tullaghan Bay Mixed-Stock Fishery (Owenmore, Carrowmore and the Owenduff) – mean 5 Yr catch = 193 salmon (0.5t).

Average total catch in MSFs in Ireland = 1,373 salmon (3.7t).

EU - Finland

Salmon catch in the River Teno in 2015: Total catch 78t (Finland 43t, Norway 35t), c. 80% caught in the main stem (MSF), 30% in tributaries (less or no MSF).

EU - Sweden

Provisional nominal catch (which may be subject to revision) for 2015 (tonnes)	In-river	Estuarine	Coastal	Total
	17.688t	0	0	17.688t
Confirmed nominal catch of salmon for 2014 (tonnes)	13.066t	0	16.895 t	29.961t

EU - UK (England and Wales)

(provisional declared catch of salmon in 2015)

- Anglian Coast: 1
- Severn Estuary: 100
- North East Coast: 15,890

EU - UK (Scotland)

Nominal catch for 2015 (tonnes)	In-river	Estuarine	Coastal	Total
	27.2t (40%)	9.3t (14%)	30.8t (46%)	67.3t

For an evolution of the catches since 1952 by gear type see Annex.

3) Updates to the Implementation Plan (IP) related to MSFs

EU - Ireland

The Irish Implementation Plan was updated in May 2014.

EU - Finland

Preparation of the new fishery agreement between Norway and Finland is underway. This is concerning river fisheries, including the MSF in the main stem, but the coastal MSF is the responsibility of Norwegian national management.

Conservation limits are established for 24 populations of the Teno stock complex, and attainment has been assessed for ten populations and for the entire system, as compared to five assessed tributaries earlier. Exploitation of these populations in the MSF in the main stem can be assessed through genetic stock identification. However, this is not yet a standard procedure in the annual monitoring programme.

In the Finnish-Norwegian negotiations, parties have come to a conclusion on regulatory measures for salmon fishing based on biological reference points and scientific assessments of their attainment, including a reduction of fishing pressure by about 30%. Completing the negotiations requires further work on the legal issues. Finland's primary goal is to reach an agreement that includes modern management measures consistent with the NASCO Guidelines. The agreement is planned to come into force for the fishing season in 2017.

EU - Sweden

No updates.

EU - UK (England and Wales)

The Implementation Plan (IP) for UK (England and Wales) was updated in 2013/14 to clarify the management of fisheries within estuaries. The updated IP states that all fisheries, including MSFs, operating within estuary limits are assumed to exploit predominantly fish that originated from waters upstream of the fishery. These fisheries are carefully managed at a local level to protect the weakest of the exploited stocks, guided by a decision structure and taking into account socio-economic factors and European Conservation status where applicable. This includes the fisheries in the Tamar/Tavy/Lynher and the Taw/Torridge estuaries and the Solway Firth.

EU - UK (Scotland)

No updates.

4) Changes or developments in the management of MSFs in this IP period to implement NASCO's agreements

EU - Ireland

Closure of the Tullaghan Bay mixed-stock fishery due to one contributing stock failing to meet CL.

EU - Finland

See above (3).

EU - Sweden

See above (1).

EU - UK (England and Wales)

Anglian Coast: a new Net Limitation Order (NLO) was introduced in 2015 maintaining the phase-out of this fishery.

Severn Estuary: the NLOs for the draft and lave nets were approved in May 2014. For both fisheries the number of instruments was capped at 2013 levels. The draft net fishery is now subject to a phase-out order and the lave net fishery is subject to a reducing order to 15. Catch limits are applied to all nets and putchers.

North East Coast: the NLO was updated in 2012; both drift nets and beach nets are being phased out, and the drift net fishery will be closed in 2022. An investigation into the possibility of capping catches in the fishery (drift nets and T&J beach nets) to prevent exceptionally high landings has been completed. Further action in relation to the management of this fishery will be taken forward as part of the Environment Agency's new five-point approach to deliver a

better future for salmon by addressing the pressures that they face through their life-cycle (see 2016 APR).

EU - UK (Scotland)

The Wild Fisheries Review
A Wild Fisheries Review (http://www.gov.scot/Topics/marine/Salmon-Trout-Coarse/fishreform/fishreview) was undertaken during 2014, the aims of which were to determine those reforms required to develop a modern, evidence-based management system for wild fisheries in Scotland. On 8 October 2014, the review submitted its final report together with 54 recommendations (http://www.gov.scot/Topics/marine/Salmon-Trout-Coarse/fishreview/WFRFinal).

Following on from the Review, Marine Scotland have embarked upon a programme of wild fisheries reform, including a package of conservation measures which were progressed separately from the wider reform programme.

Conservation Measures to Control the Killing of Wild Salmon
A package of conservation measures took effect from 31 March 2016 (http://www.legislation.gov.uk/ssi/2016/115/contents/made), designed to run on from the existing spring conservation regulations.

Key aspects of the regulations are:

- killing beyond estuary limits will be prohibited for three years;
- the killing of Atlantic salmon in inland waters will be managed on an annual basis by categorising fishery districts by their conservation status;
- local salmon management bodies will be required to develop a Conservation Plan irrespective of the conservation status of stocks in their area;
- carcass tagging for net-caught fish in inland areas.

The killing of Atlantic salmon in inland waters will be managed at a district scale which uses the already defined 109 fishery districts (Marine Scotland Science 2014) together with Special Areas of Conservation (SACs). These areas will be managed according to their conservation status. Conservation status is assessed by estimating the probability that the stock will attain its conservation limit (CL).

Category	Probability of achieving CL	Management measures
1	At least 80%	No additional management action is currently required.
2	60-80%	Management action is necessary to reduce exploitation. Mandatory catch and release will not be required in the first instance, but this will be reviewed annually.
3	Less than 60%	Management action is required immediately to reduce exploitation. Mandatory catch and release (all methods) for the coming year.

An overview of the conservation measures is provided at http://www.gov.scot/Topics/marine/Salmon-Trout-Coarse/fishreform/licence/status.

ANNEX

EU - UK (Scotland) – catches evolution by method

	Nominal catch by method (tonnes)				Nominal Catch by method (proportion of total catch)		
	Fixed Engine	Net & Coble	Rod & Line	Total	Fixed Engine	Net & Coble	Rod & Line
1952	699.8	630.0	179.0	1508.9	0.46	0.42	0.12
1953	643.3	491.5	203.4	1338.2	0.48	0.37	0.15
1954	589.4	642.8	254.0	1486.2	0.40	0.43	0.17
1955	642.4	652.5	219.8	1514.8	0.42	0.43	0.15
1956	507.7	455.7	237.6	1201.1	0.42	0.38	0.20
1957	559.4	566.6	290.6	1416.6	0.39	0.40	0.21
1958	634.8	585.8	286.8	1507.4	0.42	0.39	0.19
1959	614.8	682.9	215.7	1513.3	0.41	0.45	0.14
1960	534.3	657.2	251.2	1442.7	0.37	0.46	0.17
1961	460.2	504.2	220.6	1185.0	0.39	0.43	0.19
1962	628.1	807.5	302.2	1737.8	0.36	0.46	0.17
1963	673.8	706.5	344.5	1724.9	0.39	0.41	0.20
1964	819.4	771.9	315.4	1906.7	0.43	0.40	0.17
1965	614.8	658.5	319.2	1592.5	0.39	0.41	0.20
1966	628.1	667.8	298.9	1594.8	0.39	0.42	0.19
1967	814.5	988.1	314.1	2116.7	0.38	0.47	0.15
1968	634.8	735.1	208.0	1578.0	0.40	0.47	0.13
1969	741.7	1005.1	208.0	1954.8	0.38	0.51	0.11
1970	491.9	664.8	234.9	1391.6	0.35	0.48	0.17
1971	600.0	633.3	187.6	1420.9	0.42	0.45	0.13
1972	714.1	769.8	242.7	1726.6	0.41	0.45	0.14
1973	881.5	835.0	289.3	2005.7	0.44	0.42	0.14
1974	733.0	730.0	244.9	1708.0	0.43	0.43	0.14
1975	617.3	703.3	300.1	1620.6	0.38	0.43	0.19
1976	432.4	393.1	193.3	1018.8	0.42	0.39	0.19
1977	461.7	439.6	258.7	1160.0	0.40	0.38	0.22
1978	505.7	491.3	326.0	1323.0	0.38	0.37	0.25
1979	374.0	386.6	315.2	1075.9	0.35	0.36	0.29
1980	421.8	418.1	294.4	1134.2	0.37	0.37	0.26
1981	521.1	451.1	260.7	1232.9	0.42	0.37	0.21
1982	465.2	379.2	247.6	1091.9	0.43	0.35	0.23
1983	491.9	466.0	263.1	1221.0	0.40	0.38	0.22
1984	458.1	332.6	221.8	1012.5	0.45	0.33	0.22
1985	353.2	272.2	287.5	912.9	0.39	0.30	0.31
1986	502.6	458.2	308.6	1269.4	0.40	0.36	0.24
1987	351.5	297.1	272.8	921.3	0.38	0.32	0.30
1988	253.6	271.1	356.9	881.6	0.29	0.31	0.40
1989	279.9	301.2	314.3	895.3	0.31	0.34	0.35
1990	157.3	194.3	272.8	624.4	0.25	0.31	0.44
1991	137.0	97.2	228.1	462.4	0.30	0.21	0.49
1992	165.2	140.4	293.9	599.5	0.28	0.23	0.49
1993	155.3	108.0	283.2	546.5	0.28	0.20	0.52
1994	248.1	109.7	287.2	645.0	0.38	0.17	0.45
1995	200.2	104.3	282.1	586.7	0.34	0.18	0.48
1996	128.8	78.8	218.2	425.8	0.30	0.19	0.51
1997	78.6	32.8	183.4	294.8	0.27	0.11	0.62
1998	59.9	27.4	192.0	279.3	0.21	0.10	0.69
1999	34.8	22.7	140.7	198.2	0.18	0.11	0.71
2000	75.8	40.7	157.2	273.8	0.28	0.15	0.57
2001	75.4	21.4	152.6	249.4	0.30	0.09	0.61
2002	54.2	19.8	116.3	190.2	0.28	0.10	0.61
2003	85.0	23.0	82.9	190.8	0.45	0.12	0.43
2004	66.6	19.8	159.8	246.2	0.27	0.08	0.65
2005	61.7	26.6	128.0	216.3	0.29	0.12	0.59
2006	56.5	16.6	118.4	191.5	0.29	0.09	0.62
2007	39.8	17.2	112.5	169.5	0.23	0.10	0.66
2008	37.7	10.8	111.6	160.1	0.24	0.07	0.70
2009	26.8	14.3	79.1	120.3	0.22	0.12	0.66
2010	44.3	37.8	97.6	179.7	0.25	0.21	0.54
2011	48.2	23.5	87.3	158.9	0.30	0.15	0.55
2012	38.7	11.0	72.8	122.6	0.32	0.09	0.59
2013	50.0	25.9	43.1	118.9	0.42	0.22	0.36
2014	40.6	16.8	26.1	83.4	0.49	0.20	0.31
2015	30.8	9.3	27.2	67.3	0.46	0.14	0.40