Mixed-Stock Fisheries (Tabled by the European Union)

1) Brief description of existing MSFs

EU – Finland

Salmon fishery in the main stem of the large River Teno, including both various netting methods and angling, is exploiting c. 30 genetically different salmon populations from different tributaries and areas of the main stem.

Conservation limits are established for 24 populations of the Teno stock complex. Target attainment evaluations are currently available for 14 tributaries (partly including and combining lower order tributaries), the main stem, and for the Teno system as a whole.

2) Recent catch data

EU – Finland

Salmon catch in the River Teno in 2022: 0 t, a total ban on salmon fishing in the catchment in 2022.

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

EU – Finland

Parliaments in Finland and Norway have accepted the new bilateral fishery agreement, which came into force for the fishing season 2017. The agreement concerns river fisheries, including 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 15 individual populations. Exploitation of these populations in MSF of the Teno main stem can be assessed through catch information and genetic stock identification. Annual monitoring programme has also been updated as a part of the implementation work of the new agreement.

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

EU – Finland

Management regime for salmon fishing is based on biological reference points and scientific assessments of their attainment, including a targeted reduction of fishing pressure by c. 30%. The reduction of exploitation is especially focusing on salmon stocks with the weakest status in the Teno stock complex by tailored fishery regulations in time and space, and on specific fishing methods. According to the agreement, a recovery plan is in preparation to ensure the recovery of the weakest stocks in a time frame of 2-3 salmon generations. Stock assessment in 2019 revealed the continued decrease in exploitation (since 2017) for all individual salmon stocks in the mixed-stock fishery in the Teno main stem.

Despite the reduced exploitation rates since 2017, salmon stocks showed worse status in 2020-2022 than in recent years. Likely explanations for this development include increased natural mortality factors in different life stages of salmon. Data from salmon stock monitoring programmes, e.g. counts of ascending grilse in relation to estimated abundance of smolts one year before, indicate that the marine survival rate has decreased in recent years, resulting in low

pre-fishery abundance. Further investigations on such possible factors are underway. Finland together with Norway has decided to close salmon fishing in Tana river and its tributaries for 2023, similar to the decision for 2021 and 2022.

1) Brief description of existing MSFs

EU – Ireland

As of 2021, there are four managed mixed-stock fisheries in Ireland: Castlemaine Harbour, Killary Harbour, Owenmore Esturary and Tullaghan Ferry. The Owenmore Estuary and relatively minor Tullaghan Ferry mixed-stock fisheries formerly comprised the Tullaghan Bay mixed-stock fishery which operated until 2013. Each year, in advance of the fishing season, the scientific advisory group, the Technical Expert Group on Salmon (TEGOS) undertake a specific risk assessment for each common estuary mixed-stock fishery. This results in a higher requirement for spawners in contributing rivers than simply combining their individual river-specific conservation limits (CLs) to ensure simultaneous attainment of CL. If the common estuary CL is sufficiently exceeded then a surplus for exploitation is advised.

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, namely, the Caragh, Laune 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.

Killary Harbour

In the case of the Killary Harbour fishery, there are two contributing river stocks (Bundorragha (Delphi) and Erriff) both of which are exceeding their CLs. The TEGOS 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 CL in both rivers. The mixed-stock Killary Harbour fishery and the rod angling fishery on both rivers exploit salmon from this reduced surplus calculation, although the River Erriff rod fishery is managed as a catch and release-only fishery by local agreement.

The Owenmore Estuary and Tullaghan Ferry

The Owenmore Estuary and the relatively minor Tullaghan Ferry mixed-stock fisheries formerly comprised the Tullaghan Bay mixed-stock fishery which operated until 2013. The operation of the Tullaghan Bay mixed-stock fishery was reviewed in 2012 and it was noted that the fisheries are mostly confined to the immediate vicinity of the Carrowmore/Owenmore and Owenduff river mouths with only a relatively small mixed-stock fishery in the bay (Ferry). Therefore, it was advised that it was more appropriate to apply a specific risk analysis for Owenmore Estuary (which exploits stocks from the Carrowmore and Owenmore rivers). This results in a higher requirement for spawners for this mixed-stock fishery than simply combining the CLs for the two contributory rivers which ensures a simultaneous attainment of CLs is required to permit this fishery to operate. As such the draft net and rod angling fisheries for the Owenmore and Carrowmore 1SW must be taken from this reduced surplus if available. In addition, a small TAC is assigned to the relatively minor Tullaghan Ferry mixed-stock fishery

(which potentially exploits stocks from the Carrowmore/Owenmore and Ownduff rivers). This TAC is allocated from a percentage of the Owenmore Estuary surplus and the Owenduff surplus when available. Neither the Owenmore Estuary or Tullaghan Ferry mixed-stock fishery was permitted to operate until 2021 as one of the three contributary stocks, the Owenmore River, was below CL. However, as all three rivers were assessed as exceeding CL since 2021, both mixed-stock fisheries have since been permitted to operate.

EU – Finland

Salmon fishery in the main stem of the large River Teno, including both various netting methods and angling, is exploiting c. 30 genetically different salmon populations from different tributaries and areas of the main stem.

Conservation limits are established for 24 populations of the Teno stock complex. Target attainment evaluations are currently available for 14 tributaries (partly including and combining lower order tributaries), the main stem, and for the Teno system as a whole.

2) Recent catch data

EU – Ireland

- Castlemaine Harbour mixed-stock fishery (Laune, Caragh and Maine rivers)
  - 2022 catch = 538 salmon (1.45 t)
  - mean five year catch = 586 salmon (1.58 t)
- Killary Harbour mixed-stock fishery (Erriff and Bundorragha rivers)
  - 2022 catch = 208 salmon (0.56 t)
  - mean five year catch = 176 salmon (0.48 t)
- Owenmore Estuary mixed-stock fishery (Carrowmore and Owenmore rivers)
  - 2022 catch = 195 salmon (0.53 t)
  - mean two year catch = 154 salmon (0..42 t)
- Tullaghan Ferry mixed-stock fishery (Carrowmore, Owenduff and Owenmore rivers)
  - 2022 catch = 70 salmon (0.19 t)
  - mean two year catch = 58 salmon (0.16 t)

EU – Finland

Salmon catch in the River Teno in 2022: 0 t, a total ban on salmon fishing in the catchment in 2022.

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

EU – Ireland

There are no changes related to MSF in the Implementation Plan for the period 2019-2024.

EU – Finland

Parliaments in Finland and Norway have accepted the new bilateral fishery agreement, which came into force for the fishing season 2017. The agreement concerns river fisheries, including 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 15 individual populations. Exploitation of these populations in MSF of the Teno main stem can be assessed through catch information and genetic stock

identification. Annual monitoring programme has also been updated as a part of the implementation work of the new agreement.

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

EU – Ireland

2021 was the first year that the Owenmore Estuary and Tullaghan Ferry mixed-stock fisheries were each permitted to operate. Their operation continued in 2022.

EU – Finland

Management regime for salmon fishing is based on biological reference points and scientific assessments of their attainment, including a targeted reduction of fishing pressure by c. 30%. The reduction of exploitation is especially focusing on salmon stocks with the weakest status in the Teno stock complex by tailored fishery regulations in time and space, and on specific fishing methods. According to the agreement, a recovery plan is in preparation to ensure the recovery of the weakest stocks in a time frame of 2-3 salmon generations. Stock assessment in 2019 revealed the continued decrease in exploitation (since 2017) for all individual salmon stocks in the mixed-stock fishery in the Teno main stem.

Despite the reduced exploitation rates since 2017, salmon stocks showed worse status in 2020-2022 than in recent years. Likely explanations for this development include increased natural mortality factors in different life stages of salmon. Data from salmon stock monitoring programmes, e.g. counts of ascending grilse in relation to estimated abundance of smolts one year before, indicate that the marine survival rate has decreased in recent years, resulting in low pre-fishery abundance. Further investigations on such possible factors are underway. Finland together with Norway has decided to close salmon fishing in Tana river and its tributaries for 2023, similar to the decision for 2021 and 2022.

EU – Sweden

Sweden considers that there are practically no mixed stock fisheries in marine waters on Atlantic salmon in Sweden.

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

Trap net fisheries at the coast

- There have, due to national regulation, not been any trap net fisheries during the years 2013 – 2022.

Gill net fisheries at the coast

- Gill net fishing in the sea at depths <3 m is not expected to be a MSF. Since 2013 it is strictly regulated with respect to effort, period and mesh size to avoid catches of salmon. Marine protected areas are located nearby 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. There has not been any reported MSF or illegal gill net fisheries during 2016-2022 in coastal waters with a depth > 3m.

Information on catches reported in the Swedish Annual Progress Report on Actions taken under the Implementation Plan for the Calendar Year 2022

2: Stock status and catches.

2.1 Provide a description of any new factors that may affect the abundance of salmon stocks significantly and, if there has been any significant change in stock status since the development of the Implementation Plan, provide a brief (200 word max) summary of these changes.

Stock status reduced compared to 2019 (3 out of 23 stocks assessed in 2021 was in good productive capacity and 4 out of 22 stocks assessed in 2022 was in good productive capacity). No catch was recorded from commercial fishing on the coast in 2022 (8th year in a row), i.e. mixed-stock fishing on the coast has ceased.

Catch and release of wild salmon in rivers has increased from 9% in 2011 to 37% in 2021 and 2022. Out of 24 rivers with salmon 7 rivers reported no harvest of salmon in 2021 and 10 rivers reported no harvest of salmon in 2022.

2.2 Provide the following information on catches: ***(nominal catch equals reported quantity of salmon caught and retained in tonnes 'round fresh weight' (i.e. weight of whole, ungutted, unfrozen fish) or 'round fresh weight equivalent').***

	In-river	Estuarine	Coastal	Total
(a) provisional nominal catch (which may be subject to revision) for 2022 (tonnes)	8	0	0	8
(b) confirmed nominal catch of salmon for 2021 (tonnes)	11	0	0	11
(c) estimated unreported catch for 2022 (tonnes)	0,8	0	0	0,8
(d) number and percentage of salmon caught and released in recreational fisheries in 2022	616 salmon (26%) were caught and released in 2022 for the total fishery (wild and reared (enhancement & ranching)), whereof 577 salmon (37%) were wild (with adipose fin).			