	<p>Council</p> <p><i>Summary of Annual Progress Reports under the 2019 – 2024 Implementation Plans</i></p>	<p>CNL(22)17</p> <p>Agenda items: 5(c)(i) and 5(g)</p>
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Summary of Annual Progress Reports under the 2019 – 2024 Implementation Plans

The Annual Progress Reports (APRs) summarised here are the third APRs to be submitted under the 2019 – 2024 Implementation Plans (IPs) using the agreed template as contained in document [CNL\(18\)51](#). The following information is requested:

- any changes to the management regime for salmon and consequent changes to the Implementation Plan;
- actions that have been taken under the Implementation Plan in the previous year;
- any significant changes to the status of stocks, and a report on catches; and
- any actions taken in accordance with the provisions of the Convention.

The APRs submitted in 2022 have been reviewed by the IP / APR Review Group and its report will be made available on the [NASCO website](#). In this paper, the Secretariat has presented the information provided in section 1 (changes to Implementation Plans and new initiatives / achievements relating to salmon conservation and management), section 2 (stock status and catches) and section 4 (additional information required under the Convention) of those APRs received. Section 3 of the APRs covers the progress made over the last year on each of the actions detailed in the IPs and this has been evaluated in the Review Group's report. At the time of writing this report, no APR has been received from Denmark (in respect of the Faroe Islands and Greenland) – Faroe Islands.

1. Changes to the Implementation Plans

1.1 Describe any proposed revisions to the Implementation Plan

Canada

Canada submitted a revised Implementation Plan in November 2021. Further revisions may be undertaken in autumn 2022 to reflect changes in policies and/or programs during 2022.

European Union

France: The plan was submitted in November 2020. No revisions have therefore been made since.

Spain (Galicia): NGEU funds will imply a great investment in salmon rivers up to 2024, with restoration of habitat measures (eradication of invasive alien species -6 rivers- and permeabilisation of barriers -14 in 6 rivers-, including demolition, new fish ladders or improvement of defective ladders), and monitoring facilities (fish counters).

Spain (Navarra): in February 2022 the Review Group considered that EU – Spain (Navarra)'s revised Implementation Plan is fully satisfactory across all sections / areas of the Plan. Therefore, no more changes are foreseen.

Sweden:

4.6 add some information on the implementation of NASCO's guidance on introductions, transfers and stocking.

4.9 add relevant information on the development of a contingency plan for *G. salaris*.

United Kingdom

England and Wales: the England and Wales (E&W) Implementation Plan 2019-24 is now deemed satisfactory following a review in November 2021.

Northern Ireland: consideration is being given to amending the management action in relation to Sea lice as highlighted in the last IP review. Details will be provided to NASCO in due course and before the deadline on the 1st November.

Scotland: as a result of the adoption of a Scottish Wild Salmon Strategy and the feedback received from the review group we intend to submit a revised Implementation Plan later in 2022. This will include revisions to several sections of the IP.

1.2 Describe any major new initiatives or achievements for salmon conservation and management that you wish to highlight

Canada

Much of the Canadian action to conserve and manage Atlantic salmon in recent years has been guided by Canada's Wild Atlantic Salmon Conservation Policy implementation plan (2019-2021). That plan identified, in collaboration with Indigenous communities and other partners, a set of 18 priority action items for Atlantic salmon conservation and management, and those actions have been implemented throughout the three-year duration of the plan.

Notwithstanding disruptions due to the COVID-19 pandemic and resulting public health measures and their impacts on activities related to the fishing and management of wild Atlantic salmon, Canada continued in 2021 to implement measures as laid out in its domestic implementation plan. The plan concluded at the end of 2021, with a report outlining the status of the action items, as well as highlighting successes and challenges throughout the term, expected to be released by the middle of 2022.

To build on progress made under the 2019-21 domestic implementation plan, the Government of Canada committed to make new investments and develop a conservation strategy to restore and rebuild wild Atlantic populations and their habitats. To support the development of this strategy, in 2021 Fisheries and Oceans Canada initiated engagement activities with Indigenous communities, provinces, and stakeholder organizations, to inform conservation priorities.

In a particularly substantial investment, in 2021 DFO received \$11.8 million through Natural Resources Canada's Environmental Studies Research Fund to study the migration of Atlantic salmon at sea. By fitting more than 1,300 Atlantic salmon at three different life stages with telemetry tags, this research will provide much-needed insight into marine migration routes, timing and duration at sea, and the effects of environmental variability. This research is also documented in NASCO's Research Inventory.

Denmark (in respect of the Faroe Islands and Greenland)

Greenland: implementation of the Management Plan for Atlantic Salmon in Greenland and Executive Order. These define, among other things, three management areas with fixed fishing seasons, legal requirements regarding reporting and license, and limitation of professional fishermen to use a maximum of 20 fishing nets.

European Union

Denmark: two important migration barriers have been removed, granting salmon access to app. 60 km of spawning and rearing habitat.

Finland: because of poor stock status of Atlantic salmon populations in the River Teno system, all salmon fishing was closed in 2021 both in the river and in nearby coastal areas in Norway.

France:

1. Except Plagépomi Bretagne, the year 2021 was devoted to writing new plagepomis for most of the basins river. All of them had to take into account the actions identified in the IP:

Seine-Normandie: www.drie.e-ile-de-france.developpement-durable.gouv.fr/poissonsmigrateurs-le-plan-de-gestion-2022-2027-a4632.html

Loire: www.pays-de-la-loire.developpement-durable.gouv.fr/le-plagepomi-a4044.html

Artois-Picardie: https://www.hauts-de-france.developpementdurable.gouv.fr/IMG/pdf/plagepomi_artois_picardie_2022_2027bd.pdf

Regarding the plagepomi Rhin-Meuse, Rhône-Méditerranée, Adour et Garonne-Dordogne, the approval has not yet been validated or on line at the time of writing this report.

2. As part of the World Conservation Congress held in Marseille from November 3 to 11, OFB wanted to attract a large audience through several humorous videos to raise awareness of the impact of our consumption on wildlife, taking Atlantic salmon as an example:

https://youtu.be/D_7kGYLRVY

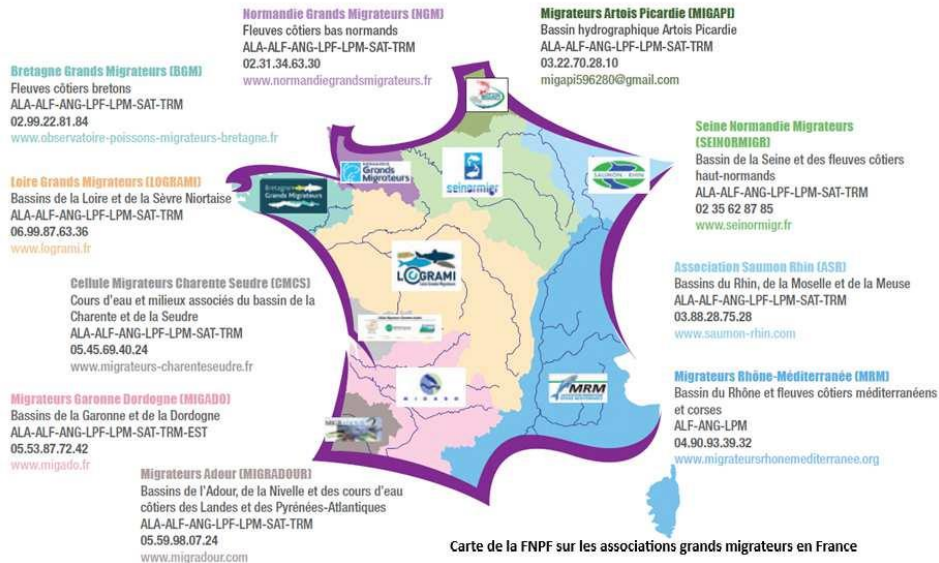
https://youtu.be/doGjskQ_OhQ

https://youtu.be/6S_Mtgw_LXw

<https://youtu.be/dfImATJHJMw>

https://youtu.be/x5aDKAX_n98

3. Seven promotional videos about the salmon life cycle and management of the fish were produced and translated. The main aim of these videos is to help create a greater awareness of the ecological, social, cultural and economic value of salmon. They can also inspire and support a new generation of researchers and managers, and conservationists in line with the IYS objectives. They cover a year in the life of salmon stocks and their management by OFB. <https://www.ofb.gouv.fr/en/international-year-salmon-2019> via the “1. FBA and its partners are carrying out several actions to better understand and preserve Atlantic Salmon (movies)” link in the "online" section.
4. A synthesis was carried out over 2 years. It is available and is entitled: Summary of the state of populations, pressures and management methods of Atlantic salmon in France: https://hal.archives-ouvertes.fr/POLE_MIGRATEURS_AMPHIHALINS/hal-03222495v1.
5. Other actions have been implemented regionally by the French "great migratory associations". The links to their websites are on the map below:



Germany: several water-engineering measures were finalised in the Rhine tributaries in 2021 and further projects are either in the planning or implementation stage. The aims of these measures are to improve habitat quality and migration and to ensure sufficient drainage. These measures might significantly improve migration to known spawning areas, spawning activity, juvenile salmon abundance and the resulting long-term migration of juvenile salmon.

Due to the increasing development of high-quality habitats for salmon in the middle reaches of resettlement waters, as well as descent aids and protection facilities at hydropower plants, stock improvement measures can be relocated to such favourable sections upstream.

The fish passage facility Geesthacht (South) that is mainly used by salmon is going to be reconstructed and optimised until March 2023.

The water-cooling device that was installed in the hatchery Silmersdorf (FARIO e.V.) in 2020 was able to prevent a great amount of the losses that would have been caused by fluctuations in temperature.

Existing groundsills (ca. 4) built from armourstone are going to be converted into gravel-spawning habitats in the river area of Wittenberg in 2022 in the course of river maintenance in accordance with the Saxony-Anhalt flood protection and water management agency.

Portugal: restocking of Atlantic salmon with a view to strengthening the population in the Minho basin. With the support and in collaboration with Spanish entities, in addition to the international section, restocking was also carried out in Portuguese affluent:

- in the international section of the Minho River (9000 juveniles in 2018, 8300 juveniles in 2019 and 9000 juveniles in 2020);
- in the river Mouro (about 5000 in 2018 and 8000 in 2019);
- in the Gadanha river (3000 embryonated eggs in 2019).

Construction of a nature like fish pass in the initial section of the Mouro River, facilitating the crossing of the first significant obstacle to the reproductive migration of Atlantic salmon and also sea trout. This fish passage was constructed in 2021.

The project SALMONLINK (<https://www.salmonlink.uevora.pt>) is in progress. The main objective of this project which gather *contributes of scientists and fishermen to the*

conservation and participatory management of Atlantic salmon populations in Portugal (MAR-01.03. 02-FEAMP-0048)" is the establishment of a network of contacts and partnerships, at national level, between scientists and commercial and recreational fishermen in areas where Atlantic salmon occurs, that allow to increase the knowledge of these populations and, at the same time, in a context of knowledge transfer between the parties, adapt the current fishing legislation to the conservation and management needs of this endangered species.

The SALMONLINK project comprises four complementary actions that aim to:

- create a network that includes scientists, administration entities that manage these resources, and commercial and recreational fishermen who develop their activity in coastal, transitional and freshwater areas where salmon occurs;
- complement the information on salmon catches provided by commercial and recreational fishermen with a set of technical and scientific pilot studies to increase knowledge on the state of salmon populations in Portugal, aspects of their biology and ecology, and the main threats to which they are subjected;
- adapt the current fishing legislation and promote alternative activities in order to make the sustainable use of this resource compatible with its protection and conservation needs, benefiting from the partnership network previously established, combined with a socio-economic and cultural study in the areas of intervention of the operation;
- disseminate the main results of the project and transfer knowledge.

The SALMONLINK project is coordinated by the University of Évora, with the technical-scientific and logistical support of MARE - Centre for Marine and Environmental Sciences.

The partners of the project are:

- “VIANAPESCA, OP – Cooperativa de Produtores de Peixe de Viana do Castelo”;
- “Associação de Profissionais de Pesca do Rio Minho e do Mar (APPRMM)”;
- “Associação Desportiva e Cultural dos Jovens de Longos Vales (ADCJLV)”.

The project is funded by European Funds (EMFF - European Maritime and Fisheries Fund), more specifically by the Operational Program MAR2020.

Besides the SALMONLINK project, Portugal (University of Évora and MARE) is, since 2020, also involved in the SMOLTRACK (<https://www.smoltrack.eu/>), project partnership, promoted by NASCO and involving a set of European partners, focused on the study of salmon smolt migrations.

Spain (Asturias): there is a program to reserve large salmon in season fishing (MSW) for rearing and restocking. Some wild specimens in fishing season have been donated by fishermen for artificial spawning. This measure will continue to be promoted. In the Narcea River, 10% of the salmon caught has been donated for spawning. In addition, a new experience of recovering salmon has started following this artificial spawning, by trying to recover some of this artificial spawning and facilitating a new spawning the following year.

Spain (Galicia): It has been proposed to include an item in the agenda of the next *Comisión Permanente Internacional del río Miño (CPIRM)* on the drafting of a IP for the Miño river between Spain and Portugal. The government of Galicia is not a part of this comission, responsible for the management of this border river, where spanish government is represented by the *Ministerio de Defensa, Comandancia Fluvial del Miño*.

Spain (Navarra):

- 1) This year three more dams have been demolished in the Bidasoa River basin, all three located in tributaries: two in Onin river ("Presa panificadora Lesakarra" coded BI-ON-BO- in the Obstacles Data Base and " Presa del Molino Erdikoerrotta", coded BI-ON-01) and one in Marin river ("Presa del Molino de Ziga" coded BI-MA-UR-01 in the Data Base). Besides, a fish ramp was built in "Colector de Bera".
- 2) The salmon radiotracking scheme started in 2018 is still ongoing. In 2021, 18 adult salmon have been tagged in the lower parts of the Bidasoa river basin when they entered from the sea and were tracked during the upstream migration and return to the sea of the surviving kelts. The analysis of the data gathered in 2021 is still ongoing. All the information gathered through these monitoring schemes will be used by the Government of Navarra in the management of the species with the objective of improving its population size and conservation status.
- 3) Besides, in 2019 a new programme of voluntary donations was implemented with anglers, and during this year the programme continued. Under this programme, on a voluntary basis anglers can donate each captured alive salmon to the Department of Environment to be tagged with a transmitter and released for its monitoring in the river or to be brought to the fish farm of the Government and used as breeder. Two salmon out of the 29 salmon caught in the 2021 angling season (7%) were donated (one 2SW female and one 2SW male) and anglers in all cases decided to bring them to the fish farm. The female survived until the spawning season, and produced around 8,400 eggs. At the moment, the new born fries are growing in the fish farm and will be released in the river in spring under the restocking scheme that the Government of Navarra carries out in Bidasoa River yearly since the 90's. The main objective of this programme is to change the anglers' way of thinking towards a more sustainable angling practice that should lead in the future to the normalization of the "catch and release" angling (no practiced by anglers in the Bidasoa River at the moment), while anglers are involved in the conservation tasks of the species that the Regional Government carries out in Bidasoa River. This results are considered as an important success as the media impact has been quite important and the general public acceptance is also big, which would certainly encourage more anglers to join the initiative in the coming seasons. Since the project was implemented three years ago, a total of 98,000 eggs have been "saved".

Sweden: due to a new legislation requiring modern environmental conditions for hydropower plants a national plan has been decided for the revision of the hydropower plant licenses in environmental courts. The national plan includes 2 100 hydropower plants and will be performed during the period 2022-2042. Planning and preparing have taken place during 2019-2021 and the process in the environmental courts will start in 2022 including eight Atlantic salmon rivers. This process can provide environmental goals for each catchment. The environmental plan for environmental conditions for hydropower will be a significant boost in restoration of river habitats.

United Kingdom

England and Wales: in 2021, new salmon protection byelaws were implemented on the River Severn, which have closed all the remaining salmon net fisheries. New byelaws were also introduced for salmon rod fisheries, which require 100% mandatory catch-and-release and method restrictions to promote the survival of released fish on the Severn, Wye and Usk. These came into force on 1st March 2022. A rod fishery byelaw was implemented on

the River Lune, in 2021, that has made the rod fishery mandatory catch-and-release to conserve salmon stocks.

To build climate change resilience, the Keeping Rivers Cool (KRC) initiative, published an England-wide Vegetation Object Model in 2021 and has nearly completed the KRC 2nd generation shade 'rainbow' map, which will be used to influence the Forestry Commission's woodland grant programme with enhanced payments for riparian tree planting alongside salmonid waters. KRC was show-cased by the Environment Agency at the Glasgow COP26 conference.

The UK Government in England has announced a comprehensive reform of agricultural policy following the BREXIT withdrawal with the Environmental Land Management Scheme (ELMS), which has replaced the EU Common Agriculture Policy. The ELMS places a much greater emphasis on protecting the environment focusing on improving water quality and preventing soil loss with a new subsidy payment system to support more environmentally friendly land management practices.

The UK Government in England have recently consulted on the introduction of European Beaver to river catchments. Management plans are being developed to ensure that future beaver introductions can be adequately managed to limit their impact upon migratory fish populations taking account of best practice from other European countries and pilot projects in Scotland.

Northern Ireland: the success of the EU funded Sea Monitor EU program which has enabled the tracking of salmon smolts from freshwater out to the marine environment.

Scotland: despite the continued impact of the Covid-19 pandemic several new initiatives were established in the reporting period.

The Scottish Government adopted an ambitious [Wild Salmon Strategy \(WSS\)](#), which establishes a national vision and framework for a range of new and ongoing management measures to tackle the multiple pressures that Atlantic salmon face during their life cycle. The strategy reiterates our commitment making a positive contribution to the effective functioning of NASCO and the development and implementation of NASCO resolutions, agreements and guidelines.

The Scottish Government published its [response](#) to the recommendations made by the Salmon Interactions Working Group (SIWG) to address the interactions between wild and farmed salmon in Scotland.

Management of sea lice: the SIWG response appointed the Scottish Environment Protection Agency (SEPA) as the lead body responsible for managing the risk to wild fish from sea lice from fish farms. In December 2021 SEPA issued a consultation on a proposed risk-based framework for managing interaction between sea lice from marine finfish farms and wild Atlantic salmon. The proposed framework will assess new and expanding farms on the risk posed to wild salmon post-smolts as they migrate through defined wild salmon protection zones.

In March 2021 the Fish Farming Businesses (Reporting) (Scotland) Order 2020 came into force. It requires mandatory reporting of average number of female sea lice per fish per fish farm site. The provisions of the Order introduce a change in sea lice reporting, details of which can be found in a [topic sheet](#). The data are published on [Scotland's Aquaculture Website](#) to promote transparency.

The Scottish Government awarded a grant of £400,000 for The West Coast Tracking project (WCTP), to improve understating of the routes salmon smolts take as they leave rivers and

enter the coastal zone. Data collected from Year 1 (2021) of the project showed that upon leaving rivers, salmon smolts disperse widely along the west coast and use many migration routes. Year 2 (2022) will focus on the routes salmon smolts take through sea lochs, with particular emphasis on areas with marine developments, including aquaculture and renewable energy installations. The data from the WCTP will inform the smolt swimming model, which will be used to support the implementation of the proposed SEPA sea lice framework.

Management of farmed escapes: the SIWG response announced a commitment to strengthen controls on fish escapes and to introduce penalties for fish farm escapes with the ultimate aim of ring-fencing or redistributing this money to support wild salmonid conservation and research.

A [Code of Practice](#) covering the Containment of and Prevention of Escape of Fish on Fish Farms in relation to Marine Mammal Interactions was legally adopted in November 2021. We are also revising the Scottish Technical Standard for Finfish Aquaculture, which determines technical requirements for fish farm equipment in order to help prevent escapes of finfish as a result of technical failure and related issues at Scottish finfish farms. Any suspected escape from a fish farm, or circumstances which give rise to a significant risk of escape, must be reported to the Scottish Government immediately. Details of all escape or suspected escape events are [published online](#).

The [Draft National Planning Framework 4](#) (NPF4), which was published in November 2021, sets out how our approach to planning and development will help to achieve a net zero, sustainable Scotland by 2045. Policies on aquaculture aim to minimise its potential impacts on the environment and for example include the policy that further open pen fish farm developments for salmon and seatrout on the north and east coasts of mainland Scotland should not be supported in order to safeguard migratory fish species.

Habitat protection and restoration: Scotland's third [River Basin Management Plans](#) were published by SEPA, on behalf of the Scottish Government, on 22 December 2021. The Plans set out revised objectives for the 2021-2027 period, and the associated work programme aims to ensure that 81% (currently 66%) of Scotland's water bodies achieve a 'good' or better classification by 2027, and continue to improve as natural conditions recover beyond that date. SEPA also receives approximately 4,000 applications each year for new activities or changes to existing activities, and through the Water Environment (Controlled Activities) Scotland Regulations 2011 authorisation process sets conditions to protect the water environment.

United States of America

1. **PLANNING:** In 2021, three geographically specific work plans were completed that identify and prioritise highest priority actions needed to further recovery of Atlantic salmon (Action H3). These plans are intended to guide restoration efforts and funding priorities for Atlantic salmon recovery efforts.
2. **RESTORATION:** In 2021, NOAA-Fisheries provided \$900,000 towards freshwater habitat restoration projects aimed at restoring habitat for endangered Atlantic salmon. Funding was provided in support of 18 road crossing projects and 4 dam projects. <https://www.fisheries.noaa.gov/feature-story/900000-funding-recommended-atlantic-salmon-habitat-restoration> (Action H3). Furthermore, 24 connectivity projects were completed in 2021 improving access to 61 km of rivers and streams. In doing so, these projects restored full connectivity to 123 units of salmon habitat and improved access to another 774 units (where 1 unit = 100m²) (Action H1).

3. **OUTREACH:** In 2021, we created an animated video that highlights the threats Atlantic salmon face and actions that the public can take to protect and restore Atlantic salmon and their ecosystems. The video can be viewed at: https://videos.fisheries.noaa.gov/detail/videos/protected-species_/video/6259928987001/atlantic-salmon-animation?autoStart=true.
4. **REGULATION:** In 2021, We issued regulatory requirements for the Brunswick and Pejepscoot Dams on the Androscoggin River that will require improvements in upstream and downstream passage for Atlantic salmon (Action H2).

2. Changes in Stock Status and Catch Statistics

The catch statistics and information on unreported catches and on catch and release are presented in Annex 1 using the information provided in the APRs and, in the case of Denmark (in respect of the Faroe Islands and Greenland) – Faroe Islands which has not submitted an APR at the time of writing, the catch has been estimated at 0 t in line with previous years. The provisional catch for 2021 (600.6 t) is significantly lower than the catch in 2020 (826.8 t). Incomplete information is available on the extent of catch and release fishing and unreported catches.

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

The following information was provided:

Canada

No new factors affecting salmon abundance have been identified. Status of Atlantic salmon in eastern Canada is as described in the Implementation Plan; stocks from the northern regions (Quebec, Newfoundland, Labrador) are faring better than stocks in southern regions (Nova Scotia, New Brunswick, Prince Edward Island). Recreational fisheries in the southern regions are either closed or, where permitted, recreational fishing is restricted to catch and release only. Indigenous communal fisheries are permitted in all areas subject to conservation requirements, although not all have elected to pursue such fisheries.

European Union

Denmark: no important changes, angler catch and stock assessments were much in line with earlier years.

Finland: despite the reduced exploitation rates in the River Teno fishery since 2017, salmon stocks showed even worse status in 2020. Likely explanations for this development include increased natural mortality factors in different life stages of salmon. As a response to this poor development, no salmon fishing was allowed 2021 in the Teno river and in nearby coastal areas in Norway. Fishing ban led to significant increase in spawning stocks in different salmon populations. The 2021 salmon catch consists of catches from the River Näätamöjoki only.

Germany: in 2021, only 173 salmon along with little natural spawning activities were registered in the Rhine catchment. This was the lowest number of records since the 1990s. At least for the Lower Rhine, low discharges in autumn could have attributed to the low number of returning adult salmon. Furthermore, the numbers for the fish pass Iffezheim in the Upper Rhine (usually one of the highest numbers in the basin) for 2021 are only estimations since video monitoring has not (yet) been evaluated. In 2021, 1,837,183 young

salmon were introduced in suitable tributaries by stocking measures in the whole catchment area of the Rhine.

Low levels of rainfall and drainage in the summer months up until the upstream migration season between 2018 and 2020 and the low oxygen levels in parts of the Elbe (around Hamburg) that were connected to this might have had a long-term negative impact on the migration patterns of salmon. In 2021, the precipitation levels increased, but it is not clear yet if this affected migration performance.

The accessibility of spawning and juvenile fish habitats is continuously compromised by beaver activity, which is increased by the abundance of energy crop fields near waterbodies.

A male pink salmon (*Oncorhynchus gorbuscha*) was caught in the lower course of the Elbe. Captures of pacific salmon species are increasing.

Due to the current decrease in passability of the Geesthacht barrage, negative impacts on the development of salmon projects are expected.

Ireland: the catch advice for the 2021 fishery was that 48 rivers had an advised harvestable surplus as they were exceeding their conservation limits (CL). A further 32 rivers could open for catch and release-only (C&R-only) fishing based on exceeding a minimum fry threshold (≥ 15 salmon fry/5 minute electro-fishing average) in catchment-wide electrofishing surveys or based on Inland Fisheries Ireland (IFI) management criteria that they met 50% or over of their CL but did not exceed their CL. 64 river systems were advised to be closed for fishing as they did not exceed the management criteria, minimum fry threshold or there was insufficient information for full stock assessment. A separate assessment was made for 16 rivers with significant multi-sea-winter (MSW) salmon stocks. Of these, 11 had an advised harvestable surplus as they were exceeding their CL and five were advised to open for C&R-only fishing. In addition, four river systems used for hydropower were assessed as being below their CL as in preceding years.

The catch advice for the 2022 fishery which is based on stock status in the preceding five-year period including 2021 is that 48 rivers have a harvestable surplus, 32 rivers should be C&R-only fisheries and 64 rivers should be closed to fishing based on the same criteria outlined above.

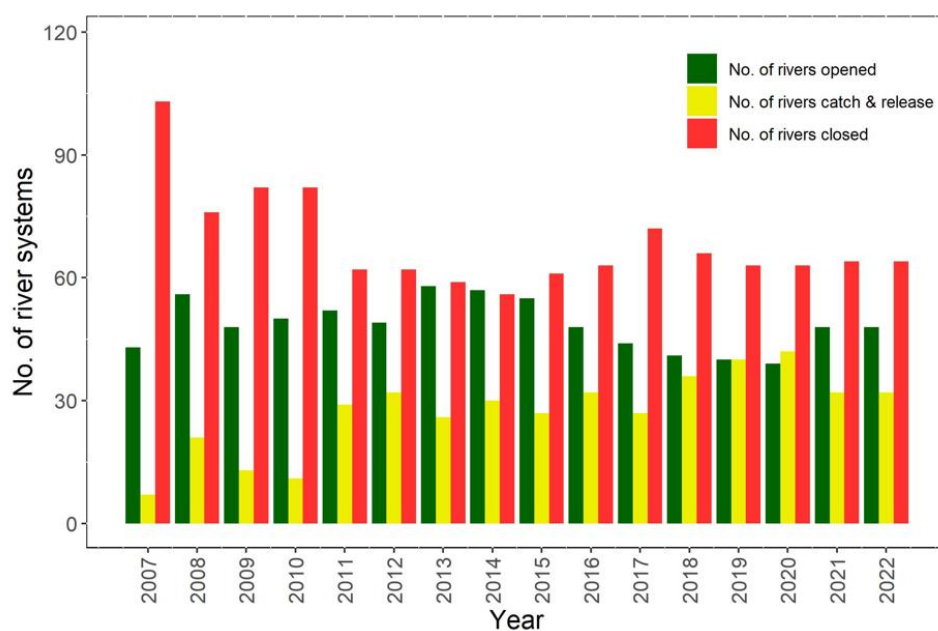


Figure. Scientific stock assessments for catch advice in Irish salmon fisheries (2007 to 2022)

Portugal: no information gathered due to the fishing restriction of salmon on inland waters.

Spain (Asturias): no important changes. New "fishing Cotos" (preserved areas) have been created, in Nalón river, which implies a regulation of maximum daily catches.

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Catch number	247	1045	1301	837	1210	1094	1138	498	601	834	858	526

Spain (Galicia): 2021 was a very dry year in Galicia, affecting timing of salmon runs and catches. Spawners in the traps were very scarce, affecting to the hatchery stock available for stocking in next years. Spawning might have been affected too, with the redds very exposed to predators and to water level oscillations.

Spain (Navarra): there have not been new factors that may affect the abundance of salmon stocks since last year. Since the development of the Implementation Plan, several barriers have been removed and as a result, there seems to be an improvement on the colonisation rate of the basin by the migrating spawners, as they seem to reach further, faster and in greater numbers to the upper areas of the Bidasoa River basin, where they were seldom seen in the past. The size of the stock varies among years, but on average, it seems to remain around 400-420 spawners. However, in 2021 a minimum of 210 adult salmon entered the Bidasoa River, less than expected but still under the natural population oscillations.

Sweden: stock status reduced compared to 2019 (3 out of 23 stocks assessed in 2021 was in good productive capacity). No catch was recorded from commercial fishing on the coast (7th 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. Out of 24 rivers with salmon 7 rivers reported no harvest of salmon in 2021.

Norway

The state of 449 Norwegian Atlantic salmon populations has been reclassified, using data from the period 2015-2019. The impact from different human activities is also determined. Only 21% of the populations were in a good or very good state, 37 % in a moderate state, and 38 in a poor or very poor state. Escaped farmed salmon, salmon lice and infections related to fish farming are the greatest anthropogenic threats to Norwegian wild salmon. The present mitigation measures are insufficient to stabilize and reduce these threats.

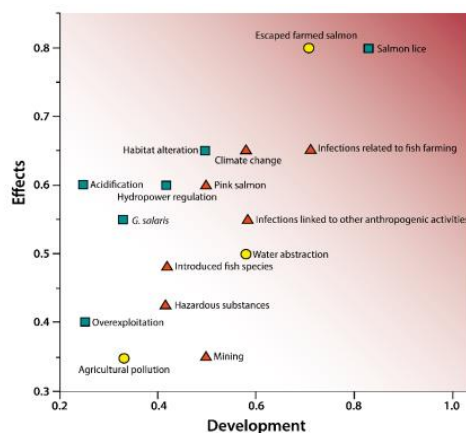


Figure. Ranking of 16 impact factors considered in 2021, according to their effects on wild Atlantic salmon populations and the likelihood of a further negative development. The knowledge of each impact factor and the uncertainty of further development is indicated by the colour of the markers. Green squares=Extensive knowledge and small uncertainty, yellow circles=moderate knowledge and moderate uncertainty, and red triangles=poor knowledge and high uncertainty (SACAS)

Invasive pink salmon is a new threat, and there is need for national and international measures to reduce the risk of negative impacts on native salmonids. The occurrence of invasive pink salmon in Norwegian rivers increased significantly in 2017, 2019 and 2021 compared to earlier years.

Russian Federation

Pink salmon is a non-native species for the Atlantic salmon waters. Its introduction to the European North of Russia was started in 1956. Before 2021, numerous ascends of pink salmon were recorded in the White Sea rivers only, whereas in the Barents Sea rivers the abundance of adults was modest. In Russia pink salmon was also registered east of the Kola Peninsula in the rivers flowing into the Barents and the Kara seas. Currently the Taymyr Peninsula appears to be a natural border that divides pink salmon populations in the native and new ranges of the species.

Since the 1960s, fisheries for pink salmon in the Northwest Russia have been conducted in coastal waters and rivers of the White Sea and up to the 2000s pink salmon harvests exceeded 100 t only four times (1973, 1975, 1977 and 1997). It was in 2001 when a nominal catch exceeded 300 t for the first time. The declared pink salmon catch in 2021 was 715 t, the record catch in the time series (Figure).

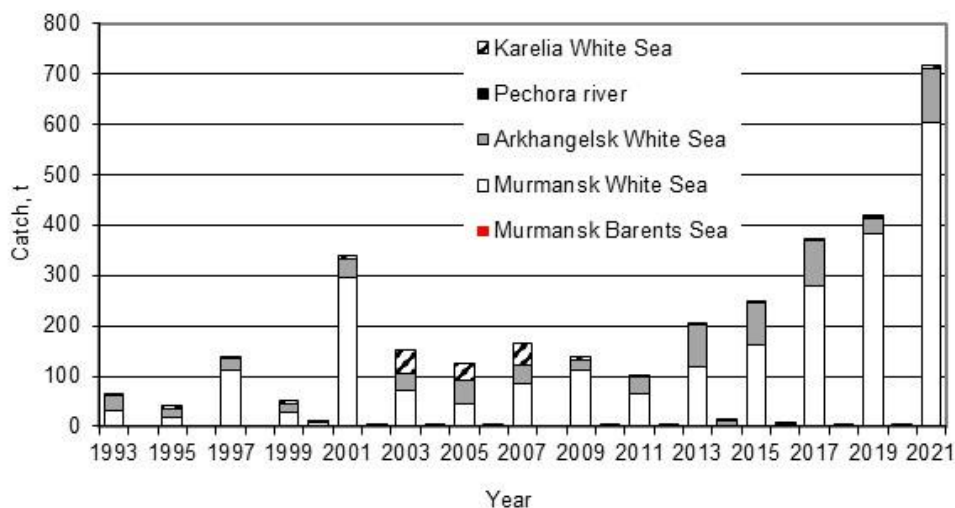


Figure. Nominal catches of pink salmon in the Northwest Russia by regions

Despite the current lack of convincing evidence of the negative impact of pink salmon on the reproduction of Atlantic salmon, unlimited exploitation of this species in all types of fisheries was recommended (Alekseev *et al.*, 2019).

Alekseev, M. Yu., Tkachenko, A. V., Zubchenko, A. V., Shkatelov, A. P., Nikolaev, A. M. 2019. Distribution, spawning and the possibility of fishery of introduced pink salmon (*Oncorhynchus gorbusha* Walbaum) in rivers of Murmansk Oblast. Russian Journal of Biological Invasions, 10(2): 09-117.

United Kingdom

England and Wales: in 2021, the provisional salmon rod catch in E&W was the lowest on record. There were periods of prolonged dry weather across much of E&W, which produced difficult conditions for angling. Salmon stocks are in an increasingly critical state when assessed against Conservation Limits (CLs) (see Action F1) with 91% of principal salmon rivers in E&W projected to be assessed as At Risk or Probably At Risk by 2026 if recent trends continue. The state of E&W salmon populations reflects the increasingly

stressful environmental conditions in fresh, transitional and marine waters impacting on salmon most notably from climate change, diffuse pollution, habitat quality and barriers to migration. Though pink salmon were expected in numbers in 2021, as they are odd year spawners, very few were observed with 26 reported captured.

Scotland: as in 2020, the Covid-19 pandemic had a negative impact on Scottish salmon fisheries during the 2021 season through restrictions on national and international travel between January and April. Information collected by Marine Scotland on fishing effort shows a decrease in effort during January to April 2021 compared to the same months in 2019 (the last year not impacted by Covid-19 restrictions). This decrease in effort is likely to have contributed to lower than expected catches and makes comparisons with previous years challenging. Low water in the late summer and autumn will also have led to a reduction in effort, and catches, in some areas. Although both the decrease in effort due to Covid-19 and reduced flow are accounted for in the stock assessments (Action F1-1 of the Scottish APR) it does further complicate among year comparisons of catches.

United States of America

Provisionally, there were 680 adult returns to U.S. waters in 2021. This count includes 676 returns to the GOM DPS; 0 to the Central New England complex; and 4 to the Long Island Sound complex.

3. Implementation Plan Actions

Details of progress against the actions included in individual Implementation Plans is reported in the Annual Progress Reports for each jurisdiction and will be evaluated and summarised by the Review Group in its report (CNL(22)16) which will be made available on the [NASCO website](#).

4. Additional information required under the Convention

4.1 Details of any laws, regulations and programmes that have been adopted or repealed since the last notification

Canada

As part of its commitment under Canada's Species at Risk Act, in 2021 Canada published its Report on the progress of recovery strategy implementation for the period 2010-2015.

In April 2021, Nova Scotia released their Containment Management Framework to supplement the containment management section of an aquaculture licence holder's Farm Management Plan (FMP). The Framework outlines the infrastructure and procedures needed for containment management; reporting procedures for suspected or confirmed breaches of containment; and the marking specifics used to effectively identify the ownership of any farmed salmon detected outside of a fish farm enclosure.

In 2021, the Province of Newfoundland and Labrador update *The Code of Containment for the Culture of Salmonids in Newfoundland and Labrador* to expand on the requirements for net storage, net testing reporting and auditing. The updates include new requirements on net test timing and the storage of nets in a biosecure manner. The 2021 Code also requires all new salmon net pen operations to demonstrate marine site cage system components and installations meet ISO or certified third-party engineering standards. Written documentation is required from the manufacturer outlining construction materials, strength of the system, and information regarding the environment in which the system has been successfully deployed. By 2024, all marine sites will be required to meet this standard.

These additional updates will help further mitigate the possibility of breaches of containment in Newfoundland and Labrador.

Denmark (in respect of the Faroe Islands and Greenland)

Greenland: a new Executive Order on fishery for salmon was adopted in 2021, limiting the reporting deadline to 14 days after the closure of the fishing season. Three management areas with fixed fishing season were introduced. The quota is given in accordance with a distribution key and is divided between the two management areas in West Greenland. Professional fishermen are restricted to use a maximum of 20 nets. All other restrictions remain. The Management Plan for Atlantic Salmon in Greenland was finished in 2021, prior to the fishing season.

European Union

Finland: two Government decrees published. All salmon fishing banned in 1) River Teno-Anarjohka border area and 2) tributaries of River Teno. Decrees valid for year 2021.

Portugal: Decree-Law No. 565/99 of 21 December was replaced by Decree-Law No. 92/2019 of 10 July, which establishes the legal regime applicable to the control, detention, introduction into the wild and repopulation of exotic species.

The details are already described in action A2 of the APR for Portugal.

The Fishing Notices of the Professional Fishing Zone of the Lima River and the Professional Fishing Zone of the Cávado River have been published.

The details and possible impacts on salmon are described in action F5 of the APR for Portugal.

Spain (Asturias): there are no big changes. The annual regulation for salmon fishing includes a prohibition in certain periods of some fishing gear to reduce extraction.

Spain (Galicia): *Ley 2/2021, de 8 de enero, de pesca continental de Galicia* has replaced the old *Ley 7/1992, de 24 de julio, pesca fluvial*, with no relevant changes for salmon populations.

Spain (Navarra): Annually, a regional law (Orden Foral de Vedas) regulates salmon fishing: defines the Authorized Total Catch (TAC) in the season, the closing date (if the TAC has not been reached before), MSW protection measures, fishing calendar, minimum size, baits, hooks, etc. In 2021 the regional law was OF 66E/2021.

As explained before, the radiotracking monitoring programme started in 2018 and the voluntary donations programme in 2019. Both continued in 2021 and it is expected they will also continue at least during 2022.

The Government of Navarre, together with other partners, has submitted a new LIFE project proposal (LIFE KANTAUERIBAI) targeting the improvement of Atlantic Salmon (among other species) in the river catchments of the project area (Gipuzkoa, Navarre and Aquitaine). Foreseen actions related to salmon improvement include removal of obstacles, establishment of automatic monitoring stations, quantification of fish mortality by hydropower plants, solutions to avoid fish entering the canals of the hydropower plants, evaluation of the permeability of obstacles, radiotracking and establishment of an international Bidasoa Salmon Working Group, to share salmon related information with our Gipuzkoan and French colleagues. If the proposal is not selected to be financed this year, the Government of Navarre is decided to try again in the next call, taking advantage

of the synergies of joint work that have been established between all the authorities and stakeholders involved in Salmon conservation in the area.

Russian Federation

Revised Fishing Regulations for the Northern Fisheries Basin came in force in 2021 by the order of the Ministry of Agriculture of the Russian Federation No. 292 of 13/05/2021.

Existing fisheries regulation measures for salmon conservation and management were revised and new measures were introduced. The current restrictions on Atlantic salmon fishing include:

- the ban on salmon fishing in the Barents Sea;
- the ban on Atlantic salmon fishing in certain areas of the White Sea;
- the ban on salmon fishing in certain areas and periods for coastal and inland fisheries;
- the ban on net fisheries in certain areas and periods for coastal and inland fisheries;
- the ban on all fisheries closer than 500 m to salmon river outlets;
- the ban on ice-fishing in certain areas of the White Sea rivers with autumn run salmon stocks;
- the ban on Atlantic salmon by-catch.

Veterinary rules for keeping fish and other aquatic animals in an artificially created habitat for the purpose of their breeding, rearing, sale and acclimatization were developed and came in force in 2021 by the order of the Ministry of Agriculture of the Russian Federation No. 782 of 23/12/2020.

Rules for establishing coastlines (boundaries of water bodies) and (or) boundaries of parts of water bodies, areas of the continental shelf of the Russian Federation and areas of the exclusive economic zone of the Russian Federation recognized as aquaculture areas adopted by the Decree of the Government of the Russian Federation No. 1183 of 11/11/2014 were revised in 2021. The procedure of establishing the boundaries of aquaculture areas in the Northern fisheries basin was changed and became the same as for the Far Eastern fishery basin. Measures for salmon conservation in the Northern fisheries basin now include the ban on establishing boundaries of aquaculture areas closer than 2 km to salmon river outlets and a minimal distance of 5 km between boundaries of aquaculture areas.

United Kingdom

Scotland: the Scottish Wild Salmon Strategy establishes national vision and framework for a range of new and ongoing management measures to tackle the multiple pressures that Atlantic salmon face during their life cycle.

Scotland and Solway-Tweed River Basin Management Plans set out a range of actions to address water quality, physical condition, water resources, and the migration of wild fish.

The Conservation of Salmon (Scotland) Amendment Regulations 2021 establishes the areas of inland waters where there is a prohibition on the retention of any salmon caught.

The Fish Farming Code of Practice (Scotland) Order 2021 adopts the Code of Practice on the Containment of and Prevention of Escape of Fish on Fish Farms in relation to Marine Mammal Interactions.

Fish Farming Businesses (Reporting) (Scotland) Order 2020 from March 2021 requires mandatory reporting of average number of female sea lice per fish per fish farm site.

4.2 Details of any new commitments concerning the adoption or maintenance in force for specified periods of time of conservation, restoration and other management measures

Canada

Through 2021, the Province of New Brunswick developed a Finfish Aquaculture Growth Strategy, which encompasses themes that support NASCO commitments and will be implemented in 2022. For example, this Strategy will include support for land-based aquaculture, in particular land-based “post-smolt” facilities, which will help mitigate potential farmed and wild fish interactions. Another theme of the Strategy will help to further enhance fish health management, which will include support for research and tools to reduce sea lice loads in farmed fish.

DFO requested advice through the Canadian Science Advisory Secretariat for the development of a risk assessment framework to inform decisions on stocking of wild Atlantic salmon. Advice is anticipated during 2022 and will support the development of a stocking policy.

Denmark (in respect of the Faroe Islands and Greenland)

Greenland: the work initiated in 2020 on a management plan and corresponding Executive Order was finished in 2021.

European Union

France: new plagépomis, see 1.2 above.

Spain (Asturias): new ‘fishing Cotos’ have been created, which implies a regulation of maximum daily catches.

Spain (Cantabria):

1. Increase of river sections in which the opening of recreational angling is delayed to protect smolts:
 - Río Miera 1.1 km
 - Río Nansa 24.7 km
 - río Vendul 3.3 km
 - Río Lamasón 7.4 km
 - Río Quivierda 4.2 km
 - Río Quiviesa: 2.2 km
 - Río Bullón: 1.1 km
2. Increase of a catch-and-release section in the Quiviesa river (2.2 km).

Spain (Navarra): the Salmon Working Group in Spain, re-established in 2019, is expected to enable the exchange of information between all competent authorities and the establishment of synergies that may lead to further improvements in species management in the country.

4.3 Details of any new actions to prohibit fishing for salmon beyond 12 nautical miles

Spain (Asturias): salmon fishing is prohibited beyond 12 nautical miles. Also in estuaries and coasts. It is only allowed in rivers with a rod.

4.4 Details of any new actions to invite the attention of States not Party to the Convention to matters relating to the activities of its vessels which could adversely affect salmon stocks subject to the Convention

Canada

Canada continued to engage with France about the status of their plans to limit the total catch per recreational license in Saint Pierre and Miquelon (SPM), and encouraged France to accede to the NASCO Convention. This was done as part of the annual meeting of the North American Commission, as well as in separate bilateral discussions in March 2021.

European Union

Spain (Asturias): it would be important to monitor issues of marketing of salmon caught in the sea.

4.5 Details of any actions taken to implement regulatory measures under Article 13 of the Convention including imposition of adequate penalties for violations

None reported.

North American Commission Members only

4.6 Details of any new measures to minimise by-catches of salmon originating in the rivers of the other member

Canada

None, other than those noted in the other responses.

4.7 Details of any alteration to fishing patterns that result in the initiation of fishing or increase in catches of salmon originating in the rivers of another Party except with the consent of the latter

No details reported.

Secretariat
Edinburgh
28 April 2022

Table 1. Official Catch Statistics¹

	Provisional 2021 catch				Confirmed 2020 catch			
	In-River	Estuarine	Coastal	Total	In-River	Estuarine	Coastal	Total
Canada	50.9	45.1	6.7	102.7	50.3	45.0	7.6	102.9
Denmark (in respect of Faroe Islands and Greenland)								
Faroe Islands ¹	0	0	0	0	0	0	0	0
Greenland	0	0	40	40	0	0	30.7	30.7
European Union	78.4	20.1	0	98.5	78.6	21.0	0.1	99.7
Norway	197.0	-	98	295.0	312.0	-	215.0	527.0
Russian Federation	31.6	0	17.3	48.8	32.4	0	16.4	48.8
UK	13.0	2.6	0	15.6	15.1	2.6	0	17.7
USA	0	0	0	0	0	0	0	0
TOTAL	370.9	67.8	162	600.6	488.4	68.6	269.8	826.8

¹ At the time of writing, Denmark (in respect of the Faroe Islands and Greenland) – Faroe Islands has not submitted catch statistics to NASCO. Catch statistics are not yet available from ICES at the time of writing. We have, therefore, assumed that the catch at the Faroe Islands remains at 0 t in line with previous years.

Table 2. Catches of Atlantic Salmon by the Parties to the NASCO Convention¹

	Canada	Denmark (Faroe Islands and Greenland)²	European Union³⁴	Finland	Norway	Russian Federation	Sweden	UK⁴	USA
1960	1636	60	2641		1576	1100	40	-	1
1961	1583	127	2276		1456	790	27	-	1
1962	1719	244	3894		1838	710	45	-	1
1963	1861	466	3842		1697	480	23	-	1
1964	2069	1539	4242		2040	590	36	-	1
1965	2116	861	3693		1900	590	40	-	1
1966	2369	1338	3549		1823	570	36	-	1
1967	2863	1600	4492		2058	883	25	-	1
1968	2111	1167	3623		1752	827	150	-	1
1969	2202	2350	4407		2083	360	76	-	1
1970	2323	2354	4069		1861	448	52	-	1
1971	1992	2511	3745		1847	417	35	-	1
1972	1759	2146	4261	32	1986	462	38	-	1
1973	2434	2402	4604	50	2126	772	73	-	3
1974	2539	1945	4432	76	1973	709	57	-	1
1975	2485	2086	4500	76	1754	811	56	-	2
1976	2506	1479	2931	66	1530	542	45	-	1
1977	2545	1652	3025	59	1488	497	10	-	2
1978	1545	1159	3102	37	1050	476	10	-	4
1979	1287	1694	2572	26	1831	455	12	-	3
1980	2680	2052	2640	34	1830	664	17	-	6
1981	2437	2602	2557	44	1656	463	26	-	6
1982	1798	2350	2533	83	1348	364	25	-	6
1983	1424	1433	3532	79	1550	507	28	-	1
1984	1112	997	2308	75	1623	593	40	-	2
1985	1133	1430	3002	49	1561	659	45	-	2
1986 ³	1559	1490	3524	38	1597	608	53	-	2
1987	1784	1539	2593	49	1385	559	47	-	1
1988	1311	1136	2833	34	1076	419	40	-	1
1989	1139	701	2450	52	905	359	29	-	2
1990	912	542	1645	59	930	316	33	-	2
1991	711	533	1139	69	877	215	38	-	1
1992	520	260	1506	77	867	166	49	-	1
1993	373	35	1483	70	923	140	56	-	1
1994	355	18	1919	48	996	141	44	-	0

	Canada	Denmark (Faroe Islands and Greenland)²	European Union³⁴	Finland	Norway	Russian Federation	Sweden	UK⁴	USA
1995	259	86	1852	-	839	130	-	-	0
1996	290	92	1474	-	787	131	-	-	0
1997	229	59	1179	-	630	111	-	-	0
1998	157	17	1183	-	740	130	-	-	0
1999	152	19	1016	-	811	102	-	-	0
2000	153	29	1336	-	1176	124	-	-	0
2001	148	42	1407	-	1267	114	-	-	0
2002	148	9	1245	-	1019	118	-	-	0
2003	141	9	1012	-	1071	107	-	-	0
2004	161	15	978	-	784	82	-	-	0
2005	139	14	884	-	888	82	-	-	0
2006	132	23	703	-	931	91	-	-	0
2007	112	25	453	-	767	63	-	-	0
2008	158	26	444	-	807	73	-	-	0
2009	126	26	327	-	595	71	-	-	0
2010	146	38	496	-	642	88	-	-	0
2011	179	28	510	-	696	89	-	-	0
2012	126	33	403	-	695	82	-	-	0
2013	137	47	382	-	476	78	-	-	0
2014	118	58	313	-	490	81	-	-	0
2015	140	58	289	-	585	80	-	-	0
2016	135	27	257	-	612	56	-	-	0
2017	110	28	223	-	667	47	-	-	0
2018	79	40	178	-	594	80	-	-	0
2019	100	29	116	-	513	57	-	20	0
2020	103	31	100	-	527	49	-	18	0
2021	103	40	99	-	295	49	-	16	0

¹Figures since 1986 are the official catch returns to NASCO. At the time of writing, Denmark (in respect of the Faroe Islands and Greenland) – Faroe Islands has not submitted catch statistics to NASCO for 2021. Catch statistics are not yet available from ICES at this stage. We have, therefore, assumed that the catch at the Faroe Islands remains at 0 in line with previous years. ²The catch for Denmark (in respect of the Faroe Islands and Greenland) includes the catch for Greenland when it was a member of the European Union and the catches up to 1983 by Denmark. ³The European Union catch from 1995 includes the catches by Finland and Sweden. ⁴The European Union catch includes UK catch until 2018. From 2019 the UK catch is shown separately.

Table 3. Catch and release¹

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Canada	49,279	42,820	58,000	47,892	58,300	77,641	50,811	59,207	39,534	64,159	69,950	49,513	50,184	60,636	59,627	55,867
Denmark (Faroe Islands and Greenland)	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0 ²
European Union ³	62,812	82,977	81,301	71,133	115,065	99,086	97,499	74,445	53,985	68,986	74,504	73,155	61,648	69,409	18,483	15,183
Norway	0	0	5,512	6,696	15,041	14,303	18,611	15,912	20,229	25,433	25,206	25,876	22,024	20,675	28,753	21,356
Russian Federation ⁴	33,380	44,341	41,881	-	14,585	-	4,743	3,732	8,479	7,028	10,793	10,110	10,799	12,762	9,508	10,727
United Kingdom ⁵	-	-	-	-	-	-	-	-	-	-	-	-	-	54,061	59,736	9,278
United States ⁶	424	-	61	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes. ¹For catch and release figures for the years 2000 – 2005, please see Table 3 in document [CNL\(19\)13](#). ²At the time of writing, Denmark (in respect of the Faroe Islands and Greenland) – Faroe Islands has not submitted catch statistics to NASCO for 2021. Catch statistics are not yet available from ICES at the time of writing. We have therefore assumed that the catch at the Faroe Islands remains at 0 t in line with previous years ³Not all EU Member States provide complete information on catch and release. ⁴Since 2009, there has been no obligation to report fish caught and released in the Russian Federation. ⁵The European Union catch includes the UK figures until 2018. From 2019 the UK figure is shown separately; however, the figure is incomplete for 2021 as one region did not report. ⁶In the U.S., no sea-run salmon are subject to recreational fishing but small recreational fisheries occur on domestic broodstock in the Naugatuck and Shetucket Rivers in Southern New England (and on the Merrimack until the close of the 2018 season); these rivers are outside the geographic range of endangered Atlantic salmon.

Table 4. Unreported catches

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Canada	56	-	21	-	18	29	31	24	21	25	27	27	24	12	13	20
Denmark (Faroe Islands and Greenland)	11	12	10	5	12.3	10	10	10	10	10	10	-	-	6	6	8
European Union	95	72	54	47	70	71	59	57	38	41	22	23	17	16	10	9
Norway	299- 499	247- 411	260- 432	166- 338	206- 344	298	298	204	210	250	262	285	263	219	225	126
Russian Federation	70-103	25-77	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UK	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2
USA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes. For unreported catch figures for the years 2000 – 2005, please see Table 4 in document [CNL\(21\)18](#). The information for Canada for some years is incomplete as not all administrative regions have provided estimates in all years. Further details can be found in the Annual Progress Reports themselves. Not all EU Member States provide an estimate of unreported catch. The UK estimate is included in the EU estimate until 2018. From 2019 the UK estimate is shown separately. No estimate has been provided by the Russian Federation since 2008. Information for Denmark (in respect of the Faroe Islands and Greenland) is incomplete for some years as Faroe Islands has not provided an estimate in all years.