North Atlantic salmon (*Salmo salar*) stocks

Introduction

Main tasks

ICES approved the Terms of References for the Working Group on North Atlantic Salmon (WGNAS, chaired by Alan Walker, UK) to meet in Rennes, France from 17–27 March 2025 to consider questions posed to ICES by the North Atlantic Salmon Conservation Organization (NASCO) (2024/AT/FRSG19).

The table below identifies the sections of the report (ICES, 2025) that provide response to the questions posed by NASCO in the Terms of Reference (ToR).

ToR	Question	Section
1	With respect to Atlantic salmon in the North Atlantic area:	sal.oth.all
1.1	provide an overview of salmon catches and landings by country, including unreported catches and catch and release, and production of farmed and ranched Atlantic salmon in 2024[1];	
1.2	report on significant new or emerging threats to, or opportunities for, salmon conservation and management[2];	
1.3	provide a compilation of tag releases by country in 2024;	
1.4	identify relevant data deficiencies, monitoring needs and research requirements;	
2	With respect to Atlantic salmon in the Northeast Atlantic Commission area:	sal.neac.all
2.1	describe the key events of the 2024 fishery[3];	
2.2	review and report on the development of age-specific stock conservation limits, including updating the time-series of the number of river stocks with established CLs by jurisdiction;	
2.3	describe the status of the stocks, including updating the time-series of trends in the number of river stocks meeting CLs by jurisdiction;	
3	With respect to Atlantic salmon in the North American Commission area:	sal.nac.all
3.1	describe the key events of the 2024 fishery (including the fishery at St Pierre and Miquelon)[3];	
3.2	update age-specific stock conservation limits based on new information as available, including updating the time-series of the number of river stocks with established CLs by jurisdiction; and,	
3.3	describe the status of the stocks, including updating the time-series of trends in the number of river stocks meeting CLs by jurisdiction;	
4	With respect to Atlantic salmon in the West Greenland Commission area:	sal.wgc.all
4.1	describe the key events of the 2024 fishery[3];	
4.2	describe the status of the stocks[4];	
5	Generic ToRs	

[1] *With regard to ToR 1.1, for the estimates of unreported catch the information provided should, where possible, indicate the location of the unreported catch in the following categories: in-river; estuarine; and coastal. Numbers and weight of salmon caught and released in recreational fisheries should be provided.*
[2] *With regard to ToR 1.2, ICES is requested to include reports on any significant advances in understanding of the biology of Atlantic salmon that is pertinent to NASCO.*
[3] *In the responses to ToRs 2.1, 3.1 and 4.1, ICES is asked to provide details of catch, gear, effort, composition and origin of the catch and rates of exploitation. For homewater fisheries, the information provided should indicate the location of the catch in the following categories: in-river; estuarine; and coastal. Information on any other sources of fishing mortality for salmon is also requested. For ToR 4.1, if any new surveys are conducted and reported to ICES, ICES should review the results and advise on the appropriateness of incorporating resulting estimates into the assessment process.*
[4] *In response to ToR 4.2, ICES is requested to provide a brief summary of the status of North American and North-East Atlantic salmon stocks. The detailed information on the status of these stocks should be provided in response to ToRs 2.3 and 3.3.*

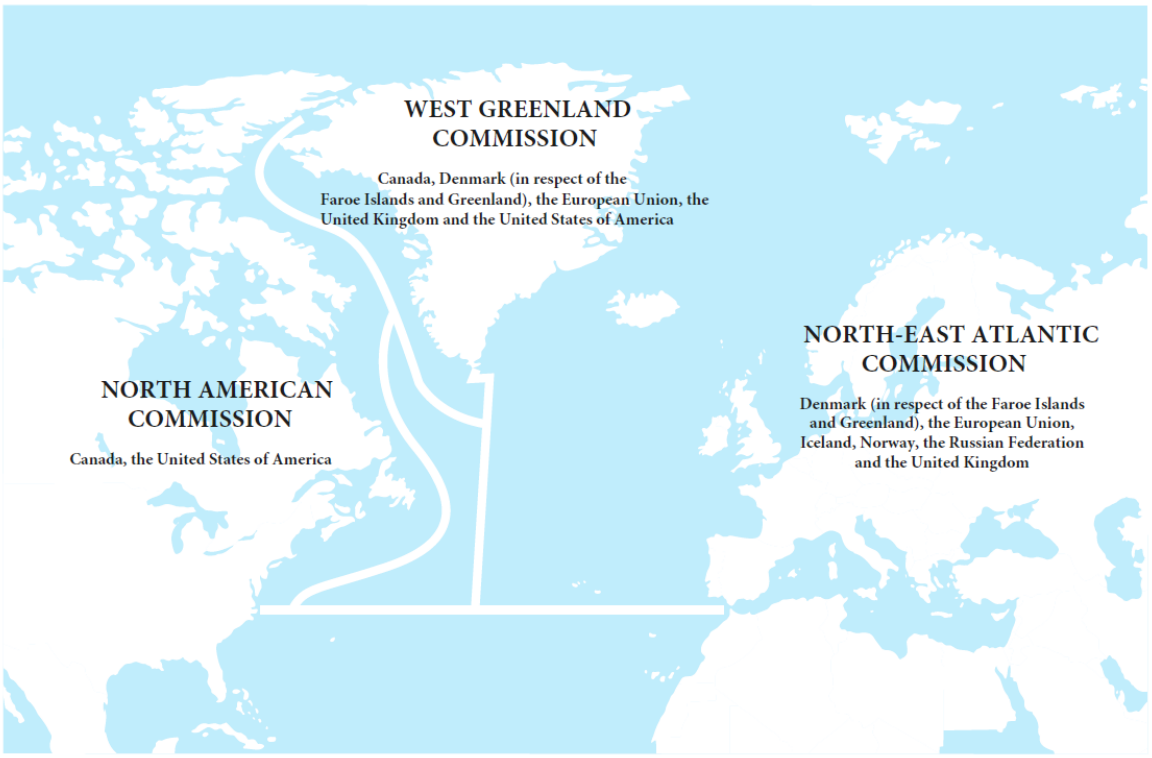
In response to the ToRs, the ICES Working Group on North Atlantic Salmon (WGNAS) considered 21 working documents. A complete list of acronyms and abbreviations used in this advice is provided in Annex 2.

Please note that for practical reasons, several tables (A1.1–A1.4) are provided in Annex 1.

Management framework for Atlantic salmon in the North Atlantic

This advice has been generated by ICES in response to the request for advice posed by NASCO, pursuant to its role in international management of Atlantic salmon. NASCO was set up in 1984 by international convention (the Convention for the Conservation of Salmon in the North Atlantic Ocean) with a responsibility for the conservation, restoration, enhancement, and rational management of wild Atlantic salmon in the North Atlantic. Although sovereign states retain their role in the regulation of Atlantic salmon fisheries for Atlantic salmon originating in their own rivers, distant-water Atlantic salmon fisheries – such as those at Greenland and the Faroes which take Atlantic salmon originating in rivers of another Party – are regulated by NASCO under the terms of the Convention. NASCO now has eight Parties that are signatories to the Convention, including the EU, which represents its Member States.

NASCO's three commission areas – the North American Commission (NAC), the West Greenland Commission (WGC), and the North East Atlantic Commission (NEAC) – are shown in the map below. The islands of St Pierre and Miquelon, located off the southern coast of Newfoundland, are not members of the NAC, but France (in respect of St Pierre and Miquelon) participates as an observer to NASCO. The mid-Atlantic area is not covered by any of the three NASCO commissions; however, under Article 4 of its Convention, NASCO provides a forum for consultation and cooperation on matters concerning the Atlantic salmon stocks in this area.



Management objectives

NASCO's objective is:

"..to contribute through consultation and co-operation to the conservation, restoration, enhancement and rational management of salmon stocks… taking into account the best scientific evidence available…".

NASCO further states that "the Agreement on the Adoption of a Precautionary Approach states that an objective for the management of salmon fisheries is to provide the diversity and abundance of salmon stocks", and the organization's Standing Committee on the Precautionary Approach interprets this as being "to maintain both the productive capacity and diversity of salmon stocks" (NASCO, 1998).

NASCO's Action Plan for Application of the Precautionary Approach (NASCO, 1998) provides an interpretation of how this is to be achieved:

> "Management measures should be aimed at maintaining all stocks above their conservation limits by the use of management targets".
>
> "Socio-economic factors could be taken into account in applying the precautionary approach to fisheries management issues".
>
> "The precautionary approach is an integrated approach that requires, *inter alia*, that stock rebuilding programmes (including as appropriate, habitat improvements, stock enhancement, and fishery management actions) be developed for stocks that are below conservation limits".

Basis of reference points and application of precaution

Atlantic salmon have characteristics of short-lived fish stocks. Mature abundance is sensitive to annual recruitment because the adult spawning stock consists of only a few age groups. Incoming recruitment is often the main component of the fishable stock. For such fish stocks, the ICES maximum sustainable yield (MSY) approach is aimed at achieving a target escapement (MSY $B_{escapement}$, the minimum amount of biomass left to spawn). No catch should be allowed unless this escapement can be achieved. The escapement level should be set so there is a low risk of future recruitment being impaired.

For Atlantic salmon, this approach has led to defining river-specific Conservation Limits (CLs) as equivalent to MSY $B_{escapement}$. Conservation Limits for North Atlantic salmon stock complexes have been defined by ICES as the level of a stock (number of spawners) that will achieve long-term average MSY. ICES considers that, to be consistent with the MSY and precautionary approaches, fisheries should only take place on Atlantic salmon from rivers where stocks have been shown to be at full reproductive capacity. Furthermore, due to differences in the status of individual stocks within stock complexes, mixed-stock fisheries present particular threats.

In many countries/jurisdictions, CLs are now defined using stock and recruitment relationships, and the corresponding CLs are not updated annually. In the other jurisdictions where such relationships are not available, stock–recruitment proxies are used to define the CLs, and these may vary from year to year as new data are added. NASCO has adopted the CLs as limit reference points (NASCO, 1998). Conservation Limits are used in reference to spawners. When referring to abundance prior to fisheries in the ocean (pre-fishery abundance [PFA]), the CLs are adjusted to account for natural mortality, and the adjusted value is referred to as the spawner escapement reserve (SER).

ICES benchmarked the life-cycle model (LCM) in 2023 and it was used for the first time for all North Atlantic salmon catch advice in 2024 to describe and forecast stock status (ICES, 2023, 2024a). This model uses a risk analysis framework that considers CLs. The risk analysis framework makes full use of the outputs from the LCM. The LCM outputs include estimates of returns and spawners (1SW and MSW), that are in line with run-reconstruction estimates and eggs (1SW and MSW). This model is used to evaluate the status relative to the reference points.

Management targets have not yet been defined for all North Atlantic salmon stocks. Where there are no specific management objectives, the MSY approach shall apply:

- ICES considers that if the lower bound of the 90% confidence interval of the current estimate of spawners is above the CL, then the stock is at full reproductive capacity (equivalent to a probability of at least 95% of meeting the CL).
- When the lower bound of the confidence interval is below the CL, but the median is above, then ICES considers the stock to be at risk of suffering reduced reproductive capacity.
- Finally, when the median is below the CL, ICES considers the stock to suffer reduced reproductive capacity.

For catch advice on the mixed-stock fishery at West Greenland (catching non-maturing one-sea-winter [1SW] fish from North America and non-maturing 1SW fish from southern NEAC [S-NEAC]), NASCO has adopted a risk level (probability) of 75% of simultaneous attainment of management objectives in seven assessment regions (ICES, 2003) as part of an agreed management plan. NASCO uses the same approach for catch advice for the mixed-stock fishery, affecting six assessment regions for the North American stock complex. ICES notes that the choice of a 75% probability for simultaneous attainment of six or seven stock assessment regions is approximately equivalent to a 95% probability of attainment for each individual unit (ICES, 2013).

There is no formally agreed management plan for the fishery at the Faroes. However, ICES has developed a risk-based framework for providing catch advice for fish exploited in this fishery (mainly multi-sea-winter [MSW] fish from NEAC countries). Catch advice is provided at both the stock complex and country level, with catch options tables providing the probability of meeting CLs in the individual stock complexes or countries, as well as in all the stock complexes or countries simultaneously. ICES has recommended (ICES, 2013) that management decisions should be based principally on a 95% probability of attainment of CLs in each stock complex/country individually. The simultaneous attainment probability may also be used as a guide, but managers should be aware that this probability will generally be quite low when large numbers of management units are used.

NASCO 1.1 Catches of North Atlantic salmon

Nominal catches of Atlantic salmon

In this document, nominal catches (landings) are equivalent to harvest. These nominal catches do not include Atlantic salmon that have been caught and released (these are reported separately) nor do they include post-release mortalities, although the latter are included in the spawner estimates by some countries/jurisdictions. For clarity, detailed data are provided in Annex 1, tables A1.1–A1.4.

Total nominal catches of Atlantic salmon in four North Atlantic regions from 1960 to 2024 are shown in Figure 1. Catches reported by country or jurisdiction are given in Table A1.1. Catch statistics in the North Atlantic include fish-farm escapees and, in some Northeast Atlantic countries, ranched fish. The data for 2024 are provisional and exclude nominal catch data from Russian Federation.

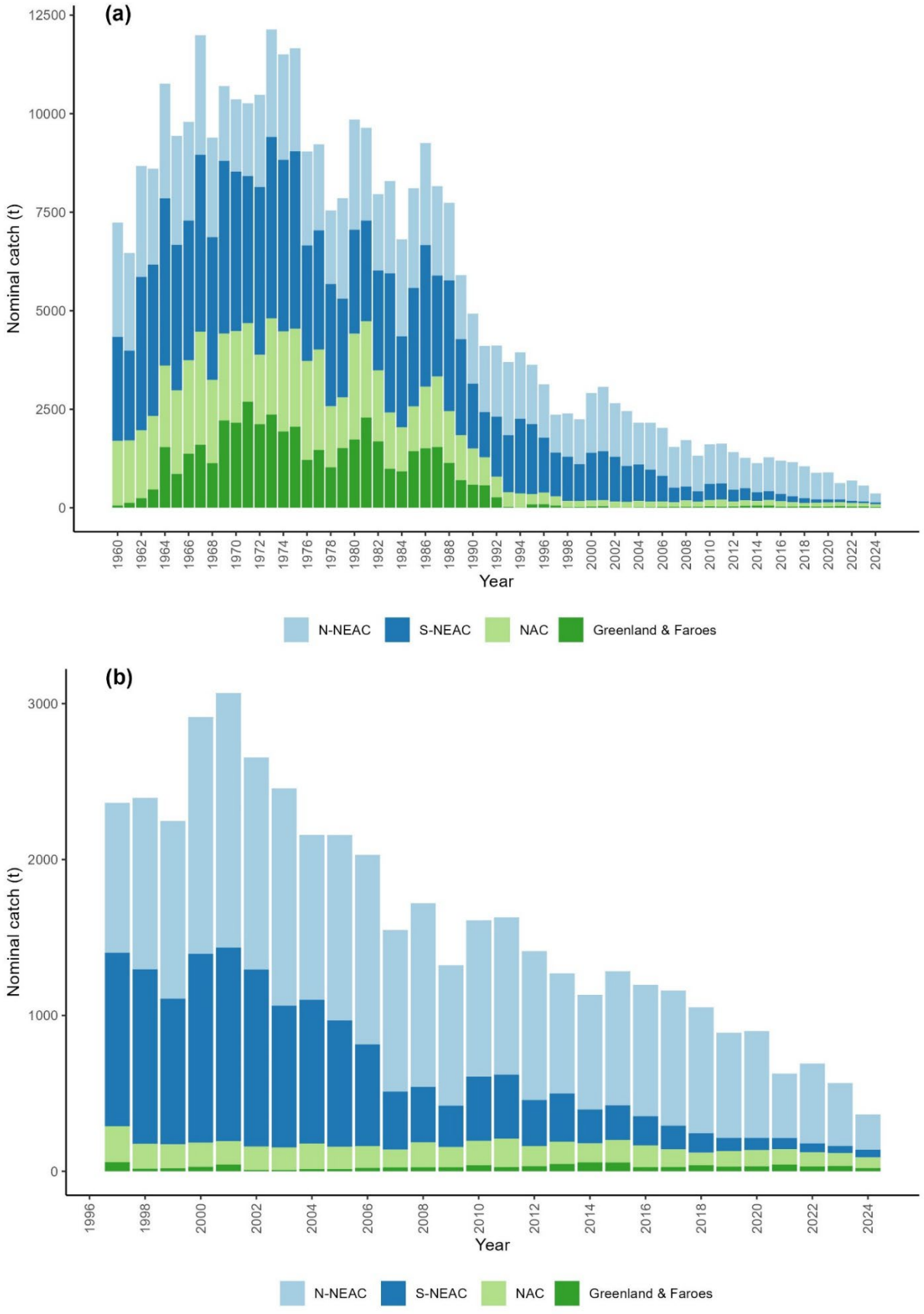


Figure 1 North Atlantic salmon stocks. Total nominal catch of Atlantic salmon (tonnes; round fresh weight) in four North Atlantic regions, 1960–2024 (top) and 1997–2024 (bottom). Nominal catch for 2024 from Russian Federation are not available and therefore omitted from 2024 provisional catch data.

Icelandic catches are separated into wild and ranched, reflecting the fact that Iceland has been the main North Atlantic country where large-scale ranching has been undertaken, with the specific intention of harvesting all returns at the release site and with no prospect of wild spawning success. The release of smolts for commercial ranching purposes ceased in Iceland in 1998, but ranching for angling fisheries in two Icelandic rivers continued into 2024 (Table A1.1). Catches in Sweden are also separated into wild and ranched over the entire time-series. The latter fish represent adult Atlantic salmon originating from hatchery-reared smolts that have been released under programmes to mitigate hydropower. These fish are also exploited very heavily in home waters and have no possibility to spawn naturally in the wild. While ranching does occur in some other countries, it is on a much smaller scale. The ranched components in Iceland and Sweden have therefore been included in the nominal catch.

Table 1 North Atlantic salmon stocks. Nominal catches (in tonnes) for the three NASCO commission areas for 2015–2024. Nominal catch for 2024 from the Russian Federation are not available and therefore omitted from 2024 provisional catch data.

Area	Year									
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
NEAC	1081	1028	1015	928	756	761	487	569	448	276
NAC	144	140	113	80	101	105	100	91	83	69
WGC	57	28	28	40	29	32	43	31	33	20
Total	1282	1196	1156	1048	886	898	630	691	564	364

The provisional total nominal catch was 364 tonnes in 2024, the lowest in the time-series since 1960. NASCO requested that the nominal catches in homewater fisheries be partitioned according to whether the catch is taken in coastal, estuarine, or in-river fisheries (Table 2).

Table 2 North Atlantic salmon stocks. The 2024 nominal catches (in tonnes) for the NEAC and NAC commission areas. Nominal catch for 2024 from Russian Federation are not available and therefore omitted from 2024 provisional catch data. (Note that weights are reported rounded to the nearest tonne, and any minor discrepancies between the overall total and the sum of the individual totals within each fishery zone displayed below are an effect of rounding.)

Area	Coastal		Estuarine		In-river		Total
	Weight	% of total catch	Weight	% of total catch	Weight	% of total catch	Weight
NEAC	75	27	16	6	184	67	276
NAC	8	12	38	55	23	33	69

Coastal, estuarine, and in-river catch data aggregated by commission area are presented in Figure 2. In Northern NEAC (N-NEAC), catches in coastal fisheries have declined from 306 t in 2009 to 75 t in 2024, and in-river catches have declined from 586 t in 2009 to 146 t in 2024 (see Figure 3 and Table A.1.2 for details). There are no coastal fisheries in Iceland or Denmark. At the beginning of the time-series, about half the nominal catch was from coastal fisheries and half from in-river fisheries, whereas, since 2009, coastal fisheries catches have represented around 33–44% of the total.

In Southern NEAC (S-NEAC), catches in coastal and estuarine fisheries have declined dramatically since 2009. While coastal fisheries have historically made up the largest component of the catch, these fisheries have declined the most, reflecting widespread measures to reduce exploitation in a number of countries; there have been no coastal catches since 2018. Estuarine fisheries have also declined, from 48 t in 2009 to 16 t in 2024. Since 2009, the majority of the nominal catch in this area is from in-river fisheries.

In NAC, the proportion of in-river fisheries catch has dropped to below 50% since 2018, while the proportion of estuarine catch has increased over the same time period and in 2024 constituted 55% of the total catch. The catch in coastal fisheries has been relatively small throughout the time-series (10 t or less).

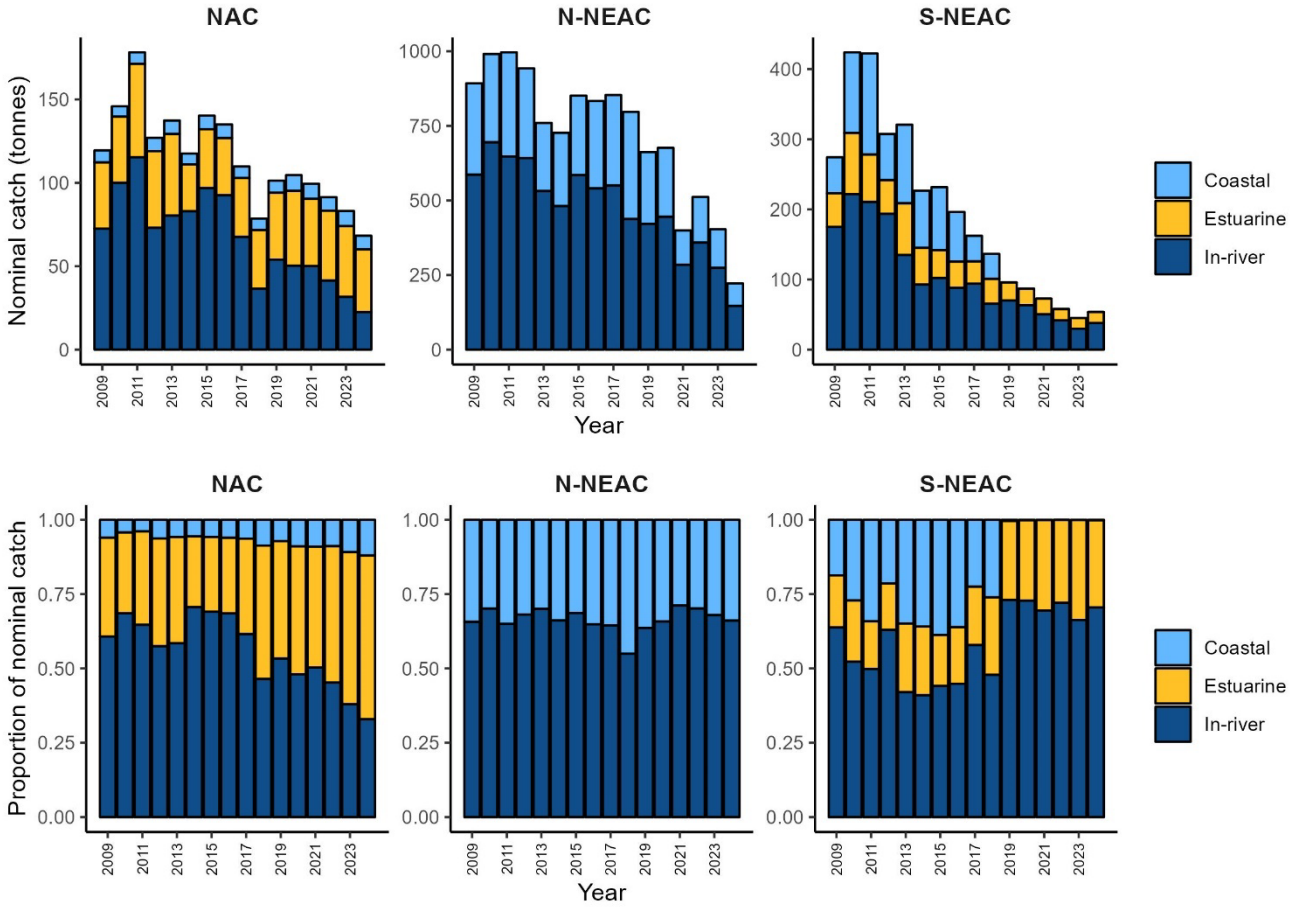


Figure 2 North Atlantic salmon stocks. Nominal catches (tonnes; top panels) and proportions of the retained catches (bottom panels) from coastal, estuarine, and in-river fisheries for the NAC area, and for the Northern (N-NEAC) and Southern (S-NEAC) NEAC areas from 2009–2024. Note that scales of vertical axes in the top panels vary. Nominal catch for 2024 from Russian Federation are not available and therefore omitted from 2024 provisional catch data.

There is considerable variability in the distribution of the catch among individual countries (Figure 3; Table A1.2). In most countries, the majority of the catch is now retained in in-river fisheries, and across the time-series the coastal catches have declined markedly. Nominal catches (harvests) from rivers have also declined in many countries, as more of the fish caught are returned through catch-and-release (C&R) schemes in angling fisheries and a few net fisheries.

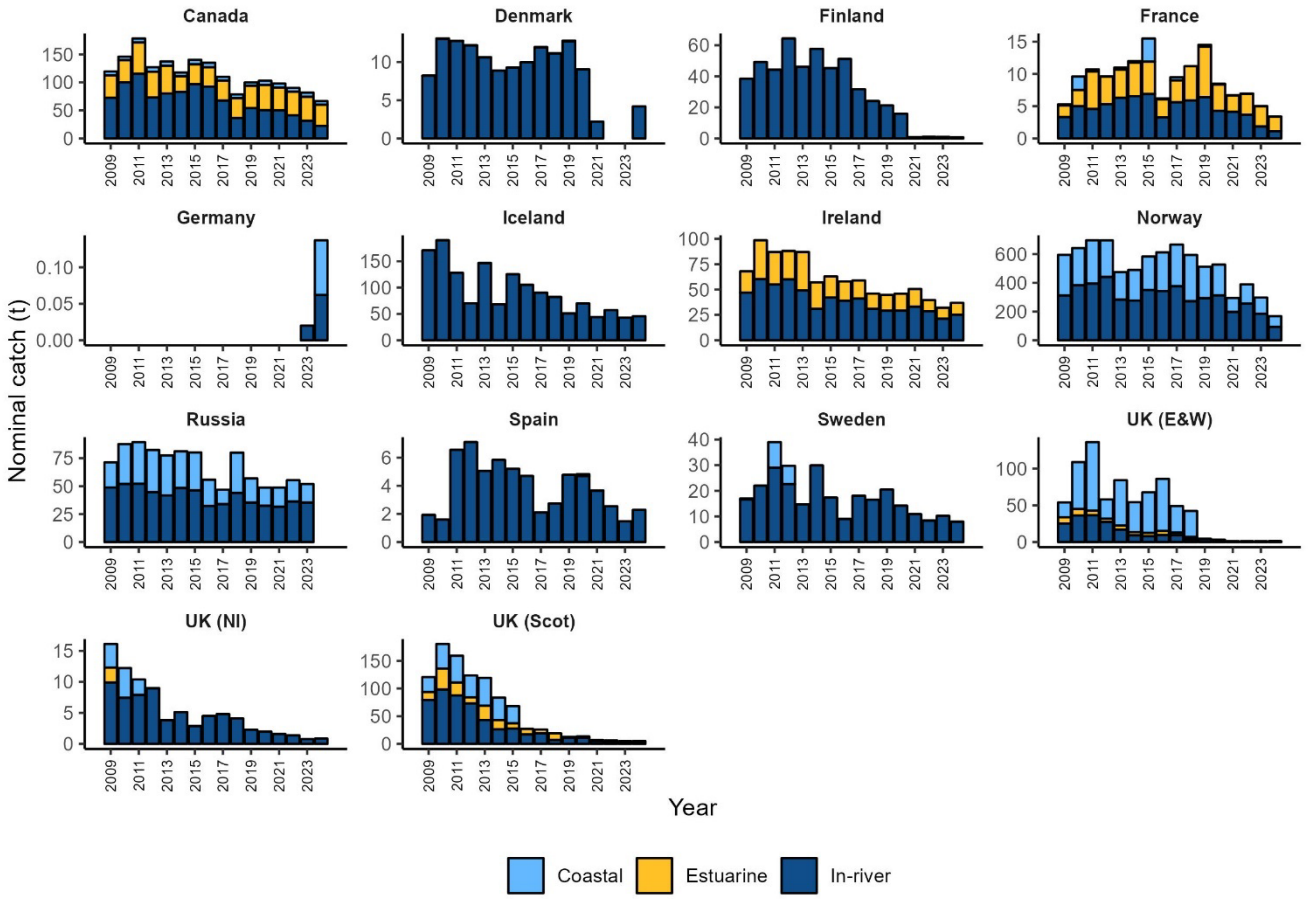


Figure 3 North Atlantic salmon stocks. Nominal catch (tonnes) by country taken in coastal, estuarine, and in-river fisheries, 2009–2024. Note that scales on the *y*-axes vary. The US is not included because there has been no catch. One-hundred percent of the fishery at St Pierre and Miquelon and at West Greenland occurs in coastal areas. These catches are not shown. For Germany, catch data was only available for 2023 and 2024 and annual values prior to this are unknown. For Denmark, no catch weight data was provided for 2022 to 2023. For the Russian Federation, no catch data was available for 2024.

Unreported catch

The total unreported catch in NASCO areas was estimated at 101 t in 2024 (NEAC 78 t, NAC 13 t, and WGC 10 t). No estimates were provided for Russia, France, Spain, or St Pierre and Miquelon in 2024.

Table 3 North Atlantic salmon stocks. Unreported catch (in tonnes) by NASCO commission area in the last 10 years.

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
NEAC	299	297	318	278	238	238	134	174	133	78
NAC	17	27	25	24	12	27	19	18	16	13
WGC	10	10	10	10	10	10	10	10	10	10
Total	326	335	353	312	259	275	164	201	159	101

The 2024 unreported catches by country are provided in Table A1.3. Unreported catch estimates were not provided by category (coastal, estuarine, and in-river). Over recent years, efforts have been made to reduce the level of unreported catch in a number of countries.

Catch and release

The practice of catch and release (C&R) in angling fisheries has become increasingly common as an Atlantic salmon management/conservation measure in light of the widespread decline in Atlantic salmon abundance in the North Atlantic. In some areas of Canada and US, mandatory C&R became widely applied as a management measure in 1984, and many European countries have introduced this in recent years, both as a result of statutory regulation and through voluntary

practice. The nominal catches do not include Atlantic salmon that have been caught and released, nor do they include post-release mortalities. Post-release mortality has not been estimated by every country. Table A1.4 presents C&R information from 1991 to 2024 for countries that provide records; C&R may also be practised in other countries while not being formally recorded. There are large differences in the percentage of the total angling catch that is released. In 2024, it ranged from 8% (France) to 98% (UK [Scotland]), reflecting varying management practices and angler attitudes among countries. Within countries, the percentage of released fish has increased over time. There is also evidence from some countries that larger MSW fish are released in higher proportions than smaller fish. Overall, approximately 145 000 Atlantic salmon (483 t) were reported to have been caught and released in the North Atlantic area in 2024.

Farming and sea ranching of Atlantic salmon

The provisional estimate of farmed Atlantic salmon production in the North Atlantic area for 2024 was 1 956 012 t (Figure 4). The production of farmed Atlantic salmon in this area has exceeded one million tonnes since 2009. Norway and UK (Scotland) continue to produce the majority of the farmed Atlantic salmon in the North Atlantic (79% and 9.5%, respectively). Farmed Atlantic salmon production in 2024 was above the previous five-year mean in all countries, with the exception of Canada and Ireland. Data for UK (Northern Ireland) since 2001 and data for the east coast of the US are not publicly available; this is also the case for some regions within countries in some years.

Worldwide production of farmed Atlantic salmon has been in excess of one million tonnes since 2001 and over two million tonnes since 2012. Reliable production figures for countries outside the North Atlantic were not available for 2023 and 2024; for these years, 2022 data was assumed (retrieved from the Food and Agricultural Organisation's Fisheries and Aquaculture Department database). Worldwide production in 2024 was provisionally estimated at 2 880 804 t (Figure 4), which is higher than 2023 and higher than the previous five-year mean (2 787 766 t). Production outside the North Atlantic, which is dominated by Chile, is estimated to have accounted for almost one third of the total worldwide production in 2024.

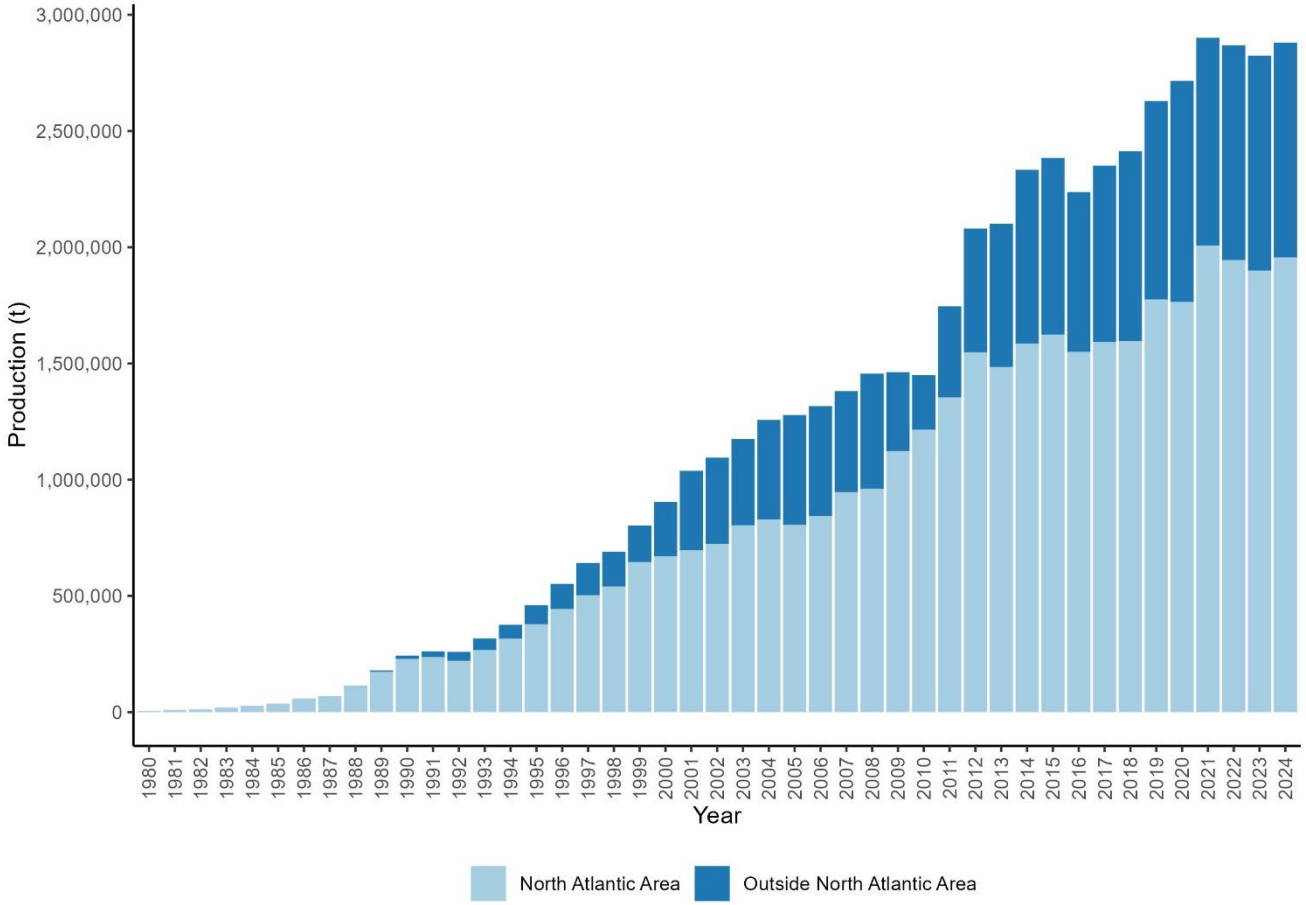


Figure 4 North Atlantic salmon stocks. Worldwide production of farmed Atlantic salmon, 1980–2024. Reliable production figures for countries outside the North Atlantic were not available for 2023 and 2024; for these years, 2022 data was assumed (retrieved from the Food and Agricultural Organisation's Fisheries and Aquaculture Department database).

Worldwide production of farmed Atlantic salmon in 2024 was almost 8 000 times the nominal catch of wild Atlantic salmon in the North Atlantic.

The total harvest of ranched Atlantic salmon in countries bordering the North Atlantic was 19 t in 2024, all taken in Iceland and Sweden (Figure 5), with the majority of the catch taken in Iceland (79% in 2024). No estimate was made of the ranched Atlantic salmon production in Norway in 2024, where such catches have been very low in recent years (< 1 t); nor in UK (Northern Ireland), where the proportion of ranched fish has not been assessed since 2008; nor in Ireland, where ranching is carried out in only nine rivers on a small scale.

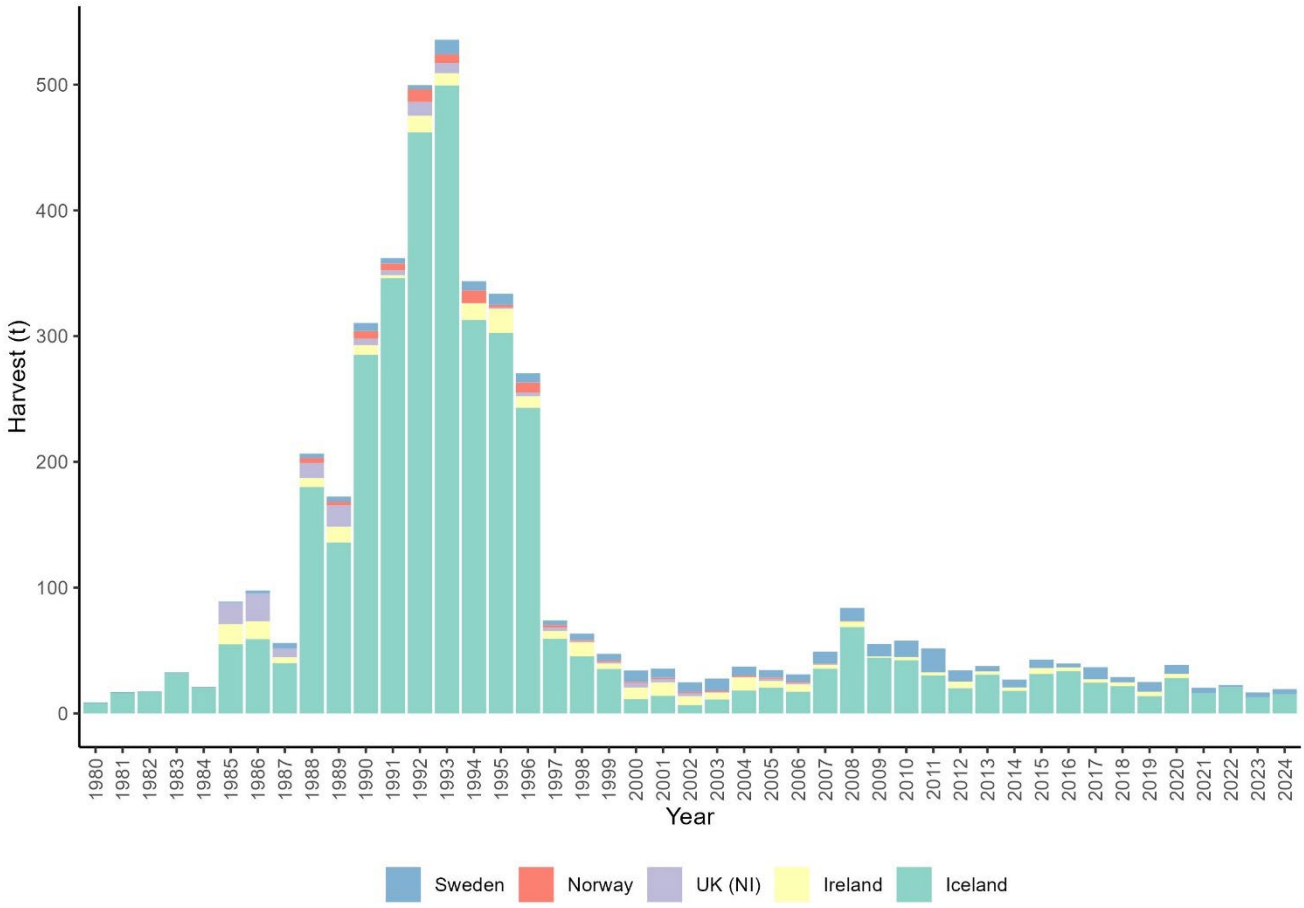


Figure 5 North Atlantic salmon stocks. Harvest of ranched Atlantic salmon (tonnes; round fresh weight) in the North Atlantic, 1980–2024. No estimates of ranched salmon harvest in Norway, UK (Northern Ireland), or Ireland have been made in recent years, as salmon ranching in these countries has been at a very low level.

NASCO 1.2 Significant, new, or emerging threats to, or opportunities for, Atlantic salmon conservation and management

A number of new or emerging threats to or opportunities for salmon conservation are considered by ICES (2025); a summary of these is presented here.

Threats

- Declines and/or sustained low abundances of salmon have been reported in many countries. Low abundances are particularly evident in NEAC for 1SW salmon in the recent decade, and in the recent three decades for MSW salmon from S-NEAC and NAC. Record or near-record low returns of 1SW and MSW salmon were reported in the majority of countries/jurisdictions in 2023 or 2024 (Figure 6). Prohibitions, or important reductions, in retention fisheries have been maintained or introduced in several countries/jurisdictions in response to these patterns. Some countries/jurisdictions have implemented unprecedented closures of recreational fisheries. However, recent low abundances, declines in estimated post-smolt survival, and a general absence of any improvements in abundance across stocks in the North Atlantic highlight the concern that large-scale marine stressors at the North Atlantic scale are impacting salmon. Notably, record-breaking sea-surface temperature anomalies were observed in the North Atlantic in 2023 and 2024 (Terhaar *et al*., 2025), most especially in subarctic regions of the Atlantic (Timmermans and Labe, 2024). While direct mitigation of the impacts of ocean warming on salmon is challenging, improving survival in, and production from, the freshwater phase of the life cycle can offset high marine mortality and increase population resilience.

- Lough Neagh, the largest freshwater lake in UK and Ireland, has been subject to zebra mussel (*Dreissena polymorpha*) invasion, which has increased water clarity, providing better conditions for sight-feeding predators, such as landlocked river lampreys (*Lampetra fluviatilis*; Kennedy *et al*., 2020). In 2024, 25.3% of smolts sampled in the lake outflow were classed as heavily damaged by lamprey, an increase on the previous year when 18.7% of smolts were heavily damaged.

- An investigation into a substantial mass mortality event of over 1 000 adult Atlantic salmon in the Ballisodare River in Ireland during summer 2024 concluded that a cumulation of several contributing factors led to the fish kill (Millane *et al*., 2024). Significant gill pathology was observed in a number of sampled fish and was considered consistent with exposure to a marine phytoplankton species, shown to be present in high levels in nearby coastal waters. The event occurred during very low water conditions and many salmon showed abrasive damage, likely sustained through mechanical damage during upriver migration.The congregation of large numbers of stressed fish with external abrasions increased susceptibility to infection by *Saprolegnia* and opportunistic bacterial infections, which ultimately caused the large number of mortalities observed.

Opportunities

- Quebec's environment ministry (MELCCFP) is developing an approach to forecast salmon returns based on the positive relationship between 1SW returns for a given year and the returns of 2SW the following year (Cauchon and April, 2025). Following the 2023 record low returns of 1SW salmon throughout Quebec (except the Ungava Bay populations), MELCCFP predicted and subsequently confirmed the low 2SW returns in 2024 (MELCCFP, 2025). As a proactive management measure, MELCCFP prohibited the retention of large salmon in most rivers before the 2024 angling season. This approach not only helped conserve the salmon population by reducing 2SW harvest during a low-return year, but it will also provide insights into marine mortality. Early investigations suggest that a significant portion of marine mortality occurs during the initial stages of the marine migration.

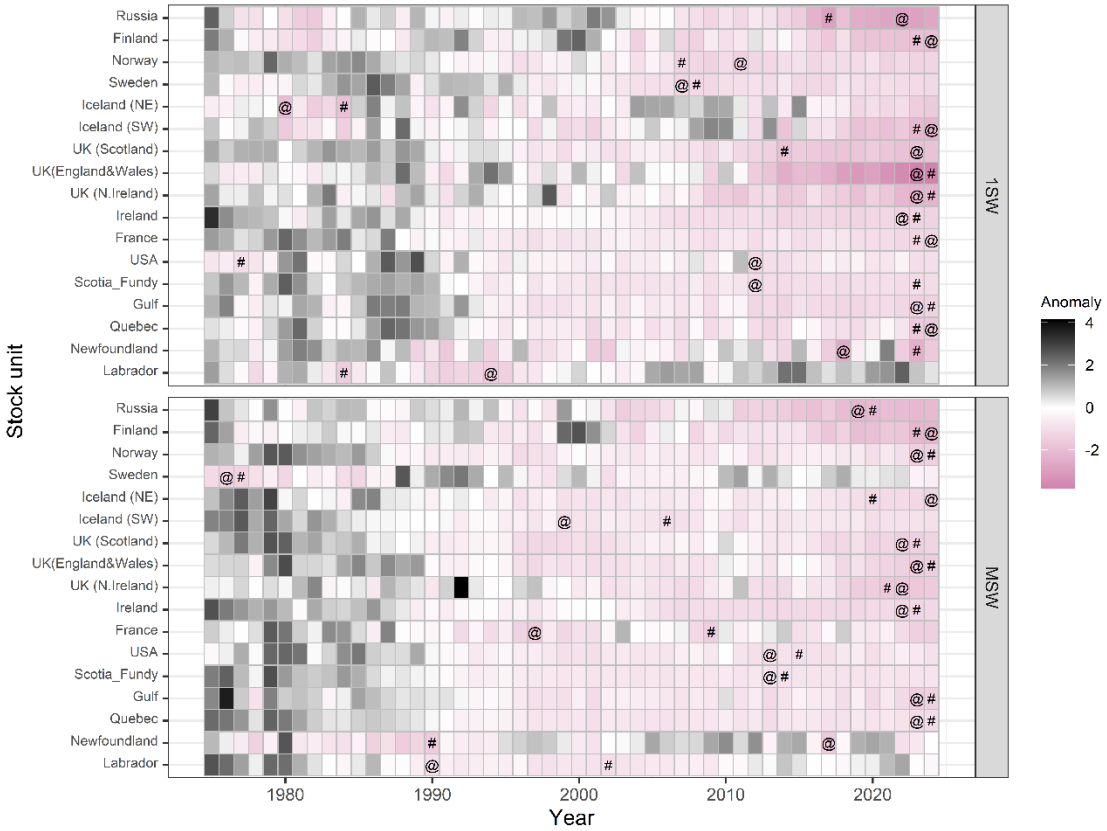


Figure 6 Anomalies (standard deviations from baseline period 1975 to 2014, i.e. excluding the most recent ten years) of Life Cycle Model estimated returns to coastal waters (medians) of Atlantic salmon to stock units of NAC and NEAC, 1975-2024. The stock units along the *y*-axis (top to bottom) are arranged from north to south for N-NEAC (Russian Federation to Iceland NE) and S-NEAC (Iceland SW to France) and from south to north for NAC (US to Labrador). The anomalies are in standard deviation units and calculated as annual abundance minus the mean divided by the standard deviation, for stock unit–specific means and standard deviations estimated for the base period 1975 to 2014. The labels are the years when the lowest (@) and second lowest (#) abundances over the entire time period occurred for the stock unit. The anomalies for 2024 are based on the forecast returns from the model.

NASCO 1.3 Provision of a compilation of tag releases by country in 2024

Data on releases of tagged, finclipped, and other marked Atlantic salmon in 2024 are compiled as a separate report (ICES, 2025). In summary (Tables 4) and noting that no recent data were available from the Russian Federation (where large tagging programmes have taken place in recent years):

- 1.16 million Atlantic salmon were marked, an increase from the 1.07 million Atlantic salmon marked in 2023.
- The adipose clip was the most commonly used primary marker (797 327), with coded wire microtags (CWT) (261 358) being the next-most common.
- Most marks were applied to hatchery-origin juveniles (1 073 722), while 81 898 wild juveniles, 4 563 wild adults and 3 165 hatchery adults were marked.
- 60 895 Atlantic salmon were tagged with other internal tags (e.g. passive integrated transponder [PIT] tags, data storage tags [DSTs], radio, and sonic transmitting tags [pingers]; Table 4), a marginal increase compared to 2023 (60 726).

Table 4 North Atlantic salmon stocks. Summary of Atlantic salmon tagged and marked in 2024. "Hatchery" and "Wild" juvenile refer to smolts and parr.

Country	Origin	Primary tag or mark				
		Microtag	External mark *	Adipose clip	Other internal†	Total
Canada	Hatchery adult	0	1026	10	24	1060
	Hatchery juvenile	0	0	705	0	705
	Wild adult	0	515	8	1537	2060
	Wild juvenile	0	18 230	22 821	1910	42 961
	Total	**0**	**19 771**	**23 544**	**3471**	**46 786**
Denmark	Hatchery adult	0	0	0	0	0
	Hatchery juvenile	0	0	168 000	665	168 665
	Wild adult	0	0	0	0	0
	Wild juvenile	0	0	0	0	0
	Total	**0**	**0**	**168 000**	**665**	**168 665**
France	Hatchery adult	0	0	0	0	0
	Hatchery juvenile	0	0	0	0	0
	Wild adult	0	0	157	157	157
	Wild juvenile	0	0	1 645	1 645	1 645
	Total	**0**	**0**	**1 802**	**1 802**	**1 802**
Iceland	Hatchery adult	0	0	0	0	0
	Hatchery juvenile	0	0	0	0	0
	Wild adult	0	941	0	0	941
	Wild juvenile	2 480	0	0	1 411	3 891
	Total	**2 480**	**941**	**0**	**1 411**	**4 832**
Ireland	Hatchery adult	0	0	0	0	0
	Hatchery juvenile	103 425	0	0	0	103 425
	Wild adult	0	0	0	0	0
	Wild juvenile	1 512	0	0	2 150	3 662
	Total	**104 937**	**0**	**0**	**2 150**	**107 087**
Norway	Hatchery adult	0	0	0	0	0
	Hatchery juvenile	0	0	0	20 297	20 297
	Wild adult	0	193	0	9	202
	Wild juvenile	0	0	0	11 811	11 811
	Total	**0**	**193**	0	**32 117**	**32 310**
Russian Federation	Hatchery adult					
	Hatchery juvenile					
	Wild adult					
	Wild juvenile					
	Total					
Spain	Hatchery adult	0	0	0	0	0
	Hatchery juvenile	141 012	0	162 921	1 512	305 445
	Wild adult	0	0	0	138	138
	Wild juvenile	0	0	0	0	0
	Total	**141 012**	**0**	**162 921**	**1 650**	**305 583**
Sweden	Hatchery adult	0	0	0	0	0
	Hatchery juvenile	0	0	186 573	0	186 573
	Wild adult	0	0	0	0	0
	Wild juvenile	0	0	0	100	100
	Total	**0**	**0**	**186 573**	**100**	**186 673**

Country	Origin	Primary tag or mark				
		Microtag	External mark *	Adipose clip	Other internal†	Total
UK (England & Wales)	Hatchery adult	0	0	0	0	0
	Hatchery juvenile	0	0	0	0	0
	Wild adult	0	364	0	22	386
	Wild juvenile	2 689	0	0	4 779	7 468
	Total	**2 689**	**364**	**0**	**4 801**	**7 854**
UK (N. Ireland)	Hatchery adult	0	0	0	0	0
	Hatchery juvenile	10 240	0	60 336	0	70 576
	Wild adult	0	0	0	0	0
	Wild juvenile	0	0	0	0	0
	Total	**10 240**	**0**	**60 336**	**0**	**70 576**
UK (Scotland)	Hatchery adult	0	0	0	0	0
	Hatchery juvenile	0	0	34 116	0	34 116
	Wild adult	0	6	0	0	6
	Wild juvenile	0	0	0	10 360	10 360
	Total	**0**	**6**	**34 116**	**10 360**	**44 482**
Germany	Hatchery Adult	0	0	0	0	0
	Hatchery Juvenile	0	22 285	50 000	89	72 374
	Wild Adult	0	0	0	0	0
	Wild Juvenile	0	0	0	0	0
	Total	**0**	**22 285**	**50 000**	**89**	**72 374**
Greenland^	Hatchery adult	0	0	0	0	0
	Hatchery juvenile	0	0	0	0	0
	Wild adult	0	0	0	3	3
	Wild juvenile	0	0	0	0	0
	Total	**0**	**0**	**0**	**3**	**3**
US	Hatchery adult	0	70	0	2 035	2 105
	Hatchery juvenile	0	0	111 832	379	112 211
	Wild adult	0	0	5	0	5
	Wild juvenile	0	0	0	0	0
	Total	**0**	**70**	**111 837**	**2 414**	**114 321**
All countries	Hatchery adult	0	1 096	10	2 059	3 165
	Hatchery juvenile	254 677	22 285	774 483	22 277	1 073 722
	Wild adult	0	2 019	13	2 393	4 563
	Wild juvenile	6 681	18 230	22 821	34 166	81 898
	Total	**261 358**	**43 630**	**797 327**	**60 895**	**1 163 348**

* Includes Carlin, spaghetti, streamers, VIE, etc.
† Includes other internal tags (PIT, ultrasonic, radio, DST, etc.)
^ Individuals tagged in Greenland by the Atlantic Salmon Federation, details within Canada's tagging programme.

NASCO 1.4 Identify relevant data deficiencies, monitoring needs, and research requirements

This advice is generated from data provided for all salmon-producing jurisdictions throughout the North Atlantic, except for Denmark, Spain, Portugal, and the Inner Bay of Fundy. Time-series of sufficient duration are not available for these areas, but ICES continues to work to close these data gaps. The abundances of salmon in these areas are relatively small when compared to the total abundance in the North Atlantic area, and therefore these data gaps are not considered to have a material effect on the advice.

ICES recommends that WGNAS should meet in 2026 (chaired by Alan Walker, UK). Unless otherwise notified, the working group intends to convene 16-26 March 2026, location to be confirmed.

Recommendations

The following relevant data deficiencies, monitoring needs, and research requirements were identified:

North Atlantic

- An increase of management actions restricting fishing activity, including C&R, will require a shift towards a greater reliance on fishery-independent datasets and methods in the assessment of stock status. Methods for estimating stock abundance are changing in some cases to account for this evolution and use an array of best available information in statistical models suited to extrapolation to un-monitored areas based on the patterns seen across monitored areas from data-rich to data-poor areas. However, annual monitoring remains increasingly relevant in the context of responses of salmon populations to rapid changes in the ecosystem;
- An ICES data call submission was not received from the Faroe Islands. Equivalent data from the Faroe Islands were received via a national report to WGNAS. A submission was received from Portugal during the working group meeting but was too late to be included in the 2025 report. ICES recommends complete and timely reporting of catch statistics from all fisheries for all areas through the ICES data call process.

North American Commission

- Sampling of all aspects of the Labrador and SPM fishery across the fishing season will improve the information on biological characteristics and stock origin of Atlantic salmon caught in these mixed-stock fisheries. A sampling rate of at least 10% of catches across the fishery season would be required to achieve a relatively unbiased estimate;
- Additional monitoring in Labrador should be considered to estimate stock status for this region. Additionally, efforts should be undertaken to evaluate the utility of other available data sources (e.g. Indigenous and recreational catches and effort) to describe stock status in Labrador.

Northeast Atlantic Commission

- Data on catch numbers, exploitation rates and unreported catch rates were not available to ICES for the stock years 2021-2024 for any of the four Russian Federation stock units. ICES recommends that these be provided in 2026. The alternative is that ICES would discount the historical Russian Federation data from the models and catch advice, and not report on the status of stocks for the Russian Federation.
- No river-specific CLs have been established for the Russian Federation, Denmark, Germany, Portugal and Spain. Iceland has developed provisional CLs and continues to work towards finalising an assessment process for determining CL attainment. ICES recommends that all countries and jurisdictions establish river-specific CLs.

West Greenland Commission

- No recommendations specific to WGC are provided.

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Annex 1 Tables

Table A1.1 North Atlantic salmon stocks. Total nominal catch of Atlantic salmon by country/jurisdiction@ (in tonnes, round fresh weight), 1960–2024 (2024 data are provisional).

Year	NAC area			NEAC–N (Northern area)								NEAC–S (Southern area)						Faroes & Greenland				Total catch	
	CA *	USA	SPM	NO **	RU ***	IS		SE		DK*^	FI	IE ^^^ $	UK E/W	UK NI $ $$	UK SO	FR $$$	ES #	FO ##	East GL	West GL ###	Other £	Nominal	Unreported catch £ £
						Wild	Ranched^	Wild	Ranched ^^														
1960	1636	1	-	1659	1100	100	-	40	0	-	-	743	283	139	1443	-	33	-	-	60	-	7237	-
1961	1583	1	-	1533	790	127	-	27	0	-	-	707	232	132	1185	-	20	-	-	127	-	6464	-
1962	1719	1	-	1935	710	125	-	45	0	-	-	1459	318	356	1738	-	23	-	-	244	-	8673	-
1963	1861	1	-	1786	480	145	-	23	0	-	-	1458	325	306	1725	-	28	-	-	466	-	8604	-
1964	2069	1	-	2147	590	135	-	36	0	-	-	1617	307	377	1907	-	34	-	-	1539	-	10759	-
1965	2116	1	-	2000	590	133	-	40	0	-	-	1457	320	281	1593	-	42	-	-	861	-	9434	-
1966	2369	1	-	1791	570	104	2	36	0	-	-	1238	387	287	1595	-	42	-	-	1370	-	9792	-
1967	2863	1	-	1980	883	144	2	25	0	-	-	1463	420	449	2117	-	43	-	-	1601	-	11991	-
1968	2111	1	-	1514	827	161	1	20	0	-	-	1413	282	312	1578	-	38	5	-	1127	403	9793	-
1969	2202	1	-	1383	360	131	2	22	0	-	-	1730	377	267	1955	-	54	7	-	2210	893	11594	-
1970	2323	1	-	1171	448	182	13	20	0	-	-	1787	527	297	1392	-	45	12	-	2146	922	11286	-
1971	1992	1	-	1207	417	196	8	17	1	-	-	1639	426	234	1421	-	16	-	-	2689	471	10735	-
1972	1759	1	-	1578	462	245	5	17	1	-	32	1804	442	210	1727	34	40	9	-	2113	486	10965	-
1973	2434	3	-	1726	772	148	8	22	1	-	50	1930	450	182	2006	12	24	28	-	2341	533	12670	-
1974	2539	1	-	1633	709	215	10	31	1	-	76	2128	383	184	1628	13	16	20	-	1917	373	11877	-
1975	2485	2	-	1537	811	145	21	26	0	-	76	2216	447	164	1621	25	27	28	-	2030	475	12136	-
1976	2506	1	3	1530	542	216	9	20	0	-	66	1561	208	113	1019	9	21	40	<1	1175	289	9327	-
1977	2545	2	-	1488	497	123	7	9	1	-	59	1372	345	110	1160	19	19	40	6	1420	192	9414	-
1978	1545	4	-	1050	476	285	6	10	0	-	37	1230	349	148	1323	20	32	37	8	984	138	7682	-
1979	1287	3	-	1831	455	219	6	11	1	-	26	1097	261	99	1076	10	29	119	<05	1395	193	8118	-
1980	2680	6	-	1830	664	241	8	16	1	-	34	947	360	122	1134	30	47	536	<05	1194	277	10127	-
1981	2437	6	-	1656	463	147	16	25	1	-	44	685	493	101	1233	20	25	1025	<05	1264	313	9954	-
1982	1798	6	-	1348	364	130	17	24	1	-	54	993	286	132	1092	20	10	606	<05	1077	437	8395	-
1983	1424	1	3	1550	507	166	32	27	1	-	58	1656	429	187	1221	16	23	678	<05	310	466	8755	-
1984	1112	2	3	1623	593	139	20	39	1	-	46	829	345	78	1013	25	18	628	<05	297	101	6912	-
1985	1133	2	3	1561	659	162	55	44	1	-	49	1595	361	98	913	22	13	566	7	864	-	8108	-
1986	1559	2	3	1598	608	232	59	52	2	-	37	1730	430	109	1271	28	27	530	19	960	-	9255	315
1987	1784	1	2	1385	564	181	40	43	4	-	49	1239	302	56	922	27	18	576	<05	966	-	8159	2788
1988	1310	1	2	1076	420	217	180	36	4	-	36	1874	395	114	882	32	18	243	4	893	-	7737	3248
1989	1139	2	2	905	364	141	136	25	4	-	52	1079	296	142	895	14	7	364	-	337	-	5904	2277
1990	911	2	2	930	313	141	285	27	6	13	60	567	338	94	624	15	7	315	-	274	-	4925	1890
1991	711	1	1	876	215	129	346	34	4	3	70	404	200	55	462	13	11	95	4	472	-	4106	1682
1992	522	1	2	867	167	174	462	46	3	10	77	630	171	91	600	20	11	23	5	237	-	4119	1962
1993	373	1	3	923	139	157	499	44	12	9	70	541	248	83	547	16	8	23	-	-	-	3696	1644
1994	355	0	3	996	141	136	313	37	7	6	49	804	324	91	649	18	10	6	-	-	-	3945	1276
1995	260	0	1	839	128	146	303	28	9	3	48	790	295	83	588	10	9	5	2	83	-	3629	1060

Year	NAC area			NEAC–N (Northern area)								NEAC–S (Southern area)						Faroes & Greenland				Total catch	
	CA *	USA	SPM	NO **	RU ***	IS		SE		DK*^	FI	IE ^^^ $	UK E/W	UK NI $ $$	UK SO	FR $$$	ES #	FO ##	East GL	West GL ###	Other £	Nominal	Unreported catch £ £
						Wild	Ranched^	Wild	Ranched ^^														
1996	292	0	2	787	131	118	243	26	7	2	44	685	183	77	427	13	7	-	0	92	-	3136	1123
1997	229	0	2	630	111	97	59	15	4	1	45	570	142	93	296	8	4	-	1	58	-	2364	827
1998	157	0	2	740	131	119	46	10	5	1	48	624	123	78	283	8	4	6	0	11	-	2395	1210
1999	152	0	2	811	103	111	35	11	5	1	62	515	150	53	199	11	6	0	0	19	-	2247	1032
2000	153	0	2	1176	124	73	11	24	9	5	95	621	219	78	274	11	7	8	0	21	-	2912	1269
2001	148	0	2	1267	114	74	14	25	7	6	126	730	184	53	251	11	13	0	0	43	-	3069	1180
2002	148	0	2	1019	118	90	7	20	8	5	93	682	161	81	191	11	9	0	0	9	-	2654	1039
2003	141	0	3	1071	107	99	11	15	10	4	78	551	89	56	192	13	9	0	0	9	-	2457	847
2004	161	0	3	784	82	111	18	13	7	4	39	489	111	48	245	19	7	0	0	15	-	2157	686
2005	139	0	3	888	82	129	21	9	6	8	47	422	97	52	215	11	13	0	0	15	-	2155	700
2006	137	0	3	932	91	93	17	8	6	2	67	326	80	29	192	13	11	0	0	22	-	2028	670
2007	112	0	2	767	63	93	36	6	10	3	58	85	67	30	171	11	9	0	0	25	-	1548	475
2008	158	0	4	807	73	132	69	8	10	9	71	89	64	21	161	12	9	0	0	26	-	1721	443
2009	126	0	3	595	71	126	44	7	10	8	36	68	54	16	121	4	2	0	0.8	26	-	1318	343
2010	153	0	3	642	88	147	42	9	13	13	49	99	109	12	180	10	2	0	1.7	38	-	1610	393
2011	179	0	4	696	89	98	30	20	19	13	44	87	136	10	159	11	7	0	0.1	27	-	1629	421
2012	126	0	3	696	82	50	20	21	9	12	64	88	58	9	124	10	7	0	0.5	33	-	1412	403
2013	138		5	475	78	116	31	10	4	11	46	87	84	4	119	11	4	0	0	47	-	1269	306
2014	118		4	490	81	50	18	24	6	9	58	56	54	5	84	12	6	0	<0.5	58	-	1133	287
2015	140		4	583	80	94	31	11	7	9	45	63	68	3	68	16	5	0	1	56	-	1284	326
2016	135		5	612	56	71	34	6	3	9	51	58	86	5	27	6	5	0	2	26	-	1196	335
2017	110		3	667	47	66	24	9	10	12	32	59	49	5	27	10	2	0	<0.5	28	-	1159	353
2018	79		1	594	80	60	22	12	4	11	24	46	42	4	19	10	3	0	1	39	-	1052	312
2019	100		1	513	57	37	14	13	8	13	21	45	5	2	13	15	5	0	1	28	-	889	259
2020	103		2	527	49	42	28	7	7	9	16	46	3	2	14	8	5	0	1	31	-	899	275
2021	98		2	295	49%	41	16	6	5	2	1	51	1	2	7	7	4	0	1	42	-	627	164
2022	90		1	389	55%	37	20	7	2		1	40	1	1	6	7	3	0	1	30	-	691	201
2023	82		1	297	52%	30	13	6	4		1	32	1	1	5	5	1	0	1	33	-	566	149
2024	67		2	168		31	15	4	4	4	1	37	1	1	5	3	2	0	1	20	-	364	101
2019-2023	95		1	404	52	37	18	8	5	8	8	43	2	2	9	8	3	0	1	33	-	735	212
2014-2023	105		2	497	61	53	22	10	5	9	25	50	31	3	27	9	4	0	1	37	-	950	267

@ Country/Jurisdiction codes: CA (Canada), US (United States of America), SPM (Saint Pierre and Miquelon), NO (Norway), RU (Russian Federation), IS (Iceland), SE (Sweden), DK (Denmark), FI (Finland), IE (Ireland), UK E/W (United Kingdom England & Wales), UK NI (Northern Ireland), UK SO (Scotland), FR (France), ES (Spain), FO (Faroes), GL (Greenland).

* Includes estimates of some local sales and, prior to 1984, bycatch.

** Before 1966, sea trout and sea charr included (5% of total).

*** Figures from 1991 to 2001 do not include catches taken in the recreational (rod) fishery; 2021, 2022, and 2023 data extracted from NASCO website (NASCO, 2025). No data available to the Working Group in 2024; totals therefore do not include Russian catch in most recent year.

^ From 1990, catch includes fish ranched for both commercial and angling purposes.

^^ Catches from hatchery-reared smolts released under programmes to mitigate for hydropower development.
^^^ Improved reporting of rod catches in 1994 and data derived from carcase tagging and logbooks from 2002.
$ Catch on River Foyle allocated 50% to Ireland and 50% to Northern Ireland.
$$ Angling catch (derived from carcase tagging and logbooks) first included in 2002.
$$$ Data for France include some unreported catches.
Spanish data until 2018 (inclusive), weights estimated from mean weight of fish caught in Asturias (80–90% of Spanish catch); weight for 2019 and 2020 for all Spain, supplied via data call.
Between 1991 and 1999, there was only a research fishery at Faroes. In 1997 and 1999, no fishery took place; the commercial fishery was resumed in 2000, but has not operated since 2001.
Includes catches made in the West Greenland area by Norway, Faroes, Sweden, and Denmark in 1965–1975.
£ Includes catches in Norwegian Sea by vessels from Denmark, Sweden, Germany, Norway, and Finland.
£££ No unreported catch estimate available for Canada in 2007 and 2008. Data for Canada in 2009, 2010, and 2019 are incomplete. No unreported catch estimates available for Russian Federation since 2008.
% Russian Federation data extracted from NASCO website (NASCO, 2025).
*^ Catch weight data not provided by Denmark for 2022 nor 2023.

Table A1.2 North Atlantic salmon stocks. Nominal catches (tonnes, round fresh weight) and % of the reported catches by country taken in coastal, estuarine, and in-river fisheries, 2000–2024. Data for 2024 include provisional data.

Country	Year	Coastal		Estuarine		In-river		Total
		Weight (t)	% of total	Weight (t)	% of total	Weight (t)	% of total	Weight (t)
Canada	2000	2	2	29	19	117	79	148
	2001	3	2	28	20	112	78	143
	2002	4	2	30	20	114	77	148
	2003	5	3	36	27	96	70	137
	2004	7	4	46	29	109	67	161
	2005	7	5	44	32	88	63	139
	2006	8	6	46	34	83	60	137
	2007	6	5	36	32	70	63	112
	2008	9	6	47	32	92	62	147
	2009	7	6	40	33	73	61	119
	2010	6	4	40	27	100	69	146
	2011	7	4	56	31	115	65	178
	2012	8	6	46	36	73	57	127
	2013	8	6	49	36	80	58	137
	2014	7	6	28	24	83	71	118
	2015	8	6	35	25	97	69	140
	2016	8	6	34	25	93	69	135
	2017	7	6	35	32	68	62	110
	2018	7	9	35	45	36	46	79
	2019	6	6	40	40	54	54	100
	2020	8	7	45	44	50	49	103
	2021	7	8	40	41	50	51	98
	2022	7	8	42	46	41	46	90
	2023	8	9	43	52	32	39	82
	2024	6	10	38	56	23	34	67
Denmark*^	2008	0	1	0	0	9	99	9
	2009	0	0	0	0	8	100	8
	2010	0	1	0	0	13	99	13
	2011	0	0	0	0	13	100	13
	2012	0	0	0	0	12	100	12
	2013	0	0	0	0	11	100	11
	2014	0	0	0	0	9	100	9
	2015	0	0	0	0	9	100	9
	2016	0	0	0	0	10	100	10
	2017	0	1	0	0	12	99	12
	2018	0	1	0	0	11	99	11
	2019	0	1	0	0	13	99	13
	2020	0	0	0	0	9	100	9
	2021	0	0	0	0	2	100	2
	2022							0

Country	Year	Coastal		Estuarine		In-river		Total
		Weight (t)	% of total	Weight (t)	% of total	Weight (t)	% of total	Weight (t)
	2023							0
	2024	0	0	0	0	4	100	4
Finland	1996	0	0	0	0	44	100	44
	1997	0	0	0	0	45	100	45
	1998	0	0	0	0	48	100	48
	1999	0	0	0	0	63	100	63
	2000	0	0	0	0	96	100	96
	2001	0	0	0	0	126	100	126
	2002	0	0	0	0	94	100	94
	2003	0	0	0	0	75	100	75
	2004	0	0	0	0	39	100	39
	2005	0	0	0	0	47	100	47
	2006	0	0	0	0	67	100	67
	2007	0	0	0	0	59	100	59
	2008	0	0	0	0	71	100	71
	2009	0	0	0	0	38	100	38
	2010	0	0	0	0	49	100	49
	2011	0	0	0	0	44	100	44
	2012	0	0	0	0	64	100	64
	2013	0	0	0	0	46	100	46
	2014	0	0	0	0	58	100	58
	2015	0	0	0	0	45	100	45
	2016	0	0	0	0	51	100	51
	2017	0	0	0	0	32	100	32
	2018	0	0	0	0	24	100	24
	2019	0	0	0	0	21	100	21
	2020	0	0	0	0	16	100	16
	2021	0	0	0	0	1	100	1
	2022	0	0	0	0	1	100	1
	2023	0	0	0	0	1	100	1
	2024	0	0	0	0	1	100	1
France*^	1996			4	31	9	69	13
	1997			3	38	5	62	8
	1998	1	12	2	25	5	62	8
	1999	0	0	4	35	7	65	11
	2000	0	4	4	35	7	61	11
	2001	0	4	5	44	6	53	11
	2002	2	14	4	30	6	56	12
	2003	0	0	6	44	7	56	13
	2004	0	0	10	51	9	49	19
	2005	0	0	4	38	7	62	11
	2006	0	0	5	41	8	59	13

Country	Year	Coastal		Estuarine		In-river		Total
		Weight (t)	% of total	Weight (t)	% of total	Weight (t)	% of total	Weight (t)
	2007	0	0	4	42	6	58	11
	2008	1	5	5	39	7	57	12
	2009	0	4	2	34	3	62	5
	2010	2	22	2	26	5	52	10
	2011	0	3	6	54	5	43	11
	2012	0	1	4	44	5	55	10
	2013	0	3	4	40	6	57	11
	2014	0	2	5	43	7	55	12
	2015	4	23	5	32	7	45	16
	2016	0	2	3	45	3	52	6
	2017	0	5	3	36	6	59	10
	2018	0	0	5	47	6	53	11
	2019	0	2	8	54	6	44	15
	2020	0	2	4	48	4	50	8
	2021	0	1	3	38	4	61	7
	2022	0	0	3	47	4	53	7
	2023	0	1	3	63	2	37	5
	2024	0	0	2	67	1	33	3
Germany	2023	0	0	0	0	<1	100	0
	2024	<1	55	0	0	<1	45	0
Iceland^^^	1996	10	9	0	0	111	91	122
	1997	0	0	0	0	156	100	156
	1998	0	0	0	0	164	100	164
	1999	0	0	0	0	146	100	146
	2000	0	0	0	0	85	100	85
	2001	0	0	0	0	88	100	88
	2002	0	0	0	0	97	100	97
	2003	0	0	0	0	110	100	110
	2004	0	0	0	0	130	100	130
	2005	0	0	0	0	149	100	149
	2006	0	0	0	0	111	100	111
	2007	0	0	0	0	129	100	129
	2008	0	0	0	0	200	100	200
	2009	0	0	0	0	171	100	171
	2010	0	0	0	0	190	100	190
	2011	0	0	0	0	128	100	128
	2012	0	0	0	0	70	100	70
	2013	0	0	0	0	146	100	146
	2014	0	0	0	0	68	100	68
	2015	0	0	0	0	125	100	125
	2016	0	0	0	0	105	100	105
	2017	0	0	0	0	90	100	90

Country	Year	Coastal		Estuarine		In-river		Total
		Weight (t)	% of total	Weight (t)	% of total	Weight (t)	% of total	Weight (t)
	2018	0	0	0	0	82	100	82
	2019	0	0	0	0	51	100	51
	2020	0	0	0	0	70	100	70
	2021	0	0	0	0	44	100	44
	2022	0	0	0	0	57	100	57
	2023	0	0	0	0	43	100	43
	2024	0	0	0	0	46	100	46
Ireland	1996	440	64	134	20	110	16	684
	1997	380	67	100	18	91	16	571
	1998	433	69	92	15	99	16	624
	1999	335	65	83	16	97	19	515
	2000	440	71	79	13	102	16	621
	2001	551	75	109	15	70	10	730
	2002	514	75	89	13	79	12	682
	2003	403	73	92	17	56	10	551
	2004	342	70	76	16	71	15	489
	2005	291	69	70	17	60	14	421
	2006	206	63	60	18	61	19	327
	2007	0	0	31	37	52	63	83
	2008	0	0	29	33	60	67	89
	2009	0	0	21	31	47	69	68
	2010	0	0	38	39	60	61	98
	2011	0	0	32	37	55	63	87
	2012	0	0	28	32	60	68	88
	2013	0	0	38	44	49	56	87
	2014	0	0	26	46	31	54	57
	2015	0	0	21	33	42	67	63
	2016	0	0	19	33	39	67	58
	2017	0	0	18	31	41	69	59
	2018	0	0	15	33	31	67	46
	2019	0	0	15	35	29	65	45
	2020	0	0	17	36	29	64	46
	2021	0	0	17	35	33	65	51
	2022	0	0	11	28	29	72	40
	2023	0	0	11	34	21	66	32
	2024	0	0	12	32	25	68	37
Norway	1996	520	66	0	0	267	34	787
	1997	394	63	0	0	235	37	629
	1998	410	55	0	0	331	45	741
	1999	483	60	0	0	327	40	810
	2000	619	53	0	0	557	47	1176
	2001	696	55	0	0	570	45	1266

Country	Year	Coastal		Estuarine		In-river		Total
		Weight (t)	% of total	Weight (t)	% of total	Weight (t)	% of total	Weight (t)
	2002	596	58	0	0	423	42	1019
	2003	597	56	0	0	474	44	1071
	2004	469	60	0	0	316	40	785
	2005	463	52	0	0	424	48	888
	2006	512	55	0	0	420	45	932
	2007	427	56	0	0	340	44	767
	2008	382	47	0	0	425	53	807
	2009	284	48	0	0	312	52	595
	2010	260	41	0	0	382	59	642
	2011	302	43	0	0	394	57	696
	2012	255	37	0	0	440	63	696
	2013	192	40	0	0	283	60	475
	2014	213	43	0	0	277	57	490
	2015	233	40	0	0	350	60	583
	2016	269	44	0	0	343	56	612
	2017	290	44	0	0	376	56	666
	2018	323	54	0	0	271	46	594
	2019	219	43	0	0	293	57	513
	2020	215	41	0	0	312	59	527
	2021	98	33	0	0	197	67	295
	2022	134	34	0	0	256	66	389
	2023	113	38	0	0	185	62	297
	2024	75	45	0	0	92	55	168
Russian Federation[$]	1996	64	49	21	16	46	35	130
	1997	63	57	17	15	32	28	111
	1998	55	42	2	2	74	56	131
	1999	48	47	2	2	52	51	102
	2000	64	52	15	12	45	36	124
	2001	70	61	0	0	44	39	114
	2002	60	51	0	0	58	49	118
	2003	57	53	0	0	50	47	107
	2004	46	56	0	0	36	44	82
	2005	58	70	0	0	24	30	82
	2006	52	57	0	0	39	43	91
	2007	31	50	0	0	31	50	62
	2008	33	45	0	0	40	55	73
	2009	22	31	0	0	49	69	71
	2010	36	41	0	0	52	59	88
	2011	37	42	0	0	52	58	89
	2012	38	46	0	0	44	54	82
	2013	36	46	0	0	42	54	78
	2014	33	41	0	0	48	59	81

Country	Year	Coastal		Estuarine		In-river		Total
		Weight (t)	% of total	Weight (t)	% of total	Weight (t)	% of total	Weight (t)
	2015	34	42	0	0	46	58	80
	2016	24	42	0	0	32	58	56
	2017	13	28	0	0	34	72	47
	2018	36	45	0	0	44	55	80
	2019	22	38	0	0	35	62	57
	2020	16	34	0	0	32	66	49
	2021	17	35	0	0	32	65	49
	2022	19	35	0	0	36	65	55
	2023	17	32	0	0	35	68	52
Spain^^	1996	0	0	0	0	7	100	7
	1997	0	0	0	0	4	100	4
	1998	0	0	0	0	4	100	4
	1999	0	0	0	0	6	100	6
	2000	0	0	0	0	7	100	7
	2001	0	0	0	0	13	100	13
	2002	0	0	0	0	9	100	9
	2003	0	0	0	0	7	100	7
	2004	0	0	0	0	7	100	7
	2005	0	0	0	0	13	100	13
	2006	0	0	0	0	10	100	10
	2007	0	0	0	0	9	100	9
	2008	0	0	0	0	9	100	9
	2009	0	0	0	0	2	100	2
	2010	0	0	0	0	2	100	2
	2011	0	0	0	0	7	100	7
	2012	0	0	0	0	7	100	7
	2013	0	0	0	0	5	100	5
	2014	0	0	0	0	6	100	6
	2015	0	0	0	0	5	100	5
	2016	0	0	0	0	5	100	5
	2017	0	0	0	0	2	100	2
	2018	0	0	0	0	3	100	3
	2019	0	0	0	0	5	100	5
	2020	0	0	0	3	5	97	5
	2021	0	0	0	1	4	99	4
	2022	0	0	0	0	3	100	3
	2023	0	0	0	0	1	100	1
	2024	0	0	0	0	0	100	2
Sweden***	1996	19	58	0	0	14	42	33
	1997	10	56	0	0	8	44	18
	1998	5	33	0	0	10	67	15
	1999	5	31	0	0	11	69	16

Country	Year	Coastal		Estuarine		In-river		Total
		Weight (t)	% of total	Weight (t)	% of total	Weight (t)	% of total	Weight (t)
	2000	10	30	0	0	23	70	33
	2001	9	27	0	0	24	73	33
	2002	7	25	0	0	21	75	28
	2003	7	28	0	0	18	72	25
	2004	3	16	0	0	16	84	19
	2005	1	7	0	0	14	93	15
	2006	1	7	0	0	13	93	14
	2007	0	1	0	0	16	99	16
	2008	0	1	0	0	18	99	18
	2009	0	3	0	0	17	97	17
	2010	0	0	0	0	22	100	22
	2011	10	26	0	0	29	74	39
	2012	7	24	0	0	23	76	30
	2013	0	0	0	0	15	100	15
	2014	0	0	0	0	30	100	30
	2015	0	0	0	0	17	100	17
	2016	0	0	0	0	9	100	9
	2017	0	0	0	0	18	100	18
	2018	0	0	0	0	17	100	17
	2019	0	0	0	0	20	100	20
	2020	0	0	0	0	14	100	14
	2021	0	0	0	0	11	100	11
	2022	0	0	0	0	8	100	8
	2023	0	0	0	0	10	100	10
	2024	0	0	0	0	8	100	8
UK (England & Wales)	1996	83	45	42	23	58	31	183
	1997	81	57	27	19	35	24	142
	1998	65	53	19	16	38	31	123
	1999	101	67	23	15	26	17	150
	2000	157	72	25	12	37	17	219
	2001	129	70	24	13	31	17	184
	2002	108	67	24	15	29	18	161
	2003	42	47	27	30	20	23	89
	2004	39	35	19	17	53	47	111
	2005	32	33	28	29	36	37	97
	2006	30	37	21	26	30	37	80
	2007	24	36	13	20	30	44	67
	2008	22	34	8	13	34	53	64
	2009	20	37	9	16	25	47	54
	2010	64	59	9	8	36	33	109
	2011	93	69	6	5	36	27	136
	2012	26	45	5	8	27	47	58

Country	Year	Coastal		Estuarine		In-river		Total
		Weight (t)	% of total	Weight (t)	% of total	Weight (t)	% of total	Weight (t)
	2013	61	73	6	7	17	20	84
	2014	41	75	4	8	9	17	54
	2015	55	82	4	6	8	12	68
	2016	71	82	6	6	10	11	86
	2017	36	73	3	7	10	19	49
	2018	36	84	3	8	4	8	42
	2019	0	0	1	12	4	88	5
	2020	0	0	0	0	3	100	3
	2021	0	0	0	0	1	100	1
	2022	0	0	0	0	1	100	1
	2023	0	0	0	0	1	100	1
	2024	0	0	0	1	1	99	1
UK (Northern Ireland)**	1999	44	83	9	17			53
	2000	63	82	14	18			77
	2001	41	77	12	23			53
	2002	40	49	24	29	18	22	81
	2003	25	45	20	35	11	20	56
	2004	23	48	11	22	14	29	48
	2005	25	49	13	25	14	26	52
	2006	13	45	6	22	9	32	28
	2007	6	21	6	20	17	59	30
	2008	4	19	4	22	12	59	21
	2009	4	24	2	15	10	62	16
	2010	5	39	0	0	7	61	12
	2011	2	24	0	0	8	76	10
	2012	0	0	0	0	9	100	9
	2013	0	1	0	0	4	99	4
	2014	0	0	0	0	5	100	5
	2015	0	0	0	0	3	100	3
	2016	0	0	0	0	4	100	4
	2017	0	0	0	0	5	100	5
	2018	0	0	0	0	4	100	4
	2019	0	0	0	0	2	100	2
	2020	0	0	0	0	2	100	2
	2021	0	0	0	0	2	100	2
	2022	0	0	0	0	1	100	1
	2023	0	0	0	0	1	100	1
	2024	0	0	0	0	1	100	1
UK (Scotland)	1996	129	30	80	19	218	51	427
	1997	79	27	33	11	184	62	296
	1998	60	21	28	10	195	69	283
	1999	35	18	23	11	141	71	199

Country	Year	Coastal		Estuarine		In-river		Total
		Weight (t)	% of total	Weight (t)	% of total	Weight (t)	% of total	Weight (t)
	2000	76	28	41	15	157	57	274
	2001	77	30	22	9	153	61	251
	2002	55	29	20	10	116	61	191
	2003	86	45	23	12	83	43	193
	2004	67	27	20	8	160	65	247
	2005	62	29	27	12	128	59	217
	2006	57	30	17	9	119	62	193
	2007	40	24	17	10	113	66	171
	2008	38	24	11	7	112	70	161
	2009	27	22	14	12	79	66	121
	2010	44	25	38	21	98	54	180
	2011	48	30	23	15	87	55	159
	2012	40	32	11	9	73	59	124
	2013	50	42	26	22	43	36	119
	2014	41	49	17	20	26	31	84
	2015	31	45	9	14	28	41	68
	2016	0	0	10	37	17	63	27
	2017	0	0	7	27	19	73	26
	2018	0	0	12	63	7	37	19
	2019	0	0	2	13	11	87	13
	2020	0	0	3	19	11	81	14
	2021	0	0	2	30	5	70	7
	2022	0	0	2	30	4	70	6
	2023	0	0	1	24	4	76	5
	2024	0	0	2	34	3	66	5

* An illegal net fishery operated from 1995 to 1998, catch unknown in the first three years but thought to be increasing. Fishery ceased in 1999. 2001–2002 catches from the illegal coastal net fishery in Lower Normandy are unknown.
** Rod catch data for river (rod) fisheries in UK (N. Ireland) from 2002.
*** Estuarine catch included in coastal catch.
^ Coastal catch included in estuarine catch.
^^ Spain catch to 2018 was Asturias catch raised, 2019 data for all Spain.
^^^ Iceland total catch includes ranched fish.
$ 2021, 2022, and 2023 data extracted from NASCO website (NASCO, 2025). No data available to ICES in 2024
*^ Catch weight data not provided by Denmark for 2022 nor 2023.

Table A1.3 North Atlantic salmon stocks. Estimates for 2024 of unreported catches by various methods, in tonnes by country/jurisdiction in the North East Atlantic, North American, and West Greenland commissions of NASCO.

Commission area	Country/Jurisdiction	Unreported catch (tonnes)	Unreported as % of total North Atlantic catch (unreported + nominal)	Unreported as % of total country/jurisdiction catch (unreported + nominal)
NEAC	Finland	0	0.0	12
NEAC	Iceland	1	0.1	2
NEAC	Ireland	4	0.9	9
NEAC	Norway	72	15.4	30
NEAC	Sweden	1	0.2	9
NEAC	UK (England & Wales)	0	0.0	9
NEAC	UK (N. Ireland)	0	0.0	19
NEAC	UK (Scotland)	<1	0.1	9
NAC	Canada	13	2.8	16
WGC	Greenland	10	2.1	33
Total unreported catch *		101	22	
Total nominal catch of North Atlantic salmon		364		

* No unreported catch estimates are available for France, Spain, St. Pierre and Miquelon, or the Russian Federation in 2024.

Table A1.4 North Atlantic salmon stocks. Numbers of fish caught and released (C&R) in angling fisheries along with the % of the total angling catch (released + retained) for countries in the North Atlantic where records are available, 1991–2024. Data for 2024 are provisional.

Year	Canada [$]		US		Iceland		Russia [*]		UK (E and W)		UK (Scotland)		Ireland		France		UK (N. Ireland) [**]		Denmark		Sweden		Norway [***]		Total C&R
	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	
1991	28	2216	50	239			51	3211																	2561
1992	29	3780	67	407			73	1012																	4833
1993	36	4480	77	507			82	1124	10	1448															5800
1994	43	5288	95	249			83	1205	13	3227	8	6595													7501
1995	46	4602	100	370			84	1190	20	3189	14	1215													7364
1996	41	5216	100	542	2	669	73	1074	20	3428	15	1041													7729
1997	50	5000	100	333	5	1558	87	1482	24	3132	18	1094													7924
1998	53	5628	100	273	7	2826	81	1277	30	4378	18	1346													8718
1999	50	4872	100	211	10	3055	77	1145	42	4382	28	1484													7961
2000	56	6448		0	11	2918	74	1291	42	7470	32	2107													1059
2001	55	5938		0	12	3611	76	1694	43	6143	38	2772													1101
2002	52	5092		0	18	5985	80	2524	50	7658	41	2405													1078
2003	55	5364		0	16	5361	81	3386	56	6425	55	2917													1231
2004	57	6231		0	16	7362	76	2467	48	1321	50	4627							19	255					1467
2005	62	6300		0	17	9224	87	2359	56	1198	55	4616	12	2553					27	606					1479
2006	62	6048	100	1	19	8735	82	3338	56	1095	55	4766	22	5409	18	302			65	794					1590
2007	58	4119	100	3	18	9691	90	4434	55	1091	61	5567	44	1511	16	470			57	959					1686
2008	53	5488	100	61	20	1717	86	4188	55	1303	62	5336	38	1356	20	648			71	2033			5	5512	1849
2009	59	5215			24	1751			58	9096	67	4843	39	1142	21	847			53	1709			6	6696	1303
2010	53	5589			29	2147	56	1458	60	1501	70	7845	40	1514	25	823			60	2512			12	1504	1974
2011	57	7135			32	1859			62	1440	73	6533	38	1268	36	1197			55	2153	5	424	12	1430	1818
2012	57	4328			28	9752	43	4743	65	1195	74	6362	35	1189	59	5014			55	2153	6	404	14	1861	1616
2013	59	5063			34	2313	39	3732	70	1045	80	5400	37	1068	64	1507			57	1932	9	274	15	1595	1491
2014	54	4161			40	1361	52	8479	78	7992	82	3735	37	6537	50	1065			61	1918	15	982	19	2028	1262
2015	64	6544			31	2191	50	7028	79	8113	84	4683	37	9383	100	111			70	2989	16	690	19	2543	1660

Year	Canada [$]		US		Iceland		Russia [*]		UK (E and W)		UK (Scotland)		Ireland		France		UK (N. Ireland) [**]		Denmark		Sweden		Norway [***]		Total C&R
	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	% rod catch	C&R total	
2016	65	6892			43	2275	76	1079	80	9700	90	5018	43	1093	100	280			72	3801	17	362	21	2519	1801
2017	66	5735			42	1966	77	1011	83	1125	90	4565	45	1256	100	126			69	4435	15	680	20	2592	1681
2018	82	5601			43	1940	73	1079	88	6857	93	3506	43	9249	49	3247			79	4613	18	806	22	2202	1486
2019	72	6063			52	1518			89	8171	91	4382	48	9790	85	5000			70	3913	15	747	20	2117	1532
2020	72	5661			51	2127	65	9508	93	1189	92	4285	53	1217	89	7333	8	72	67	4375	16	587	23	2875	1741
2021	75	6705			54	1873	71	1072	95	5534	95	3485	54	1427	89	5132	4	43	70	4016	21	680	27	2135	1636
2022	76	5212			53	2302	64	1032	96	6110	96	4157	56	1362	86	3578	1	10	73	4344	28	730	28	2718	1596
2023	78	4279			63	2056	70	1098	95	4929	96	3189	58	1068	86	1771	4	18	69	3015	29	941	27	1887	1259
2024	79	30776			70	30268			96	5678	98	45882	53	10375	92	3540	8	20	78	2932	34	1001	33	14769	145241
Average [$$]	75	55846			55	19759	68	10387	94	7327	94	39000	54	12109	87	4563	4	36	70	3933	22	737	25	23471	157409
% change [$$$]	4	-45			15	53			2	-23	4	18	-1	-14	5	-22	4	-44	8	-25	12	36	8	-37	-8

[*] Since 2009, data have been either unavailable or incomplete; however, catch and release is understood to have remained at similar high levels as before. Data extracted from NASCO website (NASC0, 2025)
[**] UK (Northern Ireland) Data for 2006–2009. 2014 is for the DCAL area only; the figures from 2010 are a total for UK (Northern Ireland). Data for 2015, 2016, and 2017 are for River Bush only.
[***] The statistics were collected on a voluntary basis; the numbers reported must be viewed as a minimum.
[$] The numbers of released fish in the kelt fishery of New Brunswick are not included in the totals for Canada.
[$$]The average value (2019–2023).
[$$$]% change in 2024 from them 2019-2023 average.

Annex 2 Glossary

1SW *one-sea-winter*; maiden adult Atlantic salmon that has spent one winter at sea.

2SW *two-sea-winter*; maiden adult Atlantic salmon that has spent two winters at sea.

CL(s) *conservation limit(s*), **i.e. S_{lim}**; *d*emarcation of undesirable stock levels or levels of fishing activity; the ultimate objective of fisheries management will be to ensure a high probability of undesirable levels being avoided.

C&R *catch and release;* catch and release is a practice within recreational fishing intended as a technique of conservation. After capture, the fish are unhooked and returned to the water before experiencing serious exhaustion or injury. Using barbless hooks, it is often possible to release the fish without removing it from the water (a slack line is frequently sufficient).

CWT *coded wire tag;* the CWT is a length of magnetized stainless steel wire 0.25 mm in diameter. The tag is marked with rows of numbers denoting specific batch or individual codes. Tags are cut from rolls of wire by an injector that hypodermically implants them into suitable tissue. The standard length of a tag is 1.1 mm.

DST *data storage tag;* a miniature data logger that is attached to fish and other marine animals, measuring salinity, temperature, and depth.

EEZ *Exclusive Economic Zone;* EEZ is a concept adopted at the Third United Nations Conference on the Law of the Sea, whereby a coastal state assumes jurisdiction over the exploration and exploitation of marine resources in its adjacent section of the continental shelf, taken to be a band extending 200 miles from the shore.

FWI *Framework of Indicators;* the FWI is a tool used to indicate if any significant change has occurred in the status of stocks used to inform the previously provided multiannual management advice.

ICES *International Council for the Exploration of the Sea*; a global organization that develops science and advice to support the sustainable use of the oceans through the coordination of oceanic and coastal monitoring and research, and advising international commissions and governments on marine policy and management issues.

MSY *maximum sustainable yield*; the largest average annual catch that may be taken from a stock continuously without affecting the catch of future years. A constant long-term MSY is not a reality in most fisheries, where stock sizes vary with the strength of year classes moving through the fishery.

MSW *multi-sea-winter*; an MSW Atlantic salmon is an adult Atlantic salmon that has spent two or more winters at sea and may be a repeat spawner.

NAC *North American Commission*; the North American Atlantic Commission of NASCO or the North American Commission area of NASCO.

Nominal catch the catch of a fishery, defined as the round, fresh weight of fish, that are caught and retained and reported.

NASCO *North Atlantic Salmon Conservation Organization*; an international organization, established by an inter-governmental convention in 1984. The objective of NASCO is to conserve, restore, enhance, and rationally manage the fisheries of Atlantic salmon through international cooperation, taking account of the best available scientific information.

NEAC *North-East Atlantic Commission*; the North-East Atlantic Commission of NASCO or the North-East Atlantic Commission area of NASCO.

N-NEAC *Northern area - North-East Atlantic Commission*; the northern portion of the North-East Atlantic Commission area of NASCO.

S-NEAC *Southern area - North-East Atlantic Commission*; the southern portion of the North-East Atlantic Commission area of NASCO.

PFA *pre-fishery abundance;* the numbers of Atlantic salmon estimated to be alive in the ocean from a particular stock at a specified time. In the previous version of the stock complex Bayesian PFA forecast model two productivity parameters are calculated, for the *maturing* (PFAm) and *non-maturing* (PFAnm) components of the PFA. In the updated version only one productivity parameter is calculated; this parameter is used to calculate total PFA, which is then split into PFAm and PFAnm based upon the *proportion of PFAm* (p.PFAm).

PIT *passive integrated transponder;* PIT tags use radio frequency identification technology. PIT tags lack an internal power source. They are energized on encountering an electromagnetic field emitted from a transceiver. The tag's unique identity code is programmed into the microchip's nonvolatile memory.

SER *spawner escapement reserve;* the CL increased to take account of natural mortality between the recruitment date (assumed to be 1st of January) and the date of return to home waters

ToR *terms of reference*

Unreported catch the derivation differs by country and this is explained in ICES (2024c). It may include the estimated catch from illegal fisheries directed at salmon, legal under-reporting, non-reporting, and illegal catch.

WGC *West Greenland Commission*; the West Greenland Commission of NASCO or the West Greenland Commission area of NASCO

WGNAS *Working Group on North Atlantic Salmon*; ICES working group responsible for the annual assessment of the status of Atlantic salmon stocks across the North Atlantic and formulating catch advice for NASCO