



# 2025 STOCK STATUS UPDATE OF ATLANTIC SALMON (*SALMO SALAR*) IN NEWFOUNDLAND AND LABRADOR

## CONTEXT

This Fisheries Science Response is from the regional peer review meeting of November 25–26, 2025, on the Stock Status Update of Atlantic Salmon in Newfoundland and Labrador. In 2025, 22 Atlantic Salmon populations were monitored (18 in Newfoundland and 4 in Labrador); however, only 17 NL populations could be assessed due to incomplete data for the remaining populations. Fisheries Management will use the advice from this Science Response Report to inform Atlantic Salmon management plans in 2026 and beyond. Results from the previous advisory meeting regarding stock status of Atlantic Salmon in 2024 have been published (DFO 2025a).

## SCIENCE ADVICE

### Status

- In Labrador, Atlantic Salmon returns to monitored rivers in 2025 were similar to 2024, lower than 2020–23, and near the lower end of historical variation (since 1998). In 2025 the monitored river in SFA 1 was in the Healthy Zone, however all three monitored rivers in SFA 2 were in the Critical Zone.
- In Newfoundland, Atlantic Salmon returns to monitored rivers in 2025 were similar to 2023 and 2024, continuing a trend of historic-low returns since 2023. Of 13 assessed rivers across SFAs 3–14A in 2025, 8 (62%) were in the Critical Zone.

### Trends

- In northern Labrador (SFA 1), Atlantic Salmon returns show a long-term increasing trend, while in southern Labrador (SFA 2), one of the three monitored rivers shows a long-term decline and the other two have remained stable.
- In Newfoundland, 8 of 10 (80%) monitored rivers across SFAs 4, 5, 9, 11, 13 and 14A with sufficient time series show long-term declining trends in Atlantic Salmon returns.
- All four monitored rivers with sufficient smolt abundance time series data show long-term declining trends in smolt production by 33% to 77%, two of which also show long-term declining trends in marine survival.
- There are long-term declining trends in recreational angling effort and the number of retained salmon in both Newfoundland and Labrador, and in the number of salmon caught-and-released in Labrador rivers.
- Total Atlantic Salmon harvest in the Labrador net fisheries has been stable over the past 20 years. There is a declining trend in total harvest in northern Labrador (SFA 1A), nonlinear trend in harvest in Lake Melville (SFA 1B), while harvest in southern Labrador (SFA 2) has been stable over that period.

## Ecosystem and Climate Change Considerations

- High freshwater temperatures and low water levels observed in recent years has impacted salmon upstream migration and reduced available habitat, with impacts to juvenile and adult survival including confirmed mortalities on seven Newfoundland rivers.
- A relationship between ocean climate and ecosystem productivity has been identified across Northwest Atlantic ecosystems. The warm phase that started in 2020 continues, along with improvements in zooplankton biomass levels.
- Current conditions are favourable for ecosystem productivity, however, the increasing variability in long-term ocean climate may hinder long-term ecosystem productivity.
- Total biomass of the marine fish community shows improvements from the lows in the mid-late 2010s and is currently at or near post-collapse highs, but remains below pre-collapse levels, indicating that these ecosystems still remain in an overall lower productivity condition.

## BASIS FOR ASSESSMENT

### Assessment Details

#### Year Assessment Approach was Approved

Atlantic Salmon stocks in SFAs 1–14 have been assessed relative to reference points based on estimated egg depositions by spawners. The Limit Reference Point (LRP) is equivalent to the conservation egg requirement (O’Connell and Dempson 1995; O’Connell et al. 1997; Reddin et al. 2006) which has been applied for over two decades (Kelly et al. 2024) and the Upper Stock Reference (USR) has been in place since 2017 (DFO 2017).

#### Assessment Type

The 2025 stock assessment for SFAs 1–14 in the NL region is an Interim-Year Update.

#### Most Recent Assessment Date

1. Last Full Assessment: The last Atlantic Salmon stock assessment for SFAs 1–14 was February 27–29, 2024, for the 2023 return year (DFO 2025b).
2. Last Interim-Year Update: The last interim-year update for Atlantic Salmon in SFAs 1–14 was November 18–19, 2024, for the 2024 return year (DFO 2025a).

#### Stock Assessment Approach

1. Broad category: Index-based
2. Specific category: The assessment of monitored NL Atlantic Salmon rivers in SFAs 1, 2, 4, 5, 9, 10, 11, 13, and 14A are index-based (including fishery-dependent and fishery-independent indices).

With no monitored rivers, SFAs 3, 6, 7, 8, 12, and 14B are considered data poor in terms of Atlantic Salmon abundance information.

Atlantic Salmon are assessed in NL at the river level, where counts of returning adults at monitoring facilities (Table 1) are converted to estimates of returns, spawners and egg depositions, accounting for known mortalities and recreational fishery removals, and compared to river-specific reference points to designate stock status (DFO 2025a). Long-term trends in adult returns, smolt abundance, marine survival, and removals from the recreational and coastal Labrador Food, Social and Ceremonial (FSC) fisheries are modelled over the previous three

generations (17–20 years). To compare the relative abundance of returning Atlantic Salmon over time, the Salmon Abundance Index models total returns to monitored rivers collectively since the closure of the commercial fisheries in 1992 (Newfoundland) and 1998 (Labrador).

Atlantic Salmon stock assessment triggers were evaluated to determine if a full assessment was warranted based on total salmon returns to monitored rivers in 2025.

### **Ecosystem and Climate Change Assessment Approach**

The physical environment was characterized by examining river water level and temperature, trends in ocean climate using oceanographic indicators, and the Newfoundland and Labrador Climate Index (NLCI). Marine food web components examined included

- lower trophic levels, characterized using primary production, and zooplankton indicators,
- status and trends of the fish community, and
- a review of available seabird and marine mammal information.

The characterization of ecological and environmental interactions included fish diets and ecosystem productivity. Aggregated fisheries metrics considered the risk of ecosystem overfishing. Pathways for climate change impacts explored the link between ocean climate and ecosystem productivity, and the potential impact of changes in NLCI variability.

### **Stock Structure Assumption**

Juvenile Atlantic Salmon predominantly remain in freshwater habitats for three to four years in Newfoundland and four to five years in Labrador prior to undergoing smoltification and migrating to sea as smolts. Spawning populations in NL consist of varying proportions of small (fork length <63 cm) and large (fork length ≥63 cm) adult salmon. For most Newfoundland rivers (SFAs 3–12 and 14A), small adult salmon are mostly female (60–92%) grilse, that have spent one year at sea before returning to spawn for the first time. Large adult salmon in Newfoundland rivers are composed mainly of repeat-spawning grilse that are either consecutive- or alternate-year spawners. Rivers in Labrador (SFAs 1, 2, and 14B) and southwestern Newfoundland (SFA 13) contain higher proportions of maiden salmon that have spent two or more years at sea before returning to spawn.

### **Reference Points**

The status of Atlantic Salmon populations are assessed annually relative to two reference points, defined on the bases of estimated egg depositions (DFO 2025a). Conservation egg requirements for Atlantic Salmon were previously established for individual rivers in SFAs 1–2 in Labrador based on 1.9 eggs per m<sup>2</sup> of river rearing habitat; the Straits Area of NL (SFAs 14A–14B) based on 2.4 eggs per m<sup>2</sup> of river rearing habitat and 105 eggs per hectare of lake habitat; and Newfoundland (SFAs 3–13) based on 2.4 eggs per m<sup>2</sup> of river rearing habitat and 368 eggs per hectare of lake habitat (O’Connell and Dempson 1995; O’Connell et al. 1997; Reddin et al. 2006). The egg depositions are derived from estimates of small and large salmon spawners, sex ratio, fecundity, and size, and are compared to the river-specific LRP and USR to designate a status each year.

- Limit Reference Point (LRP): 100% of the river-specific conservation egg requirement (DFO 2015; DFO 2025a).
- Upper Stock Reference (USR): The USR for Atlantic Salmon in NL Region rivers is approximately 75% of  $R_{max}$  estimated from a stock-recruitment curve applied to Western Arm Brook data and is 1.5 times higher than the river-specific LRP defined (DFO 2017).

- Removal Reference (RR): n/a
- Target Reference Point (TRP): n/a

**Data**

- Adult Atlantic Salmon counts from 22 rivers (18 in Newfoundland and 4 in Labrador) where upstream counting fences or fishways were operated in 2025 (1972–2025, Table 1).
- Atlantic Salmon smolt counts from five Newfoundland rivers where downstream counting fences were operated in 2025 (1972–2025).
- Annual estimates of marine survival from smolt to returning adult Atlantic Salmon on five rivers where smolt and adult counts are monitored (1972–2025).
- Estimates of recreational angling catches (retained and released) from 1994–2024 compiled using angler stub-returns and an annual angler phone survey (Veinott and Cochrane 2015).
- Estimates of Atlantic Salmon harvest in the Labrador Food, Social, and Ceremonial (FSC) and resident net fisheries derived annually from logbooks returned by participants in the fishery (1999–2024).
- Historical biological characteristics (smolt and adult size and age, adult fecundity and sex ratio) information collected at most counting facilities annually.
- Freshwater temperature and water level data collected in 2023–25 from 91 rivers in Newfoundland and 11 rivers in Labrador.
- DFO Multispecies research vessel trawl surveys (1983–2003, 2005–20, 2023–24).
- DFO-NL Ecosystem Research Program Indicators (1960–2024).
- Atlantic Zone Monitoring Program (AZMP) Indicators (1950–2024).
- NASA Moderate Resolution Imaging Spectroradiometer (MODIS) Aqua Ocean Color observation (2003–24).

Table 1. Monitored Atlantic Salmon rivers in Newfoundland and Labrador in 2025 including river-specific reference points (Limit Reference Point (LRP) and Upper Stock Reference (USR)), the estimated % LRP achieved and the corresponding stock status zone for each spawning population in 2025, and modelled trends in adult abundance on each river over the previous three generations (16–20 years). Rivers with n/a for trend have insufficient time series data for modelling.

Region	SFA	Monitored River	Life Stage	Count Method	2025 Total Salmon	LRP (millions of eggs)	USR (millions of eggs)	2025 % of LRP Achieved	2025 Stock Status	Previous Three Generation Trend
Labrador	1	English River	Adult	Fence	1,104	0.51	0.77	254	Healthy	Increasing
	2	Sand Hill River	Adult	Fence	3,787	10.10	15.15	78	Critical	Stable
		Muddy Bay Brook	Adult	Fence	172	0.58	0.87	72	Critical	Stable
		Southwest Brook	Adult	Fence	5	0.71	1.07	1	Critical	Declining
Newfoundland	4	Exploits River	Adult	Fishway	19,769	95.90	143.85	32	Critical	Declining
		Rattling Brook	Adult	Fishway	437	n/a	n/a	n/a	n/a	n/a
		Campbellton River	Adult	Fence	1,088	2.92	4.38	104	Cautious	Declining
			Smolt		19,147					
	Salmon Brook	Adult	Fishway	838	2.32	3.48	92	Critical	Declining	
	5	Middle Brook	Adult	Fishway	1,390	2.34	3.51	158	Healthy	Declining
		Terra Nova River	Adult	Fishway	3,200	14.30	21.45	58	Critical	Declining
		Northwest Brook	Adult	Fence	n/a	4.07	6.11	n/a	n/a	n/a
	9	Rocky River	Adult	Fishway	105	3.40	5.10	10	Critical	Declining
			Smolt	Fence	n/a					
	10	Northeast River	Adult	Fishway	337	0.72	1.08	135	Cautious	n/a
		Come By Chance River	Adult	Fence	n/a	0.82	1.23	n/a	n/a	n/a
		Bay de l'Eau River	Adult	Fence	n/a	1.05	1.58	n/a	n/a	n/a
	11	Garnish River	Adult	Fence	524	2.63	3.95	48	Critical	n/a
			Smolt		n/a					
Conne River		Adult	Fence	585	4.34	6.51	22	Critical	Declining	

**Newfoundland and Labrador Region**

**Update of Atlantic Salmon in NL**

Region	SFA	Monitored River	Life Stage	Count Method	2025 Total Salmon	LRP (millions of eggs)	USR (millions of eggs)	2025 % of LRP Achieved	2025 Stock Status	Previous Three Generation Trend
			Smolt		n/a					
	13	Harrys River	Adult	Fence and snorkel survey	2,107	7.80	11.70	61	Critical	Declining
		Corner Brook Stream	Adult	Fishway	n/a	0.13	0.20	n/a	n/a	n/a
	14A	Western Brook	Adult	Fence	332	0.73	1.10	74	Critical	Declining
		Torrent River	Adult	Fishway	4,030	1.50	2.25	515	Healthy	Stable
		Western Arm Brook	Adult	Fence	880	0.91	1.37	219	Healthy	Declining
	Smolt		12,231							

## ASSESSMENT

### Stock Status and Trends

An evaluation of total Atlantic Salmon returns to monitored rivers in 2025 compared to long-term averages met the threshold for both stock assessment triggers. Given that the assessment timing has changed from Winter to Fall and the next full assessment is anticipated in late 2026, an update was deemed appropriate for 2025 while the transition is implemented.

#### Labrador (SFAs 1, 2 and 14B)

A model estimating salmon abundance in monitored Labrador rivers since the 1998 commercial fishery closure suggests 2025 returns were below 2020–23 levels, slightly above 2024, but within long-term variability. This ranks as the 12th lowest abundance in 28 years (Figure 1). Uncertainty is higher for Labrador rivers because only four rivers are monitored. Returns to southern Labrador rivers in 2025 were below average, with one of three rivers trending downward over the past three generations (20 years) and the other two relatively stable. The northern Labrador river was above average and trending upward. Estimated egg depositions were below the LRP (critical zone) on all southern Labrador rivers (SFA 2) but exceeded the USR (healthy zone) on the northern Labrador river (SFA 1).

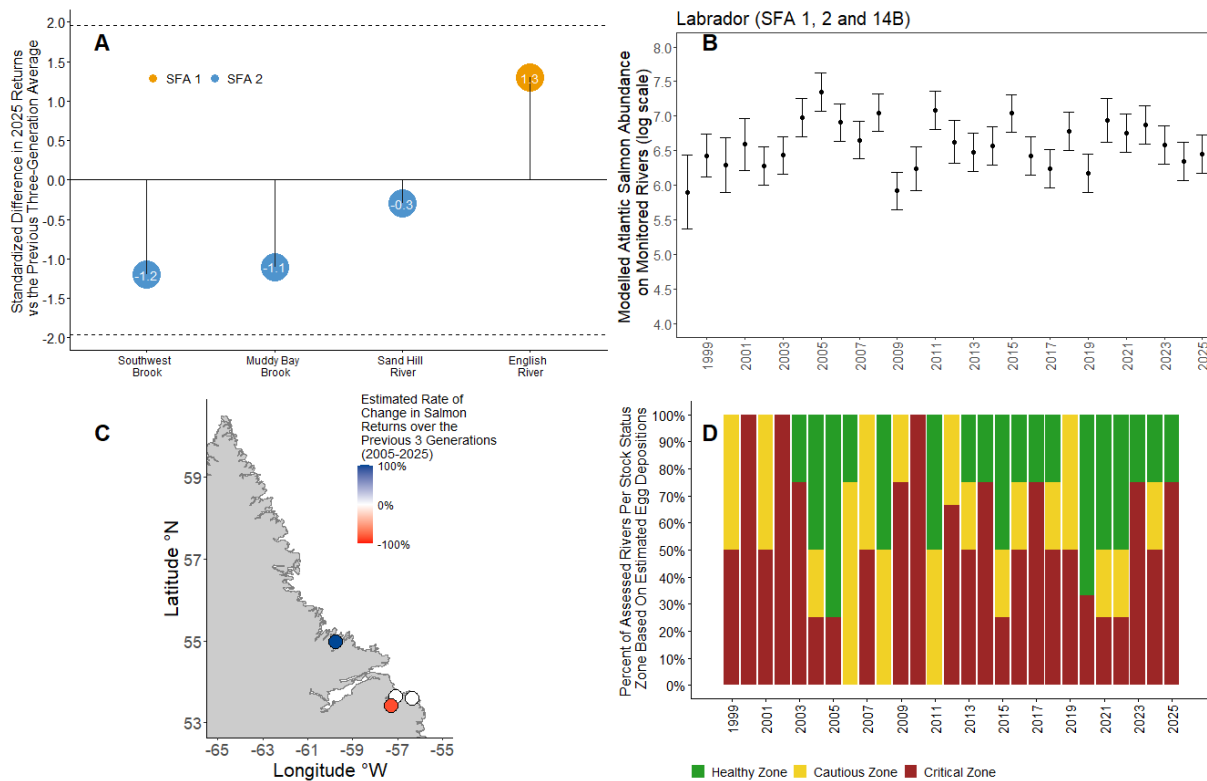


Figure 1. A) Standardized difference (z-score) in 2025 returns compared to the previous three-generation average for each monitored river (dashed lines represent  $\pm 1.96$  standard deviations, indicating significant departures from the long-term mean). (B) Modelled Atlantic Salmon abundance on monitored rivers from 1998–2025 based on generalized linear models (error bars represent 95% confidence intervals). (C) Estimated rate of change in total salmon returns over the previous three generations (2005–25) from river-specific generalized linear models (red indicates declines, blue indicates increases, white indicates no significant trend). (D) Proportion of assessed rivers classified within each stock status zone (Healthy, Cautious, or Critical) per year based on estimated egg depositions.

**Newfoundland (SFAs 3-14A)**

A model estimating salmon abundance in monitored Newfoundland rivers since the 1992 commercial fishery closure suggests that adult salmon returns were relatively strong from 2010–2015 but below average every year after except 2021, with historical lows in 2023–2025 (Figure 2). In 2025, returns to almost all monitored rivers were below long-term averages, and eight of ten rivers now show declining trends over the past three generations (Figure 2), up from three rivers showing declines in 2024. Egg deposition was below the LRP on 62% of rivers, with only 23% exceeding the USR. The proportion of assessed Newfoundland rivers that were below the LRP in 2023 and 2025 are the highest and fifth highest, respectively, since at least 1992.

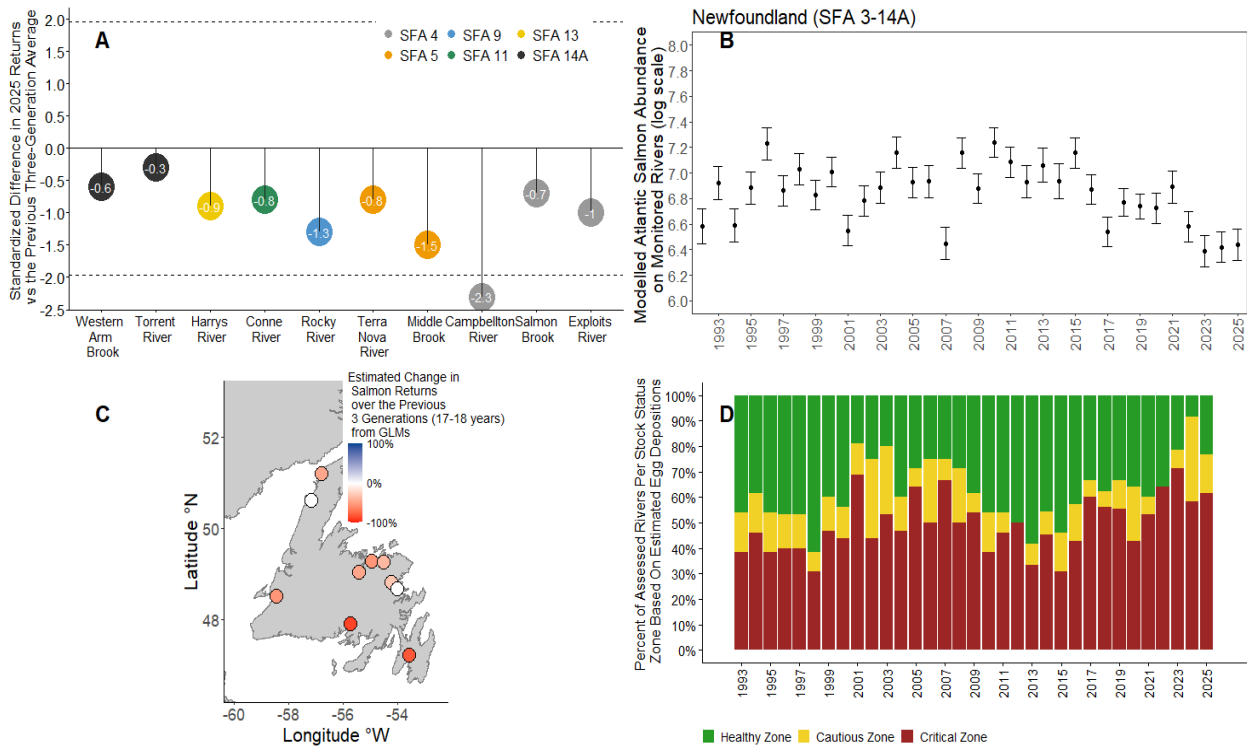


Figure 2. Trends in Atlantic Salmon abundance and stock status for monitored rivers in Newfoundland (Salmon Fishing Areas 3–14A). (A) Standardized difference (z-score) in 2025 returns compared to the previous three-generation average for each monitored river (dashed lines represent  $\pm 1.96$  standard deviations, indicating significant departures from the long-term mean). (B) Modelled Atlantic Salmon abundance on monitored rivers from 1992–2025 based on generalized linear models (error bars represent 95% confidence intervals). (C) Estimated rate of change in total salmon returns over the previous three generations (2007 or 2008–25) from river-specific generalized linear models (red indicates declines, blue indicates increases, white indicates no significant trend). (D) Proportion of assessed rivers classified within each stock status zone (Healthy, Cautious, or Critical) per year based on estimated egg depositions.

Atlantic Salmon smolt abundance data for 2025 were available for two Newfoundland rivers. Smolt abundance was below average on Campbellton River (SFA 4) and below the long-term average on Western Arm Brook (SFA 14A) in 2025 (Figure 3). The partial counts obtained on three other rivers suggests that 2025 smolt abundance was near or above short-term averages, but likely below long-term averages on those rivers. All four rivers (SFAs 4, 11, 9, and 14A) where smolts are counted over enough years to model long-term trends show declines of 33% to 77% over time (Figure 3).

The marine survival of Atlantic Salmon smolts that migrated to sea in spring 2024 and returned as adults in 2025 was above average for monitored rivers in SFA 11 and 14A, but well below average on monitored rivers in SFA 4 and 9 (Figure 4). Two of five rivers where marine survival is estimated annually show long-term declining trends in marine survival of Atlantic Salmon post-smolts, whereas the other rivers show no clear trend over time (Figure 4).

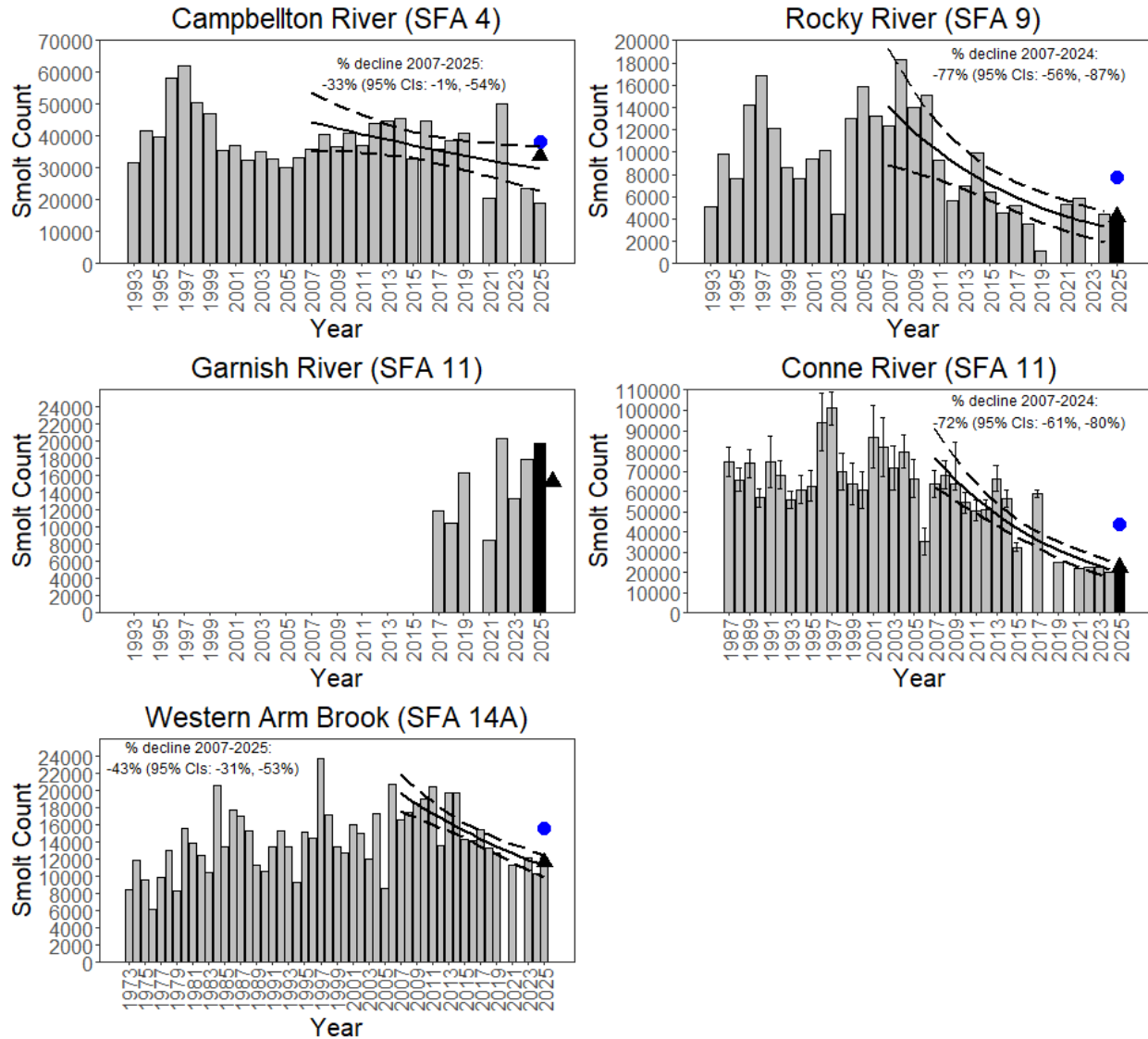


Figure 3. Atlantic Salmon smolt abundance on monitored rivers in Newfoundland, 1972–2025. Smolt abundance is enumerated annually at counting fences, except on Conne River where mark–recapture methods were used prior to 2019 (vertical error bars represent 95% confidence intervals). Blue circles represent the average smolt abundance over the previous generation of Atlantic Salmon (six years; 2019–24). Black bars indicate partial smolt counts in 2025 resulting from high water levels that delayed fence installations (Western Arm Brook, Conne River, and Garnish River) or fence washouts (Rocky River). For these four rivers, modelled trends and estimated changes in abundance are based on data up to 2024 (DFO 2025a). The Campbellton River trend includes 2025 data, as counts were unaffected that year.

**Removals from Fisheries**

Over the past three generations (18–20 years), recreational anglers have averaged 92,970 rod-days of effort, 19,481 retained salmon, and 25,862 salmon caught and released per year in Newfoundland rivers. In Labrador anglers have averaged 6,253 rod-days of effort, 1,260 retained salmon, and 5,001 salmon caught and released per year. Recreational angling effort and Atlantic Salmon retention have declined over time in Newfoundland and Labrador, as well as the number of salmon caught-and-released in Labrador only (Figure 5). These declines may be due to a combination of low water levels and high water temperatures reducing angling opportunities in recent years (DFO 2025a; DFO 2025b), lower seasonal retention limits since 2018 (Figure 6), and shifting demographics of the local recreational angling population (Van Leeuwen et al. 2025).

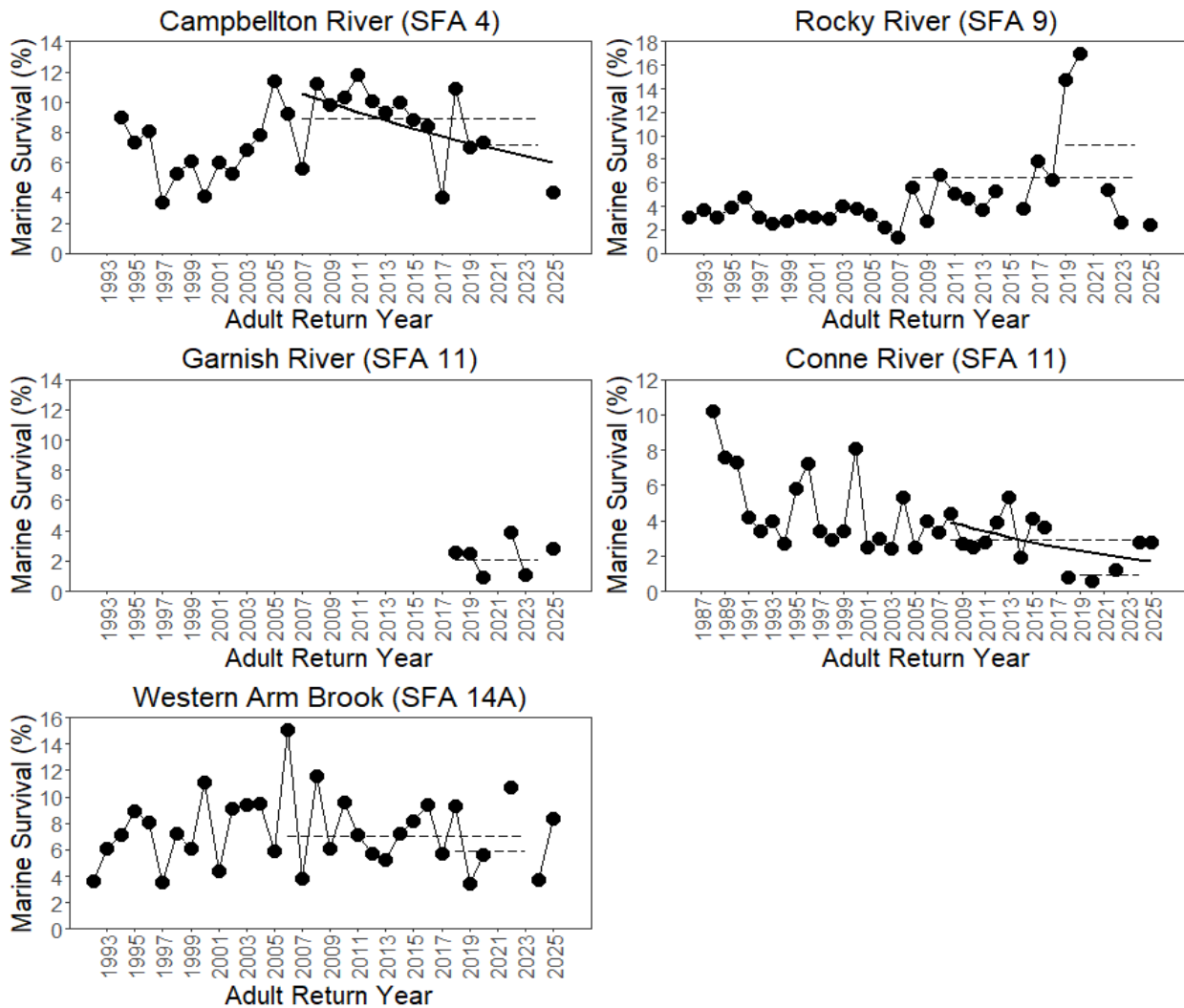


Figure 4. Marine survival rates of smolt to adult small salmon for monitored Newfoundland rivers. Survival rates have not been adjusted for marine exploitation during the commercial salmon fishery (prior to 1992); thus, values represent survival of salmon back to the river. Horizontal dashed lines illustrate the previous generation average (2019–24) and previous three generation average (2007/08–2024) where sufficient data are available. If present, a solid black line represents the estimated trend in marine survival over the previous three generations modelled with a beta GLM.

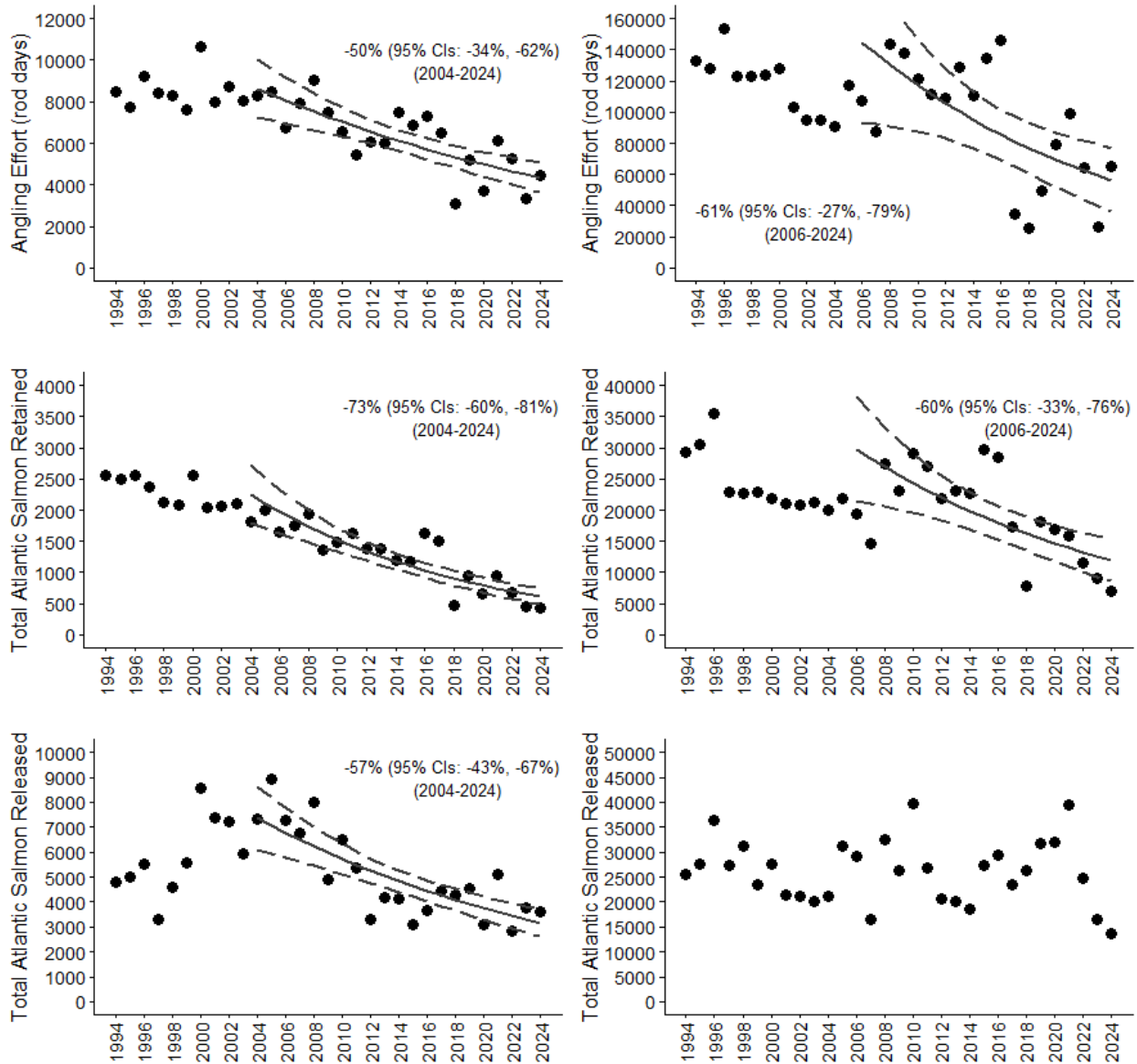


Figure 5. Angling effort (rod days), total Atlantic Salmon retained, and total Atlantic Salmon released in the recreational fishery in Newfoundland and Labrador from 1994–2024. Left panels show Labrador (SFAs 1, 2, and 14B) and right panels show Newfoundland (SFAs 3–14A). Solid lines show trends from statistical models fitted to data from the past three generations (2004–24 for Labrador; 2006–24 for Newfoundland), with dashed lines showing 95% confidence intervals.

Atlantic Salmon exploitation rates for the recreational fishery are derived on monitored rivers annually with data from 1994–2024 (Figure 6). In most years, average recreational exploitation rates range from around 7%–12%, though estimates vary widely among rivers, reaching 25%–29% in some cases.

In the coastal Labrador net fisheries, an average of 13,382 salmon have been harvested annually from 2004–24. While total salmon harvest across Labrador has fluctuated without a significant overall trend (Figure 7), patterns differ by subregion. Harvest has declined in northern Labrador, while no significant trend is evident in southern Labrador. In contrast, harvest in Lake Melville increased from 2005–14, declined from 2015–20, and increased slightly in recent years

(Figure 7). Genetic analysis of samples collected annually from this fishery suggest that over 95% of the salmon harvested are of Labrador origin (Bradbury et al. 2015; ICES 2025).

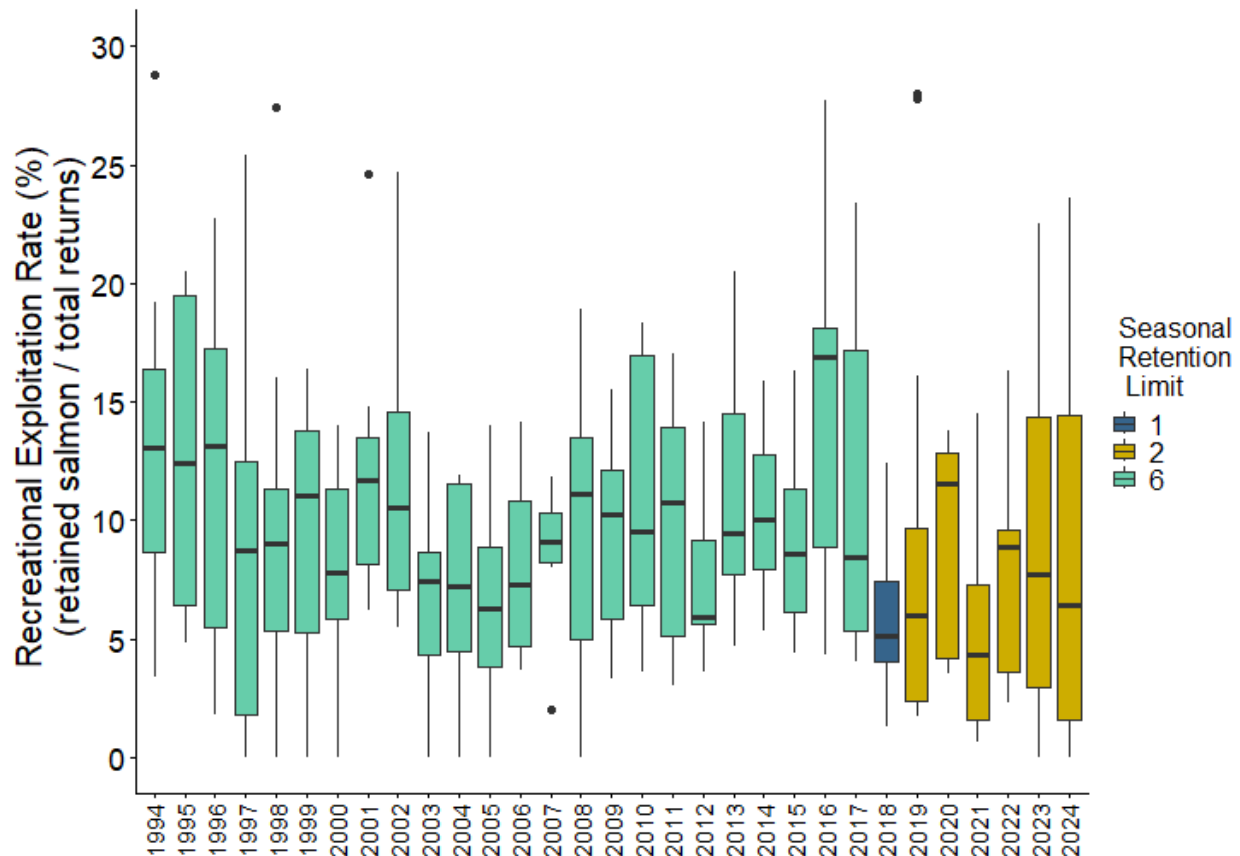


Figure 6. Boxplot of estimated recreational exploitation rates of Atlantic Salmon on monitored rivers in Newfoundland (SFAs 3–14A) from 1994–2024. Estimates of river-specific angling effort and harvest were unavailable for the 2025 season at the time of this meeting. The horizontal black lines within each box represent median values for each year.

## History of Management

Commercial Atlantic Salmon fisheries were closed for Newfoundland in 1992 and Labrador in 1998.

The mixed stock fishery of Atlantic Salmon by Indigenous groups and residents of Labrador, using gill nets, has been taking place since 2000 (ICES 2025). Communal licence conditions are negotiated annually with the Indigenous groups and an allotment of tags are provided by DFO to be distributed to communities. In 2011, the tag limit per resident fisher was reduced from 4 to 3, in response to a NASCO requirement of Canada to reduce the number of salmon harvested for conservation. Estimates of harvest are derived annually for SFA 1A, 1B and 2 (DFO 2025b; ICES 2025) from catch logs returned by participants in the fishery.

The recreational Atlantic Salmon fishery in NL is managed based on a river-classification system implemented in 1999 (Veinott et al. 2013) to determine river-specific seasonal retention limits. From 1999–2017, the seasonal retention limit was 6 salmon with a river-specific retention limit based on its classification; 6 salmon on Class 6 rivers, 4 salmon on Class 4 rivers and 2 salmon on Class 2 rivers (DFO 2017). After relatively poor salmon returns in 2016 and 2017, the

2018 season opened with a retention limit of one salmon with an in-season review (DFO 2019) which resulted in the prohibition of salmon retention mid-season after below-average returns. Since 2019, the NL recreational fishery has been managed annually with a daily catch and release limit of 3 salmon, a seasonal retention limit of two salmon, and river-specific retention limits of one fish for Class 2 rivers and two fish on Class 4 and Class 6 rivers (DFO 2025a; DFO 2025b). In addition, the criterion for closing rivers based on water temperatures (>20°C for 2–3 days) and water levels changed from full closure to angling to restricting angling to one hour before sunrise until 10:01am.

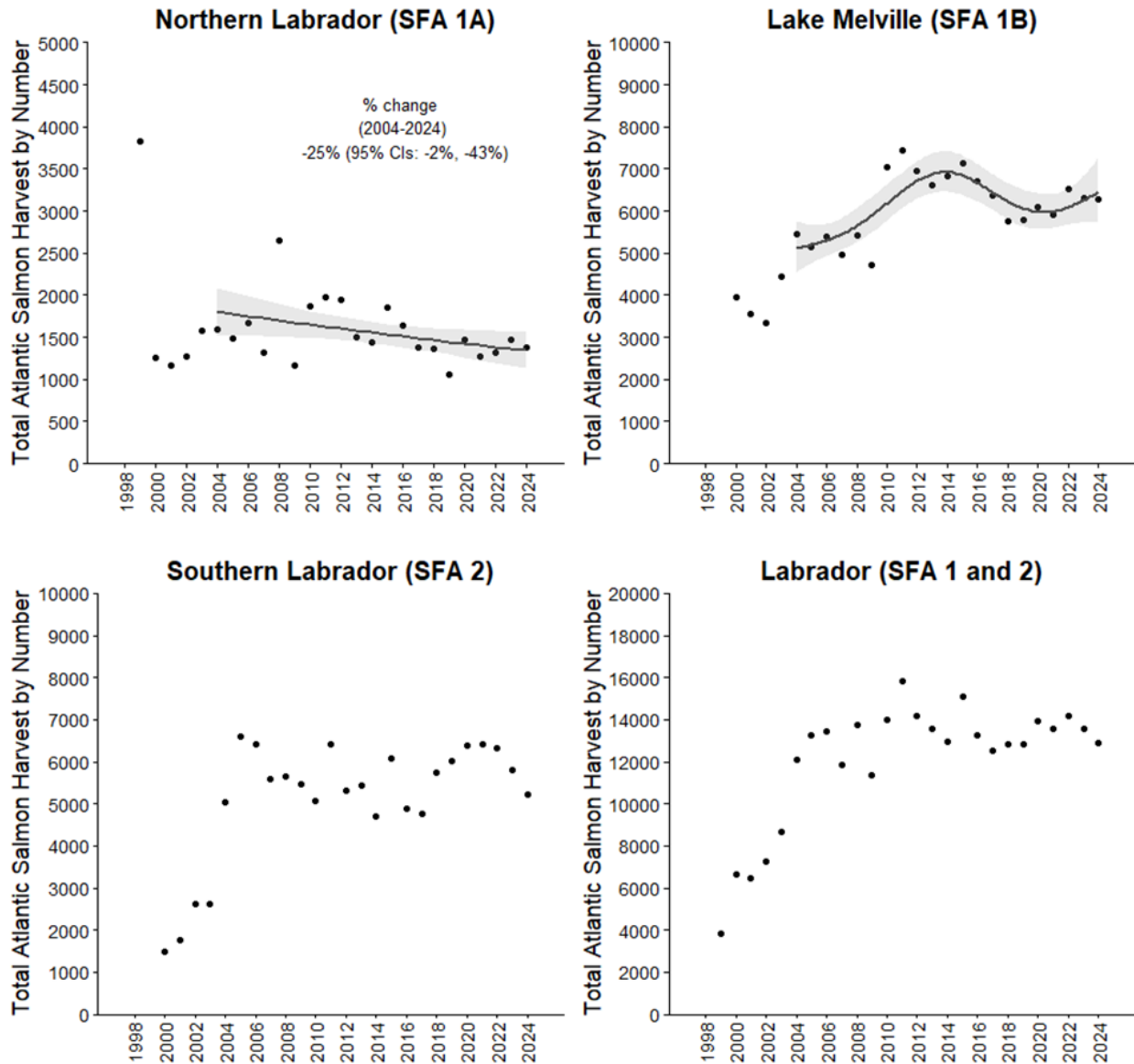


Figure 7. Total number of Atlantic Salmon harvested in the Food, Social, and Ceremonial (FSC) and resident trout net fisheries along coastal Labrador from 1999–2024. Estimates are based on logbooks submitted by participants in each fishery and are shown separately for Northern Labrador (SFA 1A), Lake Melville (SFA 1B), Southern Labrador (SFA 2), and for all areas combined.

## Ecosystem and Climate Change Considerations

### Freshwater

Since the province-wide temperature monitoring program expanded in 2023, river water temperatures have remained high. Average seasonal temperature in 2025 was approximately 0.7°C cooler than in 2024. However, low water levels and increased periods of sub-lethal temperatures (25°C or higher) continue to persist across the region. Based on observations from counting facilities, aerial surveys, and river guardians, low water levels have impacted the upstream migration of salmon and reduced the amount of available habitat on some rivers.

The hot and dry conditions during spring, summer and fall months in recent years had negative consequences on freshwater survival of salmon in the NL region. DFO Science confirmed mortality events of salmon on seven Newfoundland rivers in 2025, likely due to water temperatures near or exceeding lethal limits. Declines in smolt abundance have been observed in several monitored rivers (Figure 3), suggesting impacts on egg and/or juvenile survival. However, it is difficult to determine the degree to which freshwater temperatures may have impacted juvenile and adult survival and abundance regionally.

### Marine

The ocean climate in the NL bioregion shows decadal scale cold and warm phases. The warm phase that started around 2020 continues in 2025. Recent phytoplankton blooms have been early, which favors recruitment of the copepod *Calanus finmarchicus*, a key food item for fish. Total zooplankton biomass has been improving since the lows in the early-mid 2010s, with normal and above normal levels in recent years.

Total biomass of the marine fish community across the bioregion remains much lower than prior to the collapse in the early-1990s. Conditions in recent years appear to be improving with respect to the lows of the mid-late 2010s, with total biomass building back towards post-collapse relative highs. Still, total biomass of these ecosystems has yet to recover to pre-collapse levels indicating that they remain in an overall lower productivity condition.

A relationship between ocean climate and ecosystem productivity, indicating bottom-up regulation (e.g., food availability), has been identified across Northwest Atlantic ecosystems. Consequently, the increased interannual variability in ocean climate in recent decades could negatively impact long-term ecosystem productivity. Atlantic Salmon biology is directly influenced by ambient water temperature. While sea surface temperatures around NL from 2021–24 have been well above long-term averages, the precise implications of these climate-induced changes for Atlantic Salmon remain uncertain. However, it is expected that they will impact Atlantic Salmon through variations in the spatio-temporal distribution of their predator and prey species.

### Stock Advice

The NL region has seen below-average Atlantic Salmon returns in most years after 2015, with 2025 returns to monitored Labrador rivers ranking 12<sup>th</sup> lowest since 1998 and returns to monitored Newfoundland rivers continuing a trend of historical lows since 2023. The NL region has experienced an increase in the frequency of high river temperatures and low water levels during the spring, summer and fall, delaying the upstream migration of returning adult salmon, causing confirmed mortalities on seven rivers in 2025, and potentially having negative impacts on juvenile salmon survival to smolt. There are long-term declining trends in smolt abundance on all monitored rivers with a large enough time series, spread across SFAs 4, 9, 11 and 14A, and in the marine survival of smolts on two rivers (one in SFA 4 and one in SFA 11).

The vast majority of NL salmon smolts spend just one winter at sea prior to returning to freshwater to spawn. Information on smolt abundance and marine survival is limited to just five Newfoundland rivers (none in Labrador), however, if observed declines in smolt abundance and marine survival on monitored rivers is occurring on a larger spatial scale, and extreme environmental conditions in freshwater continue, below-average smolt production and adult returns would likely continue in 2026 and beyond. Maximizing the freshwater survival of salmon through environmental management and fisheries measures is critical for the long-term health of NL populations, particularly in Newfoundland (SFAs 3–14A) where salmon have reached historical lows in 2023–2025.

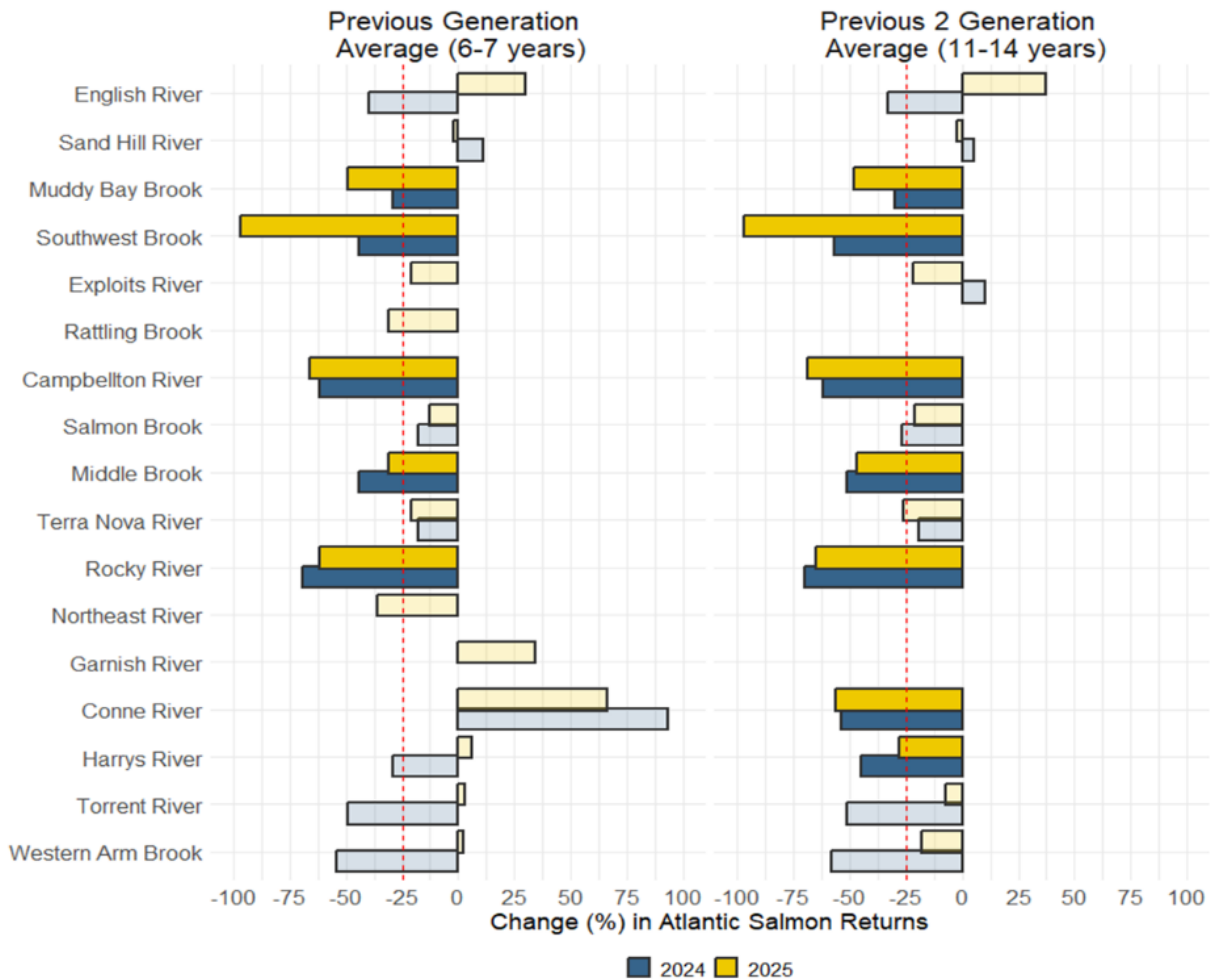


Figure 8. Percent change in total Atlantic Salmon returns in 2024 and 2025 relative to the average observed in monitored rivers over the previous generation (6–7 years; left) and two generations (11–14 years; right). Bars represent Atlantic Salmon returns in 2024 (blue) and 2025 (gold). Rivers with declines of at least 25% (red dashed line) in both 2024 and 2025 are highlighted with a deeper color shade. The available time series for returns to Northeast River, Garnish River, and Rattling Brook are insufficient for comparisons of 2024 or 2025 returns to the previous two generations. Comparisons of total returns to Garnish River and Northeast River in 2024 were unavailable due to partial counts due to counting facility washouts (DFO 2025).

## Evaluation of Assessment Triggers

The two scenarios where DFO Science would trigger revisiting the 2-year Atlantic Salmon management plan include:

1. >30% decline in total returns on  $\geq 50\%$  of our monitored rivers in any given year; or
2. >25% decline in total returns on  $\geq 50\%$  of our monitored rivers in 2 consecutive years.

Comparisons in each year are made to the previous generation and previous two generation average.

Overall, 7 of 14 (50%) monitored rivers with sufficient time series showed declines in total Atlantic Salmon returns of at least 25% in two consecutive years (2024 and 2025) compared to the previous two generation average (11–14 years). This meets the threshold outlined in the second trigger scenario.

## SOURCES OF UNCERTAINTY

No current assessments were available for salmon populations in SFAs 3, 6, 7, 8, 12, and 14B or Lake Melville (SFA 1B).

Given that this stock status update has occurred in Fall 2025, not all recreational angling logs have not yet been returned; thus, estimates of effort, catch, and harvest were unavailable for 2025. Calculations of total returns, spawners, and egg depositions on monitored rivers where angling was permitted included the average catch estimates per river over the previous generation (2019–24 for Newfoundland rivers and 2018–24 for Labrador rivers). All estimates will be revised in winter 2026 when 2025 recreational angling data have been received and processed. For almost all rivers, changes are typically negligible (i.e., 2% or less).

Returns of angling logs by recreational anglers have been low in recent years, averaging just 11% from 2018–24. The relatively low return rate of angler logs adds uncertainty in estimates of retained and released salmon for monitored rivers where angling is permitted, particularly smaller rivers with less angling pressure.

For all salmon fisheries, uncertainty exists where inaccurate and/or incomplete information is provided. Estimates of recreational catch and effort data, as well as the Indigenous FSC and resident trout/char harvest bycatch estimates in Labrador, are dependent on the quantity and accuracy of logbooks compiled and returned.

For several monitored rivers, estimates of fluvial and lacustrine juvenile salmon habitat area are based on surveys conducted over 40 years ago. Contemporary information on the habitat structure of these watersheds and the amount of available rearing habitat in fluvial environments would improve the accuracy of the LRP used in stock status calculations and the stock status zone estimate derived. Rivers like Exploits River and Terra Nova River have large areas in the upper watershed with habitat but the degree to which it is used by ouananiche and is available to anadromous salmon remains unknown. These uncertainties may bias these rivers towards a high likelihood of a critical zone designation.

Incomplete accounting of losses when estimating spawners due to various activities including: poaching activity in freshwater and coastal marine habitats, fish handling and sampling for scientific monitoring or research purposes, and impacts of extreme environmental conditions on freshwater survival.

Extreme conditions includes high temperature and low water periods in the summer months, variable hydrological conditions through winter, and storm events and their potential impacts on Atlantic Salmon habitat and egg survival.

Historical or estimated biological characteristic data (e.g., fecundity, sex ratio, and female size) and estimated catch data used in the assessment add uncertainty to the estimates of egg depositions and percent LRP attained. Contemporary estimates of adult salmon sex ratio obtained from DNA samples are used for rivers, where available (Robertson et al. 2024).

Salmon populations in assessed rivers may not be representative of all rivers in a given SFA.

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