

Wild Salmon Strategy Implementation Plan 2023 - 2028

February 2023

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Introduction

The [Scottish Wild Salmon Strategy](#) (the Strategy) published in January 2022 sets out the vision, objectives and priority themes for action to ensure the protection and recovery of wild Atlantic salmon¹ populations in Scotland. This Implementation Plan (the Plan) is a companion piece to the Strategy, and should be read in conjunction with it. In this Plan we set out a suite of actions and initiatives that will be the focus of collective efforts across a range of government and non-government stakeholders over a five year period to 2028.

Vision

Scotland's wild Atlantic salmon populations are flourishing and an example of nature's recovery. We will achieve this through the application of best-practice science and management.

Objectives

- Scotland's rivers have healthy, self-sustaining populations of wild Atlantic salmon that achieve good conservation status.
- Wild salmon management is evidence-based and underpinned by integrated data gathering, research and dissemination.
- The environmental and socio-economic benefits arising from healthy wild Atlantic salmon populations are identified and maximised through partnerships between the public, private and charitable sectors.

The Strategy and the Plan sit within an overall policy structure that is aligned towards achieving [Scotland's National Outcomes](#). This includes [Scotland's National Strategy for Economic Transformation](#) and the [Environment Strategy for Scotland](#), the overarching framework for Scotland's strategies and plans on the environment and climate change.

Wider context

Due to the range of factors influencing salmon survival over its complex life-cycle this Plan includes multi-sectoral action across a range of geographic scales and involving a broad suite of policy levers and resources.

While survival of salmon at sea appears to be a major factor in salmon population trends across the North Atlantic, our relative understanding of pressures and ability to take action is greater within river catchments and nearshore coastal environments. Coordinated interventions at a river catchment scale that aim to optimise the number and quality of healthy, naturally produced salmon smolts leaving Scottish rivers and coasts are the critical basis to achieving our objectives. Therefore, the balance of interventions is in favour of those that can be applied within river catchments whilst attention is also given to mitigating pressures from developments around Scotland's coasts.

Of central importance to this Plan, the draft [Scottish Biodiversity Strategy to 2045](#) sets out a clear ambition: for Scotland to be Nature Positive by 2030, and to have restored and regenerated biodiversity across the country by 2045. Priority actions to realise this ambition will focus on accelerating nature restoration, expanding and improving protected areas, supporting nature-friendly farming, fishing and forestry, recovering vulnerable species, and are based on the principle of tackling the nature and climate emergencies together.

The draft Biodiversity Strategy provides a vital new context and urgency for our work on salmon recovery and places an emphasis on catchment scale restoration to improve the ecological status of rivers and the species they support.

Further strategic focus is provided by [A Blue Economy Vision for Scotland](#), which states that ‘by 2045 Scotland’s shared stewardship of our marine environment supports ecosystem health, improved livelihoods, economic prosperity, social inclusion and wellbeing.’ This means marine, and inter-linked freshwater and coastal environments are restored, adapted and resilient to climate change and sustainably managed to achieve good environmental status.

There are wider linkages to land use within river catchments. This is evident for example in the inclusion of actions in [Scotland’s Forestry Strategy Implementation Plan](#) on riparian (riverbank) management to improve the climate resilience of rivers; a vital step to maintain water temperature at low enough levels for salmon to thrive. This will be supported by a newly developed riparian woodland grant under proposals to enhance the Forestry Grant Scheme. Maps developed by Marine Scotland scientists showing where rivers are most at risk from high summer temperatures, and where riparian planting will result in greatest benefit, will inform the enhanced Scheme.

Funding

To catalyse action at scale to protect and restore Scotland’s biodiversity we have committed to invest at least £65 million through the [Nature Restoration Fund](#) (NRF). Since launching in 2021, several rivers and fisheries trusts, district salmon fishery boards (DSFBs) and partnerships have been awarded project funding to deliver river habitat restoration, improve fish passage and tackle invasive non-native species.

Financial support to aid implementation is available from a range of sources including the [Water Environment Fund](#), [Marine Fund Scotland](#), [Scottish Marine Environmental Enhancement Fund](#), Crown Estate Scotland’s [Sustainable Communities Fund](#), [Forestry Grant Scheme](#) and the [Agri-Environment Climate Scheme](#).

Delivery of the draft biodiversity strategy would also see the creation of a Biodiversity Investment Plan. This will set out our assessment of the investment required to deliver a nature positive future and the actions needed to mobilise public, private and philanthropic finance.

In addition, land use and management is directly impacting on the water environment and the flora and fauna within it. The Scottish Government’s long-term [Vision for](#)

[Agriculture](#) is to transform how we support farming and food production in Scotland to become a global leader in sustainable and regenerative agriculture, with an emphasis on high quality food production, climate mitigation and adaptation, and nature restoration. In turn this will result in benefits to Scotland's rivers, lochs and wetlands and the species they support.

Dynamic Adaptive Approach

The set of actions set out here should not be seen as an exhaustive list to be taken in the period up to 2028. We will appoint a Delivery Group of stakeholders that will oversee and direct the delivery of this Plan. Importantly, the Group will also review and shape the programme of work in light of new evidence and other policy developments on an ongoing basis. This dynamic, adaptive approach will ensure that the programme of work in Scotland to support salmon restoration can be adjusted as we gain more insight into pressures and successful mitigation options. It also means that future action is not limited to the content of this Plan at the time of publication.

Delivery Framework

The Strategy set out in detail the five priority themes for action which are needed to realise the vision and objectives, and this complementary Plan sets out specific actions grouped within these themes.

DSFBs have statutory powers and duties to protect and improve salmon and sea trout fisheries within legally defined salmon fishery districts. Rivers and Fisheries Trusts (Trusts) are charitable organisations in Scotland working at catchment-scale to deliver habitat improvements and restoration works. DSFBs and Trusts, which often work in partnership, are key delivery partners for many of the actions within the Plan, playing a critical role in the management and conservation of salmon.

Salmon conservation spans a wide range of cross-cutting areas, some programmes of work listed here were designed with salmon as the primary focus e.g. policies designed to manage the interaction between wild and farmed fish whilst some were not e.g. River Basin Management Planning (RBMP). However, their importance for salmon is recognised, and the Delivery Group will ensure through continuous engagement that secondary benefits for salmon can be realised.

In addition, building an evidence base through coordinated scientific research and monitoring acts as an overarching area contributing significantly to actions within each of the five priority themes.

For each action a delivery lead (in bold) and collaborating partners, where appropriate, are stated.

Actions

1. Improving the condition of rivers and giving salmon free access to cold, clean water.

Water Quality and Quantity

1.1 Improvements will be made to 40 wastewater treatment works to address water quality issues [By 2027] (**SEPA** – Scottish Water)

1.2 Improvements will be made to 24 unsatisfactory intermittent sewage discharges to address water quality issues [By 2027] (**SEPA** – Scottish Water)

1.3 Improvement actions will be identified that prevent deterioration of water bodies in close proximity to forestry and logging activities [By 2027] (**SEPA** – Forestry operators)

1.4 Work with farms and land managers in 57 priority catchments to ensure compliance with regulatory standards [By 2027] (**SEPA** – Land managers)

1.5 Effective regulation and management will be used to prevent water bodies deteriorating from good to less than good [By 2027] (**SEPA** – Land owners/managers, Industry)

1.6 Develop a strategic approach to water scarcity based on the lessons learnt [ongoing] (**SEPA**)

1.7 To deliver improvements as required in flows and levels impacted by hydropower schemes by reviewing licences [By 2027] (**SEPA** – Hydropower operators)

River habitat and water temperature

1.8 Develop and implement an integrated approach to riparian management to improve the climate resilience of rivers, water quality, river morphology, and the availability of habitat networks [By 2025] (**Scottish Forestry** - Scottish Government, SEPA, NatureScot, Forest Research)

1.9 Enhance the Forestry Grant Scheme to deliver better community engagement, improved biodiversity and increased value for money, including improved support for tree planting around rivers and streams [By 2023] (**Scottish Forestry**)

1.10 Aid the recovery of salmon habitat through peatland restoration to improve water quality and reduce particulate organic carbon as part of the Scottish Government's Peatland Restoration Programme [By 2030] (**NatureScot** – Scottish Government)

1.11 Minimise conflict between salmon recovery and beavers through a considered and dynamic approach to beaver translocations, including the development of support for management, mitigation and research within the context of [Scotland's Beaver Strategy 2022 – 2045](#) [ongoing] (**NatureScot** – Scottish Beaver Advisory Group)

1.12 Expand our Protected Areas to at least 30% of the land surface and improve their condition, ensuring that they contribute to the ecological functioning of river catchments that support salmon [by 2030] (**NatureScot**)

Barriers to Migration

1.13 Easement or removal of 84 active barriers (including those that support hydropower, public water supply and distilleries) to allow fish migration [By 2027] (**SEPA** – Hydropower operators, public water supply companies, distilleries)

1.14 Easement or removal of 94 historic barriers (including redundant weirs associated with historical industrial activity) to allow fish migration [By 2027] (**SEPA** – DSFBs and Trusts, local authorities, landowners)

1.15 Undertake a review of 66 barriers not covered by an impoundment licence under CAR (including bridges and culverts owned by local authorities and others) to ensure they allow fish passage [By 2027] (**SEPA** – Transport Scotland, Network Rail, Local Authorities)

1.16 In the above barrier related work, secondary impacts on salmon (such as predation and poaching), will be considered by engagement with stakeholders and in project planning and implementation [By 2027] (**SEPA**)

1.17 Undertake a review of the risk to fish migration of the canal network and associated management structures [By 2025] (**Scottish Canals** – DSFBs and Trusts, SEPA, NatureScot)

Predation

1.18 Continue to administer wildlife licencing for specific purposes relating to predator conflicts with wild salmon under the terms of the Wildlife and Countryside Act 1981 and the Marine (Scotland) Act 2010 [ongoing] (**NatureScot, Scottish Government**)

1.19 Undertake a review of fish eating bird licencing policy with a view to ensuring balanced consideration of the conservation status of predator and prey species, within the context of a wider review of the approach to wildlife licencing. This will be underpinned by research to improve the scientific evidence base, including the collection of bird population data, improved understanding of their impact on salmon populations and the effectiveness of control methods [By 2023] (**NatureScot** – Scottish Government, DSFBs and Trusts, research institutes)

1.20 Complete a review of the operation of the seal licensing system under the terms of the Marine (Scotland) Act 2010 [by 2025] (**Scottish Government**)

1.21 Support efforts by fisheries managers to protect salmon from seal predation by continuing to investigate, develop and test non-lethal methods of control, thereby improving our understanding of the effectiveness of these measures [By 2024] (**Scottish Government**)

Invasive non-native species

1.22 Implement Scottish Plan for INNS surveillance, prevention and control, and secure wider support measures to enable effective INNS removal for species that may impact salmon and its supporting habitat [ongoing] (**NatureScot, SEPA – Scottish Government, FMS, Fishery trusts**)

1.23 Develop and improve monitoring and mitigation strategies for future invasions of pink salmon [ongoing] (**SEPA, NatureScot - FMS, Scottish Government**)

1.24 Promote public awareness campaigns on avoiding the spread of invasive non-native species, including biosecurity and disinfectant measures such as '[Check, Clean, Dry](#)' [By 2023] (**All water users**)

Disease

1.25 Establish a new *task and finish* group focussing on wild fish disease to investigate the research gaps, prevent introduction and spread of disease, and increase public awareness of biosecurity [By 2023] (**Scottish Government**)

1.26 Update the *Gyrodactylus salaris* Contingency Plan to ensure Scotland is prepared in the event of an outbreak [2023] (**Scottish Government**)

Stocking

1.27 Publish research on the risks and opportunities of stocking, complete a review of the current stocking policy and adopt a revised stocking policy [By 2023] (**Scottish Government**)

2. Managing exploitation through effective regulation, deterrents and enforcement

2.1 Revise and apply the Conservation of Salmon (Scotland) Regulations 2016 annually based on stock assessment data [annually] (**Scottish Government**)

2.2 Maintain the prohibition of the retention of salmon in coastal waters until such a time as the conservation status of salmon allows for the consideration of removing this measure [ongoing] (**Scottish Government**)

2.3 Review The Conservation of Salmon (Annual Close Time and Catch and Release) (Scotland) Regulations 2014 and The Tweed Regulation Order 2007 to ensure the protection of vulnerable stock components [By 2024] (**Scottish Government** - DSFBs)

2.4 Undertake a review of enforcement powers, the offences and penalty regime for salmon poaching (a wildlife crime) and other offences, aiming to increase penalties if necessary [By 2024] (**Scottish Government**)

2.5 Continue the current policy that all prospective water bailiffs must successfully complete specific training delivered by Institute of Fisheries Management (IFM) and FMS before appointment as a water bailiff [ongoing] (**Scottish Government**, FMS, IFM, DSFBs)

2.6 Refresh and promote guidance on best practice for catch and release [By 2023] (**All stakeholders**)

3. Understanding and mitigating pressures in the marine and coastal environment

3.1 Safeguard salmon and critical habitat through National, Regional and Sectoral Marine Plan policies and licensing of marine activity and development, recognising its protected status [ongoing] (**Scottish Government**, NatureScot)

3.2 Improve our understanding of the coastal and marine migration patterns of salmon through collaborative research projects [ongoing] (**Scottish Government**, all)

3.3 Develop and undertake a coordinated approach to research projects through [ScotMER](#)² to improve our understanding of the potential impacts of marine renewable developments on salmon [ongoing] (**Scottish Government**)

3.4 Protecting and enhancing marine biodiversity, including salmon and the habitats they depend on, through a well-managed network of Marine Protected Areas, Highly Protected Marine Areas and other conservation measures, and implementing the UK Marine Strategy to achieve or maintain Good Environmental Status [2026] (**Scottish Government**, NatureScot)

3.5 Implement the actions set out in our response to the recommendations of the [Salmon Interactions Working Group](#) to mitigate the risks and impact of fish farming on wild salmon [ongoing] (**Scottish Government**, Industry)

3.6 Continued development and phased implementation of the risk assessment framework for managing the interaction between sea lice from marine fish farm developments and wild salmon and sea trout in Scotland [ongoing] (**SEPA**)

3.7 Strengthen controls to reduce farmed fish escapes and explore the introduction of penalties with the ultimate aim of redistributing this money to support salmon conservation and research [ongoing] (**Scottish Government**)

3.8 Restrict fishing activity or prohibit fishing for species which are integral components of the marine food web, such as sandeels [ongoing] (**Scottish Government**)

3.9 Apply the [National Planning Framework 4](#) policy to not support further salmon and trout open pen fish farm developments on the north and east coasts of Scotland to safeguard migratory fish species [ongoing] (**Planning Authorities**)

4. Making a positive contribution through international collaborations

4.1 Continue to play an active role in the effective functioning of the [North Atlantic Salmon Conservation Organisation](#) (NASCO) and the development and implementation of NASCO resolutions, agreements and guidelines, including by chairing the North-East Atlantic Commission (2023-24) [ongoing] (**Scottish Government**)

4.2 Report on the implementation of NASCO's Resolutions, Agreements and Guidelines through Annual Progress Reports [annually] (**Scottish Government**)

4.3 Work with partners through NASCO to maintain an evidence-based and precautionary regulatory measure for the West Greenland salmon fishery and advocate for international cooperation on other pressures on salmon as appropriate [annually] (**Scottish Government**)

4.4 Participate in the West Greenland sampling programme through the provision of samplers in coordination with the UK NASCO delegation [ongoing] (**Scottish Government**)

4.5 Promote collaboration and cooperation on research into the causes of marine mortality of salmon through active participation in the International Salmon Research Board [ongoing] (**Scottish Government**)

4.6 Contribute to the preparation of an annual assessment of the status of salmon stocks across the North Atlantic and other advice by the ICES Working Group on North Atlantic Salmon [annually] (**Scottish Government**)

4.7 Contributing to monitoring and surveillance activities, information exchange and development of recommendations to prevent the spread of parasites and invasive non-native species (e.g. as part of NASCO North East Atlantic Commission *G. salaris* and future pink salmon working groups) [annually] (**Scottish Government**)

4.8 Acting on and reporting implementation of OSPAR Recommendation 2016/3³ on furthering the protection of Atlantic salmon in the North-East Atlantic [by 2025] (**Scottish Government**)

5. Developing a modernised and fit for purpose policy framework

5.1 Establish a *task and finish* group of stakeholders to undertake a broad review of the current policy framework [2023] (**Scottish Government**)

The aim of the group will be:

- to make recommendations aimed at improving the protection of salmon, and enhancing the environmental, economic, and social benefits arising from it.
- to examine new ways in which we can better support and resource local management.
- to explore new means of making investments in Scotland's rivers, including investigating private sector contributions in line with Scottish Governments commitment to develop a high integrity, values-led market for responsible investment in natural capital.

Building an evidence base through coordinated scientific research and monitoring

Science and evidence are key to delivering many of the actions set out within the Plan. Our ambition is to have a coordinated approach across Scotland to enable strategic delivery, analysis and publication of scientific data and reports. This will allow resources and expertise to be combined to improve the efficiency and quality of our delivery. It is essential for Marine Scotland, public sector regulators, charities, universities and private sector organisations to work together for this approach to be a success.

This Plan will capitalise on the vast body of scientific knowledge that already exists by promoting collation and review of information into easily accessible formats to support management actions directly. It will be supplemented by targeted research focussed on key knowledge gaps to generate specific and achievable outputs and outcomes for the benefit of salmon. This work will be underpinned by coordinated monitoring of adult and juvenile salmon, together with estimation of impacts of pressures where feasible. A Scientific Advisory Board will be established and administered by Marine Scotland to facilitate this work, with representation from multiple stakeholders.

We will:

- a. Establish and operate a Scientific Advisory Board to coordinate and harmonise research and monitoring activities across science organisations and regulators
- b. Produce an annual report on the status of salmon in Scotland
- c. Maintain regular monitoring using rod catches, fish counters, adult salmon sampling programme, sampling of juvenile salmon through the National Electrofishing Programme for Scotland (NEPS) and assessment of interbreeding of wild and escaped farmed salmon through the National Introgression Programme for Scotland (NIPS)
- d. Continue to support the Scottish Fisheries Coordination Centre (SFCC)
- e. Develop a coordinated approach to Fisheries Management Plans across Scotland supported by Scottish Government and funding from Crown Estate Scotland
- f. Undertake an analysis of the environmental and socio-economic benefits arising from healthy wild salmon populations, ensuring their existence value is recognised
- g. Undertake an assessment to determine possible gaps where achievement of RBMP targets may not provide adequate protection for salmon at local and/or national scale
- h. Construct an extended fish counter network to improve salmon population estimates

Overseeing Delivery - Next Steps

The Scottish Government will support the delivery of the Plan. Stakeholders will be invited to participate in a Delivery Group which will oversee the delivery, reporting and ongoing review of the Plan. The Delivery Group will be chaired by Scottish Government and will invite attendance from a wide range of key partners. The first meeting of the Group will be held within one month of publication of the Implementation Plan.

The provisional governance structure outlined in the draft Biodiversity Strategy includes the creation of a suite of topic based working groups (e.g. on freshwater and marine ecosystems and investment in nature) to support delivery. These groups will have a key role in the delivery of actions for the benefit of salmon and we will therefore look to ensure close integration and joint working as appropriate.

One of the initial tasks the Delivery Group will be the preparation of a Strategic Communication Plan. This will enable the key messages set out in the Strategy and the Plan to be widely promoted, raising awareness of the status of and threats to salmon among relevant sectors, authorities and the general public.

The Delivery Group will oversee progress and will publish a concise report annually. Through this process, the list of actions will be subject to ongoing review and adjustment to take account of emerging scientific evidence and other factors.

The Implementation Plan will cover a five-year period, to 2028, with a full review being undertaken thereafter.

Acknowledgements

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Abbreviations

Crown Estate Scotland (CES)
District Salmon Fishery Board (DSFB)
Fisheries Management Scotland (FMS)
Institute of Fisheries Management (IFM)
Marine Scotland Science (MSS)
North Atlantic Salmon Conservation Organisation (NASCO)
National Electrofishing Programme for Scotland (NEPS)
National Introgression Programme for Scotland (NIPS)
Science and Advice for Scottish Agriculture (SASA)
Scottish Environmental Protection Agency (SEPA)
Scottish Fisheries Coordination Centre (SFCC)

Footnotes

1 Hereinafter salmon refers to wild Atlantic salmon (*Salmo salar*) unless otherwise stated

2 Scottish Marine Energy Research (ScotMER) Programme

3 OSPAR Recommendation 2016/3 on furthering the protection and conservation of the Atlantic salmon (*Salmo salar*) in Regions I, II, III and IV of the OSPAR maritime area



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