

Fisheries Management Scotland Briefing

World Rivers Day

Date: 24 September 2023



'No one will protect what they don't care about; and no one will care about what they have never experienced.'

Sir David Attenborough

Fisheries Management Scotland is the representative body for the district salmon fishery boards (DSFBs) and fisheries trusts in Scotland. We work to promote and ensure the protection, preservation, and restoration of Scotland's wild salmon and freshwater fish, along with their fisheries and the river and coastal environments on which they depend. Fisheries Management Scotland are members of the [Missing Salmon Alliance](#), a group of conservation focused organisations who have come together to drive action and save our wild Atlantic salmon from extinction by combining expertise, coordinating activities and advocating effective management solutions. We welcome Motion S6M-10364 submitted by Jackie Dunbar.

World Rivers Day recognises that rivers in virtually every country face an array of threats, and Scotland's rivers are no exception. Rivers provide freshwater to sustain us, support our farms, drive industry, and power our homes. And we value our rivers for recreation such as fishing, boating, and swimming. Heavy use of our rivers has impacted the health of this important resource globally and nature is sending us a clear signal that all is not well. For example, the cumulative impact of dams in European rivers is one of the leading causes of an 80% decline in freshwater biodiversity and a loss of 55% of the abundance of monitored migratory fish populations.

Our native fish require **free access to cold, clean water** and there is a great deal more that must be done to protect and restore our rivers. There are many examples of catchment-scale restoration work being undertaken by members of Fisheries Management Scotland and others. These fantastic projects, which will increase the resilience of our rivers, are often supported by public funding including the Nature Restoration Fund. We are also actively working to secure private finance to support these efforts, in line with the Scottish Government **Interim Principles for Responsible Investment in Natural Capital**. As nature finance markets are in early stages of development, we would welcome the establishment of **biodiversity metrics** that facilitate investable propositions for nature, as with carbon that will benefit rivers. Whilst investment in catchment scale restoration is vital, and must be supported, we must not lose sight of the crucial need to ensure that activities under the regulatory control of Government agencies, or supported with public money, do not cause further damage. We highlight some examples below, but this is not an exhaustive list.

In Scotland, we have mitigated the pressures that salmon face through reducing exploitation in fisheries, but the current very high levels of catch and release in river fisheries, and the closure of coastal net fisheries, means that our ability to do this is now almost fully utilised. Significantly lower marine survival has meant that **rod catches of Atlantic salmon have fallen dramatically, with a knock-on effect on fragile rural economies, reducing the resources available to support management and restoration activities.**

River temperature is a critical driver of the health of our rivers, controlling species distribution and abundance. In Scotland many native freshwater species, including fish species such as brown trout and Atlantic salmon, are adapted to live in cool water habitats. At 23°C juvenile salmon experience thermal stress and behavioural change, that includes abandoning territories and searching for cool water refuges. **During the summer of 2018, the Marine Directorate estimate that around 70% of Scotland's rivers experienced temperatures that exceeded this threshold for thermal stress.**

What can be done?

The amount of solar radiation reaching rivers can be reduced through management of bankside vegetation. Native trees, planted next to rivers, can act as natural parasols, creating cooling shade and reducing river temperatures. Loss of native trees has impacted wider biodiversity, exacerbated flooding and soil loss, and led to reduced water quality. [Scotland's River Temperature Monitoring Network](#) has given us the tools to prioritise shading where it will have the greatest impact.

Fisheries Management Scotland is part of the **Riverwoods Initiative**, a Scotland-wide partnership with the objective of creating a network of healthy, resilient rivers and riverbanks across Scotland. We welcome the recent uplift in Forestry Grant Scheme (FGS) funding under Woodlands for Riparian Benefits, but further reform of public funding mechanisms (FGS, agricultural payment schemes etc.) is urgently required to **encourage and incentivise riverside planting of native trees**.

112 of 173 rivers assessed by the Marine Directorate are designated as category 3 – rivers that fall below their defined conservation limit. **Any** additional pressures on salmon in these rivers is therefore demonstrably unsustainable. Some of the factors impacting on wild salmon stocks may be beyond human control. However, we call on Scotland's Government and regulatory authorities to coordinate their activities to maximise efforts to protect and restore our rivers, and safeguard the species that depend on them. **It is vital that the status of salmon is fully considered in all planning and regulatory decisions**. For example:

Barriers to migration: Free flowing rivers, in which barriers to migration are fully removed, allow natural river processes to occur and are more resilient to environmental change. SEPA have an ambitious programme of barrier removal and easement, which must be completed by 2027. It is vital that this programme of work is completed on schedule. Large-scale hydro schemes were designed and built with a focus on ensuring that returning adult salmon could pass upstream. However, it is now clear that juvenile salmon smolts migrating from rivers to the sea, often cannot find their way past these structures. For example, only 5% of smolts are able to escape the hydro dam on Loch Shin in Sutherland. It appears that the only solution to this problem is to trap smolts upstream of such dams, and transport them downstream to continue their migration to the sea. **SEPA must use their regulatory powers, to urgently address this issue and ensure that the maximum possible number of young fish can benefit**. This will require operators to invest in mitigation schemes involving the installation fixed fish traps, upstream of the dams and then moving the fish to a suitable downstream location.

Water abstraction: Since 2018, we have had three summers in which significant water scarcity occurred in Scotland. In December 2020, SEPA consulted on a Water Resources Management Plan, which would have introduced limits on water abstraction where rivers reach critical low flows. This 'hands-off flow' is the approach adopted in England. Unfortunately, SEPA have not progressed this work. In 2022, SEPA suspended abstraction licenses on some rivers, but only after 30 days at critically low water levels. In England, the Environment Agency take the same action on day one. **We need to proactively manage water scarcity in order to protect the health of our rivers**.

Land use: Rural diffuse pollution is identified in SEPA's river basin management plans as a key pressure, including on fish. SEPA have delivered significant improvements in some priority catchments through extensive engagement with farmers. However, in other catchments, this approach has been much less effective. **SEPA must use their enforcement powers to deliver action on diffuse pollution**. Agri-environment schemes should be dependent on meeting relevant minimum environmental standards (General Binding Rules), and should support and facilitate environmental improvements to our riparian zones, including planting of native trees, appropriate buffer zones and restoration of riverbanks to create habitat for fish and invertebrates. Point source pollution, including from combined sewage overflows, remains an issue in many Scottish river catchments, and requires urgent additional action.

Forestry: Extensive drainage and blanket planting of available land have contributed, in some areas, to serious deterioration of water quality, aquatic habitat, fish populations and associated fisheries. We support the work that has been undertaken to develop and refine the Water and Forest Guidelines in Scotland. However, the current assessment methods for acidification used by SEPA do not account for damaging short term reductions in pH which are lethal to juvenile salmonids. This means that impacted water courses are not downgraded in the River Basin Management Plan and are not prioritised for remedial action. **It is crucial that SEPA refine their assessment methods to address these known pressures on our salmon stocks**. We also have significant concerns about the continuing practice of replanting conifers on deep peats after tree felling. **New conifer planting schemes are not permitted on peat deeper than 50cm – this should be extended to replanting on deep peats**.

For further information please contact Dr Alan Wells | 0131 272 2797 | alan@fms.scot | www.fms.scot