

Ghillie's Seminar 2023

21st April, Achfary Village Hall

Trust Update:

Shona Marshall

- Good densities of juvenile salmon and trout seen across the Trust's area, 83 sites across 15 catchments fished in 2022. Salmon, trout, eels, and minnows were caught, along with juvenile lamprey in one catchment.
- Categorised rivers in the Trust's area have not changed from last year.

Sweep Netting

- A total of 288 sea trout were examined from the Laxford and Polla estuaries.
- 98 sea trout were tagged with visual implant tags, located behind the left eye. If anyone catches a sea trout with a clipped adipose, please check for the VI tag!
- The largest catch was 533 fish in the Polla, in May 2022.
- Lice levels observed on the wild fish falls within the low-risk zone.

Scottish Invasive Species Initiative

- 55 mink rafts are run in the area, manned by 22 volunteers.
- 2 populations of Himalayan balsam were treated.
- 4 populations of Japanese knotweed were treated.
- 3 populations of previously cleared Japanese knotweed were monitored for regrowth.
- 2022 was the last year of the project, but SISI phase 2 began in April.

Plans for 2023

- Juvenile salmonid surveys.
- Sweep netting the Laxford, Polla, and Dionard.
- Invasive plant control: American skunk cabbage, Himalayan balsam, Japanese knotweed, Gunnera.
- Mink raft monitoring.
- Outreach with the public.

Northwest 2045 and the Regional Land Use Partnership:

Sara Harkins

- NW2045 was founded in 2020, formed from a diverse group local organisations with the aim to create a future where our local communities can thrive economically, socially, and environmentally, and where locals will have a voice to shape the development and management of natural resources.
- NW2045 is running a Scottish Government pilot project – RLUP. The aim of this is to facilitate communication and collaboration between those who use and live in the area, (such as crofters, communities, landowners, land managers, etc.) to work towards the government's aim of net zero carbon emissions and halting the loss of biodiversity.

- RLUP has made a natural capital baseline assessment through speaking to locals, landowners, researchers, Deer Management Group representatives, and more. This baseline attempts to define what natural capital the area has, i.e. “What the land does for us”.
- If you would like to get involved, or see the natural capital baseline assessment, please contact WSFT at wsft@btconnect.com and we will forward you on to Sara Harkins.

Loch Duart Fish Health:

Beth Osborne

Lice Past and Present – 2015 to now

- Lice levels in 2015-2017 were consistently very high, with chemical methods of control struggling to pull any control over lice numbers. Wrasse were brought in to aid control and were very successful. During covid lice numbers spiked again in one site due to a lack of wrasse and inability to harvest but subsequent cycles in the same site have not had a repeat.
- Ballan wrasse were seen to be most effective. Wild fish are still used, but Loch Duart are working to get away from the dependence on wild wrasse. Health checks are also carried out on the wrasse.
- Lumpfish were trialled but were unsuitable and didn't thrive.
- Wrasse are not a quick fix, and are only effective under a lice density threshold. Freshwater treatments can also be used, as can chemical treatments. There is also the hydrolicer, but this is not favoured.

Disease and Damage

- Pancreas disease is viral, and there are vaccines against it. Loch Duart strain salmon show resistance to this disease when in local waters.
- Bacterial winter lesions are being seen more commonly, and a vaccination is being produced.
- AGD is a gill disease caused by amoeba. This is monitored through weekly gill check-ups and can be treated with P50 and freshwater. Wrasse have no tolerance for freshwater, so have to be removed prior to treatment. The risk of AGD increases with water temperature and salinity.
- The changing marine environment poses increased challenges. 2023 is already showing the highest winter water temperature since Loch Duart began recording. Higher temperatures increase the risk of jellyfish and phytoplankton blooms (which cause gill damage), AGD, low oxygen levels, and a trophic cascade. Muggiaea jellyfish are a warm water species but have moved North and pose significant danger to farmed fish.
- These are managed in part through the use of oxygen sensors and air lines, with cameras to monitor for jellyfish and seals, and water samples are screened for harmful algae.
- Seals have also been an issue since the prohibition of culling and acoustic deterrent devices.

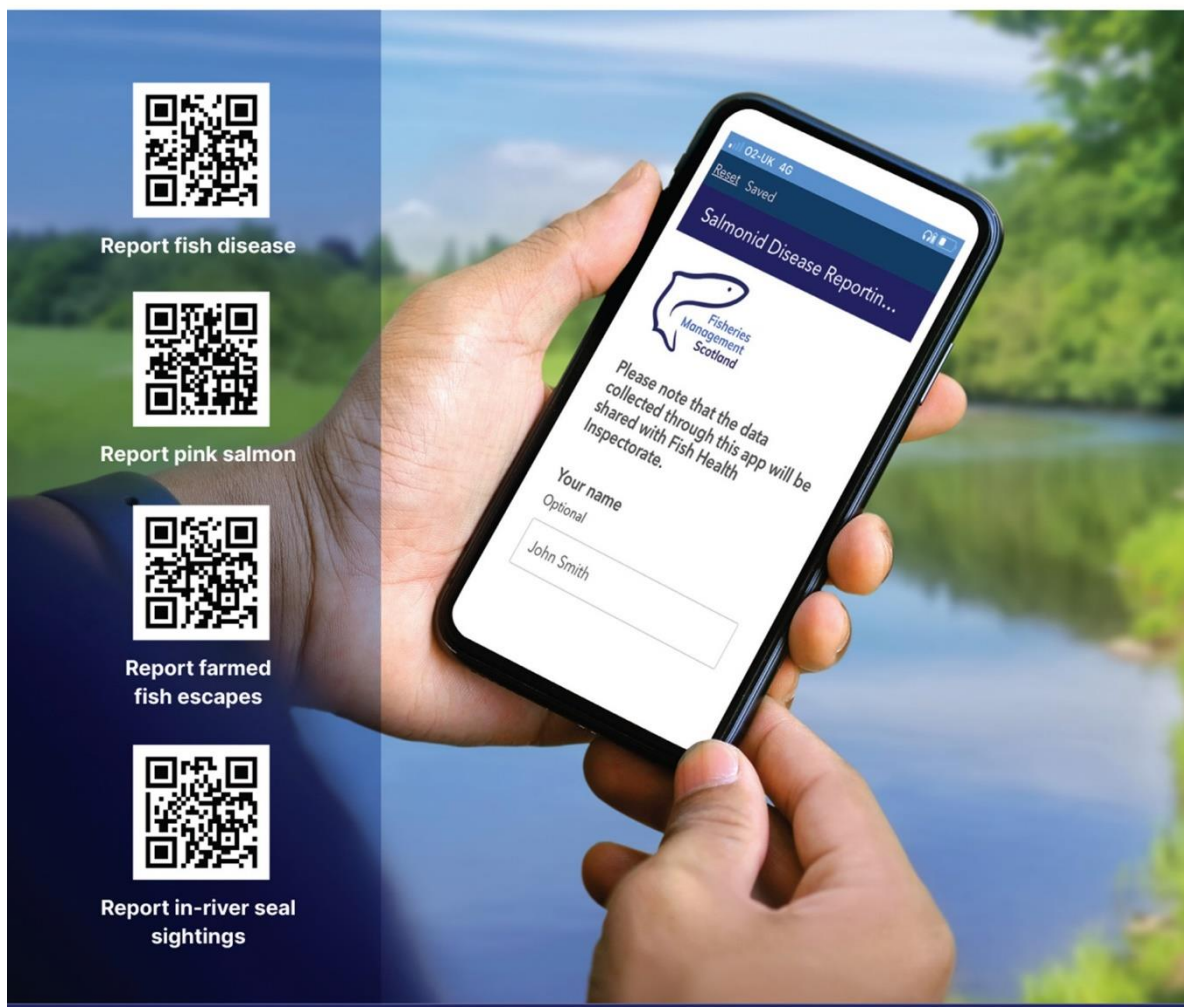
- SFCC have developed reporting apps for caught fish farm escapes, pink salmon, observed fish disease, and in-river seals.
- These can be found at <https://fms.scot/fish-reporting-apps-2/>, scanning the QR codes on the posters, or downloading Survey123 and downloading the relevant surveys.

We need your help!

Our wild salmon face a range of pressures and we need to understand when and where these pressures are taking place. Non-native pink salmon, outbreaks of fish disease, seal predation and escaped farmed fish in Scotland's rivers can cause serious problems for our native wild Atlantic salmon and freshwater fish. In order to fully understand

the extent and severity of these issues across Scotland, we need your help to report problems using our online apps.

Please download and use these apps to help us address the range of pressures which our wild salmon and freshwater fish face. Find out more at www.fms.scot/fish-reporting-apps-2/



Report fish disease

Report pink salmon

Report farmed fish escapes

Report in-river seal sightings

Find out more on our apps page
<https://fms.scot/fish-reporting-apps-2/>

Preliminary Smolt Tracking Results

Shona Marshall

2021

- 91 salmon were tagged in the Laxford, and 9 in Badnabay. 68% of Laxford smolts survived to the end of Loch Laxford, and 33% of Badnabay smolts survived – 81% in total.

2022

- 100 salmon smolts were tagged in the Laxford, with 82% surviving to the end of Loch Laxford.
- Update on sea trout smolts hasn't been provided yet.

2023

- 50 adult sea trout to be tagged in the Laxford, and 100 salmon smolts.
- A trap will also be run in the Polla for salmon smolts to see their movements through Loch Eribol.