



Briefing for the Public Petitions Committee

Petition Number: [PE1598](#)

Main Petitioner: Guy Linley-Adams on behalf of Salmon & Trout Conservation Scotland

Subject: Protecting wild salmonids from sea lice from Scottish salmon farms

Calls on the Parliament to urge the Scottish Government to strengthen Scottish legislative and regulatory control of marine fish farms to protect wild salmonids of domestic and international conservation importance.

Background

Salmon (*Salmo salar*) and sea trout (*Salmo trutta trutta*) are migratory anadromous fish. That means they spend the early stages of their life cycle in freshwater, and then migrate to sea, where they mature and grow, returning between one and four years later to the rivers where they hatched, to spawn. Scottish salmon migrate to the cold waters off the coast of Greenland. Salmon return to rivers throughout the year, in movements known as “runs”. Spring salmon runs have become depleted on many Scottish rivers, and measures have been put in place to recover stocks. For example, there has been buy out of net fisheries, and mandatory catch and release schemes put in place.

Some salmon return to spawn after one year, in which case they are known as “grilse”. Sea trout are a migratory sub-species of brown trout which, like salmon, migrate from rivers and lochs to the sea where they grow and return to freshwater to spawn. Unlike salmon, sea trout may not migrate far from the coast, sometimes not leaving coastal sea-lochs.

Marine Scotland publishes an annual report on the state of salmon and sea-trout stocks. The most recent report was [published](#) in May 2016, and summarises the state of stocks as follows:

Trends in reported catches [of salmon] vary among stock components (run-timing groups) and regions. In particular, spring stocks declined over much of the period for which records exist, stabilising at a low level in recent decades. Rod catches in 2015 remained low across all seasons throughout much of Scotland. The Marine Scotland Science rod catch tool provides evidence of widespread declines in recent years raising concerns about the numbers of spawning salmon. However, limited catch independent data (from traps and validated counters) does not show the

same major decline in salmon abundance suggesting that poor angling conditions may have also contributed to the low reported catches.

Rod catches indicate that the number of sea trout returning to Scottish rivers has probably been in decline for much of the period 1952-2015. Catches of sea trout in many areas of Scotland are at historically low levels. There have been notable recent declines in central-eastern, south west and north west areas of the country.

Data on [catches](#) of salmon and sea trout are also published annually.

Salmon farming industry

From experimental beginnings in the 1960s, the salmon farming industry has developed into a significant industry in remote areas of Scotland, producing 179,000 tonnes in 2014. Farm-gate¹ value of Scottish farmed salmon production in 2013 was estimated at £677 million ([SSPO 2015](#)). Salmon farming employed 1,435 full-time and 199 part-time workers in 2014, mainly in the Highlands and Islands, and supports further jobs in processing and downstream activities (Marine Scotland 2015a).

Salmon farming mimics the fish's natural life cycle. Eggs are collected from adult female breeding stock, fertilised and hatched in purpose built hatcheries. Salmon develop through six distinct phases, for the first four stages (egg, alevin, fry, parr) the young fish live in freshwater tanks and cages. The transfer from fresh to salt water occurs in the smolt stage (as it does in wild fish), when they are between 1-2 years old. Once in salt water the smolts are grown in cages around the Scottish coast. Some "grilse" are marketed at between 1-3 kilos after one year in the sea. The remainder of the fish are grown on to become salmon and are sold at a weight of 2-6 kilos or more.

There has been an ongoing debate about the interactions between wild salmon and sea trout, and farmed salmon. On 11 May 2016, the Salmon & Trout Conservation Scotland (2016) made a formal [complaint](#) to the European Commission. The complaint is that the Scottish Government has failed to address the impacts of sea lice parasites produced by Scottish salmon farms, on west coast wild salmon and sea trout. Consequently, they argue that the Scottish Government is in breach of the Marine Strategy Framework Directive.

Sea lice

Sea lice are a parasite of salmon and sea trout which feed on the skin and blood of host fish. Heavy infestations, especially of young fish, can be fatal. There are two species of sea lice found in Scotland, *Caligus elongatus*, a parasite that infests over eighty different types of marine fish and *Lepeophtheirus salmonis*, which infests only salmon and other salmonids.

¹ The price of a product at which it is sold by the producer

Sea lice affect both wild and farmed fish, and controlling them is a major cost for salmon farmers.

Scottish Government Action

Aquaculture

The Scottish Government has set sustainable [growth targets](#) for aquaculture, which are to increase:

- Marine finfish production sustainably to 210,000 tonnes by 2020
- Farmed shellfish production to 13,000 tonnes by 2020

The Scottish Government's (2009) [strategy](#) for aquaculture was published in 2009. Building on the framework outlined in the strategy, the [Ministerial Group for Sustainable Aquaculture](#) (MGSA) was established to support Scotland's aquaculture industry to achieve these targets.

One of the themes of the Strategy is "Healthier Fish and Shellfish". This has a desired outcome of, "A secure long-term future for the industry by protecting the asset through adoption of disease and parasite-control strategies which also contribute to minimising impacts on the environment." It says that:

"The consultation exercise indicated an urgent need for effective sea lice control measures to protect the health and welfare of both farmed and wild salmonids. This is viewed as crucial for the long-term future of both sectors."

Three more specific outcomes are identified under the following headings:

Integrated sea lice control strategies - Strategy developed for effective control of sea lice supported by a transparent, robust and fair inspection regime to ensure satisfactory measures are in place and impact on the wider environment is minimised

Disease management areas - Single year class stocking, synchronous treatment and fallowing of appropriate scale management areas

Tripartite Working Group (TWG)² - TWG refocused on local delivery of agreements between farmed and wild fisheries interests

Work on the Healthier Fish and Shellfish theme has been taken forward by a Healthier Fish and Shellfish Working Group. This group has been tasked with making recommendations for the conditions to be attached to finfish business authorisations under the Aquatic Animal Health (Scotland) Regulations 2009 to ensure delivery of single year class stocking of sites, sea lice treatment and fallowing of appropriate scale management areas.

² The Scottish Executive established a Tripartite Working Group in 1999. The three parties are the Government, wild fish interests and the aquaculture industry. The Group has worked to develop measures and strategies to reduce the impact of aquaculture on wild fish.

In addition, the group has made recommendations on the form of a national system for the collection of sea lice and mortality data to underpin future effective control measures. It is also investigating the effectiveness of currently used sea lice medicines and sampling and treatment strategies.

Regulation of sea lice at fish farms

There are a number of public bodies involved in the regulation of sea lice.

Marine Scotland Fish Health Inspectorate (FHI) inspects sea lice records and assesses the measures in place to prevent, control and reduce parasites on farms under the Aquaculture and Fisheries (Scotland) Act 2007 and the Fish Farming Businesses (Record Keeping) (Scotland) Order 2008. Unsatisfactory control measures or records may result in a further enhanced inspection of the farm, issuing of advice and/or recommendations, or implementing enforcement action.

The FHI undertakes veterinary medicines residues sampling under The Animal and Animal Products (Examination for Residues and Maximum Residue Limits) Regulations 1997 on behalf of the Veterinary Medicines Directorate – the competent UK authority for use of veterinary medicines.

Marine Scotland Licensing and Operations Team regulates the discharge of sea louse medicines from wellboats under the Marine (Scotland) Act 2010. A licence must be held for each farming site where a wellboat is used and discharges must have prior authorisation.

The Scottish Environment Protection Agency (SEPA) regulates the discharge of sea lice medicines from cages under the Water Environment (Controlled Activities) (Scotland) Regulations 2005 (Marine Scotland 2012).

Wild fisheries

Prior to session 4 the Scottish Government made a commitment to support and protect Scotland's salmon and freshwater fisheries and to modernise the management framework. Progress towards this commitment has involved a number of ongoing stages.

First, the Aquaculture & Fisheries (Scotland) Act 2013 was passed. Its purpose is to ensure that farmed and wild fisheries - and their interactions with each other - are managed effectively.

Second, the report of the Wild Fisheries Review panel was published (Thin et al, 2014). It made 53 recommendations many of which will be taken forward in the Wild Fisheries (Scotland) Bill.

Third, the Scottish Government decided to expedite the recommendation from the Wild Fisheries Review Panel relating to the decline of salmon in Scotland. Salmon is a protected species, for which Special Areas of Conservation (SACs) have been designated under the EU Habitats Directive. As debated in the [RACCE meeting on 9 March 2016](#), the European Commission has

expressed concern that Scotland has not been sufficiently protecting the conservation status of salmon in these SACs. In March 2016, the Government brought forward regulations banning the killing of wild salmon in certain fishery districts in Scotland all year round. The regulations require any salmon caught by rod and line in these districts to be released, and prevent any taking of salmon by netting in inland waters. Taking of salmon in estuaries throughout Scotland has been banned for 3 years. This is because of concerns about exploitation in mixed stock fisheries, as coastal salmon fisheries can catch salmon from more than one river.

Finally, the Wild Fisheries (Scotland) Bill will be introduced in the new parliamentary session. A consultation on draft provisions for a [Wild Fisheries \(Scotland\) Bill and draft Wild Fisheries Strategy](#) ran between February and May 2016 (Scottish Government, 2016). The draft includes provision on administration and management of wild fisheries, regulation of wild fishing and fisheries, and enforcement.

Scottish Parliament Action

The Parliament has passed two Acts which apply to aquaculture. Part 1 of the Aquaculture and Fisheries (Scotland) Act 2007 (asp 12) contains powers to control sea lice and escapes from fish farms, and gives a statutory underpinning to codes of good fish farming practice. Enforcement of the Act is the responsibility of the Fish Health Inspectorate of Marine Scotland.

Part 1 of the Aquaculture and Fisheries (Scotland) Act 2013 (asp 7) is concerned with fish farm management. It amends the 2007 Act to make farm management agreements or statements (which set out management requirements on the farm) compulsory. It introduced new rules on fish farm equipment and boats used to move and treat fish. It also includes measures to deal with commercially damaging species. There was considerable debate over whether the Act should include a requirement for the salmon farms to publish data on sea lice (Scottish Parliament Rural Affairs, Climate Change and Environment (RACCE) Committee 2013). A considerable part of the RACCE Committee's Stage 1 report on the Bill (paras 169-204) is about sea lice. The Committee gave detailed consideration to whether there should be a statutory requirement to publish disaggregated sea lice data, and said it would monitor the position on this through the Bill's Parliamentary stages. In the end, a further requirement to report sea lice data was not included in the Act, and the industry has been [self-reporting](#) on sea lice levels (SSPO 2016).

Previous petition

In 2010, the Parliament was petitioned by Lawson Devery on behalf of the Salmon and Trout Association ([PE01336](#)). The petition called on the Scottish Parliament to urge the Scottish Government to take immediate action to protect wild salmon and sea trout stocks from inappropriate commercial fish farm activities by taking action to ensure that (a) all sea-based fish farms are moved away from the estuaries of major wild salmon rivers to reduce the

impact of sea lice and (b) ban salmon smolt farms from operating within any wild salmon river system.

The Public Petitions Committee took evidence from the petitioners and invited written comments from the Scottish Government and a range of relevant organisations. The Petition was kept open between Sessions 3 and 4. In Session 4 it was referred to the RACCE Committee. The Committee agreed to take evidence on the issues related to this petition and all associated written submissions as part of its consideration of the Aquaculture and Fisheries (Scotland) Bill.

The RACCE Committee's Stage 1 report says that the Committee took the issues raised into consideration during its' Stage 1 scrutiny, and that the Committee's Stage 1 report refers extensively to the issue of sea lice (see above). The Committee agreed to keep the petition open while the Bill completed its passage through Parliament. On 12 June 2013, the Committee agreed to close PE1336 and to continue to monitor the issue, requesting updates and further evidence from the Scottish Government and any other appropriate bodies as necessary.

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25 May 2016

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