

Salmon farming in Scotland

Submission from Roddie Macpherson, 8 November 2024

The caged salmon industry: What's missing?

The third Scottish Parliamentary Committee in 6 years to examine aspects of the caged salmon industry is about to consider its response to evidence received. Will its recommendations be worthwhile, or are there too many pieces missing from the debate about the caged salmon industry? What's missing – evidence, a topic, government, and a basic question.

Missing evidence

One important issue, which has belatedly gathered prominence after years of neglect, is that of cleaner fish, species of wrasse and lumpsucker fish used in the salmon cages to try to help reduce sea lice burden on the salmon.

At the Rural Affairs and Islands Committee (RAIC) on 2 October, questions were put to six representatives of the industry about cleaner fish mortality rates and welfare.

The response listed de-watering on well boats, (to segregate them, the smaller cleaner fish fall through a grid, which holds back the larger salmon), providing hides and special feed.¹

No information was given on mortality. Operators are not required, as a routine, to provide any information on the numbers of cleaner fish in salmon cages in Scotland and their provenance, or the mortality rate and causes of death for cleaner fish.

There were significant omissions from the session's discussions.

For example, concerns about the welfare effects of cleaner fish getting involved in management interventions (eg. delousing) has led to a new RSPCA Assured standard – *'As of 1 May 2025, cleaner fish must be removed from the crowd in a pen before the salmon are removed for treatment.'* But, how can this be carried out amongst thousands of salmon without compromising fish welfare, or causing mortalities? The dewatering mentioned above is not the answer.

RSPCA Assured has a questionable answer *"Cleaner fish can be removed from the crowd through capture using nets or creels, or can be graded out using a specialised grading net prior to crowding starting. The cleaner fish that are removed prior to crowding can either be moved to a new pen, or moved out of the crowd but kept in the same pen. If necessary, the cleaner fish may also receive their own*

¹ RAIC draft Official Report for 2 October 2024, p.61

treatment (eg if they also require a treatment for amoebic gill disease), before being released into a pen.”²

Is this not wishful thinking? How long would this exercise take and at what cost to fish welfare? None of this was debated in the Committee.

Here's an interchange (part) from 2022, which illustrates practical problems.³

@gov.scot to Seaforth@mowi.com 14 January 2022 *‘Just to confirm the FW treatment that took place in December, resulted in 100% loss of lumpfish?’*

Response same day *‘It wasn’t just the freshwater as we had used the thermolicer before it. The thermo had been a tough one on the lump fish also, but like I said in our call we done as much as we could to remove the lump fish from harm to the best of our ability’s. the freshwater in December was the final blow for our lump fish sadly.’*

Another significant report not mentioned was by the Norwegian Veterinary Institute (NVI), published in English in May this year.⁴ One might have expected industry executives, employed by Norwegian companies, to have picked it up. In summary, about cleaner fish, it says

- their use in Norway is declining due to health and welfare challenges.
- uncertainty about their efficacy in delousing the salmon.
- more handling leads to higher mortality
- difficult for fish health personnel to have a good overview of cleaner fish mortality.

All missing from the Committee debate.

Most of the wrasse used on the farms are wild caught, which is increasingly seen as problematic. Despite known problems in breeding wrasse species, assurance was given to the RAI Committee – *‘We are also investing in facilities that farm wrasse..... As we progress with that, our numbers of wild catch will decrease.’*⁵

As the ‘witness’ should have known, over the years numerous unsuccessful attempts have been made to breed wrasse. Again, the NVI report is relevant - *‘Ballan wrasse are difficult to farm, partly because they have small larvae that require live food. The live feed currently used is likely suboptimal and may negatively affect the development of larva, in terms of deformities and early death. Skeletal deformities in farmed ballan wrasse are common and are believed to affect both their welfare and efficacy as delousers.’*⁶

² Email from RSPCA Assured 14 October 2024

³ FOI response 1 Mar 2022 (No. 202200277100)

⁴ Norwegian Fish Health Report 2023, Norwegian Veterinary Institute Report 8b/2024

⁵ RAIC draft Official Report for 2 October 2024, p. 61

⁶ Norwegian Fish Health Report 2023

On the day of the Committee hearing, it was reported that ‘SalMar [which has a 50% stake in the company Scottish Sea Farms, represented on the industry panel] *will discontinue the production of cleaner fish at its Stjørødal facility by the second quarter of 2025.....The company has decided to stop using cleaner fish in its marine operations, a practice that has been the subject of growing debate.*’⁷

The issues of welfare for cleaner, and doubts about their efficacy, are such that their use in Norway could well be suspended. SalMar obviously got that message.

The silence about this issue in Scotland is shockingly poor, and the industry’s effort to ensure that remains the case is evident. Should the Committee not be recommending to government that it should no longer condone the practice of an industry exploiting one species of animal to help it exploit another?

The missing topic

Although referred to during the various Committee evidence sessions, animal welfare was somewhat glossed over. This is despite the many recommendations of a 2018 Committee seeking significant improvements in the care of farmed fish and the monitoring and enforcement of their welfare.

No sufficient time was given to discuss some fundamentals, such as how effectively, or otherwise, is farmed fish welfare assured in Scotland. Which official government body in Scotland is responsible for monitoring and enforcing welfare conditions for caged fish?

Easier to list are those not responsible – the Fish Health Inspectorate (FHI), SEPA, Marine Directorate, NatureScot, and planning authorities. An example of the latter being the recent grant of permission to a business*, which has been responsible for the worst production cycle mortality rates ever recorded in Scotland – 86.8% salmon mortality.⁸

A document submitted to the Committee from the Animal and Plant Health Authority, is ambiguous in its terms, recounting a cumbersome number of steps between the notification of a welfare concern, investigation, liaison with other parties, and finally possible prosecution. But not prosecution by APHA, as it is not an enforcing authority, it says; any reference to the procurator fiscal must be done via the local authority, according to APHA.⁹

APHA has 10 inspectors in Scotland, who made 2 site inspections so far this year. in the last 3 years, no official visit was made by APHA to the farm referred to above, with the worst mortality ever recorded in Scotland. In response to a request for information, APHA could not say what the normal time period would be from

⁷ <https://www.intrafish.com/salmon/salmar-to-stop-using-lice-eating-cleaner-fish-on-itssalmon-farms/2-1-171927>

⁸ Published on the Salmon Scotland website on 2 October, after Highland Council’s meeting which granted planning permission for site at Balmaqueen, Isle of Skye

⁹ Animal and Plant Health Agency submission to RAIC 26 September 2024

receiving a complaint to carrying out a site visit, because the information is not recorded.¹⁰

This is a mess and many of Scotland's 70 million caged salmon suffer as a consequence. There is no effective sanction against continuing suffering. A national disgrace.

APHA officials rarely, if ever, witness welfare incidents or prevailing conditions. Would it not be better for the body most often visiting fish farms, the FHI, to have the responsibility of dealing with welfare cases right through to reference to the fiscal? APHA staff are already in local offices in Scotland so the staffing issue should not be too problematic.

It is easy to say that 'fish welfare is a top priority' as most players, including government, contend, but action to reflect this remains missing.

*[This farm was harvested in July, along with six others. It was the only one whose mortality rate was not reported by Salmon Scotland. It was reported on 2 October. Planning permission was granted on 19 September.]

Missing government

An overview of the regulatory system in Scotland shows that the government, and its agencies, are often missing from action. Despite Committee inquiries and recommendations over the years, the performance of the industry on many issues has not improved markedly, and caged salmon and cleaner fish continue to suffer.

As described above, the government is presiding over animal welfare system that is not fit for purpose. A laissez faire system exists where the industry 'regulates' itself via its Code of Good Practice, which the government cannot enforce. Or reliance is put on conflicted accreditation schemes, such as RSPCA Assured, not divorced from financial incentive.

Unfortunately, regulation is not a priority for a government that prefers to give subsidised PR support to the industry. Happy also to quote economic performance figures, but unwilling to conduct a cost benefit analysis, as if there is no negative impact of the industry that can be costed. *"The Scottish Government has not undertaken cost benefit analysis under the terms in which you enquire. This is because fish farming in Scotland is already a highly regulated industry and is subject to a number of fish health, environmental and local authority planning controls that helps control any potentially negative impacts."*¹¹ Many would suggest that reveals a worryingly complacent attitude within government.

No consideration is giving to other development opportunities for coastal areas, marine tourism, for example. How about giving significant funding and proper inshore fishery management to enable creel fishing to flourish? Try an restore the habitats for spawning and juvenile fish. Control bottom trawling and dredging. Is it not better to try to maximise the financial returns from our seas to local communities? In many

¹⁰ APHA FOI response dated 23 October 2024

¹¹ Letter from Marine Directorate 9 April 2024

locations, what these communities need more than jobs is affordable housing. Where's Plan B when climate change renders open net fish farms unviable?

Regulatory changes take years in the making, are late and effective future action delayed by years (eg. lowering of the EQS for the pesticide emamectin benzoate, and the framework to minimise farmed and wild fish interactions, on both of which little action will affect existing farms for years to come).

The range of published data on mortality rates, sea lice, cleaner fish etc, are either full of gaps (cleaner fish imports), inconsistent with one another (FHI, SEPA and Salmon Scotland mortality data), or are missing entirely (cleaner fish numbers on farms and their mortality). The last is particularly reprehensible. Farm operators have stock numbers and mortality figures, the FHI knows about some of them, yet thirty years or so, after cleaner fish were first used in cages, no one thought to have these published. No official action is being taken to remedy these deficiencies.

Reading the NVI report mentioned above, produced annually, one can wonder – which agency in Scotland could produce a document of that standard? Answer none – because they are seriously under-resourced.

The FHI does not have boats and, therefore, cannot conduct unannounced inspections of fish farms. What about drones?

Effective monitoring of this multi-billion pounds industry is carried out by volunteers (eg. the three farms recently pulled up for welfare breaches ultimately by RSPCA Assured; a farm in the Western Isles recording over 1 million mortalities), most of whom have nowhere near the funding available to their denigrator-in-chief, Salmon Scotland.^{12, 13}

The government's relationship with this industry is an unhealthy one, without balance. For example, six years ago, on the basis of zero evidence or knowledge, government described the use of cleaner fish as '*sustainable*'. In its 2018 report, the Rural Economy and Connectivity Committee noted Scottish Government's view that "*cleaner fish offer a sustainable and environmentally positive method for reducing the impact of sea lice on salmonid growth.*"¹⁴ In light of the absence of data at the time (which continues), ministers should apologise for this unfounded statement, and reflect on how far they have been prepared to give this industry their unqualified support.

The following are a couple of extracts from FHI Inspection reports. The earliest is from 4 years ago. Nothing has been forthcoming from government in response to these serious issues being raised on fish farms.

Report 'Lumpfish don't cope well with crowding, FW treatments or the Hydrolicer. Looking into options to exclude lumpfish from treatments but currently no feasible way to remove them.' 23 July 2020
Site – Eughlam

¹² <https://www.youtube.com/watch?v=jqFyqKL3w0>

¹³ <https://www.pressreader.com/uk/the-national-scotland/20241023/281732684964779>

¹⁴ Rural Economy and Connectivity Committee Report 2018, para. 221

Report - 'Used to have WRS but with all the FW treatments these have perished.' 7 Jan 2022

Report - 'No wrasse left on site due to freshwater treatments (44,000 fish lost) - site staff mentioned they did not have equipment to remove cleanerfish during FW treatments, issue raised with FHI senior management.' 9 Feb 2022

Site - Loch Greshornish

The missing question

The industry globally continues to look for 'innovative' solutions to the health challenges of fish in its care, and to help the 'bottom line'. Often these innovations lead to dead ends – medication resistance, pollution issues, welfare issues (mechanical delousing, cleaner fish). It is almost certain that current 'new' solutions, costing huge capital investments – farming farther off-shore, submerged cages, semi-closed and land-based systems - will encounter different, or similar, problems. Underlying all the above lies one avoided question. On what scientific evidence is the Atlantic salmon a suitable fish for intensive food production? Spoiler- the Farm Animal Welfare Committee could provide none.¹⁵

¹⁵ Exchange of correspondence with FAWC/Defra 23 September 2023, 8 January and 1 February 2024