

Green Britain Foundation

20th November 2024

Dear Rural Affairs and Islands Committee,

On behalf of the Green Britain Foundation (GBF), I am writing to present compelling evidence regarding serious environmental and regulatory concerns in Scotland's salmon farming industry.

Illegal waste disposal

Recent evidence has exposed concerning practices in the salmon farming industry's waste disposal methods, particularly regarding the activities of Whiteshore Cockles Limited in North Uist. Despite the practice of burying dead and diseased salmon from fish farms being outlawed in Scotland as of January 31, 2024, footage from May 2024 shows the company continuing to bury large quantities of salmon in beach pits.





It is also concerning that when investigators were on the island legitimately gathering evidence, Mowi staff were present. This situation warrants further investigation to ensure that legitimate inquiries can proceed without interference.

The industry's explanation of dealing with odours raises another significant issue. Complaints about odours from the salmon waste disposal facility have been made by a number of local residents, yet these complaints appear to have been inadequately investigated by the relevant authorities. It is concerning that GBF investigators, spending a few days in the area, were able to uncover evidence. The stark contrast between the effectiveness of GBF investigations and the apparent failure of regulatory authorities raises serious questions about the adequacy and willingness of these institutions to properly oversee the industry.

The environmental implications of this are severe. Dr. Michell Bloor, a Lecturer in Environmental Science and Risk, stated to ITV/STV News: "The burial of such large numbers of fish, in what appears to be an unlined site, will result in large amounts of decomposition products leaching into the surrounding environment. These decomposition products will include large amounts of nitrogen and phosphate, which could contribute to the eutrophication of any associated freshwater environment. In addition, if the fish contain any pathogens, disease or contaminants these might also be released into the environment through the air or leaching into the surrounding environment."

It is worth noting that both the Scottish Environment Protection Agency (SEPA) and Comhairle nan Eilean Siar (CNES) are now investigating Whiteshore Cockles in light of these revelations. However, the fact that it took a GBF investigation to prompt this action further underscores the

urgent need for stricter oversight and more proactive enforcement of environmental regulations in the salmon farming industry.

Regulatory failures and inadequate incident response

A recent incident involving a sunken fish farm support vessel in the Sound of Mull on July 4th highlights the inadequate regulatory oversight and response to potential environmental hazards in the salmon farming industry.

The Maritime and Coastguard Agency (MCA) stated they were "monitoring the situation, working with the fish farm operators" and reviewing a salvage plan. Similarly, the Scottish Environment Protection Agency (SEPA) merely confirmed they were "working together with partners and the operator to share information and monitor the situation closely."

These responses fall far short of what the public and politicians should expect from regulatory bodies tasked with protecting our marine environment. Instead of taking immediate, proactive measures to prevent potential pollution and environmental damage, both agencies appeared to take a passive stance, relying heavily on information and actions from the very industry they are meant to regulate.

The MCA's statement that they have "conducted three surveillance flights" since the incident seems a remarkably limited response to a potentially serious environmental hazard. Meanwhile, SEPA's focus on waste disposal after the fact, rather than on preventing environmental contamination, is equally concerning.

Furthermore, the agencies' apparent acceptance of the operator's assurances about containment measures, without independent verification, raises serious questions about the rigour of their oversight. This incident suggests a troubling pattern of regulatory bodies acting more as observers than enforcers, potentially prioritising industry interests over environmental protection.

Despite feeble assurances from industry and regulators 18 days after the sinking oil was still being filmed on the pristine water of the Sound of Mull. Officials failed to act but major supermarkets recognised the potential threat to their customers and stopped taking products from the site.



Unsustainable feed practices

Recent research published in Science Advances has exposed the true extent of the salmon farming industry's environmental impact, particularly regarding feed practices:

1. The ratio of wild fish inputs to farmed fish outputs (FI:FO) for salmon farming ranges from 1.66 to an alarming 5.57, depending on the dataset used. This means that for every kilogram of farmed salmon produced, up to 5.57 kilograms of wild fish are consumed.
2. When accounting for collateral mortality during fish capture, the FI:FO ratio for salmon farming increases further, ranging from 1.86 to 6.24.
3. While the industry has attempted to reduce marine-sourced feed, this has led to a substantial increase in crop-based feed. The "crops-in:fish-out" ratio for the aquaculture sector as a whole increased by 77% between 1997 and 2017, from 0.40 to 0.71.
4. For salmon farming specifically, crop use for feed has increased at over twice the rate of salmon production between 1997 and 2017.

5. The shift to crop-based feed has significantly increased land and freshwater use. Species groups using herbivorous fish feeds consume more than twice as much land and 43% more fresh water compared to carnivorous feed species.

These findings demonstrate that the industry's claims of sustainability are not supported by scientific evidence. The salmon farming industry is caught in an unsustainable cycle, merely shifting environmental damage from marine to terrestrial ecosystems rather than mitigating it.

<https://www.science.org/doi/10.1126/sciadv.adn9698#sec-3>

Industry admissions of environmental damage

Recent industry-sponsored research, while attempting to paint a positive picture, inadvertently reveals the extent of environmental damage caused by organic salmon farming operations.

A three-year post-closure environmental study conducted around Mowi's former small organic Isle of Ewe fish farm, published on November 4th, 2024, claims to show seabed recovery following the cessation of farming operations. But industry publicity about this study makes no reference to it being peer-reviewed or published in any scientific journal. The very fact they celebrate "recovery" is a tacit admission that significant damage occurred in the first place.

Key points to consider:

1. The study acknowledges that only 67% of sampling locations met the conditions for 'Good Ecological' status when the farm was operational in 2020. This means that 33% of the area failed to meet even basic ecological standards.
2. The claim that 100% of sampling locations met 'Good Ecological' status by 2023 implies that it took three years for the environment to recover from the damage caused by the farm's operations.
3. The study only examined the "allowable mixing zone" around the fish farm, which they admit equates to just 0.3% of the surface area of Loch Ewe. This narrow focus ignores potential wider ecosystem impacts.
4. The industry's celebration of rapid recovery inadvertently highlights the severity of the initial damage. If significant improvement can be seen in just six months, as claimed, it suggests that the operational impact of the farm was substantial.

5. The lack of peer review and published data makes it impossible to independently verify these claims or assess the methodology used.

This self-congratulatory unpublished study serves to underscore the need for independent, comprehensive research into the full environmental impact of salmon farming operations. It also raises questions about the adequacy of current regulatory standards, given that a third of the studied area failed to meet 'Good Ecological' status while the farm was operational - one reason why the farm was closed. This was an organic farm. Imagine how much devastation is routinely caused on the majority non-organic factory farming sites?

<https://www.salmonscotland.co.uk/news/the-recovery-of-loch-ewe-seabed>

Climate change and jellyfish: A growing threat to Salmon farming

Recent events in Norway and Scotland highlight the increasing vulnerability of the salmon farming industry to climate change and its consequences. The Norwegian Food Safety Authority has recently urged salmon farmers to consider culling their stocks due to the appearance of deadly jellyfish in Norwegian waters. This situation serves as a stark warning for the Scottish industry and underscores the unsustainability of the industry.

The situation in Norway and Scotland serves as a clear warning for the entire salmon farming industry. As our seas continue to warm, we can expect similar challenges with jellyfish blooms and other climate-related issues. The industry's proposed "solutions" are often speculative and unproven. They appear to be more about maintaining the status quo and profits rather than addressing the root causes of environmental degradation and animal welfare concerns.

It is crucial to recognise these issues are not isolated incidents but symptoms of a fundamentally flawed and unsustainable industry model. The committee must consider whether continuing to support an industry that is increasingly at odds with the realities of climate change is in the best interests of Scotland's environment and economy.

Conclusion and future action

The evidence presented here raises serious questions about the salmon farming industry's environmental impact and the effectiveness of current regulatory frameworks. The industry's practices are causing significant harm to marine ecosystems, contributing to overfishing of wild stocks, and placing unsustainable demands on terrestrial resources.

Given the overwhelming evidence of environmental damage, regulatory failures, and unsustainable practices in the salmon farming industry, the Green Britain Foundation calls for the immediate closure of all salmon farming operations in Scotland. We believe this is the only responsible course of action to protect our marine ecosystems and address the urgent climate crisis we face.

However, recognising that immediate closure may face resistance, we urge the committee, at the very least, to implement the following measures:

1. Impose a complete moratorium on new salmon farm licences and expansions.
2. Implement significantly stricter environmental regulations and enforcement mechanisms for existing operations.
3. Launch a thorough, independent investigation into waste disposal practices.
4. Reassess the environmental impact of salmon farming, taking into account the latest research on feed practices and their wider ecological consequences.
5. Investigate alternative economic activities that can provide sustainable livelihoods for coastal communities without the severe environmental costs associated with salmon farming. The Green Britain Foundation would be keen to support this.

I can assure you and the general public the Green Britain Foundation will be dedicating substantial resources to investigating and publicising the lack of effective oversight and regulation of this industry.

The health of our marine and terrestrial ecosystems must take precedence over short-term economic interests. We look forward to seeing the committee take decisive action on these critical matters.

Sincerely,
Dale Vince
Green Britain Foundation