

RURAL ECONOMY AND CONNECTIVITY COMMITTEE

SALMON FARMING IN SCOTLAND

SUBMISSION FROM LYNN SCHWEISFURTH, MEMBER OF THE [SCOTTISH SALMON THINK-TANK](#) AND THE SALMON AQUACULTURE REFORM NETWORK SCOTLAND (SARNS)

I strongly object to the open net salmon farming industry as presently practiced in Scotland and believe that any further expansion can only proceed using closed containment. An immediate moratorium should be placed on all applications for new sites or expansion of existing sites until such measures are implemented. At the time of writing, the Scottish government has published the latest [salmon catch statistics](#) which show the fourth lowest on record. To pretend there is not sufficient evidence to link the prevalence of salmon farms with decreasing wild salmon stocks is simply wilful ignorance. It is for this reason that a moratorium has been placed on salmon farms on Scotland's east coast. The same principle must now apply to Scotland's west coast which is slowly suffocating from the pollution from salmon farms and witnessing dangerous [declines](#) in wild salmon stocks.

The Cabinet Secretary, Fergus Ewing, has given his unequivocal support to double salmon production by 2030 to between 300 and 400 thousand tonnes per year, as laid out in the [Aquaculture Growth Plan](#) but with no acknowledgement of present concerns, let alone the additional environmental pressures that such a dramatic increase in production would entail. The Salmon Aquaculture Reform Network Scotland (SARNS) raised a number of questions relating to the Growth Plan to Mr Ewing in November last year but have as yet received no response.

While this inquiry is ongoing, it is incomprehensible that the Cabinet Secretary has [reiterated his commitment](#) to doubling production of farmed salmon by 2030 without any mention of the impact on the environment. If this inquiry returns nothing more than the familiar and as yet unfulfilled promises by the industry to address environmental concerns, then it will be a great stain on the credibility of the Scottish government's green agenda, not to mention an unforgivable waste of taxpayers' money and MSPs' and consultees' time. Furthermore, it will confirm that Scotland is lagging behind other salmon-producing countries by refusing to acknowledge the impacts of salmon farming and by failing to respond adequately by insisting on a transition to closed containment.

Since the report by the ECCLR Committee in March this year which concluded that "*the status quo is not an option*", yet another two fish farms have been approved on the Isle of Skye to add to the existing 26. The decisions for both farms were reached in less than one hour, with hardly any serious discussion of significant environmental impacts. I would urge the REC Committee to thoroughly examine how the planning committee at Highland Council was able to reach its decision while this inquiry is still

underway and in light of the most recent recommendations by the ECCLR Committee.

Consumers and the public are understandably becoming increasingly critical of this industry. The impact of salmon farming was the subject of a damning report by the BBC's The One Show in December last year, watched by five million viewers. Petitions against salmon farming on the websites TheSumOfUs and 38 Degrees have reached over 36,000 signatures with many environmental and community groups joining ranks to raise awareness. Today's press release calling for a moratorium on new salmon farms from Salmon & Trout Conservation Scotland has the support of 27 Scottish environmental, conservation and community organisations.

The issue of fish health mainly focusses on sea lice, but little mention is made of a range of other diseases, such as Infectious Salmon Anaemia (ISA), Heart and Skeletal Muscle Inflammation (HSMI), and Pancreatic Disease (PD). Antibiotics and chemicals, such as emamectin benzoate, added to the fish feed, have been used in such quantities that some fish have become resistant to them. As a result, the industry loses around 25% of stock annually, a ratio unheard of in any other livestock industry. Residents in the highlands are now familiar with trucks transporting millions of rotting fish for incineration many miles away in northwest England.

Each year, thousands of tonnes of fish farm effluent flow into the sea through open net cages. It is estimated that the sewage from fish farms is roughly equivalent to that of the entire population of Scotland. There are 45 sea lochs that have been contaminated by the toxic chemicals emitted from fish farms. Emamectin benzoate, a pesticide toxic to birds, mammals, fish and other aquatic organisms, also has dangerous long-term impacts on crustaceans, with dramatic consequences for creel fisheries, a key economic driver and employer in coastal communities which provide Europe and the world with lobster, prawns and crab.

So why is the Cabinet Secretary for the Rural Economy and Connectivity so keen to increase production without first addressing well founded and serious concerns? How can the Scottish Government reconcile its pride in a polluting industry with the many good things in its green agenda on climate change, bans on fracking and plastic straws, and the introduction of bottle return schemes? And how does farmed salmon fit into the Government's Good Food Nation Bill, designed to promote healthy food and food production?

The open net salmon industry is wholly incompatible with these initiatives. But the promise of "jobs" is a persuasive and powerful argument which the fish farming industry has used vigorously and shrewdly. Numbers are spun that give the impression that there is no other form of employment in rural areas. A closer look shows that the number of people employed on fish farms in 2016 was

approximately 1,800, not the thousands the industry regularly cites by cleverly including the wider supply chain. Every industry has a supply chain, not least the tourist industry which employs over 200,000 people and in 2015 generated £8.9 billion – revenue which remains in Scotland. If the government is so concerned about rural employment, it should surely encourage industries that complement the sectors that are the backbone of the rural economy, rather than undermine them.

It is disturbing also to see industry-friendly politicians, councillors and regulatory bodies repeating the new PR slogan of the salmon industry, designed to appeal to the zeitgeist: that industrial fish farming is contributing to global food security, a thoroughly misleading claim. As we know, overfishing has depleted the world's wild fish stocks to an alarming degree, therefore, so follows the logic, breeding fish in farms is a way of redressing the balance. But the reality is that salmon farming actually exacerbates food insecurity by further depleting wild fish stocks for use as feed while so-called 'cleaner fish', such as wrasse and lumpsucker, are now being fished in such vast quantities that it has sparked outrage among fishermen in the south of England. In anticipation of a rapid depletion of wild wrasse stocks, the industry has already begun farming wrasse, only to find that these fish are also just as prone to diseases, which they then transmit to the salmon. It goes without saying, that such rapid depletions have a long-term knock on effect in the wider ecosystem.

A growing number of consumers are now questioning whether farmed salmon is as healthy as the industry claims. Some Norwegian doctors don't think so and have advised expectant mothers against eating it due to its high concentration of PCBs and toxins. A Freedom of Information (Fol) request found that the *Scottish Salmon Company* had breached safety levels for emamectin benzoate on a number of occasions and that it was present in samples of their salmon. Studies carried out in Canada confirmed that over 90% of farmed salmon on sale in supermarkets tested positive for Piscine Reovirus and research is ongoing into what implications fish viruses could have for human health. Seafood Watch recently gave Scottish farmed salmon a total of 2.65 points out of ten on the basis of the prevalence of toxins, disease and fish escapes. If the salmon industry has succeeded in one thing apart from making huge profits, it is in diminishing a fish, long regarded as a precious natural resource, to little more than posh junk food.

The mainly Norwegian-owned Scottish salmon industry has amassed huge profits from a marketing strategy based on everyone's favourite image of Scotland: breath-taking scenery and key messages such as 'pristine', 'quality', 'prime', 'healthy' and 'provenance'. However, increasing and persistent controversy around fish health, environmental degradation and doubts about the quality of farmed salmon means that brand Scotland itself is at risk with far-reaching implications for other producers of food labelled "Scottish".

By wreaking havoc on the environment, the salmon industry is in the process of destroying its own marketing strategy along with Scotland's image as a quality food producer. Brand Scotland has been ruthlessly exploited by one single industry, reversing the efforts of those who have built it over decades. To devalue the brand jeopardises a burgeoning food and drinks sector, potentially compromising conscientious producers, retailers, restaurants and hoteliers, many of them family and artisanal businesses and many of them located in rural areas, whose livelihoods depend on the reputation of that brand.

If the Scottish Government proceeds with the expansion of an industry, whose business model is so badly broken, without due consideration of the long-term impact on the environment, local economies and brand reputation, it would not only be short-sighted, but utterly reckless.

Thankfully, there are viable alternatives to open net salmon farming. In response to similar criticisms and concerns, countries such as Norway, the US and Canada are moving towards land-based closed containment, also known as Recirculating Aquaculture Systems (RAS). Industrial-scale RAS sites have recently begun operations in the US, while Norwegian companies have invested €72 million in RAS production in China. Although sites of this size won't address concerns around the sourcing of feed or the industry's unacceptable carbon footprint, they can at least ensure that wild and farmed fish are separated, and allow effluent to be controlled, filtered and neutralised. RAS can also be developed for aquaponics, a methodology combining aquaculture with hydroponics, using the nutrients from the fish as fertiliser to grow fruit and vegetables. Such projects are scalable, can be located in cities as well as rural areas and can play a complementary role in crofting, fishing and tourism, sectors which are truly sustaining Scotland's remote areas. Given that a blueprint for urgent, radical reform of Scotland's salmon industry already exists, all we need now is the vision and political will to implement it. I therefore strongly urge the REC Committee to follow the recommendations of the ECCLR Committee in this inquiry.

Lynn Schweisfurth
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