

RURAL ECONOMY AND CONNECTIVITY COMMITTEE

SALMON FARMING IN SCOTLAND

SUBMISSING FROM THE RIVER DOON FISHERY BOARD

We wish to submit the following comments submitted under the headings of the Committee's questions.

1. Do you have any general views on the current state of the farmed salmon industry in Scotland?

It is clear that disease and parasite problems in much of the industry are out of control and there is no sign of the situation improving. Mortalities due to disease and parasites are now running at close to 25% of total production, a level that would not be tolerated in other agricultural sectors.

The levels of mortality are indicative of poor husbandry and/or the failure of available treatments.

Climate change (warming seas) will inevitably exacerbate the industry's current disease and parasite problems.

Unless radical steps are taken/adopted in the way that the industry operates, it is increasingly likely that the industry will implode with catastrophic consequences for itself and the wider environment. The history of salmon farming in Chile is a case in point.

2. There have been several recent reports which suggest how the farmed salmon industry might be developed. Do you have any views on action that might be taken to help the sector grow in the future?

The ECCLR Committee's report concluded that "further development and expansion must be on the basis of a precautionary approach and must be based on resolving the environmental problems. **The status quo is not an option**". It is abundantly clear that open-net salmon farming has caused very significant environmental damage and any increase in open-net salmon farming will only exacerbate these problems.

If there is to be any growth in salmon farming in Scotland, it must be in closed containment, either on land or in tanks in the sea. Furthermore, Scottish Government and the industry should now commit to phasing out all open-net salmon farming within a specified time period (say five years).

Closed containment means complete biological separation between the farmed fish and the wild fish, thus eliminating transfer of disease and parasites between farmed fish and wild fish.

Closed containment tanks in the sea enable the drawing up from below of cooler water, thus easing problems with rising surface water temperatures.

Closed containment would allow the industry to have a sustainable future in Scotland, utilising the existing skills in the West Highlands and Islands. It would also give a major boost to the Scottish engineering and manufacturing sector.

If Scotland fails to embrace closed containment in a timely fashion, then it runs the risk of being left behind as other countries forge ahead. The development of three major closed containment facilities have been announced in the US in the last three months alone.

3. The farmed salmon industry is currently managing a range of fish health and environmental challenges. Do you have any views on how these might be addressed?

Closed containment salmon farming provides the only medium-term to long-term solution. Given rising sea temperatures, open-net farming's issues with disease and parasites are only likely to increase. It is no coincidence that the salmon farming industry on the west coast of Ireland, further south and thus faced with higher water temperatures than the industry in Scotland, has recently shown little appetite for expansion.

The world's largest salmon farming company, Marine Harvest, has produced a graph, illustrating the percentage of sites above national sea lice trigger levels in each of the countries it operates in. Scotland was by far the worst performer in both 2015 and 2016. See page 81 of the Company's 2016 Annual Report.

4. Do you feel that the current national collection of data on salmon operations and fish health and related matters is adequate?

No. There needs to be real-time publication of farm by farm data of sea lice numbers, disease and mortality numbers.

At present data collection is almost entirely reliant on a system of reporting by the farms themselves. This needs to be backed up by extensive unannounced independent inspections and monitoring.

5. Do you have any views on whether the regulatory regime which applies to the farmed salmon industry is sufficiently robust?

The industry is poorly regulated (as the ECCLR Committee's Report makes crystal clear). This has long been the case. There is little protection for the environment in general and almost no protection for wild salmon and sea trout in particular.

It is rare for SEPA to direct farms to reduce permitted biomass when benthic surveys are unsatisfactory.

The current regulatory regime gives no protection to wild salmon and sea trout from the negative impacts of salmon farms – for example when sea lice on farmed fish escalate. This is a glaring gap in the law and should be plugged as a matter of urgency.

6. Do you have any comments on how the UK's departure from the European Union might impact on the farmed salmon sector?

No

Further General Points

An exhaustive new report, **Impacts of salmon lice emanating from salmon farms on wild Atlantic salmon and sea trout**, was published in January 2018 by the Norwegian Institute for Nature Research (NINA), Norway's leading institution for applied ecological research. It is authorised by Prof. Eva B. Thorstad and Dr Bengt Finstad, both internationally acknowledged for their expertise in sea lice biology and the interactions between salmon farming and wild fish. It examined all the available and up to date research on the impact of sea lice from salmon farms and concluded unambiguously that "the combined knowledge from scientific studies provides evidence of a general and pervasive negative effect of salmon lice on salmonid populations in intensively farmed areas of Ireland, Norway and Scotland". See <http://hdl.handle.net/11250/2475746>.

It is almost inevitable that the negative impact of salmon farming on wild fish will extend far beyond those rivers and wild fish populations within the main aquaculture areas of the West Highlands and Islands. Thus wild salmon smolts from the Ayrshire and Solway Rivers must, as they travel north, pass close to salmon farms in the West Highlands and Islands, putting them at risk of picking up potentially fatal infestations of sea lice. Furthermore, salmon smolts from Scottish east coast and north coast rivers are likely to travel close to or within infestation range of the high density of salmon farms in Orkney and Shetland. Farms in the latter in particular have a dismal record of sea lice control.

The salmon farming industry's environmental problems are already damaging "Scotland the brand". Radical reform is needed to reverse this perception and the only long term solution is to bring then entire industry into closed containment systems – either on land or in tanks in the sea.

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