

## **Environment, Climate Change and Land Reform Committee**

### **Environmental impacts of salmon farming**

#### **Written submission from Corin Smith**

Having reviewed the SAMS report titled "*Review of The Environmental Impacts of Salmon Farming In Scotland*" I am concerned that it completely omits the environmental impacts of operations associated with an intensive industrial process and is limited to reviewing only biological issues associated with salmon farming and only during the adult production phase on seawater sites. The supply chain associated with Salmon farming, as widely reported in both industry press and government endorsed economic studies, extends way beyond solely the open-cage pens at the sea water sites.

To exclude operational and logistical environmental impacts, and restrict the assessment of impacts to only biological issues locally associated with sea water sites, appears to miss perhaps the majority of the environmental impacts of salmon farming in Scotland.

For example nothing is considered in respect of the environmental impacts of an industry in a remote area being served by HGVs and Well-boats.

No mention is made of the impact of thousands of 24 tonnes lorries servicing sites across Scotland.

Using mortality data from the [aquaculture.scotland.gov.uk](http://aquaculture.scotland.gov.uk) it is estimated that nearly 40,000 tonnes of salmon will be removed from farmed sea water sites in Scotland on 2017. This amounts to nearly 1,700 lorries, driving through remote areas and long distances (24hr+) by road. Assuming fully laden 24 tonnes lorries. The actually number of lorries removing mortalities from the North West of Scotland is probably nearly double this.

Removal of fish for market would amount to a further 4,000 fully laden 24 tonnes HGVs, entering and leaving the North West of Scotland. An area of little or no industrial activity.

Feed of nearly 200,000 tonnes needs to be brought to sea water sites also. Let alone that required for freshwater rearing.

Some of the transport is done by well boat. But these equally have considerable environmental impact.

Any assessment of the environmental impact of salmon farming in Scotland would be incomplete without estimating the effects of air pollution, carbon, nitrogen and particulate emissions associated with the extensive use of heavy machinery. As well as grey water, blackwater, accidental fuel and biological material spills from well boats.

Further no reference is made to the environmental impact on the immediate areas around sea farms associated with their physical degradation, where walking beaches you quickly find plastic rubbish, nets and parts of pens.

No reference is made to the effects on marine mammals resulting from the use of sonic deterrents on farms.

No reference is made to the environmental impact of smolt production in freshwater lochs. Where issues of disease, eutrophication, sediment build up, industrial operational impact are exactly the same.

The report's, and indeed I would hope, the committee's role of assessing the Environmental Impact of Salmon Farming on Scotland must follow the previous models used to assess Economic impacts of Salmon Farming, where all down stream activities were considered, which can be found here:

<http://www.hie.co.uk/regional-information/economic-reports-and-research/archive/value-of-aquaculture-2017.html>

To restrict the assessment to only the biological impact of salmon farming in the immediate vicinity of sea-water based open cages, ignoring the environmental impact of operations, installed infrastructure and all associated supply chain activities, would be akin to assessing the environmental impact of "Fracking" based only on the impact of the collected "natural gas" on the immediate surroundings.

This would not allow a proper assessment to be made in respect of economic benefit vs. environmental cost.