

## **RURAL ECONOMY AND CONNECTIVITY COMMITTEE**

### **SALMON FARMING IN SCOTLAND**

#### **SUBMISSION FROM ROC SANDFORD, ISLE OF GOMETRA**

I run farming, holiday let, stalking & publishing businesses on the Isle of Gometra in the Staffa Archipelago. I am also a proprietor of salmon netting stations and oyster aquaculture sites on the island. My businesses represent the main source of local employment for three households. I was also a co-founder of the Archipelago Forum, committed to promoting and conserving the wildlife, historical and cultural assets to be found in the Staffa Archipelago, with a view to winning Unesco World Heritage site status and 'Wild Land' status for some of the unique environmental, historical and wildlife assets to be found in the archipelago.

This committee has a historic opportunity to ensure salmon aquaculture is placed on a sustainable footing and to ensure its viability in the medium term. Currently salmon aquaculture is generating environmental externalities which place it in conflict with other users of the marine environment, are inexpedient for Scotland as a whole and are likely to be proved unlawful if subject to judicial review. These failings are developing into a continuing embarrassment for the Scottish Government and its regulators, and an escalating disaster for those in the wild fisheries, angling and eco-tourism sectors, together with all those in the Scottish economy who depend on us. I will mention a few of these externalities below. In general, Scotland would be well served by adopting the principle 'polluter pays,' or more technically 'negative externalities to be internalised,' and ending the apparent regulatory capture which has enabled the Scottish salmon industry to otherwise inexplicably be permitted to pollute and damage biodiversity at will without public redress.

#### **Sea Lice**

'There is no evidence of an impact of lice from fish farms on wild salmon in Scotland' (Marine Scotland Science 2010). Even a cursory review of the literature renders this statement acutely embarrassing (most recently see Krkosek 2012, Costello 2009, Ford 2008 and earlier literature referenced therein). The hidden premise was that scientific evidence for causal mechanisms, if originating outside Scotland, do not apply to Scotland, that the precautionary principal has no application in Scotland, and international and domestic environmental and welfare legislation and best practice can be set at nought by Scotland.

Placing real-time, disaggregated, independently audited sea lice data in the public domain, and setting an enforceable, target at an evidence-based threshold level of ovigerous lice, could begin to help address the devastating impact of lice amplification from salmon farms on populations of wild salmonids, and the associated RSPCA endorsed welfare scandal. A regulatory blind spot allows sea lice, arguably the most damaging externality of salmon aquaculture, to escape proper control. Probably either Marine Scotland Science or Scottish Natural Heritage must be given responsibilities, for instance to order culling when sea lice numbers pass a threshold, which are quantitative, transparent, enforceable and accountable.

In Gometra's case, our wild salmon fisheries together with the modest employment they generated have been destroyed by the advent of salmon farming, and we have

taken a decision to follow our fisheries to protect the few wild salmon which survive exposure to sea lice emanating from Scottish Salmon Company farms.

## **Seals**

'Section 119 of the Marine (Scotland) Act 2010 states that Scottish Ministers must not grant a seal licence authorising the killing or taking of seals in a seal conservation area unless they are satisfied (a) that there is no satisfactory alternative way of achieving the purpose for which the licence is granted, and (b) that the killing or taking authorised by the licence will not be detrimental to the maintenance of the population of any species of seal at a favourable conservation status in their natural range (within the meaning of Article 1 (e) of the Habitats Directive). While the Scottish Government has come up with reasonably plausible arguments supported by the Sea Mammal Research Unit as to why the number of seals killed in the Western Isles will not be detrimental to the maintenance of the population of the two species, Scottish Ministers must also be satisfied that there is no satisfactory alternative way of achieving the purpose of the licence pursuant to section 119 (a). If we presume that Scottish Ministers have not acted unlawfully, then they must have satisfied themselves that acoustic deterrents, seal nets etc. do not work in the Western Isles for the 30-odd farms concerned. It follows that if they don't work there, there is no reason to suggest they will work anywhere else.' (Linley-Adams, 2012) The rules may be amended to provide a) seal nets must be deployed as a condition of any consent because the issue and use of seal killing licences is otherwise unlawful, b) granted that seal nets are deployed, licences will not be issued to cull those species in decline or outside safe biological limits under the OSPAR and other conventions, or where granting of a licence is likely to give rise to welfare issues associated with wounding rather than killing, and the killing of lactating mothers where it is impossible to guarantee the simultaneous killing of the pup. Incidentally, Scottish salmon farm seal killing is endorsed for a generous fee by the RSPCA's Freedom Food division.

In Gometra's case, soon after the Scottish Salmon company farm arrived off our shores, a programme of seal shooting began which meant those seals which survived, which had been a delight to our visitors and therefore an important economic resource to the island became wary of human interaction.

## **Cetaceans**

As part of the predator control plan Acoustic Deterrent Devices (ADDs) are routinely used by the aquaculture industry to harass and disturb seals. These are known to disturb and exclude cetaceans over massive areas of their natural range (E.g. Booth 2010 and papers cited therein). 'We would expect disturbance, displacement, and behavioural change to occur' in waters in which ADDs are deployed. (SNH, 2012). The Conservation (Natural Habitats) Regulation 1994 make it an offence to disturb any cetacean without a licence, in accordance with the Habitats Directive. SNH regard themselves as the competent authority to issue such licences, but (at the time of my most recent FOI request) no licences had been issued and there was no record of the deployment of ADDs kept by SNH. Assuming SNH has not issued licences in the interim, all Scottish salmon farms deploying ADDs are therefore operating unlawfully in this respect.

## **Landscape**

Salmon aquaculture is the principal driver of the dewilding of the Scottish West Coast. This is subject to a multiplier effect when evidence of associated environmental degradation seeps through to Scotland's populace and visitors. Given the quantity of press exposure of environmental degradation caused by salmon farming, salmon farms are coming to be seen by visitors as running environmental sores in otherwise pristine landscapes, thus causing disturbance, displacement and exclusion of the visitors on which our economy depends. For example, the seas of the Staffa Archipelago, long canvassed as a Unesco World Heritage site, are facing the proliferation of salmon farms which undermines other economic activities within the region and the employment they generate, at modest and uncertain benefit to the economy of the Archipelago proper.

## **Employment**

Sea cage salmon production currently directly employs about 1500 people Scotland wide according to unaudited, industry supplied figures published by the Scottish Government. These are important jobs held by hardworking people, but nevertheless the poor management practices of the owners of the salmon industry cannot be allowed to result in the destruction of many more jobs in other sectors of the Scottish economy. Whilst mushrooming its production, the industry has not created a net new job since 1986, largely due to automation and the substitution of capital for labour. The submission to this committee prepared by the Friends of the Sound of Jura is in this as in other areas an excellent reference, demolishing the Scottish salmon industry's inflated employment claims.

## **Sustainability**

Salmon farming must be brought in line with the Scottish Government's sustainability policies in a properly transparent and verifiable fashion. To give one example, Scottish farmed salmon feed is in part sourced from unsustainable third-world wild fisheries.

## **Disease**

Diseased salmon should not enter the human food chain, as is present practice industry wide, and the vast quantities of 'morts' or dead salmon should be disposed of in accordance with European law.

## **Toxicity**

Continuing fears are raised over elevated levels of toxins in farmed salmon and associated birth defects, elevated cancer risk, diabetes and behavioural change in consumers (for instance see the considerable literature surrounding Hites 2004, and for an example of more recent concerns citing various studies, Crinnion 2011). The committee should endeavour to procure the routine analysis and timely publication of toxin levels in Scottish farmed salmon flesh for the proper protection of the consuming public. Consumption advisories must be adjusted to make it clear that the benefits of oily fish consumption can be obtained while avoiding the toxicity issues surrounding Scottish farmed salmon by eating other sustainably fished oily fish species such as mackerel.

## **Incorporation of EU Environmental Legislation into Scottish Law**

This is a matter of urgency for obvious reasons. Scotland is developing a reputation as the dirty mature person of Europe when it comes to enforcement of international environmental legislation and its incorporation into domestic law, a reputation we can ill afford given the extent to which our economic interests are bound up in public perception of a pristine marine environment and our iconic wild landscapes.

### **Regulatory Capture**

The current regulatory regime is clearly lobbyist rather than evidence based. A parallel with *An Inspector Calls* (Priestley 1945) is irresistible: Scottish salmon farming's cast-list of useful idiots, whose activities mesh to produce an outcome nobody can reasonably either deny or desire, include RSPCA Freedom Foods, Crown Estate, Scottish Natural Heritage, Marine Scotland, Scottish Environmental Protection Agency, Local Authorities and Marine Scotland. Some of these bodies, doubtless, are left limited room for manoeuvre by the Scottish Government itself (including the indirect evidence of direct but covert ministerial intervention in regulatory decisions—what I have called 'the shape of a smoking gun'). The Government itself is apparently beholden in turn to the Scottish Salmon Producers Organisation and the wider industry by means which may include 'revolving doors', concerted PR, lobbying and whatever unpublicised means may be employed to generate an otherwise inexplicable environmental tragedy of these proportions for Scotland's marine environment, enabled by the Scottish Government, at such a massive cost to the Scottish public.

Roc Sandford  
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*This submission has been adapted from an earlier submission to a Scottish Government Consultation.*