Written submission from Roc Sandford, Gometra

This bill represents a historic opportunity for the Scottish Government to put salmon aquaculture 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 when subject to judicial review or when EU environmental legislation is incorporated into Scottish law, or when Scottish environmental and animal welfare law is properly enforced. The bill as drafted does not adequately address these issues, and risks developing into a continuing embarrassment for the industry and the Scottish Government, 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.

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 literature referenced therein), which is perhaps why the author has concealed her identity. The hidden premise or sleight of hand is that scientific evidence for causal mechanisms, if conducted outside Scotland, do not apply to Scotland, that the precautionary principal has no application in Scotland, and international and domestic environmental and welfare legislation can be set at nought by Scotland.

The bill can be amended to address this problem by placing real time, disaggregated, independently audited sea lice data in the public domain, and setting an enforceable target of zero ovigerous lice year round, so as to address the impact of lice amplification from salmon farms on populations of wild salmonids and associated welfare abuse which amounts to systematic cruelty under welfare legislation. We believe that there is a regulatory blind spot which needs to be addressed so that sea lice, arguably the most damaging externality of salmon aquaculture, are properly regulated by a body (probably either Marine Scotland Science or Scottish Environmental Protection Agency) whose responsibilities are quantitative, transparent and accountable.

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 bill can 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 killing of the pub.

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.

While we are not aware that this has been tested at law, it is our view that it is probable that these licences are being issued unlawfully given that ADDs would be rendered unnecessary by proper predator exclusion nets and these should therefore be made a requirement by the bill of any aquaculture consent within Scottish waters. This issue must be properly addressed in the bill.

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, and salmon farms are coming to be seen 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 rapid 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. The bill must be amended to address this issue.

Navigation & Crowding out of wild fisheries

Salmon Farms are known to unlawfully impede the public right to navigate and the economic viability of wild fisheries interests. This must be addressed in the bill.

Employment

Sea Cage Salmon Production currently directly employs about 1000 people Scotland wide according to unaudited, industry supplied figures published by the Scottish
Government. Employment fell last year by 5% and the industry has not created a job since 1986, largely due to automation and the substitution of capital for labour. The bill should place a requirement on the Scottish Government to commission an independent audit of the socio-economic costs and benefits of salmon aquaculture, both in terms of employment destroyed in wild fisheries, angling and tourism sectors, and jobs created in the salmon aquaculture sector.

**Sustainability**

The bill should be amended to bring Salmon Aquaculture in line with the Scottish Government's sustainability policies in a properly transparent and verifiable fashion, something which it patently fails to do. To give one example, Scottish farmed salmon feed is sourced from unsustainable wild fisheries worldwide.

**Disease**

The bill should provide that diseased salmon should not enter the human food chain, as is present practice industry wide.

**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 of even small amounts of Scottish farmed salmon (for instance see the considerable literature surrounding Hites 2004, and for an example of recent concerns which cites various recent papers, Crinnion 2011). The bill should provide for the routine analysis and timely publication of toxin levels in Scottish farmed salmon for the proper protection of the consuming public. Consumption advisories should 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. 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. This bill must be tested rigorously in this respect and amended where necessary.

**Conclusion**

The bill as drafted is clearly lobbyist rather than evidence based. A parallel with An Inspector Calls (Priestley 1945) is irresistible: salmon aquaculture'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, themselves apparently beholden to the Scottish Salmon Producers Organisation, by 'revolting door', concerted PR,
lobbying and whatever hidden means may be employed to generate an environmental tragedy of these proportions for Scotland's marine environment, of benefit only to a small group of insiders and at massive cost to the Scottish public.

References

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Linley-Adams G 2012 Private Correspondence

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