

RURAL ECONOMY AND CONNECTIVITY COMMITTEE

SALMON FARMING IN SCOTLAND

SUBMISSION FROM COLIN G CARNIE

I have fished on rivers and lochs on the West Coast of Scotland since a holiday at Invergarry in 1946, and subsequently including Loch Morar, Strontian River, River Ailort and Loch Eilt, River Ewe and Loch Maree, River Shiel, Loch Eck, River Aray, River Nith, and the River Awe for more than 60 years. I have advised proprietors and District Boards on hydrology, river hydraulics, habitat enhancement and aspects of fishery management over the past 30. I was a member of the Salmon Advisory Committee (Chairman: Professor George Dunnet) and the Scottish Salmon Strategy Task Force (Chairman: Lord Nickson). Both committees were discouraged from commenting on the impact of the salmon farming industry on wild fish either by obstruction “the Minister won’t sign off the report,” and obfuscation in the latter report in 1997 “...there was a lack of conclusive proof that heavy infestation by sea lice of wild stocks arising from salmon farming had been the principal cause of decline of sea trout and some salmon stocks in the West Highlands”. One cannot provide proof in nature and certainly not conclusive proof. The proper approach twenty-one years ago should have been a precautionary one.

I have taken an active interest in the problems relating to the collapse of stocks of salmon and sea trout since the early 1980s. I have caught fresh-run adult salmon with large numbers of juvenile lice and I have caught post sea trout smolts returning early to freshwater carrying more than 40 lice.

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

I have witnessed with horror the collapse of stocks of sea trout followed by a comparable loss of salmon stocks on the West Coast. The most recent is exemplified by the catch and count of salmon in the Awe. A consistent effort by anglers to release salmon over a period of more than 5 years, i.e. more than one generation, has not improved the stocks - as indicated by catches – so action is urgently needed.

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?

It is clear that the use of cages for rearing fish in either freshwater or in the sea is no longer an acceptable method of aquaculture because of the serious detrimental impact this has on the environment. It is essential that biological separation is introduced so that disease is neither introduced or transmitted and the problem of sea lice is removed.

In freshwater the pollution loading is changing the chemistry of water bodies which were predominately oligotrophic towards being eutrophic while the addition of

feeding is changing the natural growth on resident fish populations. The problems of disease and sea lice arising from salmon in cages in the sea are so well documented that they do not need to be repeated here.

There is really no practical alternative to enclosed systems for both juvenile and adult salmon. For smolt production containment is a known technology with defined standards of discharge. For adult salmon, containment should be done in such a way that water is abstracted from sands and gravels below the sea bed and the effluent is discharged in a method comparable to domestic waste, again to defined standards. The technology for this is well understood in public health engineering - a good example is the water supply to Perth where 17 megalitres/day (3.7mgd) are abstracted from the gravel bordering the Tay and a comparable amount of waste water is treated before return to the tidal waters.

Taking water from below the sea bed has an additional benefit of providing a supply at a steady temperature allowing managers to optimise the feeding regime.

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?

Clearly the industry is failing in terms of animal health as is shown by recent reports of carcass disposal. This is a management issue and demonstrates an inadequacy which would lead to convictions and custodial sentences if it happened with cattle and sheep. Many of the environmental problems are hidden below the water surface.

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

Sadly the industry has demonstrated an unwillingness to release figures which would provide data from individual farms – commercial confidentiality – and this lack of transparency will have to be reversed by more frequent and independent inspection.

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

Sadly it is not. See response to Q4 above. In addition there is confusion about the responsibility of the various agencies who are involved. Possibly it is time for a dedicated authority to supervise all aspects of the salmon farming industry. The Salmon Advisory Committee recommended in 1991 that a Regulatory Authority should be established at a national level to develop and manage a strategic policy for the salmon farming industry – not much progress in 27 years.

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

UK Regulations on the introduction and spread of fish diseases were relaxed in 1993 to allow free trade of live fish across EU borders. Leaving the EU will allow the UK to establish its own laws on these matters.

If the industry does not get its house in order, cutting out disease, escapes and parasites it will not be able to sell its products abroad, and possibly not even in the UK. It is in the industry's own interest to do so, to rectify the damage it is doing to the Scottish environment, and to create an industry of which Scotland can be proud.

Colin G Carnie
April 2018