

RURAL ECONOMY AND CONNECTIVITY COMMITTEE

SALMON FARMING IN SCOTLAND

SUBMISSION FROM JON GIBB (Fishery Manager River Lochy, Fort William – Clerk/Director of the Lochaber District Salmon Fishery Board – freelance writer who has written extensively on the wild/farmed debate over the last 30 years in many leading national publications.)

By way of introduction, I manage one of the most famous and productive salmon rod fisheries on the West Coast of Scotland on the River Lochy, from where salmon smolts must pass an unprecedented 12 fish farms on their way to sea. I also manage the Lochaber DSFB, the statutory body for the protection and enhancement of salmon and sea trout in one of the most densely farmed regions in Scotland. Perhaps unusually, I have for many years also led partnership projects with leading aquaculture partners aimed at protecting and enhancing local salmon populations in an attempt to reach a place where both wild and farmed sectors can coexist and thrive in this region. I also run a registered fish farm near Glenfinnan for the purpose of growing indigenous salmon for restocking local Lochaber rivers.

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

The Scottish farmed salmon sector has been an undoubtable commercial success story in the Western Highlands and is now seen as the economic lifeblood of many communities up and down the West Coast. I live and work within these communities. Less successful though has been its success in tackling issues of parasites, pollution, disease and escapes. There is a mounting body of evidence that suggests that the decline in local wild salmon and sea trout populations (central to the cultural and economic heart of these same communities) have suffered as a result of these ongoing environmental problems.

The issue of aquaculture and its impacts has become highly polarised over the years, but any rational assessment of these impacts must attempt to position the *relative* importance of them amongst all of the other factors that have negatively affected migratory salmonids on the West Coast of Scotland since the birth of the industry in the 1980's. These other impacts include –

1. The signing of the Inshore Fishery Act in 1984 which removed the three-mile zone for trawler fishing, which will inevitably have had an impact on sea trout habitat and food supply – ditto the practice of scallop dredging.
2. The well-documented expansion of salmon predator populations such as grey and common seals, and piscivorous birds such as goosanders and mergansers
3. Increasing evidence that oceanic warming in the NE Atlantic is having a detrimental affect on the food supply for salmon resulting in the sharp decline of the formerly abundant 1 sea-winter fish (grilse) numbers for which the West Coast rod fisheries were famed. A shift towards less abundant but larger early-running multi sea-winter salmon appears to be taking place. (It should be noted that some major western rivers like the Awe and the Lochy have

recently seen excellent spring salmon numbers in some recent fishing seasons, and this in spite of their proximity to many fish farms).

4. The populations of other pelagic fish (such as mackerel and blue whiting) which feed on the same prey species, in the same areas of the ocean, and in the same surface layers as salmon have expanded alarmingly in recent years. International fishing quotas for these pelagic fish in the N Atlantic remain stubbornly low due to the use of poor stock estimation models.

Any assessment of the industry that does not recognise these additional impacts on wild salmon and sea trout is not complete. Nevertheless, as witnessed by the recent ECCLR Committee investigation, the many known impacts of fish farming must clearly be added to the list. Few serious practitioners on either side of this debate would now disagree that the stubborn problems of open cage fish farming are adding an extra burden on already highly threatened salmonid stocks; and one that some West Coast river populations are now showing signs of not being able to withstand (for the first time ever some formerly prolific rivers in Lochaber such as the River Leven and River Coe did not record a single rod caught fish in 2017, while others have collapsed to new lows). The reason behind this widespread collapse, which it must be noted is not reflected in rivers outside the Scottish aquaculture zone, needs to be addressed immediately if there is a sincere desire by the Scottish Government to enable both sectors to thrive in a sustainable fashion in the future.

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?

Bearing in mind the above synopsis on the current state of the industry, it is hard to see how the industry can meet its ambitious expansion targets until a radical new direction is sought. The Highlands have seen other industries (particularly hydropower and forestry) bring economic prosperity to the region over the decades but most of them started out in ignorance of many of the environmental impacts that would ensue. In the case of hydro and forestry new regulations came into force to limit environmental damage for any new developments once these impacts were known (adaptive management). This should be the case for aquaculture. But in the case of this industry, unlike dams or forestry plantations, fish farms can be moved to more suitable locations.

In spite of some nascent and fairly small-scale operations, we recognise that land-based RAS or sea-based closed-containment systems are not yet fully economically viable if the industry is to continue to thrive. Nevertheless, bearing in mind what we now know about the potential environmental impacts of open cage salmon farms near to the mouths of wild salmonid rivers or in freshwater lochs, these technologies must surely be the future for the Scottish farmed salmon industry.

Due to the important economic contribution that both the farmed and wild salmon sector brings to the western highlands, the Scottish Government should be looking at ways immediately to incentivise fish farm companies to invest in these technologies further with a view to large scale commercial trials being set up in the very near

future. The reason that much of such forward-thinking work is taking place in Norway is that the industry is incentivised to do so in that country.

In the meantime it must be recognised that any further expansion of open cage fish farms in freshwater lochs or inland marine bays or estuaries will bring increased problems to threatened wild fish stocks that many individual populations may not be able to withstand. But that is not to say that the industry should not be encouraged to expand further and increase prosperity to the communities of the western seaboard. But the only way this can take place in a sustainable fashion (based on recent sea lice research) is if there is a moratorium on placing any new or expanded fish farms within 30kms of the mouth of migratory salmonid rivers.

Furthermore, it has been demonstrated that by far the highest risk period for wild salmon from sea lice is when the smolts leave the estuaries when the farms are in their second year of production (due to the high numbers of lice likely to be present on the farmed fish at this stage). In spite of new 'tools in the box' such as cleaner fish, thermolicers, hydrolicers etc. it would now seem that changes in the near-shore environment due to global warming are making the fight against sea lice increasingly difficult for farmers.

If so-called 'adaptive management' is being genuinely adopted, the wild fish need an immediate reprieve from this known added impact within their migration corridor. One quick way of achieving this, while also allowing the industry to achieve its ambition targets, would be to encourage expansion of new and large sites in off-shore and deep-water locations (some of these are beginning to be developed in the Inner Isles and other locations further offshore). Permissions and licences for these new sites could be issued on the understanding that the most sensitive inshore sites (those in thin fjord-like estuaries near the mouths of salmon rivers) would be fallowed during the wild smolt migration period, at least during the second year of farmed production.

The eventual goal (which will inevitably take time) is the relocation of all salmon farming away from these sensitive inshore sites, if both salmon *and* coastal-living sea trout are to be protected.

Questions 3 to 6.

I do not believe that the solution to the wild/farmed problem necessarily lies in stricter regulation or enforcement of data transparency etc. These are partly knee-jerk reactions that have been largely borne out of the frustration and polarity of the wild/farmed debate for the last 3 decades. (The exception to this would be a revaluation of current Government sea lice targets which are scientifically unjustifiable). Overall though what is required is *proactive strategic action* by policy-makers and regulators that allows the industry to expand sustainably and also offers much needed protection for wild salmonids. West Highlanders want to see both. It is only through such action that it will allow young people to remain in the highlands in a job that has genuine career security, whether that is as a fish farm worker or a highland river ghillie. It will also see the flourishing of associated industries - whether

that be fish processing factories or local fishing hotels - and give security for developers of such operations to invest with confidence in the future.

It is recognised that any changes will take time but in the meantime much could be done to assist local salmon fishery boards to protect what few spawning salmonids are left in many of the rivers of the West Coast. Currently West Coast boards run on a fraction of the resources of their East Coast counterparts (in spite of, interestingly, there being a Government moratorium on any fish farming on the East Coast). The Lochaber DSFB for example, which has a statutory remit to protect and enhance migratory salmonids over a vast area of the Scottish mainland currently runs on a budget of £28,000. Many East Coast Boards, such as the Spey or the Dee, run on budgets of around £500,000). Clearly there is something seriously flawed in this but with so few fish running West Coast rivers the levy-based funding has dried up (DSFB's are funded based on the value and income of local salmon fisheries).

One way that West Coast Fishery Boards could be funded and made more effective is through the fish farm licencing and sea bed leasing arrangements. Currently SEPA and the Crown Estate raise over £4.5 million per annum from fish farm licences and sea bed leases. From what I can determine, none of that is returned into managing the impacts of salmon farming on wild fish stocks or protecting damaged stocks. In the case of the River Lochy, which I manage, the Crown Estate take hundreds of thousands of pounds in leases every year from the fish farms that the Lochy smolts must pass on their way to sea (they charge £27.50 per tonne of salmon produced). While the River Lochy management has an excellent relationship with the fish farmers in the region and we attempt to work in partnership with our neighbours to address common problems, we could have delivered so much more for the local salmon populations had we had access to even a fraction of the huge sums being charged by the Crown Estate. While this might not directly address the direct impacts of fish farming (that can only be addressed through the step changes in production mentioned above) this would ensure that wild salmon and sea trout populations are fully monitored, protected and enhanced in the best manner possible while in the freshwater phase and while these wider industry changes are developed and bedded in.

I would be happy to provide any further details, research references and direct first-hand experiences to the committee on any of the above representation.

Lochaber District Salmon Fishery Board
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