

Environment, Climate Change and Land Reform Committee

Environmental impacts of salmon farming

Written submission from Kyle of Sutherland District Salmon Fishery Board

The Kyle of Sutherland District Salmon Fishery Board (KOSDSFB) welcomes the opportunity to comment on the SAMS report. KOSDSFB has a particular interest in the impacts of salmon farming on wild salmon populations due to the operation of juvenile salmon production facilities in Loch Shin, a freshwater waterbody, within our fishery district. The issue of escapes from these rearing facilities has been a concern to KOSDSFB for many years. In Section 5 of the SAMS report we note and welcome the inclusion of the study by Gilbey *et al.* (2017) which details the genetic assignment of escaped salmon back to the farms of origin within the Loch Shin system. This study was undertaken against a backdrop of many years of putative escapees being captured by KOSDSFB staff despite the fact that there had been no reported escapes by any fish farm operating within the Loch Shin system since 2001. The highlighting of this issue has required the commitment of considerable financial and time resources by KOSDSFB.

We welcome the fact the SAMS report accurately identifies the primary potential negative impacts on wild salmon populations as a result of salmon farming in open pen rearing facilities within freshwater lochs i.e. genetic introgression, competition for food and habitat resources and changes in trophic status of waterbodies via nutrient enrichment. However, we do not feel that the report places equal emphasis on the significance of impacts that occur in the freshwater environment compared to those impacts that occur in, or emanate from, the marine environment. Using the issue of potential genetic introgression as an example, we believe that juvenile salmon escaping in freshwater lochs pose an equal or greater risk to genetic integrity as that posed by adult salmon escaping from marine sites. We suggest that the well-documented phenomenon of juvenile male salmon becoming sexually mature without ever having migrated to the marine environment points to the risk posed by escapes of salmon from freshwater loch rearing facilities. The report also only briefly mentions the potential for competition for resources between juvenile wild salmon and juvenile escapees. We feel that greater information on this particular potential impact should have been provided.

KOSDSFB suggests that this apparent lack of equality in considering the impacts in marine and freshwater environments is particularly unfortunate given that alternatives to rearing in open pen facilities in freshwater lochs, for example land-based units using recirculation systems, have a proven record of technical and financial viability. Indeed, a number of such facilities are already in use in parts of Scotland and are also extensively used in other salmon producing countries. As such, we suggest that the potential negative aspects of producing salmon in freshwater lochs can be readily negated without significantly impacting on the overall viability of salmon aquaculture production in Scotland.