Salmon and Trout Conservation Scotland (S&TCS) thanks the REC Committee for the opportunity to suggest the Aquaculture and Fisheries (Scotland) Act 2007, as it relates to fish farms, for post-legislative scrutiny, against its stated policy intentions.

The 2007 Act has had ten years to meet its policy objectives. The Explanatory Memorandum states: “Part 1 provides a series of information gathering, inspection and enforcement measures aimed at controlling parasites on fish farms and shellfish farms and at improving, in respect of fish farms only, the containment of, prevention of escape of, and recovery of escaped fish…. It also provides a power for the Scottish Ministers to approve a code of practice giving guidance and promoting desirable practices in respect of (a) the prevention, control and reduction of parasites on fish farms and shellfish farms and (b) in respect of fish farms only, the containment of, prevention of escape of, and recovery of escaped fish”.

The Executive Note to the Fish Farming Businesses (Record Keeping) (Scotland) Order 2008, made under the 2007 Act, gives more information: “The Aquaculture and Fisheries (Scotland) Act 2007 gives powers to help support the aquaculture industry and helps build public and international confidence in fish farming by underpinning the voluntary approach set out in A Code of Good Practice for Scottish Finfish Aquaculture. It underpins the voluntary measures primarily by providing ‘backstop’ provisions to tackle the long running and difficult issues of control of parasitic sea lice and the containment and prevention of escape of farmed fish which may have a negative environmental impact. The Act provides powers for inspectors to inspect fish farms to assess whether satisfactory measures are in place for controlling parasites and for preventing fish escapes. The Scottish Ministers have the discretion to serve enforcement notices where the measures are found to be insufficient or there are problems which need to be rectified”.

While the ECCLR and REC Committees have examined salmon farming in 2018, no Committee has carried out post-legislative scrutiny of the 2007 Act. The Act has been amended by the Aquaculture and Fisheries (Scotland) Act 2013, but that Act did not amend existing sections so much as add additional sections on fish farm management agreements / statements, obtaining of samples and proscribing of technical standards for equipment. The 2007 Act has not been subject to significant revision. There is no barrier to post-legislative scrutiny. [For completeness, the Act is not subject to legal challenge, nor raises equality or human right issues].

General concerns

As the Committee is aware, many stakeholders have expressed dissatisfaction to the ECCLR and REC Committees with the statutory framework for salmon farming,
particularly in relation to its environmental impact. The ECCLR Committee concluded that “the current consenting and regulatory framework, including the approach to sanctions and enforcement, is inadequate to address the environmental issues. The Committee is not convinced that the sector is being regulated sufficiently, or regulated sufficiently effectively. This needs to be addressed urgently, because further expansion must be on an environmentally sustainable basis”. The 2007 Act is a major part of that failing framework, so there is clear merit in conducting post-legislative scrutiny.

**Inspections: parasites (sections 3 and 4)**

Evidence with the ECCLR and REC Committees is that disease and parasites in much of the industry are out of control. There is little sign of the situation improving sufficiently. Mortalities (due to disease, parasites, treatment losses) are running at c.25% of production. This mortality level indicates poor husbandry. It is highly likely that the proliferation of sea lice, viral, bacterial and amoebic diseases in the hundreds of thousands of farmed fish in a farm is having negative effects on wild salmon and sea trout. The evidence suggests just that. See S&TCS Post-Oral Evidence Note to REC.  

The 2007 Act is the only statutory vehicle for the control of such issues, but the 2018 Scottish Association for Marine Science (SAMS) Report concluded that “the legislative and voluntary frameworks that underpin the management of lice levels on farms are not transparent. They appear neither to be succeeding in controlling sea lice, nor capable of addressing the environmental effects of the lice.” S&TCS agrees that there is no effective control of sea-lice on fish-farms under the 2007 Act.

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2 http://www.parliament.scot/S5_Rural/Inquiries/Post-evidence_note_from_Salmon_and_Trout_Conservation_Scotland.pdf  
4 Para 2.1.4 at page 15
The data shown above from industry Fish Health Management Reports\(^5\) indicates an increasing proportion of salmon is produced in regions breaching the National Sea Lice Treatment Strategy\(^6\) thresholds of 0.5 and 1 adult female lice per farmed fish, against which the FHI is supposed to conduct inspections under the 2007 Act\(^7\). In so far as the 2007 Act was “aimed at controlling parasites on fish farms”, it has failed.

**Inspections: containment and escape of fish (sections 5 and 5A)**

![Graph showing reported escapes of farmed salmon from marine cages 2007 to 2017](image)

Similarly for escapes, the graph above shows that escapes continue to be a problem for Scottish marine salmon farms, despite the 2007 Act. The data are drawn from the annual Scottish Production Surveys produced by Marine Scotland Science.\(^8\)

Although a Technical Standard for Scottish Finfish Aquaculture has been developed to help prevent escapes of finfish as a result of technical failure and related issues at Scottish finfish farms, and was published in June 2015, at the time it was stated that this “will be implemented by a regulation under the Aquaculture and Fisheries (Scotland) Act 2013…”\(^9\). However, to date, no such regulation has been laid even though the Standard requires equipment to meet the requirements “by 2020 at the latest”. Rather than using open net cages, S&TCS believes that closed containment would near eliminate escapes. S&TCS agrees with SAMS that there is work to do on genetic introgression of wild stocks by farmed fish, the main concern over escapes of farmed fish, but that a precautionary approach must be adopted. S&TCS has raised the introgression of wild salmon populations of rivers protected under the Habitats Directive with the European Commission\(^10\).

In short, the 2007 Act has failed adequately to address escapes of farmed fish.

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\(^5\) [http://scottishsalmon.co.uk/publications/](http://scottishsalmon.co.uk/publications/)


\(^7\) See 2008 Guidance to Fish Health Inspectors Enforcing the Provisions in Relation to the Control of Parasites

\(^8\) [http://www.gov.scot/Topics/marine/Publications/stats/FishFarmProductionSurveys/OlderSurveys](http://www.gov.scot/Topics/marine/Publications/stats/FishFarmProductionSurveys/OlderSurveys)

\(^9\) A Technical Standard for Scottish Finfish Aquaculture

Code of Good Practice (sections 7 and 8)

Section 7 of the 2007 Act enables Scottish Ministers, by order, to approve a code of practice for the purposes of promoting what appear to the Scottish Ministers to be desirable practices with respect to the prevention, control and reduction of parasites, the containment, prevention of escape of fish and recovery of escaped fish. The Code can be drawn up by Scottish Ministers or by others.

The current Code was first published in 2006 and has been revised since by the industry itself. It has been widely criticised as not having sufficient ‘teeth’. It has not been confirmed by order under section 7. Nor has it prevented sea lice and escapes continuing as significant problems, as the ECCLR Committee has concluded.

There is wide support for the code to be revised and made mandatory. For example, the ECCLR Committee “considers there should be a mandatory requirement to keep sea lice levels within those identified in the Code of Good Practice”. S&TCS believes that Scottish Ministers need now to draw up their own code, based on the clear need identified by the ECCLR Committee - and impose it by way of an order under section 7 and appropriate monitoring and enforcement under section 8 of the 2007 Act. Ideally, section 7 should be amended to require Scottish Ministers to produce their own code, no longer relying on a voluntary approach that has demonstrably failed.

Enforcement notices (section 6)

Under section 6 of the 2007 Act, if Scottish Ministers are satisfied a fish farmer does not have satisfactory measures for the prevention, control and reduction of parasites, the containment and prevention of escape of fish or the recovery of escaped fish, they may serve an enforcement notice.

At the 33rd Annual Meeting of the North Atlantic Salmon Conservation Organization (NASCO) in 2016, the Scottish Government announced a new sea lice policy, requiring fish farmers to develop site specific action plans to be implemented if sea lice levels rise > 3 average female lice per farmed fish. When levels exceed 8 adult females, the policy was to take enforcement action under the 2007 Act.

As the levels at which action is indicated are set so high, in excess of those used in other salmon farming countries and the existing Code, this policy has done little to meet the international goal for NASCO members, that 100% of farms are to have effective sea lice management such that there is no increase in sea lice loads or lice-induced mortality of wild salmonids attributable to the farms. The only Enforcement Notice so far served required no additional actions to those already required under the Code, or that an ordinary inspection or enhanced sea lice inspection, as already operated by FHI under the 2008 Guidance on the 2007 Act’s inspection powers, would not have addressed.

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11 This new policy was outlined in NASCO Council document CNL(16)47 and is included in full in the published report of a NASCO session focused on addressing impacts of salmon farming CNL(16)60.
Overall, there has been very little use of Enforcement Notices under the 2007 Act despite all the problems experienced and recorded by FHI.

**Information about fish farms (sections 1 and 2)**

Section 1 enables Scottish Ministers to make an order for the purpose of obtaining information on the prevention, control and reduction of parasites, the containment and prevention of escape of fish and the recovery of escaped fish, and to require fish farmers to keep records, which inspectors can then require, inspect and copy.

The Fish Farming Businesses (Record Keeping) (Scotland) Order 2008, made under the 2007 Act, sets out records to be compiled and retained “in relation to the control of and treatment of parasites and the containment and prevention of escapes of fish”. However, the ECCLR Committee has concluded there needs to be real-time publication of farm-specific sea lice numbers, all disease issues, treatments (both chemical and other) and mortalities. At present, data collection is entirely reliant on a system of self-reporting by the farms. Nor is the data published. This needs to be replaced by a statutory system, with data validated by extensive independent inspections and monitoring. As the ECCLR Committee has noted, the time for voluntary disclosure of data has passed - “this reporting should be a statutory obligation to ensure transparency and facilitate public access to information”.

S&TCS has already proposed that publication of farm-specific sea lice, treatment and other data can be achieved relatively simply by amending the 2008 Order.

**Dealing with the ‘wild fish’ lacuna in Scottish law**

S&TCS lodged a Petition with the Scottish Parliament in 2016, to urge the Scottish Government to strengthen Scottish legislative and regulatory control of marine fish farms to protect wild salmonids of domestic and international conservation importance. The ECCLR Committee has now recognised what S&TCS raised in its Petition “that there appears to be no locus in the agencies for the protection and health of wild fish….The Committee is firmly of the view there should be a competent regulatory body charged with the protection and health of wild salmon and trout.” and “The Committee considers the current regulatory process does not give sufficient consideration to the impact of salmon farming on wild salmonids. There should be a formal requirement for pre-application and post-consent monitoring of wild fish” and “The Committee considers that an agency should be charged with the health and welfare of wild salmon and trout.”

As S&TCS submitted in its recent Oral Evidence to this Committee, there are a number of ways that this could be achieved in Scottish law. One option could be to give this ‘wild fish function’ to the FHI, by amending the 2007 Act, making it clear on the face of that Act that the FHI needs to regulate farms not only for the health and welfare of farmed fish, but also to protect and conserve wild salmonids.

S&TCS would be pleased to assist the Committee, MSPs or the Scottish Government in examining this and other options. However, S&TCS’ view is that, until the current failings in the regulation of the salmon farming industry and the environmental problems the industry causes, as identified by the ECCLR Committee, are resolved, there must be an immediate moratorium on any new marine open cage
fish farms or any expansion of existing fish farm sites, including any increases in farmed fish biomass at existing sites, as any expansion of the industry now will be unsustainable and may cause irrecoverable damage to the environment.

Salmon and Trout Conservation Scotland
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