

## PE1598/C

Atlantic Salmon Trust letter of 1 August 2016

Dear Mr. Howlett,

Thank you for writing to the Atlantic Salmon Trust to ask its views on the action called for in Petition PE1598.

### Atlantic Salmon Trust

***“There is compelling scientific evidence that sea lice emanating from salmon farms can pose a very serious and dangerous risk to wild migratory salmonid populations. It is essential that more is done by the salmon farming industry, and by Governments, to control levels of sea lice infestation on salmon farms”. AST, Policy on the Management of Sea Lice, 2010***

The Atlantic Salmon Trust (AST) is a registered charity in England/Wales and Scotland. The AST, established in 1967, has the objective:

“To promote the conservation, protection and improvement of wild Atlantic salmon and sea trout stocks in the countries bordering the North Atlantic Ocean for the public benefit.’

With this aim:

- ‘To conduct, assist in conducting and stimulate laboratory and field research; and
- To develop and refine principles and methods for the management of salmon and sea trout stocks and fisheries.’

### Petition Response

The Atlantic Salmon Trust Executive Director Sarah Bayley Slater and Research Director Prof. Ken Whelan, recently attended the 33<sup>rd</sup> Annual Meeting of the North Atlantic Salmon Conservation Organisation (NASCO), in Bad Neuenahr – Ahrweiler, Germany, 6 – 10 June 2016.

Advice presented to the NASCO meeting by the International Council for the Exploration of the Seas (ICES) on the status of salmon stocks in the North Atlantic region showed there was continuing low, and in some areas, critically low abundance of salmon throughout the Atlantic salmon’s range.

In addressing the need for urgent conservation actions across a range, of critical areas, NASCO this year held a day-long special session titled: *“Addressing impacts of salmon farming on wild Atlantic salmon: challenges to, and developments supporting, achievement of NASCO’s international goals”*.

AST recognises the important contribution that salmon aquaculture makes to the economy and employment opportunities of rural communities, and the contribution it has made to supplying farmed salmon as a food source, therefore reducing the pressure of commercial fishing on wild salmon stocks. We further recognise the important steps that the Scottish Government has taken towards wild salmon conservation by implementing a ban on all coastal mixed stock salmon netting for 3 years and by introducing Conservation Limits for fisheries districts, which we trust will quickly move towards river specific Conservation Limits, as the assessment methods develop.

However, based on the current body of research and presentations delivered to the NASCO day-long Special Session on aquaculture, the Atlantic Salmon Trust firmly believes that ICES has provided convincing evidence of both direct impacts and major risks from open cage salmon aquaculture on

wild salmon and sea trout stocks, in terms of both sea lice loadings and genetic introgression from escaped farmed fish.

Marine Scotland Science '*Summary of information relating to impacts of salmon lice from fish farms on wild Scottish sea trout and salmon*', (source: <http://www.gov.scot/Topics/marine/Salmon-Trout-Coarse/Freshwater/Research/Aqint/troutandlice>) reviewed the current body of available peer reviewed published evidence to assess the likelihood and scale of impact of salmon lice from salmon farms on Scottish wild salmonids. In the closing summary it states that '*salmon aquaculture can result in elevated numbers of sea lice in open water and hence is likely to increase the infestation potential on wild salmonids. This in turn could have an adverse effect on populations of wild salmonids in some circumstances*'.

**AST therefore supports Petition PE01598 calling on the Scottish Parliament to urge the Scottish Government to strengthen legislative and regulatory control of marine fish farms to protect wild salmonids of domestic and international conservation importance. Furthermore the AST calls for the Precautionary Approach, as agreed by the NASCO parties, to be applied to aquaculture management and planning throughout the North Atlantic.**

The Challenge appears to be how to balance the obvious political will to grow the salmon farming industry with the welfare and conservation of wild fish. This is not a wild fisheries issue, it is an environmental issue. It is also not just a west coast issue. Freshwater smolt rearing cage sites also exist in lochs of river systems on the east coast and escapes of farmed smolts pose a threat to the genetic integrity of the wild salmon within those rivers. Wild salmon smolts from east coast rivers may also pass salmon farming sites around Orkney and Shetland as they follow their migration routes to the feeding grounds off the Faroes and Greenland.

Alistair Mitchell, Marine Scotland, gave a presentation at the NASCO special session. In that presentation the audience was informed that there is a Policy against further development of salmon cage farming on the north and east coast 'where the majority of salmon / recreational fisheries are based'. It seems too great a coincidence that conservation limits are Grade 3 (Scottish Government's lowest category, with no exploitation permissible) for almost all the west Highland and Hebridean rivers – less than 60% probability of CL being met in last 5 years. The Scottish Government has said that it is '*supporting sustainable aquaculture growth alongside a thriving recreational fisheries sector*'. In order to do this the AST strongly believes that tighter regulations are required to protect wild salmonids.

Based on presentations at the NASCO special session, the evidence we have on sea lice impacts on the salmon's sister species the sea trout (see Bibliography below), and the growing body of evidence of impacts of lice loadings on wild salmon, Marine Scotland must reassess the current threshold limits of <3, >3 and +8 in the Scottish traffic light system to bring them in line with more stringent regulations in other farm salmon producing countries. The Scottish Government need to recognise that sea lice are not just a fish farm fish health issue but also recognise it as a wild fish health issue.

From the presentations given by other 'salmon farming' countries such as Norway, Canada, Ireland and the Faroe Islands, Scotland has at present far higher treatment thresholds based on the number of sea lice per fish. Furthermore, in contrast to elsewhere, Scotland's treatment threshold is not backed up by regulation or enforcement; rather it relies on an industry-operated voluntary code of good practice.

AST supports Petition PE01598 made to the Scottish Government for strengthened Scottish legislative and regulatory control of marine fish farms and the actions called for in the petition including:

- In line with other European countries where salmon farming is taking place, the full publication, on a regular basis, of farm-specific sea-lice and sea-lice control data.
- The introduction of maximum sea lice densities of 0.3 or less during the critical spring wild migration period of March to late May.
- Tougher regulation—as in other salmon farming countries; the voluntary Code of Good Practice should be made a statutory code, as provided for in the Aquaculture and Fisheries (Scotland) Act 2007, with the express purpose of protecting wild salmonids (salmon and sea trout).
- An upper-tier sea lice threshold should be introduced, above which an immediate cull or harvest of farmed fish is mandatory.
- Consideration should be given to closing / relocating sites which, over the medium-term, consistently fail to reach the minimum statutory standards of sea lice control.
- Rearing of juvenile salmon in lochs and / or traditional flow-through systems, should cease and be replaced with closed containment systems.
- There should be a renewed focus on research and development programmes geared towards a move to full closed containment of farmed adult salmon production in Scotland, with complete ‘biological separation’ of wild and farmed fish.

The special session at NASCO, highlighted some positive steps that could now be made towards the attainment of sustainable aquaculture. In addition to tighter regulations called for in the Petition AST strongly recommends that these approaches be reviewed with a view to their application in improving the long-term sustainability of salmon aquaculture in Scotland. They include:

- Major advances in the development of closed containment RAS (Recirculation Aquaculture Systems) for the rearing of so-called *super-smolts* (500g to 1kg in weight) and adult salmon. The larger smolts provide the benefit of a shorter period at sea, therefore reducing the time over which sea lice levels can build up on farms. This will enable farms to better manage the time at which salmon are put to sea cages. A shorter rearing cycle could also ensure that bays are fallow during the critical period, when wild salmon and sea trout smolts are heading seawards.
- The introduction of incentives to encourage experimental programmes to produce and rear sterile / triploid aquaculture stocks, as is currently taking place in both Norway and Canada. Such programmes could greatly reduce genetic impacts from fish farm escapes, both in fresh water and salt water.
- Acoustic tracking of wild salmon smolts to identify migration routes. Such an approach could advise the planning process regarding new or alternative fish farm sites, so that their location has the lowest possible impacts on neighbouring wild salmonid stocks.
- The development of quantitative methods, such as those currently in use in Norway, which could measure the level of genetic introgression in wild salmon stocks.
- Monitoring and modelling of sea lice distribution patterns to advise on fish farm locations and locations of potentially greatest risk to wild salmonids.

AST urge Conservation Organisations, the Aquaculture Industry and the Scottish Government to work together to take forward these advances in order to work towards a sustainable aquaculture industry, which will have a minimal impact on all the stocks of wild salmon and sea trout, whether on the north, east or west of Scotland; also to cooperate and learn from the techniques and regulations being implemented by their colleagues in other wild salmon and fish farming nations.

AST believes that with strengthened legislation and regulation, statutory and enforceable codes of practice, and the application of new technological developments, it would be possible to make very significant progress in providing a suite of practical management options to ensure the future

development of a sustainable aquaculture industry in Scotland and other neighbouring countries in the North Atlantic – without further jeopardising stocks of wild salmon and sea trout.

Yours sincerely,

Sarah Bayley Slater, Executive Director, Atlantic Salmon Trust, &  
Professor Ken Whelan, Director of Research, Atlantic Salmon Trust

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