Written submission from the Atlantic Salmon Trust

The Atlantic Salmon Trust is an independent charity financed by private donations and public sector grants. AST is the only independent organisation that devotes all its resources solely to the conservation of wild Atlantic salmon and sea trout. AST policy is based on advice from a distinguished group of scientists who, under the chairmanship of the Trust’s Research Director, comprise the Honorary Scientific Advisory Panel.

We welcome this opportunity to comment on the Aquaculture and Fisheries (Scotland) Bill introduced to Parliament on 3 October 2012.

General comments in response to the Bill

While AST avoids direct involvement in governance or fishery management matters, we do have a concern that there has been some unexplained slippage between the consultation stage and the contents of the Bill. In particular we note that some matters contained in the consultation document have been dropped, without reasonable explanation, prior to publication of the Bill.

We also note that the Summary Consultation Analysis portrays, in our view unnecessarily, and even perhaps divisively, comments on many of the proposals as being divided along ‘salmon farming industry versus wild salmonids lobby’ lines. We feel that this is an inaccurate picture. Responses to the consultation represent a broad cross-section, and in many instances views expressed by wild fish interests were echoed by different interest groups. We feel that the Bill provides an opportunity to demonstrate Government commitment to resolving difficulties in the relationship between the salmon aquaculture industry and wild salmonids interests, exemplified by the current dispute between SSPO and the University of St Andrews following publication by the Royal Society of a paper on the causes of marine mortality of wild Atlantic salmon.

We also find some of the assumptions made in the analysis puzzling. For instance, on the question of mandatory FMAs, the document states: “Although the concept of FMAs was generally supported by the aquaculture industry, they significantly opposed the proposal to make FMAs a legal requirement. This was supported by the wider campaign responses.”

We believe this would lead the reader to believe that the wider group backed the industry’s opposition to mandatory FMAs. The analysis shows that 86 responses were in favour of mandatory FMAs, while 26 were not.

Policy Memorandum

We note that within the Policy Memorandum accompanying the Bill, the use of the term ‘sustainability’ appears to refer only to economic sustainability, when, in the case of wild salmon stocks the main issues are environmental. While economic sustainability is important, we hope that the Memorandum’s over-emphasis on economic issues does not reflect a narrow focus on that aspect alone, when, in the context of Scotland’s natural resources, environmental, social and cultural issues are also important.
We note that the Policy Memorandum states that the questions posed in the pre-consultation document were not intended to delineate proposed elements of the Bill, but to explore effective use of existing enabling powers, to see if some of the aims could be achieved without further legislation. We find few grounds for comfort here. It seems to us that this is a tacit admission that the powers available under the 2007 Act have not been used effectively. There is no reason at present to believe that this situation will improve under any new Act.

Clause 8 of the overview of the objectives of the proposed legislation (contained in **SP Bill 17-PM**) states that: “The Scottish Government is committed to the support and protection of the country’s famous and valuable salmon and freshwater fisheries.”

AST believes that the first sentence should include the words ‘vulnerable’ or ‘fragile’. In the context of ICES data and the Scottish Government’s own analyses we know that returns of adult salmon to Scottish rivers, have suffered serious declines over the past 30 years. Numbers of sea trout returning to fresh water throughout Scotland, but especially on the West Coast, have also declined alarmingly. Policies aimed at supporting and protecting these valuable wild stocks must be based on risk analysis methodology predicated on scientific data. **Regulation of salmon aquaculture** is an example of a new industry whose impacts on the marine environment and other species are not yet fully understood. While this uncertainty continues, supported as it is by justified concerns based on scientific data, we must at the very least adopt a precautionary approach.

**The SPICE briefing on the Bill**

We note that paragraph 44 of the SPICE briefing document states that “Sea lice data is publically available on an area basis.” We would ask:

- Where, in November 2012, is such data ‘publically available’?
- Publication of aggregated figures, controlled by the SSPO, on a delayed basis, is unacceptable in the 21st century for an industry which claims to ‘have nothing to hide’. We need data on a ‘real time’ basis to allow mitigation measures to be put in place at the time of crisis, rather than reflecting on a disaster after it has occurred.
- Why can Scotland not have a similar level of transparency from the largely Norwegian-owned operators to that which they are obliged to comply with in their home country?

**The Bill**

**The issue of transparency**

We see serious disparities between Parts 1 and 2 of the Bill in terms of the demand for, or absence of, accountability. The principle of transparency which the Bill proposes on those who manage salmon fisheries does not appear to be applied with equal force to those who manage salmon farms. Indeed, the provisions for management of salmon fisheries introduce prescriptive demands which are entirely absent from those for salmon farms. Such disproportionate treatment is not conducive to an improved relationship between the managers of wild salmonids
fisheries and the salmon farming sector. As stated in paragraph 2 above (under ‘general comments’) we feel that such different treatment of the two sectors can only exacerbate a difficult relationship at a time when the Bill could take this opportunity of demonstrating a fair commitment to both.

**Part 1: Aquaculture**

Our comments on the Aquaculture chapters of the Bill relate, unfortunately, as much to what was left out (following the pre-consultation) as to what remains.

We feel that Marine Scotland’s response to the consultation fails to adequately explain why some of the proposals that were consulted on, particularly those relating to aquaculture, have not been taken forward in this Bill, despite the fact that they were supported by a wide cross-section of stakeholders. We are not reassured by the contention that there are alternative mechanisms for taking forward these proposals. Indeed, there appears to be a tacit acceptance of the fact that elements of the 2007 Act have not been adequately enforced. AST seeks assurance that these proposals which have been omitted from the Bill will be acted upon. We would also wish to see a clearly defined timetable for such action. Failing this, we would seek to have a number of those proposals included within the Bill.

Although respondents overwhelmingly supported the concept of a much higher level of transparency of data on fish mortalities, movements, disease and production, the Bill does nothing to take forward the concept of disclosure. This leaves Scotland far behind other salmon farming countries in respect of transparency of reporting, and open to EU and international criticism of neglecting its valuable natural resources.

- **The publication of sea lice data at an appropriate resolution** is one of the key issues for all organisations representing wild salmonids fisheries. The absence of such transparency in regard to sea lice data places insuperable barriers in the way of effective and long-lasting collaboration between wild fisheries and salmon farmers in assessing, at a local level, the success or otherwise of treatment strategies. It is also essential that fishery managers can be confident that in instances where farm treatment strategies have failed to control lice levels, there will be a requirement to adjust sea lice management and control strategies to ensure that lice levels can be controlled within the accepted parameters in future.

- Publication of sea lice data at a meaningful level of resolution would bring Scotland into line with other countries where salmon farming is carried out. It would also give an objective basis for assessing whether or not the salmon aquaculture industry is able to manage sea lice levels within acceptable parameters.

- Experience over the period since the 2007 Act has demonstrated that there is an unwillingness to put in place such a voluntary and timely reporting obligation. There is a similar reluctance to engage in transparent reporting of information on fish mortality, movements, disease, treatment and production.

- The impression given by this secretive culture within the sector is potentially immensely damaging to the interests of Scottish salmon farming and lays the
industry open to speculation and criticism of its practices, whether they are well founded or otherwise. AST is absolutely clear on this point: there is no advantage to the industry in continuing to conceal data which should be in the public domain. We believe that a successful salmon farming industry should be no less accountable to the consumer than the beef industry is.

- **Summary.** The Bill does not address the issue of transparent reporting sufficiently. By failing to do so, and not taking note of global developments in aquaculture which embrace new technologies and methods of production, the Bill may inadvertently put the Scottish salmon farming industry into a weak position to defend or promote its products. We believe that a modern industry should be no different from terrestrial farm production in terms of accountability for product treatment and origin. If we fail to do that, we will find that the global consumer will make that decision for us, with inevitable consequences for the industry and Scottish employment.

**Powers to revoke consents** for fish farms are crucial to the operation of a sustainable salmon aquaculture industry, as well as to fair and equal treatment of the interests of that industry, and of wild salmon and sea trout fisheries. Our understanding of the interactions between the aquaculture industry and wild salmonids is improving, but it is far from complete. At present it is therefore not possible to predict the effect of a particular farm site on wild fish. There are also gaps in our understanding of how cumulative impacts of farms can be accurately assessed.

Most fish farm developments currently receive permanent planning consent. The lack of powers to revoke consents is a cause for concern, because, in the context of climate change and the various biological, meteorological and oceanographic changes that are affecting the fauna and flora of the marine environment, no legislation should support permanent rights.

We note that 71% of the substantive responses to the consultation question were in favour of such a power. This is possibly the single most serious omission in the Bill.

We also note that, despite strong support for the proposal to give Scottish Ministers powers to reduce biomass on farm sites, in particular to ensure effective treatment of sea lice and reduction of benthic pollution, this is absent from the Bill. The same applies to the proposal that Scottish Ministers should be given powers to determine a lower threshold above which remedial action needs to be taken.

We believe that powers to require SEPA to reduce biomass consents should have been included in the Bill. SEPA’s ‘consideration of applications for biomass consents’ are limited to ‘discharges’ such as fish waste and sea lice treatments. It has long been a contentious issue that SEPA is not required to include sea lice larvae produced on salmon farms as a ‘discharge’. We would contend that these are an industrial discharge, and should be treated as such. In the absence of powers for SEPA to treat lice as a discharge, it is inappropriate for Scottish Ministers to have the power to reduce biomass consents where such action is required for the welfare of wild fish.
Marine Scotland Science confirms that the industry’s Code of Good Practice takes no account of farm size, or number of farms in an area, in setting threshold levels for sea lice treatments. Given the growing body of knowledge on cumulative impacts of potential discharges of sea lice larvae on farms, we believe that there is no fail-safe mechanism in place to prevent significant numbers of larval lice being shed into the environment, thus posing an unacceptable risk to wild salmon and sea trout. This is true both in the case of Management Areas containing a large number of smaller individual farms, and of the larger farms which are currently being consented.

We also note that SEPA appear to have only used their existing powers to reduce biomass on a handful of occasions, on the basis of benthic surveys, despite 44% of monitoring surveys between 2009 and March 2012 being deemed by SEPA to be “unsatisfactory”.

In terms of threshold levels for sea lice on farmed fish, above which remedial action needs to be taken, we would contend that the current levels, which are related to the number of lice per farmed fish, are inadequate in dealing with cumulative impacts. The absolute number of sea lice larvae released from a farm is the significant figure. We therefore believe that threshold lice levels should be changed to take into account the cumulative biomass in the local area in order to minimise risks to wild fish.

This is another significant omission from the Bill, given the apparent commitment of Scottish Ministers to protect both the salmon farming industry and Scotland’s wild salmonids.

The Atlantic Salmon Trust We are also disappointed to note that the Bill does not address the question of phasing-out of open net pen smolt farms in fresh water. The recently-completed WWF Salmon Aquaculture Dialogue produced a standard for farmed salmon which refuses accreditation to fish raised within such pens in countries which have populations of wild migratory salmonids. The Bill thus fails to address a major aspect of salmon farming practice within Scotland which is, according to the views of international experts, unsustainable.

Chapter 1

Section 1

Fish farm management agreements

We support the principle of mandatory membership of a Farm Management Agreement (where this is more than one operator in a Management Area) or provision of a Farm Management Statement where there is a single operator.

FMAs are identified as the vehicles for delivery of effective management of parasites and disease, as well as safe handling and movement of farmed fish. However, since membership of an FMA is restricted to fish farmers, the most valuable feedback loop which Area Management Agreements included is lost.

We are concerned that the Bill makes no provision for involvement of wild salmonids interests in Management Agreements, despite new research which provides strong
We note that, while there was no consensus in responses to the question of whether or not salmon farm operators should be allowed to define management areas, the Bill maintains the status quo in this respect.

- This means that Management Areas are still defined by operators alone, and delineated within the voluntary and solely industry-mediated Code of Good Practice.

- We note that Management Areas are extremely variable in size, and we believe that in some cases the current Management Area boundaries are based on operational expediency rather than robust data on biosecurity and control of sea lice and disease.

- Work on fully understanding the relationship between fish farm sites and the wider environment is still incomplete. This is particularly the case in understanding of the dynamics of sea lice larvae dispersal, and disease transmission.

- On that basis we supported the consultation proposal that Scottish Ministers should have powers to specify Management Area boundaries. We would therefore seek reassurance that Scottish Ministers will be able to specify FMA boundaries where necessary, in light of new knowledge.

Section 4B

Inspection

We find it indefensible that provisions for inspection of fish farm records are worded in such a way as to ensure that interested parties can still be prevented from obtaining data under Freedom of Information legislation, for instance sea lice counts on farms.

We welcome the fact that the Bill makes provision for Scottish Ministers to specify technical standards for fish farming equipment.

- To the best of our knowledge, there have been no prosecutions or enforcement notices issued under the 2007 Act in respect of escapes of farmed fish, despite the fact that the Scottish Government’s published statistics on farm escapes

Evidence for the impact of elevated numbers of sea lice in aquaculture areas on wild salmon (Krkosek, M., Revie, C.W., Gargan, P.G., Skilbrei, O.T., Finstad, B. and Todd, C.D. Impact of parasites on salmon recruitment in the Northeast Atlantic Ocean. Proc R Soc B, November 2012). This paper demonstrated that, in light of the fact that marine mortality of salmon remains very high, even a small improvement in the number killed by parasites would make a large difference to the potential number of returning fish. The evidence of adverse impacts of farm-produced lice on sea trout has existed for many years (see A Review of the Impacts of the Salmon Louse, Lepeophtheirus salmonis (Krøyer, 1837) on Wild Salmonids Prof. Ken Whelan Research Director, Atlantic Salmon Trust, August 2010. http://www.atlanticsalmontrust.org/assets/ast-sea-lice-impacts-review.pdf)
show that a very significant proportion of escapes in each year are due to human error rather than equipment failure or acts of God.

- There is therefore an urgent need to include in Section 3 a requirement for mandatory training of fish farm operatives in effective use of all equipment, in particular the management and maintenance of nets and moorings, and safe use of workboats. Such training should be delivered by accredited trainers, and all fish farm personnel should be required to demonstrate competence in use of equipment. We remain to be convinced of substantial advantage in the legislation presently proposed in relation to containment of fish, since the provisions of the 2007 Act do not appear to have been effectively enforced.

We are disappointed to note that the proposal to introduce something similar to Norway’s Nytek standard has been rejected on grounds of cost. The specification of such standards has been proposed for many years. The Bill would offer an ideal arena for the introduction of a firm timeline towards such a national standard and in the long term it would reinforce the industry within the market and thereby protect the Scottish industry and jobs.

AST welcomes the provisions for increased regulation of wellboat operations, and the recognition that wellboat operation constitutes an area of risk in relation to spread of diseases and parasites.

We are puzzled by the fact that whereas the Bill recognises these risks in respect of wellboats, it does not appear to acknowledge similar risks, or propose similar controls, in respect of the farming of salmon in open net pens.

**Part 2: Salmon Fisheries etc**

The proposed amendments to the 2003 Act are mainly about governance. AST broadly supports the direction of development towards good practice, with greater transparency and accountability. We note that Scotland benefits from the devolved structure of its river boards in a way that England and Wales, with the centralised execution of powers by the Environment Agency, does not.

AST agrees with the Bill’s proposition that boards: a) should act fairly and transparently b) that there should be a Code of Good Practice for wild salmon and freshwater fisheries. Ideally, good practice, as set out in the ASFB’s CGP, should be spread evenly across all fishery boards, but the reality is that only those boards, with the resources to ensure that good practice standards are met, can do so. The best of Scottish Fishery Boards at least meet international standards of management, and in some cases exceed them.

- In general we note that many points raised by Part 2 of the Bill were not referred to in the consultation. For example, the principle of open meetings and availability of information is clearly correct in the spirit of open democratic government. We feel that this spirit of openness should be consistent throughout the two parts of the Bill, and they are not in certain sections of Part 1 Aquaculture.
- We make the point that it is not possible to manage natural resources without access to the fullest information available. However, we do acknowledge that
certain aspects of commercial activity and physical security may need to be treated in confidence.

- In general we agree that Board meetings should be held in public, although there may be good reason on occasions for certain aspects of the work of boards to be discussed in camera. Examples might include security or counter poaching matters, which could be dealt with at sub-board or management level.

- Governance of Boards does need to be more transparent and consistent in terms of good practice, but it is important that by implementing such standards we do not throw the baby out with the bath water. Local involvement is, in the view of AST, the key to good fisheries management, but only if there are inbuilt assurances of good governance and standards of delivery. Local involvement on a catchment basis ensures that knowledge on all aspects of human activity within a river catchment, some of which may impinge on fisheries, is shared in a convivial forum for discussion.

- Section 20 proposes the introduction of increased powers for Scottish Ministers to modify the good governance requirements by order. The question is whether a centralised and controlling set of powers at Holyrood will result in better management and husbandry in each river catchment. We doubt whether there is a need for this change, beyond the powers already held by Ministers under the 2003 Act, but we do recognise that the governance of the Boards needs to be seen to include local interests far more reliably and consistently than at present. We feel that the issue of competence is a matter for ASFB as the overarching representative body for Scottish Fishery Boards.

- The most cogent reason for wider stakeholder involvement on a catchment basis is the need for everyone involved with land or river management within a catchment to prepare for the effects of climate change, including invasive species, new diseases (e.g. Ash die-back), extremes of weather, and higher temperatures. There is an obvious need at catchment level for such stakeholder inclusion on a catchment basis, an inevitable consequence of which should be to make boards accountable and inclusive, and, importantly, to reduce a narrow focus or ‘silo mentality’. There are examples of such partnerships in the Aberdeenshire Dee and Angus South Esk catchments.

- AST therefore believes that Catchment partnerships, as exist in some areas already, should in our view become a mandatory part of governance, with central involvement of fishery boards and trusts. Only through such wider involvement can holistic management of river habitats and the species that depend on them be achieved.

- AST also supports ASFB’s welcome for the inclusion of a power to introduce a carcass tagging system in Scotland. Carcass tagging was a clear recommendation of the mixed stock fisheries working group (in which the AST was a participant) and there was overwhelming support for this provision in the consultation. Carcass tagging will bring the traceability of farmed salmon into line with other agricultural products and make a clear statement about Scotland’s respect for its global customers.

- AST welcomes the inclusion of a power to take fish or samples for analysis. Genetic analysis is a key tool in modern fisheries management and will enable rational management decisions to be made. Genetic mapping and attribution of salmon populations to regional or, in some cases, catchment
salmon stocks, is in an early stage of development and is likely to become a vital tool in wild salmon and sea trout fisheries management.

**Other issues**

- **Purchase of rod caught fish:** It is illegal to sell rod caught fish but it is not illegal to purchase rod caught fish. This is clearly an anomaly: it should be illegal to both sell *and* purchase an untagged fish.

- **For a** It has long been recognised that mixed stocks coastal netting is bad fishery management practice. Both ASFB and AST participated in the Mixed Stocks Working Group and our responses on this issue are identical: “The weekly close times were put in place for sound conservation reasons and were designed to allow a proportion of the salmon run to have free passage into their natal rivers *throughout* the season. Therefore we believe that, where the close time cannot be adhered to for reasons of health and safety, the leaders should be removed for a corresponding period at the earliest next opportunity.

- **The North Atlantic Salmon Conversation Organisation**\(^1\) has successfully negotiated reductions in salmon fisheries in their marine feeding grounds in the North Atlantic. Mixed Stock Fisheries are now under international scrutiny in the context of tight restrictions of traditional high seas MSFs near Greenland and the Faroes.

- **The operation of MSFs** is contrary to internationally accepted best practice because they prevent management of the resource on an individual catchment basis. At a time of increasing pressure on wild Atlantic salmon throughout their range, it is reckless to continue the practice, especially in coastal areas where it is known that populations from catchments affected by that form of lethal exploitation are thought to be fragile, or are known to be below their conservation level (CL).

- **AST** has made it clear to ministers in other parts of the UK that new licences for MSF netting operations should not be issued. In Scotland we share ASFB’s view that, “when a netting station is put up for sale, or is to be leased to a third party, the relevant DSFB should, in the interests of salmon conservation, have a statutory right of first refusal to purchase (or lease) that netting operation before any proposed sale (or lease) could proceed”.

- **The need for the equitable burden of conservation** was recognised by the Mixed Stock Working Group, on which AST sat. If the real conservation value of every surviving salmon migrating back to Scotland were recognised, and a conservation levy imposed for every fish killed the burden would be shared more equitably. AST respectfully points out that the favourable terms for contributions made by commercial netting interests is a historical relic and does not reflect the true value of each fish, nor the fragile condition of stocks.

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\(^1\) NASCO: Established under the Convention for the Conservation of Salmon in the North Atlantic Ocean in October 1983
Our final comment concerns climate change. The work done by AST and its international analogues and partners, including Scotland’s Ocean Institute and Marine Scotland, shows that the Atlantic Ocean is warming, and that the effects of this warming are advancing north at an average rate of 23kms each year. Warmer seas bring extreme weather, huge variances in pressure and massive changes to the pelagic layer of the ocean. The traditional feeding areas of Atlantic salmon are being squeezed and some places where Scottish salmon go to feed at sea are currently very poor in terms of prey species. New species, such as Gilt head bream and sea bass are arriving off the Scottish coast, some of which are predators of our migrating salmon smolts. The freshwater environment is also under pressure from flood, drought and temperature extremes. In this context we believe that we cannot continue to exploit salmon and sea trout as we have done in the past.

This Bill provides an opportunity to prepare for the inevitable changes that climate change will bring and to mitigate for changes that have already occurred.