Representation to ESS concerning Scottish Government's failure to protect wild salmonids from sea lice emanating from salmon farms and SEPA's proposed sea lice framework

WildFish.

Coastal Communities Network Scotland

Submitted March 2024

Contents

1. Introduction

1.1 This referral to ESS relates to the harm being caused to wild Atlantic salmon and sea trout by sea lice emanating from Scottish marine salmon farms and the continued failure of the Scottish Government and its regulators to put in place proper controls to protect both species, contrary to their legal obligations under a range of legal instruments - international, assimilated law (ex-European Union) and domestic.

2. The sea lice issue for wild salmonids

2.1 That sea lice from salmon farms cause harm to both wild Atlantic salmon and sea trout is no longer seriously contested by any party to the debate, other than from parts of the salmon farming industry itself (for fairly obvious reasons). However, even from within the salmon farming industry there are examples of the industry accepting that lice from farms can harm wild fish, notably the Report of the Salmon Interactions Working Group, on which the industry was represented, noting "the potential hazard that farmed salmonid aquaculture presents to wild salmonids…" (see below).

2.2 Also, Ben Hadfield, a senior officer with Mowi, in an email to Argyll and Bute Council's Planning Officer on 29 May 2018 conceded that "it is now the generally accepted position that uncontrolled sea lice levels on fish farms located in constrained water bodies can present a hazard to wild fish populations…"

2.3 A scientific review of the effects on both salmon and sea trout, undertaken in 2018[1] concluded that: "Results from scientific studies on the impacts of salmon lice on Atlantic salmon and sea trout are summarized here. **Considerable evidence exists that that there is a link between farm-intensive areas and the spread of salmon lice to wild Atlantic salmon and sea trout.** Several studies have shown that the effects of salmon lice from fish farms on wild salmon and sea trout populations can be severe; ultimately reducing the number of adult fish due to salmon lice induced mortality, resulting in reduced stocks and reduced opportunities for fisheries. Depending on the population size, elevated salmon lice levels can also result in too few spawners to reach conservation limits".

2.4 A further thorough scientific review[2] undertaken on the effects on sea trout concluded: "Amongst salmonids, sea trout are especially vulnerable to salmon lice infestation because they typically remain in coastal waters during their marine residence, and coastal waters are the areas where open net cage Atlantic salmon farms typically are situated. Based on the reviewed studies, it can be concluded that salmon farming increases the abundance of lice in marine habitats and that despite the control measures routinely applied by the salmon aquaculture

[1] Thorstad, E.B. & Finstad, B. 2018. Impacts of salmon lice emanating from salmon farms on wild Atlantic salmon and sea trout. NINA Report 1449: 1-22. Trondheim, Norway, January 2018 omslagside (wildfish.org)

[2] Thorstad, E.B., Todd, C.D., Bjørn, P.A., Gargan, P.G., Vollset, K.W., Halttunen, E., Kålås, S., Uglem, I., Berg, M., & Finstad, B. (2014). Effects of salmon lice on sea trout. A literature review. omslagside (nina.no)

industry, salmon lice in intensively farmed areas have negatively impacted wild sea trout populations by reducing growth and increasing marine mortality"

and that

"Population-level effects of salmon lice have been quantified in Atlantic salmon by comparing growth and survival of chemically protected fish with untreated control groups released in parallel. There are few such studies on sea trout but the results for Atlantic salmon support that 12 to 44% fewer spawners are potential levels of extra mortality attributable to salmon lice that can be expected for Atlantic salmon populations in farm-intensive areas. Studies of Atlantic salmon likely represent minimum estimates for sea trout mortality at the same sites because salmon smolts migrate quickly through coastal waters and into the open ocean, whereas sea trout remain throughout in coastal or inshore waters".

2.5 The conclusions of the above scientific reviews are broadly accepted by the Scottish Government's scientists.[3]

2.6 Note however, that although Marine Scotland accepts the impact of sea lice on salmon populations, it never advises planning authorities to turn down any proposed fish farm in order to protect wild fish. Indeed, the marine scientific survey work and analysis that would be required to show that an individual farm might affect or be affecting significantly a local, or even the national population of salmon - although it is highly likely that fish farms, cumulatively, can and do exactly that - is generally impractical. Indeed, WildFish and CCN are particularly concerned that cumulative impacts are not being properly assessed or those impacts acted upon.

2.7 Furthermore salmon in each separate river sub-population have a unique genetic makeup, as they return to their natal rivers to breed. Planning generally ignores this genetic diversity and instead only assesses whether each proposed farm will harm the national salmon population. As such, this calls into question whether the National Marine Plan, which defines that general level of protection for the Atlantic salmon Priority Marine Feature, is failing to protect this diversity within Atlantic salmon populations.

2.8 The Scottish Government's Scottish Wild Salmon Strategy[4] notes that "sea lice are a naturally occurring parasite of wild fish that impair performance and can kill salmon smolts above threshold levels. Salmon farms can substantially elevate levels of sea lice in coastal habitats and potentially increase risks to wild salmon growth and mortality under some local conditions".

2.9 However, direct evidence of harm to wild salmonids due to sea lice in any one location or from any one fish farm is not available, except possibly in the long-term data from Marine Scotland Science's Shieldaig Field Station, and is likely to remain impossible to show. Migrating salmon post-smolts become infested with

---

[3] Impacts of lice from fish farms on wild Scottish sea trout and salmon: summary of science - gov.scot (www.gov.scot)

[4] 3. Scotland's Atlantic salmon - Scottish wild salmon strategy - gov.scot (www.gov.scot)

sea lice as they pass through coastal waters, passing many farms as they do. Sea lice larvae are also known to travel up to 30km from the fish farms from which they emanate[5]. Infested post-smolts die at sea, where their bodies are impossible to find. Population effects of sea lice from fish farms are, in effect, not possible to show or isolate from other factors that may be at play.

2.10 The evidence of harm is nonetheless compelling that sea lice emanating from fish farms can and will kill wild salmonids. Lab-based work has established thresholds of harm and Scottish Government field sampling (at the Shieldaig Field Station) shows that sea trout (as proxies for salmon) more often have lice levels above that threshold, particularly when nearby salmon farms are in their second year of production, when on-farm sea lice numbers typically rise, sometimes rapidly. Norwegian and Irish research has proven that fish farm sea lice reduce the numbers of returning adult salmon.

2.11 While there are other pressures that face Atlantic salmon and sea trout populations, the context in Scotland is that wild salmon catches and Marine Scotland's assessment of the conservation status of salmon breeding rivers are both at all-time lows. The most recent assessment of Atlantic salmon in Scotland (for the 2022 fishing season) classifies over half of assessed rivers or groups of rivers (101 out of 173) as being in poor conservation status (Grade 3)[6]. Irrespective of efforts to characterise and quantify other pressures, the harm caused by sea lice emanating from fish farms is well understood and precautionary efforts to control the impact of farm-derived sea lice on wild salmonids should not be delayed on the basis of the relative contribution of such 'other pressures' to the decline in wild salmonids.

2.12 Indeed, there is no time for such a 'relaxed' approach. In December 2023, in its latest species reassessment, the highly-respected International Union for the Conservation of Nature, which administers the IUCN Red List of Threatened Species, has altered the official status of the main UK population of Atlantic salmon (including Scottish wild salmon), reclassifying the population as Endangered, signalling that the UK and Scottish populations are at risk of extinction[7] . One of the key risks to wild Atlantic salmon outlined by the IUCN at the time of reclassification was "mortality due to salmon lice from salmon farms", which the body noted was "of great concern".

2.13 This applies not only to the direct threat on the west coast and in the western isles, but also the potential impact of lice from fish farms in the northern isles (Shetland, Orkney) on migrating east and north coast river smolts in terms of reduced marine survival.

---

[5] This article: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2817184/ cites these two studies for the 30km stat: https://www.cambridge.org/core/journals/parasitology/article/abs/spatial-and-temporal-variation-in-the-infestation-of-sea-trout-salmo-trutta-l-by-the-caligid-copepod-lepeophtheirus-salmonis-kroyer-in-relation-to-sources-of-infection-in-ireland/7D17EB5B7A
Gargan P. G., Tully O., Poole W. R.2003Relationship between sea lice infestation, sea lice production, and sea trout survival in Ireland, 1992–2001. In Salmon at the edge (ed. Mills D.), pp. 119–135 Oxford, UK: Blackwell Science

[6] 3. Scotland's Atlantic salmon - Scottish wild salmon strategy - gov.scot (www.gov.scot)

[7] https://www.iucn.org/press-release/202312/freshwater-fish-highlight-escalating-climate-impacts-species-iucn-red-list

3. The general approach of Scottish Government to marine salmon farming

3.1 The Scottish Government's approach to the sea lice issue outlined above has been characterised both by its sluggish pace, and by the underlying unwillingness of Scottish Government to take any steps that might constrain the growth of the politically-important Scottish salmon farming industry, or to take precautionary action to limit sea lice numbers in those existing farms already understood to be most likely to be doing harm to wild fish.

3.2 The Scottish Government has made very many statements indicating its wholesale support for the expansion of the industry[8] .

3.3 The Scottish Government's Marine Scotland has given strong support over many years for the industry's target to double its 2018 production levels (aka 'value') by 2030.

3.4 This support manifests itself in pro-fish farming policies in Scottish Planning Policy, National Planning Framework 3 (both now replaced by NPF4), the National Marine Plan and Local Development Plans. For example, former Scottish Planning Policy stated, inter alia:

"Supporting Aquaculture

NPF Context

249. Aquaculture makes a significant contribution to the Scottish economy, particularly for coastal and island communities. Planning can help facilitate sustainable aquaculture whilst protecting and maintaining the ecosystem upon which it depends. Planning can play a role in supporting the sectoral growth targets to grow marine finfish (including farmed Atlantic salmon) production sustainably to 210,000 tonnes; and shellfish, particularly mussels, sustainably to 13,000 tonnes with due regard to the marine environment by 2020.

Policy Principles

250. The planning system should:
• play a supporting role in the sustainable growth of the finfish and shellfish sectors to ensure that the aquaculture industry is diverse, competitive and economically viable;
• guide development to coastal locations that best suit industry needs with due regard to the marine environment;
• maintain a presumption against further marine finfish farm developments on the north and east coasts to safeguard migratory fish species".[9]

[8] See for example https://www.gov.scot/policies/aquaculture/ and https://www.gov.scot/news/vision-for-sustainable-aquaculture/

[9] Scottish Planning Policy (SPP) - Scottish planning policy - gov.scot (www.gov.scot) at page 56

3.5 While the policies are often said to be conditional on the growth being 'sustainable' (for instance, having no impact on the national populations of Priority Marine Features (PMFs)), there has never been an assessment of the cumulative risk of harm across the west coast and in the western and northern islands ('the aquaculture zone'), due to the entire industry's impacts at its present size, or of those impacts doubling, or of the capacity of a warming sea to assimilate them.

3.6 Note however that Scottish Planning Policy restates the Scottish Government's long-standing presumption against fish-farming on the North and East coasts, 'to protect migratory fish'. This is precautionary as clearly there is an acknowledged risk that fish farming can harm wild salmonids. It is not known, and Scottish Government has always been evasive as to its reasoning here, why the precautionary approach is not also applied on the west coast and in the islands.

4. WildFish involvement with the sea lice issue

4.1 In the early 2010s, Salmon & Trout Conservation (now WildFish) was closely involved in ACAS-mediated negotiations with the industry, hosted by the Scottish Government, to try to find a way forward in collaboration with the Scottish Salmon Growers Association (SSGA) (now 'Salmon Scotland') to protect wild salmon and sea trout; those efforts failed, entirely due to the SSGA's inability to move from its dogmatic position that no harm was being caused by fish farms to wild fish.

4.2 It is over a decade since the Rural Affairs, Climate Change and Environment (RACCE) Committee of the Scottish Parliament considered the impact of sea lice on wild fish during the passage of the Aquaculture and Fisheries (Scotland) Bill in 2012, but the 2013 Act, as it became, again failed to provide any protection for wild salmonids from the sea lice emanating from fish farms.

4.3 It is eight years since Salmon and Trout Conservation Scotland (now WildFish) lodged a formal Petition[10] with the Scottish Parliament, calling on the Scottish Government to strengthen Scottish legislative and regulatory control of marine fish farms to protect wild salmonids of domestic and international conservation importance.

4.4 Of specific concern to Salmon and Trout Conservation was the lacuna in the law that it had pointed out on many occasions – that Part 1, and particularly section 3 of the Aquaculture and Fisheries (Scotland) Act 2007, as amended, addressed sea lice control on fish farms only for the purpose of securing the animal welfare of the farmed fish, not in respect of the effect of the massive release of sea lice larvae from fish farms on wild salmonids.

[10] PE01598: Protecting wild salmonids from sea lice from Scottish salmon farms - Getting Involved : Scottish Parliament

4.5 Although Scottish Government at the time denied vehemently that the lacuna existed at all, it has relented on this point, as evidenced by its charging of SEPA in 2020 to use its powers under the Controlled Activities Regulations[11] to apply permits to fish farms to control the impact of sea lice outside the farms.

4.6 That 2016 Petition triggered two more Scottish Parliamentary Committees, the Environment Climate Change and Land Reform (ECCLR) and Rural Economy and Connectivity (REC) Committees, to conduct enquiries and issue reports, both published in 2018, both concluding that sea lice control to protect wild salmonids needed to be addressed as a priority and that, generally, improved regulatory control of salmon farms was needed to protect wild salmonids as a priority – "the status quo is not an option" [12] [13].

From Rural Economy and Connectivity Committee Report "Salmon farming in Scotland", published 27 November 2018, emphasis added

RECOMMENDATION 1

However, the industry also creates a number of economic, environmental and social challenges for other businesses which rely on the natural environment and the Committee recognises this impact. Therefore, if the industry is to grow, the Committee considers it to be essential that it addresses and identifies solutions to the environmental and fish health challenges it faces as a priority.

RECOMMENDATION 2

The Committee strongly agrees with the view of the Environment, Climate Change and Land Reform Committee (ECCLR) Committee that if the industry is to grow, the "status quo" in terms of regulation and enforcement is not acceptable. It is of the view that urgent and meaningful action needs to be taken to address regulatory deficiencies as well as fish health and environmental issues before the industry can expand.

RECOMMENDATION 60

The Committee is therefore of the view that maintaining the status quo in terms of the regulatory regime in Scotland is not an option. It considers that there is a need to raise the bar in Scotland by setting enhanced and effective regulatory standards to ensure that that fish health issues are properly managed and the impact on the environment is kept to an absolute minimum. The Committee therefore recommends that a comprehensively updated package of regulation should be developed by Marine Scotland and other regulatory bodies, both to ensure the sector will be managed

[11] The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (legislation.gov.uk)
[12] Environmental impacts of salmon farming - Parliamentary Business : Scottish Parliament
[13] Salmon farming in Scotland | Scottish Parliament

effectively and to provide a strong foundation on which it can grow in a sustainable manner.

From Environment, Climate Change and Land Reform Committee (5 March 2018) Report to the Rural Economy and Connectivity Committee on the Environmental Impact of Salmon Farming, 2018, emphasis added

Overall, the Committee concluded:

It is clear to the Committee that the same set of concerns regarding the environmental impact of salmon farming exist now as in 2002 but the scale and impact of these has expanded since 2002. There has been a lack of progress in tackling many of the key issues previously identified.

Over that period there appears to have been too little focus on the application of the precautionary principle in the development and expansion of the sector.

Scotland is at a critical point in considering how salmon farming develops in a sustainable way in relation to the environment. The planned expansion of the industry over the next 10-15 years will place huge pressures on the environment. Industry growth targets of 300,000 - 400,000 tonnes by 2030 do not take into account the capacity of the environment to farm that quantity of salmon. If the current issues are not addressed this expansion will be unsustainable and may cause irrecoverable damage to the environment.

The Committee is deeply concerned that the development and growth of the sector is taking place without a full understanding of the environmental impacts. The Committee considers an independent assessment of the environmental sustainability of the predicted growth of the sector is necessary[14].

There are significant gaps in knowledge, data, monitoring and research around the adverse risk the sector poses to ecosystem functions, their resilience and the supply of ecosystem services. Further information is necessary in order to set realistic targets for the industry that fall within environmental limits. There should be a requirement for the industry to fund the independent and independently verified research and development needed.

The role, responsibilities and interaction of agencies requires review and agencies need to be appropriately funded and resourced to fully meet their environmental duties and obligations. Scotland's public bodies have a duty to protect biodiversity and this must be to the fore when considering the expansion of the sector. We need to progress on the basis of the precautionary principle and agencies need to work together more effectively.

[14] For completeness, no such assessment has yet been undertaken

There need to be changes to current farming practice. The industry needs to demonstrate it can effectively manage and mitigate its impacts.

5. Scottish Government's and SEPA's response on sea lice

5.1 In response to the REC and ECCLR Committee reports, the Scottish Government set up the Salmon Interactions Working Group to provide advice on the interactions between wild and farmed salmonids.

5.2 However, in setting up the SIWG, the Scottish Government expressly required consensus from the Group, giving the fish farming industry an effective veto over the Group's conclusions.

5.3 SIWG reported in May 2020[15]. Salmon and Trout Conservation (now WildFish) responded to the SIWG Report in detail in May 2020[16]. The Scottish Government responded to SIWG 17 months later, in October 2021[17].

5.4 As part of the Scottish Government's response to SIWG, three years after REC, SEPA was finally tasked by Scottish Government, in that response, with bringing forward proposals to address fish farm / wild fish interactions, particularly those associated with sea lice, under the Controlled Activities Regulations.

5.5 Two rounds of public consultation followed (see below) together with a number of roundtable meetings held by SEPA.

5.6 Another two years have passed, but SEPA's final proposals are now finally in a very late stage of development and early implementation.

5.7 It is important to note that since the REC Committee and SIWG reports, significant new fish farm biomass has been added to the industry total, in the form of planning permissions and Controlled Activities Regulations (CAR) licences, both for new farms and for the expansion of existing farms – this despite the REC Committee's Recommendation 2 that "urgent and meaningful action needs to be taken to address regulatory deficiencies as well as fish health and environmental issues before the industry can expand". To February 2024, since the March 2018 ECCLR Committee Report, total extra biomass consented amounts totals 55,505 tonnes (45,007 tonnes since the November 2018 REC Committee Report).[18]

[15] Report of the Salmon Interactions Working Group (www.gov.scot)

[16] wildfish.org/wp-content/uploads/2022/06/STCS-Review-of-the-Report-of-the-Salmon-Interactions-Working-Group-FINAL-100520.docx.pdf

[17] Salmon Interactions Working Group Report: Scottish Government Response - gov.scot (www.gov.scot)

[18] There is some uncertainty in the Western Isles component of these totals as the Council there has suffered a cyberattack.

6. Developments since 2021

6.1 In respect of sea lice, WildFish has consistently argued that to protect wild fish from the negative impacts of sea lice parasites emanating in numbers very many orders of magnitude higher than would be expected normally or naturally in the marine environment[19], that an absolute sea lice limit on all farms needed to be imposed, in line with best available science and the precautionary principle.

6.2 That limit needs to be science-based, subject to independent monitoring, and enforced robustly by SEPA with rapid actions required to protect wild fish where limits are exceeded. Further strict penalties need to be applied for breaches, with on-farm fish biomass reductions and ultimately, revocation of CAR licences for repeat breaches.

6.3 In the years since 2021, when SEPA was tasked by Scottish Government with bringing forward proposals to address fish farm / wild fish interactions, particularly those associated with sea lice, the approach has been wholly inadequate to address the threat to wild salmonids (both salmon and sea trout). In practical effect, no changes have been made to fish farm operations.

6.4 To an extent, it is important to recognise that the political steer that SEPA (and other regulators) has been given appears to have been so supportive of the Scottish salmon farming sector as to make it impossible for SEPA to deliver proper protection of wild salmonids.

6.5 SEPA is also bound by the Scottish Regulators' Strategic Code of Practice, issued pursuant to section 5 of the Regulatory Reform (Scotland) Act 2014, which requires SEPA to "adopt a positive enabling approach in pursuing outcomes that contribute to sustainable economic growth".[20] It is clear that the pursuit of growth in the fish farm industry has diluted the controls SEPA might otherwise have proposed.

6.6 However, WildFish considers that the approach taken, even given the political steer, has been and remains unlawful to the extent that it cannot meet the legal and other objectives and commitments (as below) by which Scotland is bound.

---

[19] See Marine Scotland Science Summary of Science: "In Scotland, salmon farms have been shown to be a much more important contributor than wild fish to the total numbers of sea lice in the Scottish coastal zone (Penston & Davies 2009)"
Penston, M.J. & Davies, I.M. (2009) An assessment of salmon farms and wild salmonids as sources of *Lepeophtheirus salmonis* (Krøyer) copepodids in the water column in Loch Torridon, Scotland. Journal of Fish Diseases 32, 75-88.

[20] Scottish+regulators%27+strategic+code+of+practice.pdf (www.gov.scot)

7. SEPA's first consultation

7.1 The first consultation opened by SEPA in December 2021 and closed in March 2022[21]. SEPA consulted on its outline proposals for what is described as "the new, spatially based risk assessment framework for regulating the interaction between sea lice from marine finfish farms and wild Atlantic salmon" noting that the framework would be applied through the Water Environment (Controlled Activities) (Scotland) Regulations 2011, under which SEPA already regulated discharges from marine finfish farms to the water environment.

7.2 WildFish responded critically to that consultation in January 2022[22]:

"The proposals fall far short of what is required because they:

• Ignore the damage already caused by fish farming to wild salmon populations in Scotland.
• Fail to recognise the urgency of the situation faced, that populations of wild salmonids are at critically low levels (as per the SIWG), and that "urgent" (per the REC and ECCLR Committees) and "swift" (per SIWG) action to provide enhanced and effective regulation is needed, adopting the precautionary approach (per REC and ECCLR Committees).
• Fail to recognise or apply the principles laid down in the UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021, in particular, the precautionary principle as it relates to the environment and the principle that preventative action should be taken to avert environmental damage.
• Fail completely to deal with impacts on sea trout, a UK Biodiversity Action Plan priority fish species.
• Fail to address the continued impacts of existing farms, instead being politically focussed on facilitating the expansion of fish farming.
• Fail to deal with impacts on wild salmon beyond a very short time window (April/May).
• Fail even to attempt to meet the NASCO objective that "100% of farms 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" to which Scotland is signed up.
• Are vague in delivery, built on largely untested models and numerous assumptions on the interactions between farmed-derived lice and wild fish.
• Rely excessively on self-monitoring, self-assessment and indeed, self-design of both the regulatory tools and models by the fish farmers themselves.
• Are very far from the "robust, transparent, enforceable and enforced" regulatory system that the SIWG sought.

[21] Proposals for a risk-based framework for managing interaction between sea lice from marine finfish farm developments and wild Atlantic salmon in Scotland - Scottish Environment Protection Agency - Citizen Space (sepa.org.uk)
[22] STCS-response-to-SEPA-sea-lice-consultation-Jan-2022-1.pdf (wildfish.org):

• In any event, would take years to develop and implement properly, with outcomes remaining extremely uncertain, therefore not providing any prospect of effective regulation in the foreseeable future.

7.3 In its response to the first consultation[23], made in August 2002, SEPA made some small changes following their analysis of the responses received and held a series of engagement sessions in June 2022 to update stakeholders on changes to the framework and the implementation process.

7.4 Following the first consultation, SEPA decided that sea trout should be included from the beginning of the framework, stating that "we will initially focus on providing protection of sea trout in Wild Salmon Protection Zones during the early sea phase of their lifecycle and the development of a sea trout monitoring programme that will provide information to help assess risk and further develop the regime".

7.5 SEPA undertook to produce a further consultation "in early 2023" detailing how the framework would operate in practice before implementing the regime. This consultation would "include details of the choices we have made on controls that will apply and an assessment of the social and economic implications of the framework" with SEPA "starting to apply the framework to applications for proposed new farms and expansions of existing farms in the second half of 2023".

8. SEPA's second consultation

8.1 SEPA's promised second consultation[24] was opened in May 2023 and closed in September 2023.

8.2 As the second consultation was limited to considering options, none of which would deliver the protection of wild salmonids that WildFish considered necessary, WildFish limited its response to an open letter, supported by a number of community groups in Scotland[25], which heavily criticised the proposed framework for a series of fundamental failings.

8.3 The major and fundamental failings WildFish identified with SEPA's revised proposals were:

1) The proposals only looked at future farms. The 200+ existing farms will not be addressed initially, including 19 farms already identified as 'relatively higher risk' by SEPA. Indeed, SEPA says openly: "it is going to take a mixture of evidence that we'll need to build over the next few years… before any action is taken on existing farms".

[23] 20220816 Official Sea Lice Regime consultation analysis.pdf (sepa.org.uk)
[24] Detailed proposals for a risk-based, spatial framework for managing interaction between sea lice from marine finfish farm developments and wild salmonids in Scotland - Scottish Environment Protection Agency - Citizen Space (sepa.org.uk)
[25] Open letter on SEPA sea lice framework proposal FINAL

2) The proposals initially do not cover the Shetland and Orkney Isles, where one third of open-net salmon production is located.

3) The proposals focus on 121 'Wild Salmonid Protection Zones' (WSPZs), with no assessment of cumulative impact of sea lice on fish moving between zones or of the risk of sea lice moving between zones.

4) The protection zones do not include rivers where salmon populations have existed previously, but no longer do. This sets out a pathway via which environmental degradation leads to less regulation and ignores the requirement under relevant European-derived assimilated law - the Water Framework Directive - to restore water bodies (and their fish populations).

5) Initially, SEPA is only focusing on 8 of the WSPZs. A tiny number. Some new farms not 'deemed' as currently impacting on these zones will have no sea lice restrictions imposed at all.

6) SEPA is only focusing on new farm applications deemed to have possible impact on WSPZs where capacity has been assessed as limited or exceeded, but no immediate action specified for existing farms in areas where capacity has been assessed as already presenting potential risk to wild salmon.

7) SEPA is only performing the screening for 'relative risk'. Hereafter, aquaculture companies will then use their own modelling to determine whether their farm contributes to the risk of harm to wild salmonids from sea lice loads. It hardly needs to be pointed out that modelling can be slanted to produce the results those companies will want.

8) Sea lice limits will only be applied for up to 3.5 months of the year, despite the sensitive period for migrating salmon running for 5 months, from 1st February to 30th June.

9) SEPA has stated that it had no plans to enforce biomass reductions or to rescind licences if limits are breached. "Things like biomass reduction and rescinding licences are not part of our enforcement approach" (SEPA, open roundtable meeting, June 2023).

8.4 In its response to the second consultation[26] SEPA has made further slight changes to its plans, which will now be implemented:

8.5 Those changes include:

Implementation timetable

8.6 SEPA has stated that "we will take on lead regulatory responsibility for managing sea lice and wild salmon interactions from 1st February 2024 and for managing sea lice and sea trout interactions from March 2025".

[26] sepa_response_to_consultation_feedback_december_2023-2.pdf

8.7 This appears to be a retreat from the plan for sea trout identified in the second consultation that "from the outset, the framework will also provide an improved level of protection from April to the end of June for wild sea trout in WSPZs on the West Coast and around the Western Isles"[27].

8.8 SEPA's response to the consultation also pushes back implementation of so-called 'no deterioration' clauses for the 19 high risk farms from spring 2024, to spring 2025, those farms identified as being of highest relative risk are[28]:

Table B: List of farms initial screening indicates may be in the highest relative risk category

Licenced farm name	Licenced site ID	Licence number	Maximum biomass (tonnes)
Ardcastle (see footnote 17)	FFMC43	CAR/L/1010775	1752
Ardgaddan (see footnote 17)	FFMC47	CAR/L/1010817	2381
Bagh Dail nan Ceann North and South	FFMC54	CAR/L/1004226	3000
Camas an Leim (Torridon)	CAL1	CAR/L/1010002	2500
Loch Duich	DUI1	CAR/L/1010433	2500
Gorsten (see footnote 18)	GORS1	CAR/L/1009968	2500
Meall Mhor (see footnote 17)	FFMC14	CAR/L/1015860	1345
North Kilbrannan[19]	NKBN1	CAR/L/1168182	2475
Noster	NOS1	CAR/L/1009974	2200
Poll na Gille	FFMC34	CAR/L/1000800	2500
Portnalong	PORL1	CAR/L/1002889	2000
Rubh an Trilleachain	RTRI1	CAR/L/1109280	2500
Scalpay	SCLP1	CAR/L/1156482	2500
Seaforth	SEA5	CAR/L/1009963	2110
Soay Sound	SOAY1	CAR/L/1004053	2300
Strondoir Bay (see footnote 17)	FFMC70	CAR/L/1003721	1767
Tarbert South (see footnote 17)	FFMC49	CAR/L/1010476	1568
Trilleachan Mor	TRM1	CAR/L/1013016	2130
West Strome	WSTR1	CAR/L/1100544	2000

Risk screening and modelling [for proposed new and expanded salmon farms]

8.9 SEPA says "We will assess farm development proposals with the help of screening models to identify those proposals that we are confident are unlikely to pose a significant risk to wild salmon populations and, hence, do not require further assessment".

Permitting requirements

8.10 SEPA now says "When granting authorisation for farm developments, we will:

[27] 230511 Sea Lice Consultation FINAL (1).pdf at page 100
[28] sepa_response_to_consultation_feedback_december_2023-2.pdf, at page 110

• Require the farms to report the average number of adult female sea lice per fish, and the total number of fish on their farms each week between mid-March and 30th October.
• Except for farms in the lowest relative-risk category, include risk-proportionate permit conditions limiting the average and maximum number of adult female lice on the farms. The limit conditions will apply between mid-March and 31st May each year, the sea lice management period for protecting wild salmon".

8.11 The window within which SEPA will be applying sea lice limits, is only 2.5 months of the year, despite the sensitive period for migrating salmon running for 5 months (as previously acknowledged by the Scottish Salmon Producers Organisation, the forerunner of Salmon Scotland), from 1st February to 30th June. Further, sea trout remain in coastal waters year-round (and thus are vulnerable to lice infestation for prolonged periods). With warming seas, winter is no longer a lice-free period on fish farms as it once could be.

Regulation of existing farms: Preventing deterioration

8.12 SEPA says "during 2024, we will introduce requirements for all existing farms to report the weekly average number of adult female sea lice per fish, and the total number of fish, on their farms between mid-March and 30th October each year.

8.13 In late 2024, we will add standstill sea lice limit conditions to the permits of existing farms on the West Coast and around the Western Isles, other than farms in the lowest relative risk category. These conditions will be effective between mid-March to 31st May from 2025 onwards".

8.14 Initially planned for spring 2024, this is nevertheless based on a major misunderstanding by SEPA of the legal obligation under WFD to avoid deterioration.

8.15 The premise upon which SEPA's analysis is based, which is not supported by any evidence, is that the current sea lice levels on farms are *not* causing deterioration in water body ecological status, by impacting wild salmonid populations.

8.16 In effect, SEPA's 'standstill' or what it calls 'no deterioration' conditions may, in fact, be 'baking in' further deterioration. Looked at another way, a 'standstill' in sea lice numbers on farms does not imply a 'standstill' in further deterioration of (the fish element of) water body status.

8.17 As such. SEPA's plan is unlawful as against the obligations of Article 4 of the Water Framework Directive, as discussed below.

Regulation of existing farms: Reducing pressure on wild salmon

8.18 SEPA says “we will require appropriate action by operators of relevant higher relative risk farms as soon as we have sufficiently robust evidence that a reduction in sea lice concentrations is necessary to improve the condition of a wild salmon population. We will lead a collaborative approach to determining if, and where, such action is required through Scotland’s River Basin Management Planning process”.[29]

8.19 However, this is fundamentally not precautionary and is based on there needing to be evidence of damage or harm before any action is taken, evidence which all sides acknowledge would be highly difficult or practically impossible to show, for any particular location or fish farm.

8.20 It is worth restating that the difficulty of gathering such evidence does not mean that there is no impact – hence the need for SEPA to take a precautionary approach and limit sea lice numbers now, on the basis of the best available evidence (i.e. all the ‘smoking gun’ evidence in peer reviewed science, harmful levels of sea lice on sea trout proxies, the threshold of harm established by Norwegian researchers and accepted by SEPA, and SEPA’s own modelling).

<u>Compliance assessment and enforcement</u>

8.21 SEPA says “We will ensure compliance with permit conditions by running checks on reported data; carrying out farm inspections; taking appropriate action in line with our enforcement policy where we identify non-compliances; and publicising whether farms’ performances are good, acceptable or unacceptable when we implement our new performance assessment scheme”.

8.22 Note that WildFish asked SEPA for sight of, but was refused access to information on the “sophisticated analytical methods” by which SEPA says it intends to identify ‘unreliable’ sea lice data submitted by operators, which has been an issue of contention for years[30] (see SEPA’s refusal of relevant WildFish FOI requests below).

<u>Adaptive management approach for sea trout</u>

8.23 SEPA says “we will not take forward the approach to protecting sea trout proposed in the consultation. Instead, starting in March 2025, we will implement an adaptive approach to managing interactions between sea lice from fish farms and sea trout. This will be underpinned by a new, nationally overseen monitoring programme”.

8.24 This appears to be a retreat from the plan for sea trout identified in the second consultation that “from the outset, the framework will also provide

[29] The current RBMPs barely mention salmon in their marine phase or the threat from fish farms

[30] See for example Godwin S.C. et al. Bias in self-reported parasite data from the [Canadian] salmon farming industry. Ecological Applications, 31(1), 2021, e02226
“We found that the industry’s monthly counts of two sea-louse species increased by a factor of 1.95 respectively, in months when counts were audited by the federal fisheries department.”

an improved level of protection from April to the end of June for wild sea trout in WSPZs on the West Coast and around the Western Isles"[31].

Further assessment and environmental monitoring for salmon

8.25 SEPA says "We will lead a collaborative approach to refined model development for the prioritised WSPZs. Our intention is for the refined models to be freely available for anyone to use. We will lead work to design and then deliver targeted monitoring programmes to investigate the relationship between the condition of wild salmon populations and the relative exposures of post-smolts from those populations to infective-stage sea lice".

8.26 Again, this shows the lack of a properly precautionary approach. SEPA is basing its new system on adaptive management, while still acknowledging that it requires "targeted monitoring programmes to investigate the relationship between the condition of wild salmon populations and the relative exposures of post-smolts from those populations to infective-stage sea lice".

8.27 Until such time as SEPA understands such 'relationships' and 'relative exposures', it should operate a properly precautionary approach to fish farm management – not one which can best be characterised as 'suck it and see'.

9. SEPA's refusal of relevant WildFish FOI requests

9.1 Although it is appreciated that access to environmental information is outwith the definition of 'environmental law' over which ESS has oversight, it is useful context to appreciate that SEPA has been less than open with WildFish during its two major consultation exercises.

9.2 In its initial 2021 consultation document, SEPA made reference to "sophisticated analytical methods" by which it intended to identify 'unreliable' sea lice data submitted by operators, which has been an issue of contention for years.

9.3 In January 2022, WildFish requested information on those methods but was refused access by SEPA.

9.4 That matter is still with the Scottish Information Commissioner, following SEPA's refusal. However, the delays currently being experienced by the Commissioner's office in dealing with matters referred to it, are excessive. As at February 2024, the matter has been with the Commissioner for over 20 months without decision and a formal complaint has been made to the Commissioner.

[31] 230511 Sea Lice Consultation FINAL (1).pdf at page 100

9.5 Similarly, the initial list of 21 high risk farms referred to in SEPA's second consultation was requested by WildFish in 2023. While SEPA has (after the consultation has closed) now published its reduced list of 19 'relatively higher risk' farms, it continues to refuse to publish the names of the original "high risk" farms.

9.6 Knowing the names and locations of the 21 most at-risk salmon farm sites that the modelling under the 2023 consultation had identified, would undoubtedly have given WildFish, other NGOs and the wider public, greater ability to comment on the practice of the new regulatory framework being proposed and the complex models behind it, because it would have been clearer what the likely practical effect of the proposals would be.

9.7 Put another way, it would be far easier for the public to have assessed the likely effect of the new regulatory framework being consulted upon, if the identified farms had been named, located on a map and the process related to real farms in the real world, rather than some hypothetical exercise involving 21 sites, the locations of which could be anywhere from Shetland to the Clyde.

9.8 Again, as at February 2024, that matter rests with, and is delayed at, the Scottish Information Commissioner.

9.9 If ESS requires further information, WildFish would be happy to supply correspondence with SEPA and the Commissioner's office on both matters.

10. Overall assessment of SEPA's plans

10.1 Despite the complexity of what is now planned, drawing on SEPA's two consultation documents, and SEPA's two responses to those consultations, it is possible to summarise the elements of what is planned for controlling sea lice interactions between fish farms and wild fish.

10.2 The framework would only operate to protect wild Atlantic salmon post-smolts during a short window, via wild salmon protection zones (WSPZs) and a sea lice exposure threshold that applies only in these zones.

10.3 SEPA has not however assessed the impact of the entire industry on the wild salmon and sea trout population (and river populations), and does not intend to do so. It will not assess the cumulative impact of sea lice from all 200+ existing fish farms on wild salmon and sea trout. SEPA's largest scale of focus is the WSPZs, all of which are in constrained waterbodies and close to the mouths of salmon breeding rivers. SEPA even neglects the risk that wild fish will face if they pass through more than one non-contiguous WSPZ, which is likely to occur in some areas.

10.4 The proposed sea lice exposure threshold would only apply in the wild salmon protection zones during April and May.

10.5 Sea trout are inadequately considered and their protection is not addressed for much of the year.

10.6 Only when actual exposure is found to be greater than the proposed threshold of harm, would SEPA consider there to be an increasing risk of significant impacts, including mortality, among wild salmon in their sea phase. SEPA is not proposing to protect all wild salmon post-smolts, only those of average size or above, that swim at average speed or faster. Smaller fish swim more slowly and will be exposed for longer to the risk of sea lice in SEPA's WSPZs. Nor does the chosen threshold for sea lice exposure protect 100% of average fish from harm.

10.7 Proposals for new marine fish farms or increases in biomass at existing farms would be subject to an assessment of the risk posed to wild salmon post-smolts, based on complex modelling by operators and applicants, to address whether SEPA's sea lice exposure threshold would be exceeded in a Wild Salmon Protection Zone.

10.8 SEPA says the level of assessment required from operators or applicants "would be proportionate to the risk", with screening assessments used to identify where more detailed risk assessments, to be carried out by the applicants for new or expanded fish farms, are required.

10.9 Subsequent CAR permits would include "such conditions as necessary" to ensure the number of sea lice emanating from the developments is kept low enough to protect wild salmon post-smolts as they pass through wild salmon protection zones.

10.10 At first, the framework will apply only to applications for proposed new farms and for proposed increases in biomass at existing farms. Apart from the 'no deterioration' clauses (the limitations of which are outlined above), existing farms will only be brought into the framework at a much later date, once SEPA has collected, or been presented with, robust evidence that the lice from those farms are contributing to harm to wild fish. This includes the time required to collect data to calibrate and validate sea lice dispersion models.

10.11 However, SEPA's proposed system of sea lice control is highly complex and remains based on opaque and yet-to-be finalised modelling approaches, being drawn up by SEPA in close collaboration with the industry itself.

10.12 SEPA's plans are generally based on a process of what SEPA terms 'adaptive management' which, SEPA says, is to enable them, inter alia, to respond "over the appropriate timescale" to, for example, "evidence from scientific studies of differences in the precise timings and duration of salmon migration from different salmon rivers and the average passage times of salmon post-smolts through different wild salmon protection zones" and "evidence from scientific studies for adjusting and refining sea lice exposure thresholds for different wild salmon protection zones or for

groups of such zones". However, it is far from clear how that appropriate monitoring will be undertaken and such evidence gathered and acted upon.

10.13 WildFish fears that in practice, the process of adaptive management could equally be characterised as waiting for damage to occur or become apparent in wild fish monitoring, trying to establish causation (in a highly complex marine environment, where so doing is nigh-on impossible) and only after that, requiring any changes on-farm to sea lice control and/or biomass of farmed fish held on farms.

10.14 It is very difficult to imagine under what circumstances significant changes to farm practice or biomass might result.

10.15 SEPA seeks to characterise what is proposed as 'precautionary', but it is the antithesis of adopting a precautionary approach to the proliferation on, and release from, fish farms of sea lice, and their subsequent negative impact on wild salmonids.

10.16 SEPA's "no deterioration" or "standstill" approach will not stop harm being caused to wild salmonid fish due to sea lice from existing farms. The standstill lice conditions it plans to impose will be based on farms' historic lice counts, so those farms that have had the highest lice counts in the last few years will be allocated high lice threshold going forward – a perverse reward for their previous poor performance which is likely to perpetuate the harm they have been doing.

11. Relevant legal and other obligations

11.1 Given the above, there are a number of relevant legal and other obligations derived from international law and conventions, assimilated EU-derived law and domestic law.

11.2 As part of its functions, ESS can both consider whether environmental law is fit for purpose and whether environmental law is being applied properly.

11.3 Here, it is asked to do both.

11.4 However, the urgent issue is whether SEPA's new system to regulate the interaction between fish farm-derived sea lice and wild salmonids is, in fact, lawful.

Biodiversity Convention

11.5 The Convention on Biological Diversity (CBD), which the UK signed up to in 1992 in Rio de Janeiro, called for the development and enforcement of national strategies and associated action plans to identify, conserve and protect existing biological diversity, and to enhance it wherever possible.

11.6 The UK Biodiversity Action Plan was published in 1994 and was the UK Government's response to the Convention on Biological Diversity. The 'UK Post-2010 Biodiversity Framework', published in July 2012, succeeds the UK BAP and 'Conserving Biodiversity – the UK Approach'. The Framework demonstrates how the work of the four countries and the UK contributes to achieving the Aichi Targets, and identifies the activities required to complement the country biodiversity strategies in achieving the Targets.

11.7 The Scottish Biodiversity List[32] is a list of animals, plants and habitats that Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland. It is published as a requirement of the Nature Conservation (Scotland) Act 2004 and lists species and habitats of the highest priority for biodiversity conservation and "helps public bodies carry out their biodiversity duty" under the 2004 Act.

11.8 Both wild salmon and sea trout are on the Scottish Biodiversity List.

11.9 SEPA has a relevant duty under the Nature Conservation (Scotland) Act 2004 to further the conservation of biodiversity:

"(1) It is the duty of every public body and office-holder, in exercising any functions, to further the conservation of biodiversity so far as is consistent with the proper exercise of those functions.

(2) In complying with the duty imposed by subsection (1) a body or office-holder must have regard to—
(a) any strategy designated under section 2(1), and
(b) the United Nations Environmental Programme Convention on Biological Diversity of 5 June 1992 as amended from time to time (or any United Nations Convention replacing that Convention)".

11.10 It is clear therefore that SEPA' sea lice plans must meet that duty to further the conservation of wild salmon and sea trout. It is WildFish's and CCN's contention that SEPA's plans fall very far short of that obligation.

NASCO

11.11 The UK (and hence the jurisdiction of Scotland) is a party to the Convention for the Conservation of Salmon in the North Atlantic Ocean.

11.12 The North Atlantic Salmon Conservation Organization (NASCO) stated aim is to enable six Governments and the European Union to co-operate to conserve, restore, enhance and rationally manage Atlantic salmon through international co-operation taking account of the best available scientific information.

[32] Scottish Biodiversity List | NatureScot and Scottish Biodiversity List.xls (live.com)

11.13 The parties to the Convention are Canada, Denmark (in respect of the Faroe Islands and Greenland), the European Union, Norway, the Russian Federation, the United Kingdom and the United States of America.

11.14 NASCO's conclusions are clear that there are significant adverse impacts on wild Atlantic salmon from marine salmon farming.

11.15 In 2003, NASCO's internationally agreed 'Guidance on Best Management Practices to Address Impacts of Sea Lice and Escaped Farmed Salmon on Wild Salmon Stocks' (The Williamsburg Resolution) established goals for NASCO jurisdictions relating to containment and sea lice management.

11.16 For sea lice, NASCO best practice is for "100% of farms 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".

11.17 Scotland has consistently failed to live up to commitments relating to the negative impacts of salmon farming, under the NASCO Convention.

11.18 Note for example, that the NASCO Review Group concluded in 2021, of Scotland's actions under NASCO:

> "Mandatory Actions: this section was considered to be unsatisfactory overall because the actions required on sea lice and containment, given the marine aquaculture present in UK – Scotland, were considered by the Review Group to be unsatisfactory. For the Review Group to be able to consider the mandatory actions on both sea lice and containment to be in line with, or moving towards the achievement of, NASCO's Best Management Practice, SLG(09)5, they should relate to the management of these issues. To be considered as satisfactory, mandatory actions on effective sea lice management and the management of containment are required. Additionally, monitoring alone for the impacts of salmon farming on wild Atlantic salmon, where it is not clear how the outcome of the action will move UK – Scotland clearly towards the achievement of NASCO's goals, is not satisfactory."[33]

11.19 The President of NASCO wrote to the Scottish Government on 21st December 2021[34] stating:

[33] https://nasco.int/wp-content/uploads/2022/01/IP2112_UK-Scotland_Full-Feedback-to-Parties-Nov-2021.pdf at page 2

[34] https://nasco.int/wp-content/uploads/2022/01/Letters-from-President-following-November-2021-IP-Review_UK_Redacted.pdf

A number of NASCO's Resolutions, Agreements and Guidelines seek to minimise the impacts from aquaculture on wild salmon stocks. The Review Group judged section 4.11 of the Implementation Plan from UK-Scotland (SMART actions for aquaculture etc.) to be unsatisfactory. I would, therefore, like to draw your attention to a request from the NASCO Council made following the Theme-based Special Session on the impacts of salmon farming on wild Atlantic salmon, held during the Annual Meeting in 2021. It was agreed that a renewed request be made from the NASCO Council that:

> *'all Parties and jurisdictions with salmon farming produce SMART actions in their revised Implementation Plans for the management of lice and escapes. These actions should reflect strong and sustained progress towards meeting the goals of 100% containment of farmed fish, and for 100% of farms to have effective sea lice management. Monitoring of sea lice and escapes should only be a secondary activity to research or assess the effectiveness of the main action'.*

11.20 In its response to the Salmon Interactions Working Group, the Scottish Government showed it appreciates that Scotland must comply with NASCO obligations:

> "We must also ensure that Scotland meets its international obligations, including the NASCO Williamsburg Resolution of which the UK is a signatory and through which we are committed to minimising the impacts and risks presented by aquaculture to wild salmonids".

11.21 However, as against the sea-lice NASCO objective, what SEPA now proposes falls very far short of what is required.

11.22 The Report of the Meeting of the Implementation Plan / Annual Progress Report Review Group for the Review of Annual Progress Reports under the Third Cycle of Reporting (2019 – 2024) of NASCO states that, for Scotland, on "Aquaculture, Introductions and Transfers and Transgenics", "…..the Review Group was unable to establish progress against NASCO's Resolutions, Agreements and Guidelines."[35] [36]

11.23 The SEPA plans and proposals do not aim to meet, nor come close to meeting, the obligation that "100% of farms 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".

11.24 SEPA's plans are, in contrast, based on a process of what SEPA terms 'adaptive management', but could equally be characterised as waiting for damage to occur or become apparent, trying to establish causation (in a highly complex marine environment, where so doing is nigh-on impossible) and only after that, requiring changes on-farm to sea lice control and/or biomass of fish held.

---

[35] https://nasco.int/wp-content/uploads/2023/05/CNL2322rev_Report-of-the-Meeting-of-the-IP_APR-Review-Group-for-the-Review-of-APRs.pdf

[36] See also - Report by inter-governmental wild salmon conservation organisation NASCO slams Scottish Government's failure to act on salmon farming impacts | Wildfish

11.25 However SEPA seeks to characterise what is proposed, it is the antithesis of adopting a precautionary approach to sea lice interactions, due to their proliferation on and release from fish farms, with wild salmonids.

Water Framework Directive

11.26 The Water Framework Directive[37] – as implemented in Scotland – obliges Scotland not only to prevent deterioration, but also to enhance status of aquatic ecosystems, in all types of water body, including rivers, lochs, lakes, estuaries, coastal waters. The Water Environment and Water Services (Scotland) Act 2003 contains the general duties, at section 2 (with the WFD referred to as "the Directive"):

"(1) The Scottish Ministers and SEPA must exercise their functions under the relevant enactments so as to secure compliance with the requirements of the Directive, the Groundwater Directive and the Priority Substances Directive.
(2) The responsible authorities must exercise their designated functions so as to secure compliance with the requirements of the Directive, the Groundwater Directive and the Priority Substances Directive.

"the relevant enactments" means this Part, Part 3 of the Regulatory Reform (Scotland) Act 2014 and such other enactments as the Scottish Ministers may by order specify"

11.27 The key objectives of the WFD are set out in Article 4 of the Directive. It requires Member States to use their River Basin Management Plans (RBMPs) and Programmes of Measures (PoMs) to protect and, where necessary, restore water bodies in order to reach good status, and to prevent deterioration.

11.28 Good status means both good chemical and good ecological status.

11.29 In Scotland, the fish element of any assessment of water body ecological status is related directly to the condition of salmon and sea trout populations[38].

11.30 It is under the Water Environment and Water Services (Scotland) Act 2003 (which implements the WFD) that the Controlled Activities Regulations, which SEPA will now use to implement its sea lice plans, are drawn.

---

[37] Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy

[38] See UKTAG (2014) River Assessment Method Fish Fauna Fish Classification Scheme 2 (FCS2) Scotland https://www.wfduk.org/sites/default/files/Media/Characterisation%20of%20the%20water%20environment/Biological%20Method%20Statements/River%20Fish%20Scotland%20UKTAG%20Method%20Statement.pdf and The Scotland River Basin District (Standards) Directions 2014 at 00457867.pdf (www.gov.scot)

11.31 However, generally, those plans fall far short of what is required to avoid deterioration and to restore water body status (including the salmonid fish element to that status) to 'good'.

11.32 Further, the particular decision that SEPA has made in relation to what it describes as "regulation of existing farms: preventing deterioration" is unlawful as against WFD.

11.33 The adding of what SEPA describes as 'standstill sea lice limit conditions' to the permits of existing farms on the West Coast and around the Western Isles, other than farms in the lowest relative risk category (effective only between mid-March to 31st May from 2025 onwards), is based on a major misunderstanding by SEPA of the legal obligation to avoid deterioration.

11.34 SEPA's analysis is based upon an unsupported and unsupportable assumption that the current sea lice levels on farms are not causing deterioration in water body GES (by currently impacting wild salmonid populations).

11.35 In effect, SEPA's 'standstill' conditions may, in fact, be 'baking in' further deterioration. 'Standstill' in sea lice numbers on farms does not imply a 'standstill' in the further deterioration of (the fish element of) water body status. As such, SEPA's plan is unlawful as against the obligations of Article 4 of the Water Framework Directive.

Marine Strategy Framework Directive

11.36 The main objective of the Marine Strategy Framework Directive (MSFD) is to achieve good environmental status in EU marine waters by 2020[39]. The MSFD defines good status as "the environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive".

11.37 The MSFD was adopted on 17th June 2008. The MSFD was due to be transposed into national legislation by 15th July 2010 and required the UK Government to publish, before the end of 2015, a programme of measures necessary to achieve or maintain good environmental status in marine and coastal waters by 2020, and to put those measures into effect by 31st December 2016. Inevitably, this required that measures were put in place to protect wild salmonid fish, and these should have been implemented.

11.38 The MSFD was transposed by the UK Marine Strategy Regulations 2010. In effect MSFD was retained, now assimilated law in the UK[40].

[39] Marine Strategy Framework Directive | NatureScot

[40] Marine Strategy Regulations - EU Exit: marine environmental legislation in Scotland - gov.scot (www.gov.scot)

11.39 Scotland worked with the UK governments on amendments which have been made to the Marine Strategy Regulations 2010, so that they continued to be effective now that the UK is no longer part of the EU[41].

11.40 The published UK Programme of Measures 2015[42] accepted concerns over species such as salmon and sea trout, but, in respect of the impacts of fish farms on wild salmonids, relied entirely on the UK's membership of the North Atlantic Salmon Conservation Organisation (NASCO) and the national Implementation Plans drawn thereunder.

11.41 Salmon and Trout Conservation made a complaint to the European Commission in 2016 concerning the failure to comply with the MSFD with respect to wild salmonids.[43]

11.42 A revised Programme of Measures was consulted upon by the UK Government in late 2021[44]. However, the elements of that Programme of Measures, as provided by the Scottish Government, do not address sea lice control on fish farms any differently to the earlier Programme.

11.43 As compliance with NASCO recommendations and guidance was and remains the only measure put forward by Scotland to deal with sea lice from salmon farms in the POM required by the MSFD, then the measures put forward are patently inadequate to comply with the MSFD.

11.44 SEPA's sea lice plans to deal with the sea lice issue, which (above) do not meet the obligations of NASCO, are therefore in breach of the requirement to draw up requisite measures in order to achieve good status.

11.45 Further, MSFD contains the explicit regulatory objective that "biodiversity is maintained by 2020"[45]. Recital 44 to the MSFD makes it clear that "programmes of measures and subsequent action by Member States should be based on an ecosystem-based approach to the management of human activities and on the principles referred to in Article 174 of the Treaty, in particular the precautionary principle".

11.46 In respect of the conservation of the two protected species, wild salmon and sea trout, SEPA's plans to control the impact of sea lice from fish farms are insufficiently precautionary, based as they are on 'adaptive

---

[41] Marine Strategy Regulations - EU Exit: marine environmental legislation in Scotland - gov.scot (www.gov.scot)
[42] MSFD consultation: UK marine monitoring programmes (publishing.service.gov.uk)
[43] Salmon and Trout Conservation (2016) Complaint to the Commission of the European Communities Concerning the Failure of the United Kingdom (UK) to draw up and take appropriate measures pursuant to the Marine Strategy Framework Directive in relation to the impact of sea lice emanating from Scottish marine salmon farms on wild Atlantic salmon and sea trout. May 2016. Made by Guy Linley-Adams, Solicitor, on behalf of Salmon & Trout Conservation (UK) and Salmon & Trout Conservation (Scotland).
[44] UK Marine Strategy Part Three: Programme of Measures - Defra - Citizen Space
[45] See for example http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm

management', and fail to deal with existing fish farms. That cannot be in compliance with the MSFD.

Habitats Directive

11.47 The Habitats Directive (Council Directive 92/43/EEC) was adopted in 1992 and requires all Member States to designate, protect and manage core areas for habitat types listed in Annex I and species listed in Annex II of the Habitats Directive.

11.48 Atlantic salmon are listed in Annex II.

11.49 In Scotland, the Habitats Directive is translated into specific legal obligations by the Conservation (Natural Habitats, &c.) Regulations 1994.

11.50 Regulation 3, Duties relating to compliance with the Directives states that, in relation to the Scottish marine area, a competent authority must exercise their functions which are relevant to nature conservation, including marine conservation, so as to secure compliance with the requirements of the Directives and that this applies in particular to functions under the Water Environment (Controlled Activities) (Scotland) Regulations, under which SEPA's sea lice plans are to be delivered.

11.51 There are 17 Special Areas of Conservation (SACs) for Atlantic salmon in Scotland. Of these, 11 are designated with salmon listed as a primary qualifying interest. These SACs apply to fresh water only. However, many SAC populations can be impacted by sea lice from salmon farms, although those SACs within the aquaculture zone are particularly at risk.

11.52 For a plan or project to be consented, an appropriate assessment must be conducted to ascertain that the plan or project will not adversely affect the integrity of a European site.

11.53 SEPA's plans, in so far as they affect fish farms which can be expected to have a likely significant effect on many SAC populations of Atlantic salmon, cannot pass an appropriate assessment, as the plans for sea lice rest upon a system of adaptive management, which relies upon identifying harm when it has occurred and rectifying it after the event.

11.54 That approach is directly in conflict with the strict precautionary approach required by Article 6(3) of the Directive.

Relevant domestic law

UK Withdrawal from the EU (Continuity) (Scotland) Act 2021

11.55 Domestically, section 14 of the UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021 gives Ministers duties to have due regard to the guiding principles and lays out guiding principles for the Scottish environment.

11.56 The Scottish Ministers must, in making policies (including proposals for legislation), have due regard to the guiding principles on the environment and other authorities (including SEPA) must, in doing anything in respect of which the duty under section 1 of the Environmental Assessment (Scotland) Act 2005 applies (requirement for environmental assessment), have due regard to the guiding principles on the environment.

11.57 The precautionary principle as it relates to the environment is defined in the UN Rio Declaration on Environment and Development 1992 as, "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation"[46]. This intention was reflected in the EU precautionary principle, and developed through Commission publications and case law.

> "5.10 The precautionary principle enables proportionate decision-making in areas of scientific uncertainty that allow for protective measures to be taken without having to wait until the hazard or harm is realised. Decision makers should apply the precautionary principle when there is both a good reason to believe that serious or irreversible environmental damage could occur, and a lack of scientific certainty around the consequences or likelihood of the hazard and associated risk. Where there is uncertainty as to the likelihood or extent of potential environmental damage, but there is evidence indicating significant hazards and associated high risks of harm, cost-effective measures can be put in place to address the risk of harm through regulation of activities or products, further research or public information. Application of the precautionary principle will reflect the nature of the individual decision and measures should be proportionate to the desired level of protection".

11.58 SEPA says, of the precautionary principle, that "before we take action, we must ensure the action is evidence-based, proportionate, reasonable and necessary", but SEPA also says that in its use of screening models at least, where doubts exist it will give nature the benefit of the doubt[47]. That is an expression of the precautionary principle, but SEPA has failed to follow through, except in that its screening modelling makes a few conservative assumptions, for instance about fish farm biomass.

11.59 The 2018 Scottish Parliament's Environment, Climate Change and Land Reform (ECCLR) Committee and Rural Economy and Connectivity (REC) Committee inquiries recommended that the precautionary principle should be applied more often in Scottish aquaculture regulation and consenting decisions.

---

[46] Scotland's guiding principles on the environment: statutory guidance - gov.scot (www.gov.scot)
[47] https://consultation.sepa.org.uk/regulatory-services/detailed-proposals-for-protecting-wild-salmon/results/ccn_response.pdf

11.60 In other words, SEPA does not need to have perfect information about a clear and acknowledged environmental risk, such as the impact of sea lice on wild fish, before it takes precautionary measures.

11.61 Under these circumstances, SEPA must apply precautionary measures while it gathers better data on those impacts, to inform future management.

11.62 However, SEPA's sea lice plans rest entirely on a system of adaptive management and cannot therefore be considered to apply the precautionary principle to the clear threat from fish farm-derived sea lice. When information is lacking, as it is here, the precautionary principle must necessarily come before adaptive management.

Regulatory Reform (Scotland) Act 2014

11.63 SEPA's primary purpose, as set out in the Regulatory Reform (Scotland) Act 2014 is to ensure that Scotland's environment is protected and improving, including ensuring that natural resources are managed in a sustainable way. In carrying out its functions for that purpose, SEPA must, except to the extent that it would be inconsistent with its purpose, contribute to improving the health and wellbeing of people in Scotland and to achieving sustainable economic growth.

11.64 In the context of sea lice control, the Scottish Regulators' Strategic Code of Practice, drawn under the 2014 Act, requires regulators to "adopt risk and evidence-based protocols which help target action where it's needed and help to ensure the achievement of measurable outcomes" and states that "regulators should consider risk at every stage of their policy planning and decision-making processes to help ensure that action is targeted where it is most needed."

11.65 SEPA claims that "in developing the details of the framework, we have followed the Scottish Regulators' Strategic Code of Practice, designing the framework to be transparent, accountable, consistent, and proportionate, targeting action to where it is needed, based on environmental risk"[48], but that is patently not the case.

11.66 By not addressing existing farms first, as a priority, SEPA is ignoring its obligations in the Code, as there is no actual risk from any new, yet-to-be-built farms, or from any proposed expansion of yet-to-be expanded farms. It is obvious that the current, existing risk to wild salmonids can come only from existing farms.

11.67 ESS is asked to consider whether SEPA's sea lice plans meet its purpose as set down in the 2014 Act and the extent to which SEPA has, in

[48] Detailed proposals for a risk-based, spatial framework for managing interaction between sea lice from marine finfish farm developments and wild salmonids in Scotland - Scottish Environment Protection Agency - Citizen Space (sepa.org.uk) – see 'Overview'

fact, complied with the Scottish Regulators' Code in its prioritising of risk, favouring the facilitating the growth of the industry (new farms and expansion of farms) over dealing first with the risk to wild salmonid populations from existing farms.

12. Conclusions

12.1 Harm continues to be being caused to wild Atlantic salmon and sea trout by sea lice emanating from Scottish marine salmon farms.

12.2 The continued failure of the Scottish Government and its regulators to put in place proper controls to protect both species is contrary to their legal obligations under a range of legal instruments - international, assimilated law (ex-European Union) and domestic.

12.3 That sea lice from salmon farms cause harm to both wild Atlantic salmon and sea trout is no longer seriously contested by any party to the debate, other than from parts of the salmon farming industry itself.

12.4 The Scottish Government's approach to the sea lice issue outlined above has been characterised both by its sluggish pace, and by the underlying unwillingness of Scottish Government to take any steps that might constrain the growth of the politically-important Scottish salmon farming industry.

12.5 Since the early 2010s, Salmon & Trout Conservation (now WildFish) has been closely involved in efforts to protect wild salmon and sea trout, leading to the two recent Parliamentary Committee reports, out of which came the SEPA proposals at the heart of this matter.

12.6 SEPA was tasked by Scottish Government with bringing forward proposals to address fish farm / wild fish interactions, particularly those associated with sea lice, under the Controlled Activities Regulations. Two rounds of public consultation followed. SEPA's final proposals are now finally in a very late stage of development and early implementation.

12.7 SEPA's plans are based not on a properly precautionary approach, but on a process of what SEPA terms 'adaptive management'.

12.8 There are a number of relevant legal and other obligations derived from international law and conventions, assimilated EU-derived law and domestic law.

12.9 ESS is asked to consider whether SEPA's new system to regulate the interaction between fish farm-derived sea lice and wild salmonids is, in fact, lawful, as against that range of obligations, including the Biodiversity Convention, the Convention on the Conservation of Salmon in the North-East Atlantic, the Water Framework Directive[49], the Marine Strategy Framework Directive, the Habitats Directive and applicable domestic legislation.

[49] References to Directives should be read as references to the assimilated but EU-derived law in Scotland

Contact details:

Guy Linley-Adams Solicitor
Authorised and regulated by the Solicitors' Regulation Authority
SRA no 328970 and the Law Society for Scotland no 30663
guy@wildfish.org