Response ID ANON-HA2M-67PV-U

Submitted to Detailed proposals for a risk-based, spatial framework for managing interaction between sea lice from marine finfish farm developments and wild salmonids in Scotland
Submitted on 2023-09-15 14:33:54

Introduction

Summary and conclusions

Wild Salmon Protection Zones (WSPZs)

1 Do you agree with our revisions to the WSPZ?

Yes

If not, please explain why you disagree and what would be your alternative:

Fisheries Management Scotland remain supportive of the sea lice risk assessment framework, and we are of the view that it should be implemented as quickly as possible, with a particular focus on accelerating the inclusion of existing farms. The recommendations of the Salmon Interactions Working Group are quoted a number of times in the consultation document, but a key recommendation (recommendation 1.2.) has not been included. This recommendation, which was subsequently endorsed in the Scottish Government response, states that the regulatory system should be robust, transparent, enforceable and enforced and this is the test by which we will judge the success or otherwise of the framework. Unfortunately, there are a number of areas where we do not believe that the current proposals meet this test, and we have highlighted these points in our answers below. Whilst we have answered 'no' to many of the binary questions below, this is often a reflection of the way the questions are drafted.

We are broadly supportive of the changes made to the WSPZs since the first consultation, subject to the concerns set out below being addressed. As the delineation of the WSPZs underpins the efficacy of the whole framework, it is vital that we are satisfied that the network of WSPZs robustly protects wild salmon and sea trout from impacts arising from sea lice from fish farms.

Whilst we support the identification of an appropriate radius to define the edges of a WSPZ where a salmon river drains into open sea, we do not understand the basis of setting this at 5km. We believe this figure is arbitrary and does not make biological sense in all circumstances. For example, a study in Norway assessed the risk of impact of sea lice on marine residence time of sea trout populations and considered that areas extending to 20km around home river mouths constituted critical marine habitat (Finstad et al., 2021). For example, in Ayrshire the 5km radius results in a 'patchwork' approach with multiple WSPZs identified along the coast where wild salmonids are likely to traverse, and it does not seem logical to treat these as distinct, individual WSPZs. In this case, multiple important salmon rivers drain into this large but enclosed water body where it is well understood that wild fish are migrating. We understand that post smolts from the Endrick Waters SAC have been detected on a line of receivers in Kilbrannan Sound, so in our view there must be a single WSPZ which extends from the River Clyde estuary to Kilbrannan Sound. Where there remains an absence of good quality information on the specific use of the sea by post-smolt salmon and sea trout in this area, an alternative approach to identifying WSPZs would be more appropriate. On that basis, we would advocate either one large WSPZ to cover the entire Firth of Clyde, or for the radius of each current WSPZ to be extended to 20km, with a view to ensuring continuity between the current zones. A number of tracking studies published by the Marine Directorate demonstrate that the Firth of Lorn is an important coastal area for wild salmon. This is being further explored through the West Coast Tracking Project (a partnership between the Atlantic Salmon Trust, Marine Directorate and Fisheries Management Scotland) but we consider that the WSPZ identified for the Linnhe and Sound of Mull system should be extended now to cover the outer Firth of Lorn.

There are other information sources that should be used to inform the designation of WSPZs. We have not been able to interrogate the SEPA sea lice modelling to the extent that we would have liked, but we believe that this work shows areas out-with WSPZs where lice concentrations would appear to suggest a risk to wild fish. A similar picture emerges from some of the industry sea lice dispersal modelling that has been used in planning applications in recent years, and we understand that modelling undertaken on behalf of the Coastal Communities Network gives an important perspective. We believe that where modelling predicts high concentrations of lice out with the proposed WSPZ boundaries, the boundaries of these WSPZs should be extended accordingly. In our view particular early attention should be given to the following areas: Outer Firth of Lorn, the waters around Skye, Oldany Island, Sound of Harris, and south of Kilbrannan Sound.

As set out in our response to the previous consultation, we consider that SEPA must do more to account for cumulative impacts from sea lice encountered as wild salmonids pass through multiple WSPZs during their migration. This could be dealt with in a number of ways, including using a more precautionary threshold for sea lice in the water column. Under the proposed system, wild salmon could be exposed to a sea lice burden just below the critical threshold as they leave a WSPZ and this would be deemed acceptable by SEPA without considering any subsequent infection pressure during their migration either in open water or when passing through a subsequent WSPZ.

It is not fully clear from the consultation, but we understand that WSPZs which are contiguous constitute a single WSPZ, for example Loch Fyne out to the east and west of Arran, and the areas from Loch Linnhe out around Mull. In addition, and to ensure that the WSPZs are appropriate to the migration of wild salmonids, we propose that WSPZs identified for Loch Broom, Little Loch Broom and the area around Gruinard Island are consolidated into one WSPZ. We also believe that the consolidated WSPZ should extend to the sea areas surrounding the Summer Isles. This area includes extensive maerl bed habitat which is likely to be of significant importance for sea trout and will provide crucial first feeding opportunities for salmon. There are a number of existing and proposed farms in this area, and potential impacts on wild fish in this area should be fully considered. Finally, it would appear that WSPZs for Loch Kishorn, Loch Ainort, Loch Greshornish, Loch Eil, Loch Craignish, Loch Long, Gare Loch and Loch Striven do not cover the entirety of the loch system – if this is intentional, SEPA should provide further justification for this.

We would expect that the overall number and individual boundaries of WSPZs will be kept under review and amended to include rivers that previously held salmon. In our view, this should happen immediately, in line with the principals laid out in the Biodiversity Strategy and in moving away from trying to achieve 'no deterioration' to a position of actively restoring Scotland's rivers and native fish populations.

Once the WSPZs are finalised, it is imperative that stakeholders have a full understanding of the extent of each individual WSPZ. With this in mind, we believe it would be helpful for each WSPZ to be assigned a name or label to provide this clarity.

2 Do you have any additional information on, or suggestions how we could identify, important sea trout rivers in the West Coast, Western Isles and Northern Isles?

Additional information or suggestions:

It is not clear what is meant by 'important' in this context as sea trout are designated Priority Marine Features – habitats and species considered to be marine nature conservation priorities in Scottish waters. Therefore, all sea trout populations are important and are recognised as such by both Scottish Government and NatureScot. Our view is that all rivers should be included within protections zones for sea trout unless there is conclusive evidence to indicate that there has never held sea trout or Atlantic salmon populations. We are happy to engage further with SEPA as the proposals are developed further.

Screening models

3 Do you have any suggestions to improve our screening models?

Do you have any suggestions to improve our screening models?:

We do not have the capacity to fully assess the screening models in detail, but we understand the basis behind them and support their use until such time as refined modelling is available for all WSPZs on a consistent, agreed basis.

We seek clarification from SEPA that the proposed threshold of 0.75 infective-stage sea lice per m2 days is suitably protective of wild fish. The information in Appendix 2 sets out the justification for this figure, with reference to a number of studies from Norway and Scotland. We agree that the meta-analysis (Ives at al 2023) quotes in the consultation provides a reasonable threshold for the level at which serious physiological impacts start to occur. However, this threshold is 0.08 mobile lice per gram of post-smolt, not 0.8 as quoted in Appendix 2 (we recognise that this is a typographical error, and not an error that has carried through into the threshold calculation). However, Appendix 2 also suggests that the exposure threshold which would result in 0.08 mobile lice per gram of post-smolt, is actually 0.65 infective-stage sea lice per m2 days. We therefore do not understand the basis for using 0.75 infective-stage sea lice per m2 days. Please see also our comments below in relation to cumulative impacts.

We note however, that Ives at al. (2023) also relate their T1 threshold (0.08 lice g-1) to assessments of mortality rates undertaken by Taranger et al. (2011, 2015). Taranger arrived at assumptions that mortality is 20% at 0.1-0.2 lice g-1, with Ives et al. stating that this seems reasonable in view of their estimate that risk from lice increases substantially above 0.08 lice g-1. It is therefore clear that some mortality would appear to be likely in wild salmon at even 0.65 infective-stage sea lice per m2 days. The West Coast Tracking Project, will provide valuable information to inform the models, but in the first instance, we do not believe that the threshold of 0.75 infective-stage sea lice per m2 days is suitably protective of wild fish.

For the fish tracks model, it is imperative that the cumulative impact of fish passing through multiple WSPZs during their migration journey is given due consideration. It is likely that fish will migrate through multiple WSPZs and therefore feasible that the exposure threshold may be exceeded as fish cross into subsequent (and possibly multiple) WSPZs. The West Coast Tracking Project has collected data on the movements of salmon through Scotland's coastal waters which will provide valuable information to this process. We do not believe that this has been given adequate consideration, although we understand the WSPZs depicted as contiguous in the online GIS map are to be considered as one WSPZ.

Related to our comments above on thresholds and cumulative impacts, we seek clarity from SEPA as to the approach that will be taken to allocating existing capacity, in the event that the sea lice load within a WSPZ is below critical thresholds. It is our understanding that in other areas of regulation SEPA would keep some of the available capacity (perhaps 5-10%) in reserve. We are strongly of the view that the same principle should apply to the sea lice risk assessment framework. We would like to discuss this further with SEPA.

We emphasise that SEPA's regulatory decisions will be a function not only of the model outputs, but also of how SEPA categorise each farm or area in terms of perceived risk. To help alleviate this concern, SEPA should make clear the key inputs and parameters which underpin the screening models and determine the outcome of the assessment. This will support overall transparency in the process.

It is our understanding that SEPA have applied the exposure threshold to the 95th percentile value, to indicate whether or not a proposed development would be likely to have a significant adverse impact. Whilst the use of the 95th percentile may be best practice from a modelling perspective, we would expect to see a justification provided for this from the perspective of sea lice biology and/or wild fish interactions.

We note concerns raised by some stakeholders about the perceived over-precautionary nature of the screening model. It is vital that the screening models retain a degree of precaution to avoid a situation where a potentially harmful development is screened out of the process for further refined modelling.

We expect that SEPA will ultimately move away from screening models, and utilise a single, agreed hydrodynamic and post-smolt tracking model with consistent inputs/parameters that feed into particle tracking models for each WSPZ. We would encourage SEPA to set out a clear time period in which to achieve this.

4 Do you have any suggestions on how we could better present the outputs of the models?

Do you have any suggestions on how we could better present the outputs of the models?:

The mapped outputs (p. 116 - 119) that arise from the screening models could usefully be accompanied by a succinct narrative explaining the outcome. Equally, the use of a colour code to identify the risk category of each assessed farm would be valuable for stakeholders who are unfamiliar with the screening models and the framework's process (a four-tiered colour code in line with the four risk categories).

We understand that the screening model assesses the contribution of sea lice arising from a farm to the relevant WSPZ(s) to assess the relative risk of that farm causing the WSPZ to reach or exceed the exposure threshold of 0.75 infective-stage sea lice per m2 days. A contribution of ≥0.04 infective-stage sea lice per m2 is proposed as the threshold for a 'substantial' contribution of sea lice, and ≤0.02 is categorised as 'negligible', with two intermediary categories of 'small' and 'moderate'. It is not clear what the thresholds are for the 'small' and 'moderate' risk categories, and how these screening thresholds relate to the overall 0.75 infective-stage sea lice per m2 exposure threshold. As we understand the situation, the outputs of the salmon post-smolt model will be used to categorise the contribution of a farm relative to the exposure threshold, as opposed to the interim position set out in the consultation. The results of the West Coast Tracking Project will be valuable in informing this model by providing data on the speed of salmon migration through Scotland's sea lochs and WSPZs so that we can better understand the duration of salmon exposure to sea lice. Stakeholders need to have a full understanding of the outputs of the models as soon as possible in order to have confidence in the process. In addition, we would recommend that SEPA adopts clear and consistent naming systems for all aspects of the framework including the risk assessment categories to improve stakeholder understanding of a complex and technical regulatory approach. The various use of numbers and/or labels (such as medium, considerable, substantial) which differ in different parts of the consultation is somewhat confusing and does not help stakeholders to understand the risk or severity associated with the different components of the consultation.

We note that to date SEPA have only had access to publicly available sea lice data (i.e. from March 2021). We do not believe that this is sufficient to give an adequate assessment of sea lice performance, and we would expect that SEPA will urgently gain access to more data with which to revise the screening models (as committed by the industry in the SIWG recommendations).

Risk assessment framework for sea trout

5 Do you agree with the proposed timetable?

No

If not, please explain why you disagree and what would be your alternative?:

We recognise that the approach for the risk assessment framework for salmon is not directly applicable to sea trout due to different life history characteristics and therefore sea lice exposure time. We also recognise that the development of a sea trout specific framework is complex and will take time. However, sea trout are designated as Priority Marine Features, and we do not consider that the proposed interim approach for sea trout will provide any meaningful additional protection.

Until such time as a bespoke approach for sea trout is developed, the approach designed for salmon should be extended to cover the period within which it can be reasonably expected that sea trout will be present in WSPZs. Crucially, this interim approach should apply to all farms, not just new and expanding farms or those considered to be high risk. This would mean ensuring that the total sea lice load is managed below the currently identified thresholds for salmon (not the arbitrary level of 0.5 lice/fish proposed in the consultation) throughout the period within which it can be reasonably expected that sea trout will be present in WSPZs.

Given the recognised biodiversity and wild salmon crisis, we are not comfortable with 2027 being the endpoint for this process. The full framework must be delivered at pace, and SEPA must ensure that appropriate resources are available to develop the framework as soon as possible. We would seek assurance that SEPA are using their existing charging powers to ensure full cost recovery across their entire regulatory remit, to ensure that the resources for implementation of the framework and regulatory responsibilities for other sectors are available. The models for the full regulatory framework for sea trout should include all WSPZs, not just those considered to be high risk for salmon. In addition, the WSPZ and screening model development in all areas (Orkney, Shetland and at-risk WSPZs) should be taken forwards in parallel.

Risk assessment matrix

6 Do you agree with our proposed risk assessment methodology?

Yes

If not, please explain why you disagree and what would be your alternative?:

We are inclined to agree with the proposed risk assessment methodology, dependent upon further clarification as to how the quantitative outputs of the screening model relate to the categories set out in the risk matrix. We support the principal behind using a matrix to assess risk, but the basis upon which the WSPZs and farms are assigned to the relevant risk categories is not set out in sufficient detail for stakeholders to have a full understanding. Our ultimate view on this process will be determined by our confidence in the accuracy of assigning farms according to an appropriate level of risk. Please see our comments above in relation to progressing the outputs of the salmon post-smolt model to categorise the contribution of a farm relative to the exposure threshold.

It is critical that all risk assessments of available capacity within WSPZs and of individual farm sea lice contributions to that zone are ultimately underpinned by the a critical threshold of infective-stage sea lice per m2 days exposure. We believe that the appropriate use of this threshold is a clear and positive differential from regulatory regimes operating in other jurisdictions, as long as the framework within which this sits is appropriate to the protection of wild salmonids. We will therefore seek regular assurance that the regulatory framework results in control of sea lice to ensure that the

threshold is not exceeded (including appropriate consideration of cumulative impact of wild fish passing through multiple WSPZs). With respect to an individual WSPZ which is categorised as high risk (i.e. with little or no remaining capacity), we consider that swift regulatory action should be taken to ensure that sea lice arising from existing farms within that WSPZ, are kept below this critical threshold. Alternatively, we seek further assurance that farms categorised in the lower relative risk categories (i.e. 1 – 3) will be properly assessed and monitored to ensure that the categorisation is appropriate. We would like to work with SEPA to ensure that appropriate monitoring is put in place across all categories of risk.

For new and expanding farms, SEPA appear to be planning to only require refined models for development proposals if local wild salmon populations "are not in a good state or are declining". This is not an acceptable approach, and in our view runs contrary to the principles set out at the very inception of this process, as discussed at a meeting of all stakeholders at Saughton House in 2018 or 2019. At that meeting SEPA and Marine Scotland Science made clear that protection of wild salmonids was a priority across the 'aquaculture zone'. All development proposals should be subject to refined modelling if the screening model indicates that there is a risk of the exposure threshold being exceeded.

We would expect SEPA to take the lead on development of the refined models and ultimately to utilise a single, agreed hydrodynamic and post-smolt tracking model with consistent inputs/parameters that feed into particle tracking models for each WSPZ. We would encourage SEPA to set out a clear time period in which to achieve this.

7 Do you agree with our proposed approach to developing a risk assessment framework for sea trout?

No

If not, please explain why you disagree and what would be your alternative:

We agree with the proposed approach for developing a risk assessment framework for sea trout in terms of the engagement and consultation proposals set out, and for this to be progressed with pace in 2024. The final risk assessment framework for sea trout must cover the entire period within which it can be reasonably expected that sea trout will be present in WSPZs. We therefore do not agree that the approach for sea trout should only apply from 01st April until 30th June.

We have significant concerns about the interim approach proposed to offer 'a level of protection' for sea trout. We do not believe that the use of a limit of 0.5 adult female lice per fish x maximum number of fish on the farm is appropriate. The basis for the framework is that impacts on wild salmonids are a function of both the concentration of sea lice in the environment and the exposure time to those lice. Given that sea trout are resident in coastal waters for a prolonged period (and therefore their exposure to sea lice in the environment can be assumed to be longer than for salmon) we can see no justification for the allowable lice per fish limit to be higher for sea trout, than is proposed for salmon. In order to achieve a 'level of protection' for sea trout until such time as a bespoke framework is developed, the numeric lice limits should at least match those used for salmon (i.e. to remain within the overall critical threshold of infective-stage sea lice per m2 days exposure).

In addition, using the end of June as a cut-off date for the interim approach is not appropriate. No justification has been given for the use of this date, and we believe it is entirely arbitrary. Sea trout are resident in our coastal waters for a prolonged period during the summer. The interim approach for sea trout should cover the period for which it can reasonably be expected that sea trout are present in WSPZs.

Finally, the interim approach as currently drafted will only apply to new and expanding farms or existing farms assessed to be posing a high risk to salmon. In common with our view on the overall regulatory framework, and in line with the recommendations of the Salmon Interactions Working Group, we are strongly of the view that the sea trout framework should apply to all new and existing farms, both in the interim approach and the full regulatory framework.

Pre-application process

8 Do you agree with the proposed workflow for pre-applications?

Yes

If not, please explain why you disagree and what would be your alternative?:

We broadly support the process of using an initial screening model to categorise the relative risk level of a development proposal, and the requirement for further refined modelling should the screening model indicate a considerable or high risk of the sea lice exposure threshold being met or exceeded.

It is positive that SEPA have included an explicit step for local community engagement following the screening modelling process. The Salmon Interactions Working Group made a clear recommendation that 'District Salmon Fishery Boards (DSFBs) should continue to be statutory consultees in the future regulatory regime'. In their response to these recommendations, the Scottish Government stated that 'the contribution and local knowledge District Salmon Fishery Boards provide as a statutory consultee in planning determinations is valued. Effective governance and constructive debate is essential within the consenting framework, including through the established CAR consultation and assessment procedure.' We therefore consider that an additional step for pre-application consultation with statutory consultees should be added to the process, such that developers should undertake engagement with DSFBs ahead of proceeding to engage in the screening model process.

The basic information required from developers for the screening process includes the "maximum average number of adult female lice per fish to which the developer intends to manage the farm during the wild salmonid migration period by year of production cycle at sea". This implies that an operator can propose any lice per fish limit to adhere to during their production, and it should be more explicit that this must conform with the environmental outcome of remaining within the critical threshold of infective-stage sea lice per m2 days exposure. In addition, developers should be required to fully consider sea lice arising from existing farms, both in terms of risk to wild salmonids and in their sea lice management strategies early in the application process.

9 Do you agree with the proposed timetable for the development of pre-application environmental assessment?

No

If not, please explain why you disagree and what would be your alternative?:

Given the recognised biodiversity and wild salmon crises, we are not comfortable with 2027 being the endpoint for this process. The full framework must be delivered at pace, and SEPA must ensure that appropriate resources are available to develop the framework as soon as possible. We would seek assurance that SEPA are using their existing charging powers to ensure full cost recovery across their entire regulatory remit, to ensure that the resources for implementation of the framework and regulatory responsibilities for other sectors are available.

However, we are encouraged that the pre-application environmental assessment will be required for all new and developing farms from the implementation of the framework, and that developers have been made aware that this includes any applications yet to be determined regardless of what stage they may be at in the planning process.

For existing farms, we understand that the process of developing refined models for the highest risk WSPZs is due to begin in 2024. We encourage SEPA to progress this work with urgency given the current biodiversity and wild salmon crises.

Applications for new or expanding farms

10 Do you agree with the way we have used the risk assessment matrix to identify where we will apply permit conditions for reporting and lice limits?

No

If you disagree, please explain how you would apply the matrix and why this would deliver a better outcome?:

We are strongly of the view that conditions relating to numeric lice limits should apply to all new and existing farms. We accept that a risk assessment matrix is an appropriate approach to manage risk, with the overarching objective of ensuring that the total sea lice load in a WSPZ does not exceed the critical exposure threshold for wild salmon. However, we do not believe that the proposed approach meets the test of being robust, transparent, enforceable and enforced, as recommended by the Salmon Interactions Working Group. In particular, we believe that it is unacceptable for a large number of farms to have no numeric lice limits. Subject to our comments about confidence in the screening models, and the need to address cumulative impacts, we are comfortable with the principle that some farms will have lower lice limits than others. We support the approach as set out in the consultation for the two highest risk categories, and in particular the clear statement that proposals that would result in an exposure threshold being exceeded, or further exceeded, will be refused authorisation. However, for all other farms, we consider that a numeric lice limit should be included as a condition of consent, as currently proposed for the third tier of risk. We believe that this would be entirely proportionate, as it would only place farms deemed by SEPA to be low risk farms under the same regulatory controls as they currently face under FHI, whilst consolidating this approach under a single licence.

On reporting, we support the requirements set out, with the caveat that both sea lice levels and the number of farmed fish should be reported and published in as close to real time as possible so that the process is fully transparent. This is in line with the recommendations of the Salmon Interactions Working Group.

11 Do you agree with our proposal for setting permit limits on the number of lice on a farm?

Yes

If not, please explain why you disagree and what would be your alternative?:

We agree that permit limits should be set with the intention of keeping the overall sea lice burden in a WSPZ below a critical threshold of infective-stage sea lice per m2. As highlighted above, we seek further assurance that the thresholds proposed by SEPA will demonstrably achieve this crucial environmental outcome. It is vital that SEPA provides all stakeholders with a clear narrative on how conditions which set numeric lice limits per farm will contribute to compliance with this overall sea lice burden for the WSPZ. This ongoing narrative is particularly important as the proposed framework is a significant move away from the approach adopted in most jurisdictions – an assessment of performance against the average number of lice per farmed fish. It is vital that all stakeholders understand that farms that might have previously been considered to be performing poorly may or may not be the major contributors to the total lice load within WSPZs. Equally, it is important that SEPA identifies farms that contribute a disproportionate number of lice to WSPZs.

We are strongly of the view that there should be a presumption against further development using traditional open-net technology in any WSPZ categorised as having little or no remaining capacity for infective-stage sea lice, unless the developer can demonstrate that the development will not contribute to the sea lice load in the area. In such circumstances, strict conditions to ensure that this is the case, alongside robust regulatory control of sea lice load arising from existing farms within the WSPZ must apply. As highlighted above, we support the clear statement that proposals that would result in an exposure threshold being exceeded, or further exceeded, will be refused authorisation.

12 Do you agree with our proposal for applying a rolling average limit, and a maximum daily limit on the number of adult female sea lice?

No

If not, please explain why you disagree and what would be your alternative?:

Whilst we agree that it is the average lice management performance of the farms contributing to infective-stage sea lice concentrations in a WSPZ that is most important in managing exposure risk, we do not accept that this is an adequate justification for using a rolling average limit. As we set out in the previous consultation, we remain strongly opposed to this approach. The key outcome is to ensure that the critical exposure threshold for wild salmon is not exceeded in the WSPZ, and SEPA have not demonstrated how the use of a rolling average would be compatible with this. The use of a rolling average will potentially allow exceedances of the exposure threshold, with no consideration of the impact on wild fish, and we do not consider that this is consistent with the precautionary principle. Crucially, this approach does not meet the test of being transparent, and it adds another layer of complexity for stakeholders, in what is already an extremely complex system.

In addition to our comments above, we also take issue with the idea of using 4 times the rolling average as the threshold for the purpose of avoiding large peaks. If a lice level of 4 times the rolling average is reached, that would mean that the four-week rolling average has also been breached in a single week. If SEPA is to persist with the approach of using a rolling average, the peak level should be set much lower – we would suggest twice the rolling average. This would increase the chance of preventing prolonged, large peaks and associated impacts on wild salmonids. This would also help to act as an 'early warning' of potential issues going forward. However, we would emphasise that, given that the current approach is based solely on models, a rolling average approach is entirely inappropriate as a regulatory tool.

13 Do you agree that it is proportionate to require enhanced sea lice counts at high-risk sites and that this should be delivered in due course via automated systems using artificial intelligence?

Yes

Please give reasons for your answer:

We strongly agree that enhanced sea lice counts should be required to increase accuracy where SEPA consider a site to be high risk. It is entirely proportionate for this to be required wherever new or existing farms are considered to be high risk. The actual number of fish to be counted for sea lice on high risk farms should be informed by statistical modelling to ensure that the data used in regulation is as accurate as possible.

Automated systems that can be thoroughly audited for their accuracy and efficacy could potentially be introduced in future, but we do not consider that the time frame set out in the consultation document is realistic for this. Any such systems would need to be properly verified to ensure that they are suitable for use in regulation, and in order for stakeholders to have full confidence in the system.

We would also expect regulators (SEPA and/or FHI) to undertake extensive compliance monitoring to ensure that estimates of the overall sea lice load in the environment as are accurate as possible. It is disappointing that this is not covered in detail in the consultation. We would remind SEPA that the REC Committee strongly recommended "that any changes to the enforcement regime should incorporate measures which will ensure that there is a move away from the self-assessment culture that appears to be prevalent at present."

14 Do you agree with how we propose to provide a level of protection until the end of June for sea trout on the West Coast and around the Western Isles while we develop a new risk framework for sea trout?

No

If you disagree, please explain how you would apply the matrix and why this would deliver a better outcome?:

We have significant concerns about the interim approach proposed to offer 'a level of protection' for sea trout ahead of a full regulatory framework being developed. The approach as set out does not appear to recognise that sea trout are designated as Priority Marine Features – habitats and species considered to be marine nature conservation priorities in Scottish waters.

We do not believe that the use of a limit of 0.5 adult female lice per fish x maximum number of fish on the farm is appropriate. The basis for the framework is that impacts on wild salmonids are a function of both the concentration of sea lice in the environment and the exposure time to those lice. Given that sea trout are resident in coastal waters for a prolonged period (and therefore their exposure to sea lice in the environment can be assumed to be longer than for salmon) we can see no justification for the allowable lice per fish limit to be higher for sea trout, than is proposed for salmon. In order to achieve a 'level of protection' for sea trout until such time as a bespoke framework is developed, the numeric lice limits should at least match those used for salmon (i.e. to remain within an overall critical threshold of infective-stage sea lice per m2 days exposure).

In addition, using the end of June as a cut-off date for the interim approach is not appropriate. No justification has been given for the use of this date, and we believe it is entirely arbitrary. Sea trout are resident in our coastal waters for a prolonged period during the summer. The interim approach for sea trout should cover the period for which it can reasonably be expected that sea trout are present in WSPZs.

Finally, the interim approach as currently drafted will only apply to new and expanding farms or existing farms assessed to be posing a high risk to salmon. In common with our view on the overall regulatory framework, and in line with the recommendations of the Salmon Interactions Working Group, we are strongly of the view that the sea trout framework should apply to all new and existing farms, both in the interim approach and the full regulatory framework.

15 Do you agree with how we propose to set permit conditions to protect sea trout populations?

No

If not, please explain why you disagree and what would be your alternative?:

Please see our answer to question 14 above.

16 Do you have any comments or suggestions on how we plan to phase in the framework?

Yes

If so, please provide details:

Notwithstanding our previous comments raised in relation to the implementation of the framework itself, the implementation of this regulation must be accelerated in line with urgency set out in the Biodiversity Strategy, the Wild Salmon Strategy and the Salmon Interactions Working Group. It is important that the regulatory framework is ambitious, and we don't believe that the initial focus on 'preventing further deterioration' meets this test. A clear timeframe for ensuring restoration of wild salmonid populations, as opposed to just preventing further deterioration must also be set out in a refined timetable for delivery of the framework.

An ambition of merely preventing further deterioration on existing farms and delaying improvement until such time as evidence is collected from refined models and monitoring (which may take until 2027) is not an acceptable starting point. In the consultation, SEPA state that they "will act to protect wild salmonid populations as soon as we have good evidence they are being impacted and evidence confirming the contributions of individual farms" – we are extremely concerned about this principle. We therefore seek urgent clarification as to what SEPA will consider to constitute 'good evidence' and what the associated timescale is for regulatory action.

Permitting timetable

17 Do you agree with the proposed timetable for permitting?

Yes

If not, please explain why you disagree and what would be your alternative?:

We broadly support the application of the framework to new and developing farms by the end of 2023. We also support the intention to apply the framework to all determinations undertaken after the implementation date, no matter when the application was submitted. However, as detailed above, we do not support the proposed timeframe for the inclusion of existing farms within the framework, and we wish to see the development and implementation of environmental monitoring requirements to be introduced for all sites as soon as possible.

Regulation for existing farms

18 Do you agree with our approach to monitoring and reporting conditions and the way we have used the risk assessment matrix to identify where we will add lice limits to permits?

No

If you disagree, please explain how you would apply the matrix and why this would deliver a better outcome?:

As highlighted above, we do not consider that an initial approach designed to maintain the status quo through 'no deterioration' conditions for existing farms is acceptable. As SEPA have set out in the consultation, Environmental Management Plans (EMPs) have been used as an interim approach to managing sea lice interactions between farmed fish and wild salmonids since 2019. This approach is inconsistently applied by both operators and local planning authorities and is neither robust nor enforceable. EMPs are not fit for purpose and it is imperative that we transition to this new regulatory system for both new and existing farms as soon as possible.

As we have also highlighted above, we believe that all farms should be subject to numeric lice limits. On that basis we do not agree with how the risk assessment matrix identifies the farms which will be subject to numeric lice limits.

With regards to monitoring and reporting, we support the requirements set out, with the caveat that both sea lice levels and the number of farmed fish should be reported and published in as close to real time as possible so that the process is fully transparent. This is in line with the recommendations of the Salmon Interactions Working Group. Our comments on requirements for environmental monitoring requirements are set out below.

We do not consider that the proposed approach to numeric sea lice limits for existing farms is appropriate. The purpose of the framework should be to ensure that the numbers of infective stage sea lice are managed at a level below critical thresholds for the protection of wild fish. Therefore, we consider that the same approach (subject to our suggested changes highlighted above) should apply to both new and existing farms.

In line with the precautionary principle, we argue that existing farms in all but the lowest risk category should be subject to a lice limit of 0.2 adult female lice per fish x maximum number of fish on site from the outset. Once refined models are in place, the same approach as SEPA intend to use for new sites should apply. We seek further assurance from SEPA that the suggested targeted approach to individual farms within WSPZs with 'little to no' lice capacity will effectively manage lice levels across the whole WSPZ within the critical exposure threshold.

In the previous consultation, we argued that the framework should include all rivers, that hold, or have previously held salmon or sea trout populations. We remain of the view that the framework should be extended to include such rivers, in line with the ambitious for restoration included within the Scottish Biodiversity Strategy.

Reducing pressure on wild salmon populations

19 Do you have any existing evidence that could be used to assist assessments of the WSPZs where the sea lice exposure threshold is potentially being exceeded?

Text box for information:

Fisheries Management Scotland members are working to manage these issues on a day-to-day basis, and have collected local data on sea lice interactions for a number of years which will be valuable to feed into this process. On the understanding that such assessments will be taken forward quickly, and in line with the precautionary principle, we are happy to work with SEPA and other partners to develop the evidence base to assist swift and robust assessments of WSPZs as necessary.

Please add any files that could be used as evidence to assist assessments of these areas? :
No file uploaded

20 Would you be interested in collaborating with us in carrying out the assessments required to determine if action is required to reduce infective-stage sea lice concentrations in those WSPZs in which screening suggests the sea lice exposure threshold may be exceeded?

Yes

If so, how would you be willing to contribute? :

Following previous engagement with SEPA, the Marine Directorate and Crown Estate Scotland, Fisheries Management Scotland are keen to continue to contribute to the development of a robust programme of wild fish monitoring to assess sea lice infestation pressure and support the validation of models. Our members work hard to manage these issues on a day-to-day basis, and their experience and expertise should be used to inform this process on an ongoing basis.

If yes, please provide an email address so we can contact you:
general@fms.scot

Existing farm timetable

21 Do you agree with the proposed timetable for introducing measures at existing farms?

No

If not, please explain why you disagree and what would be your alternative?:

As highlighted above, the proposed timeline for completion of this process (2027) is unacceptable, and the initial approach of ensuring 'no deterioration' is not aligned with the recognised urgency of the wild salmon and biodiversity crisis. SEPA also references Environmental Management Plans (EMPs) "as an interim measure" for managing interactions between wild and farmed fish which have been in place since 2019. As outlined above, EMPs are not a suitable mechanism for managing risk to wild salmonids and it is important that we transition away from EMPs for both new and existing farms as quickly as possible. Please see our previous answers regarding our alternative approach to managing sea lice at existing farms ahead of refined modelling being undertaken at all sites.

The full framework must be delivered at pace, and SEPA must ensure that appropriate resources are available to develop the framework as soon as possible. We would seek assurance that SEPA are using their existing charging powers to ensure full cost recovery across their entire regulatory remit, to ensure that the resources for implementation of the framework and regulatory responsibilities for other sectors are available.

Compliance assessment

22 Do you agree with the way we are proposing to use the risk assessment matrix to identify where we should focus our regulatory effort?

Yes

If you disagree, please give your reasons and describe what you would propose instead?:

We are in broad agreement with the use of the risk assessment framework, subject to the concerns outlined below. We would again emphasise that the new regulatory system should be robust, transparent, enforceable and enforced. SEPA have a range of enforcement options available under the Controlled Activities Regulations, up to and including review and revocation of licenses. Whilst interpretation of the modelling work undertaken to date has led SEPA to conclude that revocation of licenses is unlikely to be required (because SEPA believe that the environmental outcome can be achieved through management of lice from farms which contribute a disproportionate proportion of sea lice into a WSPZ), it is important that stakeholders are clear that this option exists and will be used if necessary. We would remind SEPA that the REC Committee report into Salmon Farming in Scotland concluded that "enforcement action in relation to breaches of sea lice levels has not been sufficiently robust to date. It is therefore of the view that if the revised compliance policy is to be effective it must be robust, enforceable and include appropriate penalties". We do not consider that SEPA's proposed approach meets this recommendation, either in terms of the strength of enforcement action or the timelines under which action would be taken.

We broadly support the principle that the initial focus of regulatory effort should be on 'high' and 'considerable' risk farms, but this is predicated on confidence in the screening model (and the data used to populate this) giving an accurate picture of what is happening on the ground. On that basis, we would like to see a focus on monitoring for impacts on wild fish, and the use of sentinel cages, in all WSPZs to ensure that impacts are not occurring in WSPZs considered by SEPA to be lower risk. We would again emphasise that the inputs to the screening models are based only on 2.5 years of publicly available data.

This framework is intended to protect wild fish, and therefore any failures in compliance should be treated consistently with this objective in mind. Where other factors (such as farmed fish health issues, which compromise sea lice control) occur, the overriding factor should be the protection of the environment. Should such issues occur repeatedly, we would question the sustainability of that farm location, and other regulatory controls, up to and including review or revocation of licenses, may be necessary.

We are aware that under the current regulatory system for sea lice reporting there are many times in which sea lice numbers are not recorded/submitted. Failure to monitor and report sea lice numbers in line with permit conditions should not be tolerated during the short regulatory period proposed by SEPA. This information is fundamental to the success or otherwise of the framework, and we don't believe that a simple non-compliance would be a sufficient regulatory response.

As previously mentioned, the framework must meet the test set out in the Salmon Interactions Working Group of being robust, transparent, enforceable and enforced. Compliance with the framework, and how this is managed, will be critical in achieving this.

23 Do you agree with the proposed timetable for our compliance work?

No

If not, please explain why you disagree and what would be your alternative?:

Data reporting and auditing of data reporting for all farms should start in 2024, as a fundamental pillar of the framework and to increase transparency in the process and support the framework in meeting the test of being robust, transparent, enforceable and enforced from the outset. Data on sea lice and farmed fish numbers must be published in as close to real-time as possible as highlighted in the Salmon Interactions Working Group.

Environmental monitoring

24 Do you agree with how we propose to prioritise where we target effort under the first environmental monitoring strategy for the framework?

No

If not, please explain your reasons and what you think we should do instead?:

The proposed system is based on models with limited data inputs as highlighted in our previous answers. We therefore agree that a focus on ground-truthing and refining the models is important, including developing a greater understanding of sea lice infestation pressure and smolt passage times through WSPZs. However, due to the uncertainties surrounding the model inputs, and to provide a greater degree of confidence to stakeholders, we believe that environmental monitoring will be required across all WSPZs, not just those that SEPA consider to be of greatest risk.

We understand the proposed initial focus on the eight WSPZs on the West Coast and around the Western Isles in which SEPA's initial screening assessments indicate the sea lice exposure threshold may already be met or exceeded. However, if stakeholders are to have confidence in the framework, it is imperative that the same approach is quickly rolled out to WSPZs which fall into the next category of risk, and for environmental monitoring to be undertaken in all WSPZs from the outset. SEPA must put the appropriate resources in place to ensure that this can be done.

25 Do you think the focus of the monitoring strategy should be on the 5 types of monitoring listed?

No

If not, please explain your reasons and what you propose instead or in addition?:

We agree with the first four categories set out in the scope of monitoring, and believe that they should be progressed. Data gathered from monitoring work should be included in models to assess salmon exposure to infective-stage sea lice as soon as it is available. For instance, data from the West Coast Tracking Project will contribute to a more accurate understanding of salmon migration movements through WSPZs. However, we do not agree that information in trends in wild salmon stocks are required to inform 'where protection or reduction in pressure arising from farm-derived sea lice is most required'. The wild salmon crisis has been recognised by the Scottish Government and where models suggest a risk of impacts, we believe that regulatory action should be taken to address those impacts. This is in line with the precautionary principle, and we are very concerned that the suggested approach would result in long delays before regulatory action is taken. This is not consistent with the urgency set out in Scotland's wild salmon strategy. SEPA have defined an exposure threshold for the protection of wild salmonids which is based on the best-available evidence, and this should be the basis for swift regulatory action where the sea lice exposure threshold is exceeded.

26 Do you think that the proposed collaborative approach is the best mechanism for developing and delivering a monitoring plan?

Yes

If not, please give your reasons and describe what you would propose instead?:

We are supportive of the collaborative approach outlined in the document, but we do not understand SEPA's reluctance to use charging powers to recover costs associated with undertaking, or commissioning, the necessary environmental monitoring. The collaborative approach should inform the scope of the work required and then SEPA's charging powers should be used to recover the cost of delivering this work. As we have highlighted throughout our response, given the resource constraints that SEPA are operating under, all mechanisms for swift delivery of this crucial framework must be fully explored and implemented.

27 Are there other bodies and organisations you think would be interested assisting with a collaborative approach to environmental monitoring?

No

If so, please can you say who they are and how you think they could contribute?:

We welcome the fact that Fisheries Management Scotland and our members' extensive experience in this area has been recognised.

Monitoring plans for WSPZs

28 Do you agree with the proposed timetable for the development of the Framework monitoring plans?

No

If not, please explain why you disagree and what would be your alternative?:

As highlighted above, we are strongly of the view that SEPA should use their charging powers to ensure that resources are in place to commission appropriate monitoring from the start of the framework across WSPZs in all risk categories. There is extensive experience of undertaking relevant monitoring across the aquaculture zone and we would emphasise that SEPA does not have to undertake this monitoring in house. SEPA should consider the approach to monitoring in 2024 now, a longer-term strategy can be developed from there.

Making data available

29 Do you agree with the proposed timetable for improving accessibility of information collected in implementing the framework?

No

If not, please explain why you disagree and what would be your alternative?:

We support SEPA's proposal to update and modernise Scotland's Aquaculture Website but, in common with our previous comments, we do not think that the proposed timetable for doing so is acceptable. This work should commence immediately, and we believe that the ambition should be for this to be completed within 12 months. All data should be made publicly available in as close to real time as possible. We agree that sea lice risk assessments should be included in the annual publications proposed under the Strategy from 2024.

Your details

30 What is your organisation? (if applicable)

Organisation:
Fisheries Management Scotland

Analysis of implications

31 Please provide your views on the effects of the proposed framework on your interests?

Please provide your views on the effects of the proposed framework on your interests?:

The lack of an appropriate framework to regulate the impact of sea lice on wild salmonids has long been recognised as a significant gap in Scotland. Fisheries Management Scotland are supportive of the sea lice risk assessment framework, but the effect of the new regulatory system on the health of wild salmonid populations is highly dependent on the manner and speed with which the framework is implemented. In our view the current proposals will have minimal or no positive benefit for sea trout populations. However, if the approach to existing farms is strengthened and accelerated and a more robust approach is adopted for sea trout, we believe that the sea lice framework will provide a positive basis upon which to address and manage the impact of sea lice on wild salmonids.

If we are to address the biodiversity crisis in Scotland, we strongly believe that we need to redress the balance between supporting economic interests and the core necessity of protecting the environment. We believe that this balance has been wrong for many decades and this needs to change if we are to address the current crises facing our natural environment.