



By Email

Scottish Environment Protection Agency
Aquaculture Regulation Team
Strathallan House
The Castle Business Park
Stirling
FK9 4TZ

15 September 2023

Dear Sirs,

DETAILED PROPOSALS FOR A RISK BASED SPATIAL FRAMEWORK FOR MANAGING INTERACTION BETWEEN SEA LICE FROM MARINE FINFISH FARM DEVELOPMENTS AND WILD SALMONIDS IN SCOTLAND

CONSULTATION RESPONSE ON BEHALF OF ORGANIC SEA HARVEST LTD.

Organic Sea Harvest (OSH), formed in 2015, was the first new start salmon farming company in Scotland for over two decades. The company has the express aim of farming its Salmon to Organic Standards. The company holds CAR licences issued by SEPA for four sites, all of which are at high energy, exposed locations, distant from the inner sea lochs and major salmon rivers. OSH is proud to produce Organically certified Salmon on its two operational sites to the south of Staffin on the Isle of Skye.

OSH, as an aquaculture operator has never sought to deny that there is the potential for sea lice released from salmon farms to present a risk of adverse impacts on wild salmonids. We must, however, recognise that this potential pressure is just one of many pressures facing wild salmonids. We seek, through low stocking densities and operation on exposed sites to reduce the need to treat for elevated sea lice numbers on our sites. We do, however, feel that there is an overemphasis on the impacts of sea lice on wild salmonids and that in our area of operation other, pre-existing, pressures are potentially more significant and have been exacerbated over an extended timescale through terrestrial agriculture and land management practices. This also presents a risk of pressures on wild salmonids but does not appear to have galvanised significant action from regulators or land owners in the area, including Scottish Ministers.

Moving forward OSH welcome the opportunity to continue working with Skye and Lochalsh Rivers Trust and the Skye District Salmon Fishery Board if it is reconvened, and to assist these bodies in their role of improving and restoring salmonid habitats within the rivers local to the OSH sites. This includes ongoing monitoring commissioned by OSH with the Skye and Lochalsh Rivers Trust acting as contractor, as well as opportunities in discussion to establish a long-term monitoring solution for fish migrations within the rivers close to our sites.

We welcome the opportunity to comment on this consultation. We thank the SEPA team for organising the stakeholder workshops held in late June which whilst useful in informing our response served to demonstrate significant unresolved issues and areas of uncertainty within the SLRF as proposed. We would like to take this opportunity to note our disappointment that the request we made on 29th of June seeking a one-to-one meeting went unanswered and that it was not possible for SEPA to convene an industry meeting with Local Authority Planners and NatureScot during the consultation period as was initially offered.

OSH supports the development of a properly constructed, tested, and validated model that accurately assesses the risks that might arise from the activities of Scotland's salmon farms. SEPAs current proposals

for a SLRF fall significantly short of providing a robust framework and the timeframe for delivery is unachievably ambitious.

As a small company operating on two sites OSH does not have the financial headroom to employ or engage a member of staff specifically in the role of modeller. If we end up with a framework that requires repeated remodelling of data then this will present a financial burden on the company. If SEPA progress with this or similar framework we consider it imperative that a standardised model is developed, validated and utilised in such a way that consistent and comparable modelling results can be obtained by modellers operating on behalf of Industry, regulators or external parties such that time consuming debate over output results can be avoided.

In responding to this consultation OSH has considered the questions in the consultation document and responds in the table below.

Please feel free to contact us should you require any additional information.

Yours sincerely,



Organic Sea Harvest Ltd



DETAILED PROPOSALS FOR A RISK BASED SPATIAL FRAMEWORK FOR MANAGING INTERACTION BETWEEN SEA LICE FROM MARINE FINFISH FARM DEVELOPMENTS AND WILD SALMONIDS IN SCOTLAND

CONSULTATION RESPONSE ON BEHALF OF ORGANIC SEA HARVEST LTD.

Question 1: Do you agree with our revisions to the WSPZ? If not, please explain why you disagree and what would be your alternative.

No, the present consultation does not clearly set out how water bodies have been defined as WSPZ for the purposes of the SLRF, how a river has been defined as a "Salmon River" for the purposes of the WSPZ, or the scientific basis for a 5km zone at the mouths of such rivers.

In our view the designation of an area as a WSPZ should be based on a sound scientific approach and take account of other pressures within those water bodies that may impact on populations of wild salmonids. These include, but are not limited to, the presence of non-native mammalian predators, overgrazing by livestock, lack of riparian woodland, particulate runoff from peat drainage, poaching and targeted fishing activity (regardless of whether this is catch and release or catch and keep). We would contend that in many areas there is a far greater demonstrable risk to wild salmonids from these pressures than there is from sea lice emanating from Scotlands Salmon Farms.

Question 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

No

Question 3: Do you have any suggestions to improve the screening models?

We have been assured that an existing Salmon Farm in the context of the SLRF is one which holds a current CAR Licence. OSH holds 4 such CAR licences but only 2 are depicted in the screening model outputs in Annex 4 giving the impression that they have not been included in screening to date.

The outputs of the screening model depicted in Annex 4 are misleading as they give the impression that all sites are at peak biomass during the modelled two month period, in the real world some will be fallow, freshly stocked or in the process of harvesting out during the period of interest. These sites will be far below licenced biomass and the risk model outputs, as presented, may be overly pessimistic providing an unrealistic worst case.

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

Where an existing site has been developed and therefore has a real world track record of lice counts and formal estimates of biomass / fish numbers, these figures should be used in the risk modelling. Risk modelling should be undertaken for a period of three years, with outputs presented for each of the three years.

For existing sites that are not yet developed it would, we consider, be appropriate to use predicted stocking and growth curves for the site along with historical lice data for neighbouring sites to predict the possible contribution of lice from these sites. We anticipate that this would better serve to highlight sites where greater regulatory attention should be focussed and will prevent better performing sites with low lice levels being assimilated in a worst case scenario.

Question 5: Do you agree with our proposed approach to developing a risk assessment framework for sea trout? If not, please explain why you disagree and what would be your alternative?

No. Development of a risk assessment framework for sea trout alone in Orkney and Shetland should be delayed until a robust Risk Assessment Framework for salmon and sea trout has been developed for the mainland and Western Isles. We remain of the view that sea trout should have been included in this

framework from the outset. The progression of the framework with seatrout considered as an interim measure fails to facilitate a more streamlined approach to regulation that has been long anticipated within the industry, is committed to by regulatory bodies and expected by external parties. We envisage the proposals continuing to drive a two-tier system in which companies will have to prepare substantially the same documents to the satisfaction of Planning Authorities for Sea Trout and Salmon for SEPA and this position is unacceptable.

Question 6: Do you agree with our proposed risk assessment methodology? If not please explain why you disagree and what would be your alternative.

No – The methodology appears to rely heavily on the screening modelling that we have commented on above, The screening modelling appears to incorporate a number of overly pessimistic assumptions including a worst case scenario assuming all sites are at peak biomass during the defined sensitive period. The risk assessment methodology needs to be based on realistic scenarios supported by robust scientific assumptions.

Question 7: Do you agree with the proposed timetable? If not, please explain why you disagree and what would be your alternative.

No – Given the further aspects of work required which are identified in the consultation document and were discussed at some length in the various engagement workshops the timetable is overly ambitious and potentially under resourced. As it remains unclear where the SLRF fits within the wider consenting review it would, in our view, be preferable to allow the consenting review to take its course and reach a conclusion prior to implementing the SLRF in a revised form.

Question 8: Do you agree with the proposed workflow for pre-applications? If not, please explain why you disagree and what would be your alternative.

No, Developers are recommended to undertake pre-app engagement to inform planning applications, and in some situations Marine Licences. Our recent experience is that despite undertaking Pre-app workshops and subsequently documenting feedback received and how we have addressed concerns, third parties continue to object to planning applications on the same issues on the basis and that they have not been pre-consulted and this is taken as correct by the determining body.

SEPA's proposed workflow seeks to add a compulsory pre-app to those that are already considered best practice. We feel that this contrary to the accepted need to streamline regulatory process and that SEPA's pre-app should not be a standalone process but should form an element of a single regulatory approval process.

Question 9: Do you agree with the proposed timetable? If not, please explain why you disagree and what would be your alternative.

No, Collaborative development of refined models for those WSPZs in which screening indicates the sea lice exposure threshold may be exceeded needs to take place before the SLRF is implemented but is dependent upon WSPZ being reviewed with real world data as described above.

If SEPA progress with this or similar framework we consider it imperative that a standardised model is developed, validated and utilised in such a way that consistent and comparable modelling results can be obtained by modellers operating on behalf of Industry, regulators or external parties such that time consuming debate over output results can be avoided.

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

No – The methodology appears to rely heavily on the screening modelling that we have commented on above, The screening modelling appears to incorporate a number of overly conservative assumptions

including a worst case scenario assuming all sites are at peak biomass during the defined sensitive period. The risk assessment methodology needs to be based on realistic scenarios supported by robust scientific assumptions.

Question 11: Do you agree with our proposal for setting permit limits on the number of lice on a farm? If not, please explain why you disagree and what would be your alternative.

Yes, but we struggle to see how such condition would be readily enforceable in the real world.

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

No, Lice counts and averages for the purposes of the SLRF should be based on numbers of ovigerous female lice rather than adult female lice. Ovigerous females are the life stage that will be producing the eggs that are considered to be particles within the proposed modelling.

Question 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? Please give reasons for your answer.

No, Any operations on site that result in the handling of fish inevitably result in damage to those fish handled and to those contacted by sampling nets. There are significant fish health concerns around enhanced sampling that do not appear to have been taken into consideration. For information OSH initially intended to sample 50 fish per pen per week for lice counts and gill health going beyond the industry standard and subsequent regulatory requirement of 20 fish. There was no statistical advantage to be gained when counts per fish were averaged across the whole site. Even at 20 fish per pen per week and assuming that we can physically sample every week of a production cycle that is up to 24K fish handled on a 12 pen site for health monitoring. Unfortunately not all of the fish sampled survive the process and enhanced monitoring would add to this health pressure.

The use of automated systems using AI is an interesting prospect but we do not feel that this is something that we, as a company would be able to commit to if required without further information from SEPA as regulator as to the equipment to be used and its effectiveness. SEPA should be aware that the use of any such equipment will not necessarily reduce the need for fish to be handled as part of weekly monitoring.

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

No, Interim measures have a habit of sticking and becoming permanent. Whilst we welcome the inclusion of Sea trout, which was omitted from the previous consultation we are of the view that the SLRF should not be introduced and should remain in development until such time as it can be launched as finished product covering both salmon and sea trout introduced as part of overarching regulatory reform.

Question 15: Do you agree with how we propose to set permit conditions to protect sea trout populations? If not, please explain why you disagree and what would be your alternative.

Whilst we welcome the inclusion of Sea trout, which was omitted from the previous consultation we are of the view that the SLRF should not be introduced and should remain in development until such time as it can be launched as finished product covering both salmon and sea trout introduced as part of overarching regulatory reform.

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

No, we do not anticipate having any new CAR applications in progress at the implementation date.

<p>Question 17: Do you agree with the proposed timetable? If not, please explain why you disagree and what would be your alternative.</p>
<p>No, given the level of additional work required to develop and agree aspects of the proposals such as modelling and monitoring we feel that the proposed timetable is overly ambitious.</p>
<p>Question 18: Do you agree with our approach to modelling and reporting conditions and the way we have used the risk assessment matrix to identify where we will add lice limits to permits? If you disagree, please explain how you would apply the matrix and why this would deliver a better outcome.</p>
<p>No, the proposals do not explicitly recognise that not all companies have modellers and as previously set out we feel that the methodology and assumptions in the modelling used to inform the risk matrix are flawed. The risk matrix needs to be revised with real world data prior to implementation of the SLRF.</p>
<p>Question 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?</p>
<p>No</p>
<p>Question 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?</p> <p>If so how would you be willing to contribute?</p>
<p>Yes – if the modelling set out in Annex 4 is correct it could be hypothesised that some sites in some water bodies could act as sentinels for other sites. Ie we should be seeing elevated sea lice settlement on the operational OSH sites some time after sites to the South of the Sound of Raasay experience elevated levels of ovigerous females. As Loch Carron and East Skye is seen as one of the eight areas prioritised for further investigation OSH would be keen to assist in any investigations that would assist in ground truthing the modelled outputs. We would welcome further discussion with SEPA in this matter but take this opportunity to reiterate the fact that OSH has not experienced prolonged periods of elevated levels of Salmon lice on its sites.</p>
<p>Question 21: Do you agree with the proposed timetable? If not, please explain why you disagree and what would be your alternative.</p>
<p>No, given the level of additional work required to develop and agree aspects of the proposals such as modelling and monitoring we feel that the proposed timetable is overly ambitious.</p>
<p>Question 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. If you disagree, please give your reasons and describe what you would propose instead.</p>
<p>No, the risk assessment matrix is based on modelled scenarios which are unlikely in the real world. For example all sites stocked at peak biomass during sensitive period. The risk framework should not be introduced until risk modelling with real world data has been completed.</p>
<p>Question 23: Do you agree with the proposed timetable? If not, please explain why you disagree and what would be your alternative.</p>
<p>No. The timetable is overly ambitious. Revised modelling should be completed before introduction and we cannot support its introduction in the present form.</p>
<p>Question 24: Do you agree with how we propose to prioritise where the target effort under the first environmental monitoring strategy for the framework? If not, please explain your reasons and what you think we should do instead.</p>

Yes, although we note that there is a lack of clarity regarding how the WSPZ areas have been derived.
Question 25: Do you think the focus of the monitoring strategy should be on the types of monitoring listed above? If not, please explain your reasons and what you propose instead or in addition.
Broadly yes, however it needs to be recognised that some of the monitoring strategies may not be applicable in all areas. For example there has been a driver, for many years that, that new sites should be sited in high energy areas outwith sea lochs. OSH has specifically targeted exposed sites. The exposure of the area and rocky shoreline at estuary mouths makes sweep netting impossible from a Health and Safety standpoint. Estuarine fyke netting has had limited success but as attracted predators, we have now embarked on a programme of coastal fyke netting which is also difficult given the exposure of the location, is expensive and time consuming. We have had some discussions with suppliers of in river monitoring systems but these will inevitably require a certain amount of hard engineering requiring further CAR licence and Planning permission. Will a site fail to be compliant with its proposed monitoring measures if such measures are not permitted by other regulators under other consenting regimes?
Question 26: Do you think that the proposed collaborative approach is the best mechanism for developing and delivering a monitoring plan? If not, please give your reasons and describe what you propose instead.
Yes
Question 27: Are there other bodies and organisations you think would be interested in assisting with a collaborative approach to environmental monitoring? If so, please can you say who they are and how you think they could contribute?
No
Question 28: Do you agree with the proposed timetable? If not, please explain why you disagree and what would be your alternative
No, The timetable is overly ambitious. Revised modelling should be completed before introduction and we cannot support its introduction in the present form.
Question 29: Do you agree with the proposed timetable for improving accessibility of information collected in implementing the framework? If not, please explain why you disagree and what would be your alternative
Yes, although we would call for similar information accessibility requirements from ALL other activities that present a risk to wild salmonid populations within our rivers and inshore environment. The aquaculture industry has its biomass, medicine use, sea lice counts, and mortalities published in accessible datasets but we do not see the same level of reporting for other businesses. For example, what chemicals are being added to land as fertiliser or pesticide that have a potential to run off into rivers with ecological impacts, or how many salmon are caught on a specific river on a weekly basis.