

FINAL SSPO response submitted:

Finfish aquaculture sector plan consultation

Deadline: 24th December 2018

The questions: (1-5 are administrative)

6. Does the Finfish Aquaculture Sector Plan identify the right partners and influencers for SEPA to work with to achieve the vision?

Not sure

[Please note that due to the formatting of the consultation document it is not possible to select the 'YES' field as doing so does not allow the free text field to be accessed for the addition of comments.]

The list of partners and influencers is extensive and appears to be comprehensive.

Please note that The Northern Lighthouse Board is one stakeholder which is not mentioned. This stakeholder has an important role, specifically in relation to the current and future location of sites.

We are concerned that there has been a gap in engagement with key stakeholders on an individual basis, e.g. fish feed sector and Local Authorities, before the draft sector plan was published. Additionally, limited consultation occurred in the development of the document, specifically with regard to sectoral facts and examples of where 'beyond compliance' occurs within the sector already.

7. Does the Finfish Aquaculture Sector Plan contain the right actions and priority actions to tackle non-compliance?

Not sure

The sector's recorded non-compliance is not a direct measure of impact on the environment, but a measure of how compliant it is with the licence conditions imposed. We welcome the move towards simpler, outcome-focused licences.

The current licence arrangements are not fit for purpose and compliance with them does not provide a true reflection of environmental impact. Under the existing regulatory regime, non-compliance in the finfish aquaculture sector has been dominated by failures in benthic surveys. These compliance failures are, in the main, where the farm's footprint does not match the model prediction. This does not necessarily mean environmental harm has taken place, but it does mean that the footprint is not where it was predicted to be.

Late submission of monitoring data is also a challenge, particularly relating to the window when the surveys can be undertaken, and which are dependent on safe-working weather conditions. The new proposed regime will need to take account of the practicalities around the sampling window, increased number of samples, number of farms and feasibility of the

sampling programme. A significant concern is the increased capacity required (5 fold) for certified laboratories to analyse additional samples and report in an appropriate timescale.

Moving to a position where compliance is based on actual environmental harm is welcomed by the sector and we believe it will demonstrate a step forward in our compliance performance.

The review of the Compliance Assessment Scheme (CAS) has been ongoing for a number of years, but has so far not resulted in change. The current scheme is designed to demonstrate compliance across all sectors regulated by SEPA. Fish farming is not easily comparable to non-biological sectors like manufacturing. Equally, fish farming is not regulated under the same regime as intensive land-based farming systems such as poultry or pig production, nor is it regulated under the same regime as intensive cattle or dairy farming. The licensing complexity of fish farming is not comparable with other Controlled Activity Regulations (CAR) licences for discharges into the water environment.

It is clear that the existing Compliance Assessment Scheme is no longer appropriate to demonstrate environmental compliance. We are concerned that during a transition period to a new regulatory approach where different schemes are used on different farms, use of the current CAS will lead to further confusion around the sector's actual environmental performance. We expect an outcome of the CAS review to be a sector-specific definition of the best criteria under which our compliance can be monitored.

8. Does the Finfish Aquaculture Sector Plan contain the right actions and priority actions to help businesses go beyond compliance?

Not sure

The aims around this concept are good, but how SEPA resources this needs to be laid out clearly in practical terms, i.e. through knowledge exchange and projects being developed. It is currently a concept that is poorly understood by the sector, in practical terms. It is difficult to see how SEPA is going to actually support businesses going 'beyond compliance'.

The sector is operating beyond compliance across many areas and we are actively pursuing an agenda which will generate improved compliance in those areas where non-compliance is identified. Examples include significant reductions in use of anti-foulant, reducing the amount of copper discharged and new techniques such as on-site desalination for bathing fish in freshwater rather than using bath medicines like hydrogen peroxide. Across the sector we are continuing to develop and explore new technologies to increase the sustainability of our businesses. We are already developing and utilising many of the innovations mentioned in the document.

How SEPA pursues the priority actions will determine the speed and success of the 'beyond compliance' concept in finfish aquaculture. The sector sees this as a longer-term proposition, although there are many areas which could be described as the industry going beyond compliance already and these are not recognised in the proposed framework.

We note that the majority of the proposed areas of priority action are specific to the delivery of compliance, rather than being a 'go beyond' compliance action, e.g. 'Enhancing the regulation of marine cage fish farms' is a regulatory measure which sets and maintains compliance. We would welcome the opportunity to work with stakeholders to define what is meant by 'beyond compliance' for our sector.

9. What actions do you think are the most important to ensure protection of the environment, and why?

Focusing the performance of the sector on compliance which relates to actual environmental impact will be the most important action to ensure protection of the environment. There is a need to progress swiftly to assessing actual footprint, rather a prediction of the impact. This must be done, however, in a way that is both practical and achievable.

We welcome the defined action to work together using a multi-regulatory approach to identify a framework to protect wild salmonids. This work needs to include appropriate stakeholders, identify and confirm the known causes for the decline and pursue actions to address them.

We would refer SEPA to the recommendations made in the Scottish Parliament RECC report and the work underway by the Interactions Working Group and the Farmed Fish Health Framework groups, which are led by Marine Scotland on behalf of Scottish Government. Full transparency on proposals with early dialogue is encouraged to ensure that a fit for purpose outcome is achieved. This framework should also include consideration of all other pressures identified as potential impacts on wild salmonids.

10. Do you agree with our proposals for a new, strengthened regulatory framework for marine cage fish farms (see annex to sector plan)?

Not Sure

The strengthened framework should result in farms developing in the most suitable locations and the general direction of travel is supported by the sector.

However, there are significant gaps in the technical detail required to make a reasoned decision on the implications for marine cage fish farms. The gaps need to be filled to ensure this is a fair, reasoned and responsible approach which can work in practice.

There is a pressing need for further discussions with relevant stakeholders to work through the practicalities of the proposals. The sector would welcome those discussions starting in Q1 of 2019, as a matter of urgency, given the continuing uncertainty regarding regulatory controls and processes and before any implementation takes place.

We propose the implementation of the framework could be progressed utilising a pilot approach where a number of sites are transferred quickly to the new approach to test the process and procedures before a full roll-out to the sector.

Feed control: We understand from the Industry/SEPA consultation workshop of 3 December 2018 that the use of feed as a control mechanism is to provide clarity for regulatory control with respect to the scale of operation, as this is currently through limits on the standing biomass held on the farm. There are several questions around the mechanisms which could be set for this control measure. These include questions around FCR, composition of feeds, weekly feed rates, cycle length etc. and, importantly, of particular concern is the impact of a feed control on the health and welfare of the fish. We do not support the use of feed as a control measure.

Feed use is a poor proxy measure of seabed impact since different diets, environmental conditions and genetic makeup of different strains of salmon will result in markedly different levels of waste from the fish. We urge SEPA to engage with suitable experts and stakeholders in this area before committing to the use of feed as a control measure.

Medicines: We welcome the use of robust science to ensure the discharge of medicines meets the most appropriate EQS levels and that decisions are independently verified through the UKTAG process. Any review of current medicines should be undertaken in an open and transparent fashion and be inclusive of all relevant stakeholders to ensure that the decision process, including the instruction of any review, is evidence led.

The concept of using a 100m mixing zone is understood to be a consistent approach across a number of sectors regulated by SEPA. These other sectors, including discharges from point sources at the coast, are different from marine cage fish farming and the appropriateness of this concept needs to be tested. The technical detail surrounding the practical application of this proposed approach needs further discussion with the sector to understand the consequences for current sites and locations.

11. Does the appendix to the sector plan deliver an appropriately strengthened regulatory framework to protect the environment and contribute to the vision of the Finfish Aquaculture Sector Plan?

Not sure

‘Annex 1: Protection of the Marine Environment’ delivers a vision of the future direction of regulating the sector in Scotland and this is generally supported by the sector. The delivery of the framework will depend on the detail, which has not yet been finalised. Until this detail is concluded it is not possible to agree that the plan will be appropriate or proportionate for the future regulation of the sector. The detail will decide whether this framework can be delivered, or not.

12. Do you agree with the timetables proposed for introducing the new regulatory framework to new and existing sites?

No

The sector would like to progress with the new framework with pace to allow farming in the most appropriate locations, but there is a need to get this change right rather than change it quickly and get it wrong.

The proposal for new farms entering this new regulatory framework, with 2019 as the stated implementation date, is challenging, given the details still to be completed with regard to the determination process and licence conditions.

We understand that there is considerable detail to finalise, including but not limited to guidance notes on modelling and monitoring protocols, definition of small sites, the implications for waterbody cumulative impacts and new licence conditions.

Further, even with timeous completion of this work, the timetable for transposing existing sites into the new regulatory regime is not realistic, based primarily on the capacity to assess the monitoring samples and the existing capacity within SEPA to process licence applications. The current capacity of UK suppliers of taxonomic assessment services is already full. Building capacity will take time and resource, especially when increasing sample numbers 4 or 5 fold.

Novel new approaches to monitoring, like eDNA techniques, are being progressed with pace. Indeed, the sector is supporting many research and development projects aimed at establishing the science and practical knowledge to implement eDNA technologies as quickly as possible. However, it must be accepted that these technologies are currently at the research stage. The timescale for implementation as a regulatory tool is unknown and, at best, a number of years away.

The sector has concerns that this regulatory change will need additional resources within SEPA. Our experiences with the regulator have demonstrated that resources have not, to date, been available to allow practical and efficient changes, swift assessment and notification of benthic reporting findings, or application determination within the statutory timeframes. We recognise that all regulatory authorities have seen continued cuts to staff and resources and this needs to be taken into account in adopting the implementation timetable.

13. If you have any additional questions or comments on the Finfish Aquaculture Sector Plan and the strengthened regulatory framework, please add them here.

The sector's opinion of the draft Finfish Aquaculture Sector Plan and the Proposed Regulatory Framework is supportive of the direction of travel.

We are concerned that the impact on small companies does not appear to have been taken into account when developing the sector plan. The modelling, monitoring and sampling requirements are extensive in terms of cost and resource. Innovations like high energy sites and RAS are not necessarily within reach, financially, for small companies. Support for alternative innovation which can benefit smaller companies should also be considered. There is some concern that the 'one-size-fits all' approach does not necessarily suit the diverse nature of the Scottish finfish sector.

As evidenced in our responses to questions 6-12 inclusive, there are many questions and details still to be finalised prior to the implementation of the regulatory approach. Many of these questions were submitted in an email communication between SSPO and SEPA on 19th November 2018 and are fundamental to the principles of what SEPA is trying to achieve. We therefore seek an urgent response to these questions to support the sector's understanding of the impact to business, which this proposed framework may have. For transparency purposes for all stakeholders, we have reproduced this list of questions at the end of this response.

Should the regulatory approach be implemented as proposed, there are a number of practical limitations of which, it would appear, SEPA is unaware.

With respect to modelling - the requirement for a hydrodynamic model for a waterbody linked to the NewDepomod model when applying for a commercially sized new farm, in some locations, is understood and recognised by the sector to enhance the predictive model and add value to the determination process. However, at present there are very few individuals who are actually qualified to undertake this task.

With respect to monitoring – the sector welcomes the move away from compliance being measured against a predicted model location to compliance being assessed against environmental impact. It recognises the value of a greater weight of scientific evidence to enable such assessment. However, there is a capacity issue with respect to the analysis of the increased number of seabed samples required, and an increase in the costs associated with monitoring. Whilst advancements are being made in use of alternative analytical methods such as eDNA, this work, predominantly funded by the sector, is still at the research stage and is not commercially available. We would therefore question if the logistics and associated costs to regulate industry have been clearly understood by SEPA prior to the drafting of this framework, particularly given the 2019 implementation timetable proposed.

The following points are aimed at identifying areas which need clarification, discussion or dialogue, and comments which we think need to be taken into account when developing the framework and technical annexes.

Applications and licences

How will future licences look and will these be simplified licences? What is the time frame for simplified licences in relation to the process described in the consultation? Data collection for high energy sites needs to be considered at a practical level, such as the ability to collect increased hydrographic data requirements and take a flexible approach (i.e. data scale / frequency / battery life etc.).

What is the definition of a 'small site' in terms of footprint size and biomass?

Modelling

NewDepomod requires significant work to develop it into a useable format and will need upskilling of staff and a commitment to development. Clarity on re-modelling of existing

sites is required. Assistance for smaller companies to access the most appropriate modelling expertise which will allow them to develop their sites should be investigated.

The economic impact on a small company or start up in the sector which needs to develop a hydrographic model linked to NewDepomod could be excessive. Assisting smaller companies to become more efficient / update equipment or move to other locations should be considered. The current proposal would be a barrier to entry to the sector.

The suggestion that existing sites can transition into the new framework without re-modelling, but by undertaking enhanced monitoring, is welcomed.

Data collection at high energy sites can be challenging. With increased requirements (time) of data to be supplied, some flexibility may be needed.

No information has been provided on the availability of the revised Bath-auto model or timescales for its roll out. The current version is outdated and not fit for purpose.

Monitoring and IQI

There is no technical guidance document available on monitoring. There is also no method statement on IQI calculations or monitoring protocols based on IQI principles, including sediment collection.

The change from ITI to IQI has been debated and discussed between SEPA and the sector for a number of years. Although similar, there are some distinct differences and there is no direct relationship between them as IQI also incorporates sediment type and particle size. Historical site performance may be lost if these additional variables, and the original species lists used to originally calculate ITI, have not been preserved. The outputs from NewDepomod are couched in terms of ITI, as well as deposition rates, requiring them to be calibrated against IQI. Confirmation is also required on the relationship between carbon flux and IQI.

The proposed screening approach, whereby the current critical deposition rate of 192 g-solids/m²/year, which is assumed to relate to an ITI of 30 and to approximate an IQI of 0.64 will be retained. This does not appear to be a satisfactory approach, and urgently needs further discussion.

The sampling for all sites will ultimately be more extensive, with multiple transects required. This will allow us to measure the actual impact on the seabed from our operations. However, detail on the sampling window, seasonality and the time of sampling relating to biomass levels all need to be clarified. Will SEPA continue with the approach where sampling results need to be processed, reported and submitted within 4 months, given our answer to Q12 on capacity limitations of taxonomists in the UK?

With the aim of improving the sector's compliance, should the roll out of the new monitoring regime be specifically targeted at sites currently failing seabed surveys along with new sites?

The cage edge standard needs to be clarified. Confirmation of whether this will remain at the current level or whether it will be reviewed is required. Will an IQI figure be developed? The concept of using an arbitrary number of enrichment polychaete worms to determine

actual impact is somewhat outdated. In dispersive locations, the dominant fauna at cage edge may not necessarily be enrichment polychaetes. Hard-substrates and locations where the seabed is unimpacted at cage edge demonstrate the challenges of defining a specific cage edge standard which may not always be appropriate. The approach taken to understand impact needs to be science based and the standards need to ensure benthic recovery in the medium to long term. The option of farm specific impact assessments based on a % deterioration in the existing benthos at the farm site should be considered.

Certainty of the 0.64 IQI boundary when the background levels are lower needs to be clarified.

Real time monitoring: How will 'real-time monitoring (rtm)' be achieved? What is the purpose of rtm and does SEPA have the resource / capability to manage / understand the outputs?

What does a quality assurance scheme for operator monitoring look like in practice and what costs / timescales are involved in setting this up? Can an 'off the shelf' scheme be adopted from other sectors? Is this monitoring regime expected to be in place for 2019? How will that be implemented in that timeframe?

Control measures

Is there an upper limit on spatial extent of a farm footprint? What will this be?

The framework details in a number of places that farms will ensure that the quantities of waste discharged are matched to the capacity of the seas around the farms to assimilate the waste. Clarification is required that the arbitrary cap of 2,500Tonnes biomass has been removed in this proposed framework.

Cumulative Impact

We understand further work is required to better understand the consequences of cumulative impacts from farms at a waterbody scale. There are a number of questions relating to the appropriateness of some defined waterbodies and the science behind their definition. We welcome early engagement to better understand the implications for the sector and develop practical solutions to waterbody scale impacts.

Medicines

We seek flexibility in medicine use that, over the longer term, would allow reduced medicinal release, but potentially improved treatment efficacy and health management. This has not been discussed in chapter 5 of Annex 1.

Clarification on the monitoring requirements for in-feed medicines, such as emamectin benzoate, is needed. The current approach of cage edge and 100m sampling locations is not appropriate or scientifically justified given the proposed extensive monitoring programme under the new regulatory system. There is a need to ensure any monitoring uses concurrent sampling, i.e. utilising a multiple parameter sampling approach where appropriate. This will assist with reducing the environmental impact of the sampling process and ensure efficiency in sample collection and logistics / safety of staff.

Email Communication with SEPA (19th November 2018):

Technical Questions relating to the consultation on the Finfish Aquaculture Sector Plan

Following the launch of the consultation on the sector plan, the salmon and trout farming sectors met to have an initial discussion around the documents provided. There are a number of questions which the sector has, primarily around the technical detail of the proposals. Prior to the industry meeting with SEPA for a consultation workshop, we would like you to consider the questions posed below. This will allow us to make best use of the workshop time by discussing the issues pertinent to the industry. We would anticipate that this will also help you to involve the most appropriate SEPA staff to help answer and discuss the issues in detail.

Main Document

- 1. Have technical annexes been developed and agreed for:
 - a. New licence conditions*
 - b. Monitoring guidance*
 - c. Modelling guidance**

If so, when is the sector going to see these?
- 2. How will future licences look and will these be simplified licences
 - a. What is the time frame for simplified licences in relation to the process described in the consultation?**
- 3. The sector's compliance is highlighted (p17), what is the current situation regarding the review of the Compliance Assessment Scheme? This will have a significant bearing on the future compliance of the sector. It is not mentioned in these documents*
- 4. What is SEPA's view on the implementation time described in the document?*
- 5. What work has gone in to establishing whether the timeframes are achievable on a practical basis, given previous performance on meeting timeframes?*
- 6. What consideration has been given to bottlenecks such as monitoring capability and the role out to all licenced operations?*
- 7. Some general notes about the document:
 - a. The biomass figure (Fig. 5) is open to mis-interpretation (it does not explain that fish are farmed over a 24m cycle, that farms are fallowed for extended periods etc.)*
 - b. Fig. 6 is also not representative, as explained in the footnote.*
 - c. On P19. Some of the failing sites would have been due issues to with model predictions and some clarification would have been helpful, to explain that AutoDepomod is unable to give accurate predictions for all scenarios.**

Annex 1: Protection of the Marine Environment: Discharges from Marine Cage Fish Farms

- 8. Do existing sites need to be modelled using NewDepomod to continue operating under the new regime? i.e. all 250 existing sites to be re-modelled by end of 2021?
 - a. Have you assessed the modelling capacity / resource to do this?*
 - b. Can we agree that this should not be a priority for sites which can demonstrate compliance against the 100m standard as is?**
- 9. Is the 100m mixing zone area calculated from the outside edge of the pen, or from the centre of the pen?*
- 10. Is the 0.64 IQI boundary where GES is going to be defined?*

- a. *What if there is no 0.64 IQI boundary (due to bathymetry or the specific benthic communities)?*
- 11. *How does this relate specifically to ITI 30? Please provide further information on the relationship between 0.64 IQI and ITI 30. How does this relate to modelled outputs?*
- 12. *Please provide examples and present further details of the modelling outputs / options at the workshop for:*
 - a. *Modelled poorly flushing sites*
 - b. *Modelled highly flushing sites*
 - c. *Range of existing sites*
- 13. *Is there still an upper limit of 0.5Km² for farm site footprints as proposed under the DZR consultation?*
- 14. *Is there still a cap of 5% impact on defined water bodies and how will this be resolved?*
- 15. *How have water bodies been scientifically defined?*
- 16. *How will feed be controlled on a practical basis on farms?*
 - a. *How will this be manifested? As a condition in the licence?*
 - b. *What aspects will be controlled: FCR / amount / rate of feeding*
 - c. *How will changing diets be assessed and what tolerance will be permitted?*
- 17. *How will 'real-time monitoring (rtm)' be achieved?*
 - a. *What is the purpose of rtm and does SEPA have the resource / capability to manage / understand the outputs?*
- 18. *What cage edge standards will be applied?*
- 19. *Has this been reviewed or will it be reviewed?*
- 20. *How will SEPA tackle hard-substrates and locations where the seabed is unimpacted at cage edge?*
- 21. *What is the enhanced monitoring design?*
 - a. *Has a template been produced?*
 - b. *Is the guidance complete (Q1b)*
 - c. *How will lack of taxonomic resource be dealt with on a practical basis to enable significantly more samples to be dealt with?*
 - d. *Is this the only method of assessing the impact being proposed?*
 - e. *What are the timeframes for new monitoring methods to be adopted?*
- 22. *Will in-feed medicines be sampled at the 0.64 IQI boundary rather than the fixed 100m point?*
- 23. *Is the bath model fit for purpose under this new framework?*
- 24. *Please provide modelled examples at the workshop for discharge of bath treatments under this new regime.*
- 25. *What is the definition of a 'small site' in terms of:*
 - a. *Footprint size*
 - b. *Biomass consent*
- 26. *What is the definition of an MPA in this context:*
 - a. *Species or habitat or both?*
- 27. *What does a quality assurance scheme for operator monitoring look like and what costs / timescales are involved in setting this up? Can an 'off the shelf' scheme be adopted from other sectors? Is this monitoring regime expected to be in place for 2019? How will that be implemented in that timeframe?*