

Environment, Climate Change and Land Reform Committee**Environmental impacts of salmon farming****Written submission from Scottish Environment Protection Agency (SEPA) to supplementary questions following ECCLR meeting of 6 February 2018****Environment, Climate Change and Land Reform Committee**

A time-line of SEPA's studies/reports/reviews/consultations/plans for the sector, to what extent does SEPA undertake independent monitoring and analysis rather than relying on information provided by the sector? what additional resource is planned as a result of DZR?

SEPA is adapting its regulatory approach to ensure that the environment is protected, makes legal obligations for operators simple and clear and makes it more attractive to locate fish farms in less sensitive areas. We will drive operators to achieve and maintain compliance. We will use a range of approaches from setting clear legal obligations, providing advice and guidance, exploring innovation and using our enforcement powers to ensure compliance. SEPA will also encourage and support the sector to voluntarily go beyond the compliance standards.

Resources for DZR will be determined based on the final design of the approach. Monitoring under DZR is, for example, a chargeable activity. We are currently evaluating in the light of consultation responses the appropriate balance between SEPA monitoring and operator monitoring under DZR.

SEPA is currently undertaking the following for the finfish aquaculture sector:

Finfish Aquaculture Sector Plan - In March 2017 we announced proposals to develop a Sector Plan for finfish aquaculture. This will set out how we will ensure operators reach and maintain full compliance with environmental laws and how we will help as many operators as possible to move beyond compliance and deliver wider economic and social benefits as a result. We will publish a draft Sector Plan for public comment by the end of June 2018.

Review of EQS for emamectin benzoate - In autumn 2016, SEPA commissioned a review of the current EQS for emamectin benzoate (EmBz): www.sepa.org.uk/regulations/water/aquaculture/. The review reported in early 2017. In summer 2017, SEPA placed an open call for submission of additional information. In December 2017, the UK Technical Advisory Group¹ (UKTAG) agreed to undertake a peer review of the EmBz EQS and make recommendations for an EmBz EQS to the UK devolved administrations. UKTAG is aiming to report at the end of June 2018.

Depositional Zone Regulation - A public consultation on the proposed new framework for regulation of fish farms closed in August 2017. 144 responses were received. SEPA is completing final analysis of these and proposals will be brought forward by end June.

¹ UKTAG advises on standards under the Water Framework Directive

Review of Licence template - SEPA is currently reviewing and simplifying all of its licences. We are doing this to create a simple, outcome focused licence template that will be clear, enforceable and which places the responsibility on the operator for environmental performance. The review is being phased and the marine cage fish farm licence will be one of the first.

Development of regulatory modelling guidance for the aquaculture sector - SEPA is currently finalising guidance on the use of modelling to support development of fish farms. This sets out the modelling requirements and standards required for the determination of aquaculture-related licence applications.

Monitoring survey of waterbodies in Shetland - SEPA's survey vessel, the Sir John Murray undertook our largest aquaculture survey during 2017. A large number of samples were collected and these will be made publically available when this work is completed.

Collaborative work on eDNA - SEPA is collaborating with Scottish Aquaculture Innovation Centre (SAIC), Scottish Association of Marine Science (SAMS) and Marine Harvest Scotland Ltd (MHS) to develop a genetic monitoring technique to measure the impacts of aquaculture activities on seabed quality. This technique has the potential to create an accurate, repeatable and reliable measure of benthic impacts.. The project may also enable use of genetic monitoring techniques as a rapid assessment screening tool for describing fish farm impacts. The project is due to complete early 2019.

Scottish Aquaculture Research Forum (SARF) - SEPA is actively involved in the following SARF research projects:

- Technical considerations of closed containment sea pen production for some life stages of salmonids – [SARFSP011](#) – Due to conclude in late 2018
- Bath Dispersion Modelling - [SARFSP012](#)– Due to conclude in late 2018
- Feasibility/modelling of single Marine Licence development consent for Scotland aquaculture - [SARF113](#) - Due to conclude in late 2018

Detail of SEPA's work in reviewing the use and impacts of emamectin benzoate - scope/remit of this - including any reviews, reports, findings, conclusions - and including the desk study and interim information referenced in the evidence session. When will this work be complete?

This is covered in our response above.

In evidence SEPA referred to the need for tighter control over the use of emamectin benzoate - can you provide further information on this and why the interim stricter standard for emamectin benzoate is not being applied to existing fish farms in MPAs or in the vicinity of a PMF

The interim regulatory position is designed to ensure marine protected areas and priority marine features are not put at any risk of deterioration whilst the

environmental standard for emamectin benzoate is under review. Under the position, SEPA will not authorise proposed increases in the use of emamectin benzoate if doing so would risk deterioration of the conservation interests.

The on-going operation of existing farms that are not proposing to increase their use of emamectin benzoate is not likely to result in any worsening of the condition of marine protected areas or priority marine features. However, we have tightened the conditions of most existing farm licences which permit the use of emamectin in order to ensure that less of this medicine is used.

The number and frequency of unannounced visits to fish farms and the process and criteria for determining the programme of visits? Has this changed over time?

Inspections are normally pre-organised due to access and availability of operator at facilities, however SEPA has powers to visit any premises at any time. Inspections will typically examine cages or tanks, filters and settlement ponds, discharge points and storage of materials, medicines and chemicals. Data held by the company may also be examined. Data submitted to SEPA is assessed.

SEPA has a hazard and risk assessment tool to capture the inherent hazards and risks of a licenced activity. The output of this, when combined with the output of SEPA's Compliance Assessment Scheme (CAS) gives the level of regulatory effort which is appropriate for any licenced activity/site. This assessment process leads to annual fluctuation in total number and frequency of visits within any regulatory regime.

In 2015, 20% of 197 visits were unannounced.

In 2016, 35% of 168 visits were unannounced.

In 2017, 15% of 132 visits were unannounced.

SEPA's view of gaps in regulation e.g. in relation to the protection of wild fish?

The Water Framework Directive, requires SEPA to report on the status of wild fish in freshwaters. Where populations are found to be failing to reach good status, pressures have to be identified to explain this, and measures identified to deal with these and restore systems to the required standard. This requirement does not extend into the marine environment.

A good example of a possible approach which could be adopted is in line with the developing Aquaculture Stewardship Council standards, which include detailed proposals to monitor and manage sea lice, escapees and introgression rates.

The role of SEPA in the regulation of transportation of fish (including dead fish), fish products and fish feed/feed supplies?

SEPA is Scotland's principal waste regulator. SEPA does not regulate the transportation of fish products or fish feed/feed supplies as, in most circumstances, these would not be regarded as wastes. Nor do we regulate the transportation of live fish. With regard to dead fish, the Animal and Plant Health Agency (APHA) is the

principal regulator. Typically, the transportation of dead fish would be covered by the requirements of Animal By-Products legislation and the carrier would be required to register with APHA. If the circumstances of a particular case are such that Animal By-Products legislation does not apply, then the carrier would need to be registered with SEPA under waste legislation and there would be an obligation under waste legislation to ensure the secure storage and transportation of the waste.

Does SEPA consider there are there gaps in the information in relation to the sea-bed in the vicinity of fish farms?

Please see response above on research and other initiatives being undertaken.

In evidence SEPA referred to 29 fish farms located close to maerl beds and then referenced 13 remaining maerl beds - can we have clarity - is it the case that of the original 29 maerl beds located close to fish farms only 13 remain or only 13 remain unaffected?

Can SEPA confirm that 16 maerl beds in the vicinity of fish farms have now disappeared or been damaged?

How many other maerl beds or any other protected feature have been damaged?

Further analysis is needed beyond the timescales permitted by this response in order to be able to answer these questions. We will respond to the committee separately.

What is the process of stopping the activities?

What action have SEPA and SNH taken in relation to the individual farms and compliance? Have licences been adjusted or revoked?

All marine cage fish farms require a licence from SEPA. The licence controls discharges from the farm, including discharges of organic waste and medicine residues. SEPA enforces compliance with the conditions of these licences. It also has powers to vary the conditions of the licences or to revoke them at any time. Where there is evidence that the operation of a fish farm is compromising the objectives for a marine protected area, the normal process would be for SEPA to work with the operator of the farm to ensure that the necessary steps are taken to enable achievement of those objectives. This may involve SEPA taking enforcement action; varying licence conditions; or even revoking the licence.

Further analysis is needed beyond the timescales permitted by this response in order to be able to answer the detailed questions regarding numbers.

What work is SEPA doing to monitor the impact of fish farms in the vicinity of protected features (PMAs/MPAs/SACs)? How is SEPA proactive in this?

As detailed above, SEPA undertakes inspections routinely. In addition, surveys such as that undertaken in Shetland in 2017 provide us with important data. In the period 2015 – 2017 SEPA carried out 23 aquaculture related monitoring surveys.

What is SEPA's role in relation to escapees? can SEPA fine farms? under what circumstances?

SEPA does not have a role in managing or regulating escapes.

What further regulation is required in relation to wrasse and lumpsuckers (including the farming of these species)?

SEPA does not have a role in managing or regulating wrasse or lumpsuckers other than in relation to potential environmental impacts through use of the species within caged fish farming.

What work (including research) is SEPA engaged with in looking at solutions to the environmental issues of fish farming?

What work (including research) is SEPA engaged with in looking at the issues (including carbon footprint) of alternative approaches to fish farming?

Research that we are engaged in is described in the answer to the first question. Further, as part of the development of the finfish aquaculture sector plan, we will work with the industry and with other stakeholders in the sector to evaluate new evidence and to identify solutions. A key part of the sector approach is to foster innovative solutions that allow operators to go beyond mere compliance. As a responsible regulator it is also imperative that we remain informed of new evidence and new solutions in order to support sound regulatory decisions.