

Significant Water Management Issues for Scotland

Consultation response: Fisheries Management Scotland

Introduction

We welcome the opportunity to comment on SEPA's Significant Water Management Issues (SWMI) Report. Overall, we broadly consider that SEPA have identified the most important issues that are impacting on our water environment. Given that the consultation document states that it covers all of Scotland, including the parts of the Solway Tweed River Basin District which lie in Scotland, we have chosen not to respond specifically to the parallel consultation for the Solway Tweed.

Many of our members have developed a strong and positive working relationship with SEPA and have been involved in the delivery of a range of excellent projects which have resulted in significant environmental improvements. It is important to emphasise that we wish to work with SEPA to ensure that this strong working relationship is further developed and improved throughout Scotland. We recognise that the structural changes within SEPA have been challenging, and we wish to avoid a situation where long-term, positive working relationships are lost through this process. It is important that SEPA ensure that maintaining and further developing a positive working relationship with the fisheries management sector is prioritised.

The third round of river basin management plans should take a holistic, catchment-wide approach to protecting and improving the aquatic environment. We would therefore emphasise that the issues identified in the consultation document are often interrelated and are often associated with other potential pressures which are not identified in the document. For example, a significant concern for the future of Atlantic salmon is water temperature in our freshwater environment. The [Scotland River Temperature Monitoring Network](#) (SRTMN) has been established by Marine Scotland Science to provide predictions of river temperature, and temperatures recorded during the summer of 2018 show that 69% of Scottish rivers experienced temperatures that cause thermal stress for salmon on one or more days. 2018 was also a year in which there were significant water scarcity issues in large parts of the country. Where river levels are low, this will exacerbate temperature increases in our rivers, which can have a devastating impact on fish and aquatic invertebrates. Given that one of the means of mitigating increasing temperatures is the planting of trees in the riparian zone to provide dappled shade there is also a clear linkage with rural land use. A coordinated approach between SEPA, Scottish Forestry and the Scottish Government towards amending the current grant system to facilitate this approach would be highly beneficial to our freshwater environment.

We welcome the recognition of the challenges faced by Atlantic salmon in the consultation document. Scottish Ministers have a commitment in the Programme for Government to develop a wild salmon strategy. It is important that the outcomes of this process are fully reflected in the third River Basin Management Plan.

Across the range of issues identified in the consultation document, we would also like to see visible enforcement of license conditions and General Binding Rules. Whilst we have been supportive of the awareness raising campaigns that SEPA have utilised to initiate behaviour change, we are strongly of the view that enforcement should play a stronger and more visible role in future. This should include the use of fixed and variable monetary penalties, a greater use of enforcement undertakings and criminal prosecutions where appropriate.

Finally, we are strongly of the view that SEPA's fundamental role of environmental protection should be prioritised over facilitating economic development.

Water scarcity

We understand that there is a consultation due on this issue, which has been delayed due to the COVID-19 pandemic. As highlighted above, the linkage with water temperature and riparian land use is vital. We would like to see a clear strategy for reducing reliance on river abstraction and reducing run-off from land. Such a strategy should pro-actively identify mitigation measures in advance of water scarcity issues, where it is known that these are likely. This would help to avoid the situation, which occurred in 2018, where emergency CAR licenses were issued with very limited or no consultation or information raising.

There is no mention in the document of the Scottish Government's land use strategy, and we believe there should be a stronger and more coordinated linkage between these processes.

There are several other pressures which are faced by Scotland's migratory fish species which are associated with water scarcity. Some examples are included below:

1. In the summer of 2018, a significant number of adult returning salmon were unable to enter the Blackwater system in the Outer Hebrides. This situation coincided with high levels of sea lice in Loch Roag and this combination of pressures resulted in significant mortality of adult returning salmon in the sea pools below the river.
2. Where flows are low, any inputs from rural land use or wastewater discharges are exacerbated due to the smaller dilution effect and higher rate of settling of such materials.
3. In any circumstance where migratory fish are prevented from moving through rivers, they are more susceptible to predation and illegal fishing (poaching). Poaching of salmon is a significant wildlife crime and it is important that SEPA understand this linkage with the needs of fisheries managers. Poaching and predation 'hot-spots' are often associated with physical structures which can slow the free movement of fish. This is covered further below under man-made barriers to fish migration.
4. Large scale conifer afforestation can exacerbate the problems of low flows through enhanced drainage and transpiration.
5. Low flows and high temperatures can lead to significant disease outbreaks (such as saprolegnia infection) as fish get trapped in pools and migration is impeded.

Waste-water discharges

The consultation document highlights improvements in recent decades in the collection and treatment of sewage discharges but notes that discharges of wastewater still contribute to adverse effects on water quality in at least 70 water bodies in Scotland. We understand that substantial upgrades are required to the sewage system to make the necessary improvements and we would like to see detailed information on the technical ability of Scottish Water, and the investment that Scottish Water/ Scottish Government will make, to fulfil these obligations by 2027. We believe that it is important that RBMP3 clearly sets out the improvements that will be made during the plan and is clear about where this will not be possible. Some of these issues are highly strategic in nature and relate to the wider planning system. We should be actively developing a system where adequate capacity of wastewater treatment is developed in advance of housing developments progressing. SEPA could be pushing for this now in their role as a statutory consultee.

As set out above, we believe that compliance with regulations must play a much stronger role in RBMP3. The consultation document states that 10% of the Scottish population is served by private sewage treatment systems, including septic tanks. Such systems are required to be registered with SEPA – what proportion of such systems are registered and how do SEPA intend to ensure that all such systems are registered in future? While the upgrade of existing Scottish water sewage treatment facilities is vitally important, in many more rural catchments it is the cumulative impact of private domestic sewage tanks that discharge into small water courses that is of greatest concern.

Rural land use

SEPA's approach to priority catchments has led to significant welcome improvements. However, as highlighted above, SEPA's focus in the third RBMP should be on ensuring compliance with the current regulations and assessing whether those regulations are fit for purpose for the protection of the environment. We therefore seek assurance that meeting GBRs will result in an improvement in the water environment – if this is not the case, either the specific GBRs should be reviewed, or activities covered by GBRs should be moved into CAR licensing. It is critical that regulatory approaches designed to improve the water environment demonstrably have that effect. Worryingly, despite 94% compliance quoted for the Esk catchment, SEPA's water quality data for the South Esk (2014-2019) suggests that water quality has deteriorated since 2016. We are therefore keen to get a better understanding of how exactly compliance is assessed. We would emphasise that many agricultural tributaries in Scotland's rivers are dredged and silted but are often categorised as being at good or excellent environmental status. This apparent disparity is difficult for fisheries managers to understand.

We seek assurance that the level of compliance quoted for the Esk catchment is reflected across all catchments, and not just the catchments in which SEPA have undertaken a large number of farm visits and awareness raising. We believe that it is now time for the farming sector, and NFUS, to take responsibility for ensuring compliance with the minimum legislative requirements. As SEPA regularly state, compliance with environmental law is non-negotiable and regulated businesses in the sector need to comply.

As highlighted in our response to the dairy sector plan, we are concerned that during the recent wet winters, SEPA has frequently relaxed restrictions on slurry storage to allow farmers to reduce the volumes held in over-stretched slurry stores. Many landowners have benefitted from grants to increase slurry storage capacity which is positive. However, we are also aware that on some farms, the size of herds has been increased to pay for the additional investment involved. This has the result of perpetuating the original problem of inadequate storage capacity. It is important that progress is not measured in terms of grant uptake – see below.

The RBMP process should be properly integrated with, and complimentary to, other processes which have the potential to support efforts to improve the environment. For example, we have been involved in discussions about cross-compliance between GBRs and Good Agricultural and Environmental Conditions (GAEC) for many years and it is vital that these processes are brought together. The linkage of GAEC with rural payments is a powerful route for ensuring behaviour change which should be fully utilised. There is also potential to ensure that SEPA regulation supports national efforts to increase riparian tree-planting to support efforts to cool our rivers. These projects have multiple benefits for our water environment, including addressing diffuse pollution and reducing water run-off.

Page 9 of the consultation document discusses ‘a shift to more efficient resource use’ without describing the grounds through which such a change will occur. It is important that a detailed explanation of this approach is included in RBMP3. We again emphasise that we believe that regulatory compliance and cross compliance are key to ensuring such a shift.

Our migratory fish populations are declining. Whilst many of the issues faced by these species appear to be at sea, there remains a great deal that could be done in the freshwater environment, and the way that we use our land, to improve habitat. A recent report published in the journal Biological Conservation, showed that Insect populations are declining worldwide due to pesticide use and other factors, and more than 40% of insect species could become extinct in the next few decades. Insects are a vital food source for our native fish populations and an essential part of our wider biodiversity. Migratory fish populations are also in decline, and we are conscious that work undertaken by CEFAS has demonstrated that some pesticides (such as Atrazine – now banned) had a significant impact on the ability of migratory fish to osmoregulate on reaching sea water. There are also a range of sub-lethal effects of pesticides, for example on the olfactory system of salmon, reducing the ability of the male fish to detect and respond to the priming pheromone that is important in synchronising reproductive physiology and behaviour (<https://www.cefas.co.uk/publications/techrep/tech119.pdf>).

We have a number of concerns relating to commercial forestry, and associated acidification, particularly in south-west Scotland. These were raised in our response to the SEPA sector plan for forestry, but a particular concern remains the re-planting of commercial forestry (including continuing of drainage practice) on deep peats, a practice which is not permitted for new forestry plantations. Draining of peatland is often the main cause of water quality issues.

Recent work on the River Deveron has identified a range of different pesticides in the Deveron that are not reported on by SEPA – most notably Cypermethrin in 2018 well in excess of the EQS. In the case of Cypermethrin, samples have indicated concentrations of this chemical in excess of concentrations which have been shown to have impacts on the expression of milt by male Atlantic salmon. We consider that a greater focus on the control and use of pesticides, including the quantities used, and their impact on the aquatic environment is necessary, particularly in relation to important spawning areas for salmon and sea trout.

We have previously raised concerns about lack of clarity of what constitutes ‘significant’ poaching by livestock. We seek assurance that the driver for the GBRs relating to livestock access and siting of feeders, includes improvement of river ecology and in-stream habitat, rather than being focussed on improving bathing water quality.

Finally, highly damaging dredging activity occurs in many agricultural burns across Scotland. We are strongly of the view that this should be a licensed activity, with associated regulatory action to ensure compliance – see below.

Restoring resilience in physically modified rivers

As highlighted above, some of the activities that SEPA permit (such as dredging) can result in damage to important spawning tributaries. This work appears to be undertaken with minimal or no regulatory supervision from SEPA. In some cases, open-ended catchment licenses are issued on an annual basis. We do not consider that this approach is suitable, or that there is adequate compliance monitoring.

Where catchments have been modified historically for agriculture and are currently classified as Bad or Poor for Morphology, in many cases SEPA's online tools state that they are "on course to be completed by 2027". We do not understand the planned pathway to achieve such significant changes in status, nor do we understand how such changes can be achieved with something as challenging as morphology. We are strongly of the view that it would not be acceptable to reclassify such tributaries as highly modified (or similar) and thus avoid restoration.

It is unclear how the work required to restore resilience in physically modified rivers will be financed. There is no mention of farm payment funds, and although the consultation document makes reference to the Water Environment Fund for restoration projects, we understand that such tributaries would not qualify as they do not offer sufficient public amenity. We therefore seek more clarity as to how these important spawning tributaries can be restored by 2027 through RBMP3.

In recent years SEPA has taken the view that funding mechanisms through WEF should be delivered in partnership with local Authorities. Under this arrangement, consultants and contractors tend to the large (inter)national organisations and as a consequence there is little support for smaller organisations such as Trusts or local businesses. This is a very static model and is one of the reasons why these projects can be very expensive and take so long. There is an opportunity to utilise this public funding to support local businesses and organisations more, many of whom have an excellent track record of delivering improvements across Scotland.

Manmade barriers to fish migration

As the consultation recognises, addressing artificial barriers to migration is usually the most cost-effective, reliable and fastest way to support our iconic migratory fish populations. It also recognises the significant challenges that these populations face and the urgent need to support these populations. It is therefore disappointing to see such a strong emphasis on the challenges, time and financial burden on businesses and local authorities associated with this work. We seek clarity on how SEPA are working to streamline the process, perhaps learning from the approach taken in other countries. The cost of preparatory assessments often outweigh the costs of doing the physical work, and some of our members have been advised not to apply for WEF funding, as it will make the project undeliverable due to the costs of the associated surveys that the WEF process would demand.

In some circumstances, the options for removal or easement of barriers are severely curtailed due to the fact that barriers are listed. We believe that sometimes the need to protect our historic heritage, and protecting our environment is out of balance, and therefore we would like to start a discussion about the circumstances in which it might be possible to de-list barriers, in order that they can be removed for the benefit of our natural environment.

Related to the above, we are strongly of the view that full removal of barriers to fish migration should be the default position. This not only allows passage of fish, but also helps to restore the natural functioning of the river (gravel movements etc.). Easement, or the installation of technical fish passages, should only be considered where all other options have been exhausted. The full implications of such actions, including potential impacts arising from predation or poaching, should be considered and discussed in detail with fisheries managers.

Finally, we believe that the identification and easement of barriers associated with culverts should be given much higher priority in RBMP3. We also consider that the promotion of good design of new culverts through guidance and awareness raising is required to avoid further barriers being created.

Hydropower

We believe that there needs to be a more holistic and strategic approach taken to the issue of renewable energy generation in this time of unprecedented climate change. In particular, there needs to be a review of water diversion between catchments for hydroelectricity generation, when the relative importance of hydroelectricity to Scotland's overall low carbon electricity production is reducing. We agree with the statement in the consultation document that, as climate change becomes more apparent water resources will come under greater pressure and the balance between water use by industry and environmental flows will need greater emphasis. On that basis, diversion of substantial quantities of water between catchments should be reviewed in the light of predicted impacts of climate change.

As highlighted in the consultation document, we are working with SEPA to understand the challenges with fish passage at large dams. We look forward to continuing to work with SEPA to ensure that this work is undertaken in full by 2027.

Wherever abstraction takes place, whether in relation to large-scale or small-scale hydro, distilleries or fish farms, it is vitally important that SEPA ensures compliance with the relevant abstraction licence. We are aware of many examples where full or partial blockages in fish passes associated with such schemes, or incorrect installation of baffle boards or fish screens can impact wild fish populations if they are not quickly addressed. Where such issues decrease the ability of the operator to abstract water, they tend to be addressed quickly. This does not appear to be such a high priority where the blockage results in higher abstraction. This is an area where the fisheries management sector can play an important role. High profile compliance monitoring, either by SEPA staff or by utilising DSFB bailiffs working in partnership with SEPA, has an important role to play.

Fish farming and wild fish interactions

We welcome the reference to wild-farmed interactions in the document, and we agree that this should be a key focus in the next round of River Basin Management Planning. We hope that the developing spatial management framework will be brought into use as soon as possible, with the purpose of closing the regulatory *lacuna* which has seen Atlantic salmon and sea trout unprotected by the regulatory system for too long. The Salmon Interactions Working Group reported in May and we believe that it is vital that SEPA work with Marine Scotland to ensure that the recommendations are put in place without delay. On that basis, management of impacts on wild salmon and sea trout should have a high priority in RBMP3 and SEPA's regulatory and enforcement strategy.

Invasive non-native species

The consultation document highlights that there are currently no specific RBMP actions planned to address invasive non-native species and we agree that this needs to change. Our members have significant experience in managing INNS, and in the north of Scotland this work is being delivered through the Scottish Invasive Species Initiative (SISI). However, work to address INNS requires sustained, long-term effort and funding and existing strategies risk failing in the long term if there is an over-reliance on volunteers, without ongoing funding for lead partners (such as fisheries trusts and DSFBs).

The main issue with managing INNS is lack of consistency of funding and difficulties with enforcement of regulations. If appropriate support and leadership from national agencies is forthcoming, our members are well placed to deliver strategic treatment and control of INNS on a catchment scale. SISI does not cover the whole of Scotland and as a consequence the consistency of approach and associated community support and involvement has been diminished in the rest of Scotland.

Several of our members have commented that there is a significant mismatch between the local data and data held by SEPA on INNS.

Issues not covered in the consultation

Our members have also identified a number of areas not identified in the consultation as amongst the most significant water management issues. Some of these relate to our comments above, but we include them again below for completeness:

- Flooding and floodplain resilience - our members consider that management of floodplains is an important issue.
- Infrastructure and urbanisation, including new housing demands. We would like to see clear guidance on what is expected of developers through the planning process, including using this process to realise opportunities for restoration and improvement of the water environment.
- Acidification is associated with the continued conifer planting and drainage of deep peats in Galloway and has a huge environmental impact on large areas of the headwaters of the River Bladnoch SAC, River Cree, Water of Fleet and parts of the Kirkcudbrightshire Dee.