Sixth Draft SANA Response to River Basin Management Plan Consultation

This draft reply refers to the SEPA publication at: https://consultation.sepa.org.uk/rbmp/draft-river-basin-management-plan-for-scotland/consultation/intro/

Explanatory Note

The deadline for responding to the River Basin Management Plan (RBMP) consultation is 22nd June. In the draft text which follows, numbers refer to the questions in the consultation paper.

It is important to note that this subject area is just as much for the NMFC to comment as the MFC. At the MFC meeting of 14 March, it was agreed to invite the NMFC to take the lead on drafting replies to questions 13, 14 and 15 which deal with removing man-made barriers to fish migration. This is because attention is needed also to easing barriers that affect migration by fish species other than salmon and sea trout.

Input from the NMFC is requested on the other topics, i.e. those on which MFC have volunteered to produce the first draft of replies.

The first batch of questions (1, 2 and 3) are not about the subject. They are about who we are.

River restoration

Q 4. *Do you agree with the approach outlined?*

Answer: Not sure.

SANA reserves its position on this question. The general objectives are laudable but it is not clear who will be eligible to act as the managing agent for a restoration project. Who will decide which bodies are eligible to be classed as community organisations for grant aid?

Where relevant projects can be identified by angling clubs on water which they own or lease, we ask that they be classed as a community organisation – and thereby be eligible for grant aid. In the case of leased water, the arrangement would, presumably, be subject to the landlord's agreement. An alternative would be for the club to propose the restoration project and the landlord to act as managing agent.

Q 5. *What issues do you see with us adopting this approach?*

Answer: Where a relevant project can be identified, it is less important who does it than that it is done. Especially in places where no District Salmon Fishery Board or Fishery Trust exists, there may be an initiative "vacuum". In these cases, and in any other situation where anglers can identify a project, angling clubs should have the status of project managers and be authorised to subcontract all or any aspects of works.

Q 6. *Can you suggest any changes to the approach that will help us reach our goals?*

Answer: No comment.

Water supply and waste water

Q 7. *Do you agree with the approach outlined?*

Answer: No.

Again, the general objectives are laudable but it is not clear that the financial and regulatory framework will be sufficient to meet the policy aspirations. They are not adequate now.

As regards waste water, anglers see at first hand where pollution is occurring and they are exposed to it. The worst cases arise from Scottish Water's reliance on Combined Sewer Outfalls (CSOs). The operating failures of treatment plant and the impact of underinvestment in wastewater storage gives rise to a situation whereby CSOs are not only used during very wet weather events. Further, the lack of recording of CSO use and the absence of testing of water bodies following their use is a national disgrace.

Another specific issue, giving rise to over-enrichment of water bodies, is the lack of phosphate removal in Scottish Water's Waste Water Treatment (WWT) plants.

Q 8. *What issues do you see with us adopting this approach?*

Answer: The first and primary consideration is the need to put more resources to Scottish Water for the substantial capital expenditure needed to modernise WWT processes and add capacity to storage wherever non-storm CSO use can be identified. This may be achieved by some combination of extended borrowing powers, increased charges to households and commercial users and grant aid from the Scottish Government. Recognising, that such expenditure will be very large, some prioritising will be necessary. We suggest that water bodies designated as, or affecting, Special Areas of Conservation (SACs), Special Protection Areas and Sites of Special Scientific Interest be tackled first.

Rivers designated as SACs for salmon are a particular interest. Also, rivers designated as SACs for freshwater mussels require healthy populations of salmon and other freshwater fish for the beneficial relationship at the mussels' larval stage of development. River and sea lampreys can be helped to reach egg laying sites to some extent by "hitching a lift" on migrating freshwater fish.

The second consideration concerns SEPA's powers and duties. This too will have resource implications. It should have a statutory role in regulating Scottish Water's use of CSO's and a new obligation to carry out assessments of water quality when they are used. Additionally, the results of those tests ought to be taken into account in the headline measurement of condition of water bodies as referred to at pages 7 and 9 of the consultation document.

The third consideration is also a resources issue. SEPA needs more inspectors operating on the ground so that it can take the initiative in carrying out sampling of water quality, rather than relying on reports from members of the public who have spotted pollution incidents. There should be random testing.

Q 9. *Can you suggest any changes to the approach that will help us reach our goals?*

Answer: Measuring water quality for pollution impacts should take place under all conditions, especially with respect to CSOs. An outcome of reform should be that the goals will be harder to reach. Getting there should be justified under a system which measures progress by rigorous monitoring of water bodies.

This action should also include aquatic insect monitoring - which SEPA used to frequently carry out but has scaled down considerably in recent years.

Rural Land Use

Q 10. *Do you agree with the approach outlined?*

Answer: Not sure. Where is the responsibility in the RBMP for deciding and enforcing what land uses are appropriate?

Q 11. *What issues do you see with us adopting this approach?*

Answer: This is a complicated subject because of the diverse land uses which can impact on water bodies and how they relate to each other. Having a planning preference for how a site should be used excludes other possible uses.

We see prospective climate change as a driver of public policy on land use. The experience of increased extremes – viz. heavier rainfall events, more droughts and especially higher water temperatures - is very concerning for the conservation of native freshwater species. The amelioration measures through land use should be: slower discharge to water courses; better water retention and shading of habitats used by juvenile fish.

To simplify our response we have addressed it under three topic areas: forestry because of its scale and substantial water use; agriculture because of scale and potential for diffuse pollution; and urbanisation of the countryside which is shorthand for urban sprawl as well as building houses in river catchments.

Before commenting on the three topic areas, **climate change**, or rather the measures that might be introduced to counter it, or ameliorate its effects, deserves some attention. The headline advocacy about combating climate change is heading in the direction of lower energy use, as well as changing the energy mix away from reliance on fossil fuels. It includes making more use of local resources, e.g. using renewable electricity generation to make hydrogen fuel from freshwater. However, if that water used to make hydrogen is taken from the wrong place, or at the wrong time, it would damage freshwater habitat. Then, we would have lost a local resource. The good news is technologies are being/have been developed to use seawater for the electrolysis process. It could be made mandatory.

In terms of dealing with the effects of climate change, attention must be paid to making our rivers and lochs more resilient to the paradoxical effects of more floods with more droughts and to warmer water. We return to this topic in answering question 17 below.

Forestry presents a classic case of how easy it would be to get things wrong.

A current issue, which is driven by the climate change agenda, is the search for opportunities to generate carbon credits by overseas corporate bodies through acquisition of farm land in Scotland for planting with trees. It is recognised that there is widespread foreign demand for sites to plant trees on Scottish soil. This is to offset carbon emissions produced overseas. Countries and/or companies have targets to meet and land for tree planting can be scarcer elsewhere*. Also, within the UK there is official advocacy of growing trees for the purposes of selling carbon credits. See: https://www.gov.uk/guidance/the-woodland-carbon-code-scheme-for-buyers-and-landowners

More generally, SANA is concerned that insufficient attention is paid to disbenefits of aforestation, e.g. consumption of water by trees, acting as a vector for acidification of watercourses, contributing to flood events and badly configured drainage leading to deposition of silt in watercourses.

On specifically climate grounds, an issue of good practice should be the design of forests. For instance, an objective of forest design can be to moderate water temperature through shading. However, shading is only good practice for some fish species. Also, there should be a clear distinction between conifers and deciduous trees, with a preference for the latter on or near watercourses. While dense planting of commercial conifer forests is the major concern, dense planting of deciduous forests may cut out most of the light too, other than during winter. In short, forest design, with respect to water, should be integrated with local fishery management objectives.

In general, deciduous woodlands protect water quality, limit bank erosion and bed erosion and minimise siltation problems, not just beneath the tree canopies, but also in the water courses downstream. Densely planted conifers let in so little light that almost all ground cover plants, themselves potentially soil-binding, are absent. Streams in commercial forestry areas tend to be more acidic, sometimes acutely so, also they are flashy in flows and prone to dry up. While these problems are widely understood and accepted, and mitigation measures are available, will these be applied sufficiently to preserve natural riparian and water channel biodiversity? High standards of forest/woodland design and subsequent implementation on the ground are fundamental to mitigation measures. Therefore, there needs to be strict enforcement and substantial penalties for non-compliance. Deterrents against bad practice are needed. Otherwise, grants for climate mitigation measures could result in frantic tree planting - a numbers game without sensible controls.

* "We consider land value as a key constraint and there is a pinch point where forestry cannot compete. Our research shows that the average land value in England is just under £8,000 per acre, or £5,000 per acre for poor livestock land. However, in Scotland, where a lot more planting takes place, suitable land is generally below £2,000 per acre, meaning the case for conversion to productive forest is easily made."
Source: https://www.savills.co.uk/research_articles/229130/239002-0

Agriculture in Scotland has undergone extensive changes since WW2. These have been pronounced and far reaching in arable and mixed arable/livestock farming areas. Although these areas only comprise around 10% of the land area of Scotland the adverse influences of evolving agricultural practices over the past seventy years have adversely impacted on the water environment of many rivers.

Some of these impacts are apparent to those who have observed them develop over the years while others are not apparent to the naked eye. These many and varied impacts are well known to the authorities and recognition of them is evidenced by regulations coming into play this century. These regulations are welcome but their effect in returning rivers, whose catchments are largely arable, to their former condition can be likened to closing the stable door after the horse has bolted.

In this context, the two metre no-plough buffer zones, riverside fencing, hard-standing watering points and the regulated timing of spreading natural and artificial fertilisers will help in controlling diffuse agricultural pollution, siltation and eutrophication in enriched catchments. However, inspections to advise land managers on fully complying with regulations should continue and should be more widely carried out. Given that the Scottish Government has a complete database of farm businesses and inspects farms, inter alia for compliance with the requirements of Good Agricultural and Environmental Condition, we suggest that SEPA liaise with the Scottish Government for advice on where and when to carry out inspections in addition to SEPA's current program.

It is a major omission that there is no action note on agriculture at page 9 of the consultation.

Urbanisation of the countryside is a relatively new issue. This is an increasing concern because of its many potentially damaging impacts through loss of rural countryside and the amenity value of rivers and lochs, not least for anglers.

More houses in the countryside mean faster run-off of precipitation from roofs and paved areas than is the case with open ground. Also, if connected to public sewers, urban sprawl and other new houses in rural areas will contribute to the CSO problem identified in our answer to Question 8.

Within this category we also include windfarms as a threat to water quality and a potential contributor to overly fast drainage. During and after their construction phase there have been several instances of events which have burdened water courses by excessive siltation. This is an important issue for juvenile fish habitat.

Q 12. *Can you suggest any changes to the approach that will help us reach our goals?*

Answer: Re. **forestry**, the fundamental issue of where aforestation should, or should not, take place is probably beyond the scope of SEPA's remit. Similarly, compliance with good practice in design and management of woodland is a regulatory matter for other parties. However, these are issues of utmost relevance to River Basin Management Planning.

Re. **agriculture**, diffuse and point source pollution are within SEPA's remit. As per our comments above in relation to Scottish Water, SEPA should exercise its regulatory function with random sampling as well as in response to reported pollution incidents.

Re. **urban sprawl**, central and local government planning authorities implement planning policy. A substantial change of policy would be needed to prevent further urbanisation. This

might be given effect through legislation which makes adherence to central government guidance notes mandatory.

Removing man-made barriers to fish migration

Q 13. *Do you agree with the approach outlined?*

Answer: No.

Barriers can impede salmon and sea trout, but other species such as brown trout, grayling, eels and lampreys also need access to suitable feeding and/or spawning areas, so their needs must be taken into consideration when changes to barriers are proposed.

Recent work has shown that brown trout can travel long distances in their natal rivers, and research into grayling has shown some can travel far to feed and/or spawn. Grayling (a salmonid with some protection under Annex V of the EC Habitats Directive) in particular have difficulty in surmounting obstacles, so in rivers where they occur fish passes designed for more powerful fish such as salmon may not be suitable.

In rivers where coarse fish occur in their lower reaches, barrier removal may bring unintended changes to their distribution that may impact unfavourably on salmonids. The river bed upstream of barriers can be deep with mud and debris, some of it toxic. When barriers are removed much of it will be swept downstream and could adversely affect fish eggs, aquatic insects, and other invertebrates, unless it is removed beforehand.

Removal will also impact on the flows above and below sites, and maybe not always beneficially.

Q 14. *What issues do you see with us adopting this approach?*

Answer: In gauging opinion from member organisations, it has become apparent that the term "barriers to migration" has, in practice, been interpreted by SEPA to only include actions to ease fish access at man-made barriers. Given that the mean flow in many rivers has been reduced by abstraction, licensed or otherwise, this policy ignores the artificiality of "natural" obstructions that have become barriers to migration. Also, barriers can arise from land slips and fallen-tree blockages. Photographic evidence is available on request.

In the case of the River Clyde, the United Clyde Angling Protection Association (UCAPA) has found that the current policy is inadequate to the needs for fish migration of all species. A barrier to fish migration that can be eased should be eased. Recognising the Falls of Clyde as an unmanageable barrier should not be taken as a policy criterion to be applied elsewhere on the system.

Over the last 35 years, the Clyde's status as a recovering salmon river has seen remarkable progress. UCAPA leases some 16 miles of salmon fishing rights from Crown Estate Scotland – from Bothwell Bridge to the impassable Falls of Clyde at Stonebyres. Its experience on the River Clyde would suggest that the simple aim of removing of man-made barriers to facilitate fish migration is wholly inadequate and should be replaced with the "removal of all manageable barriers, man-made or otherwise".

Within this lower section of the River Clyde there are three significant tributaries that, for the most part, have excluded fish migration, thus deleteriously limiting fish spawning activity to the main stem of the river.

These comments have largely focussed on salmon because of their obvious socio -economic value. However, this issue is just as important for brown trout, an in-river migrating fish. Trout fishers vastly outnumber salmon anglers in many areas.

Q 15. *Can you suggest any changes to the approach that will help us reach our goals?*

Answer: Other than persuading Government to provide more resources for SEPA's plans, it may be that easement may prove more prudent and less expensive than removal.

Also, as noted above, the scope of barrier removal/easement should be extended to account for reduced mean flows and for blockages caused by land slips and fallen trees. I.e. all significant barriers to migration should be addressed.

Other actions to improve the water environment

Q 16. *Do you agree with the approach outlined?*

Answer: No. We have a general concern about the whole approach and discuss this further in our response to Question 18. The consultation's text on aquaculture worries us and we use Question 17 as a vehicle to propose an alternative approach.

Q 17. *What issues do you see with us adopting this approach?*

Answer: The upcoming consultation on regulation of the finfish farming industry is important to us and SANA will want to comment. This topic area and the rest of the text on aquaculture (wellboat discharges, CAR and sea lice interactions) are interesting subjects in themselves but collectively they miss the point.

The central problem for the industry itself, and for the environments on which it impacts, is its production technology. Until it employs closed containment systems, the fish it raises will be exposed to things in the natural environment that kill or maim them. Similarly, interests of

wild fish and the wider aquatic environment will always be jeopardised by open cage production. It is inherently not sustainable.

Closed containment would also be better practice for freshwater aquaculture, although the major issue at present is marine finfish farming. Aquaculture profitability is already being impacted by increasing water temperatures, more intense storms and prolonged droughts, causing increased stress and declining fish health and welfare. Losses of captive stock into the natural environment are an obvious expected consequence of storm events. These problems are likely to get worse. Live fish movements employed in intensive aquaculture may need tighter controls to prevent import of evolving parasites and diseases which may further damage wild fish populations. All this needs a close interaction of all authorities, including SEPA.

We see Crown Estate Scotland (CES) as having potentially critical roles in both the regulatory challenge to clean up the fish farm industry and in helping it adapt to new production technology.

CES might assist SEPA's regulatory role by enforcing the biomass limits on individual finfish farm sites. SEPA have apparently been unable to enforce existing controls. While SEPA is consulting on the possible use of fish feed supplies as an indirect control, we are unconvinced that such measures could not be easily circumvented by unrecorded imports of material. We have welcomed the suggestion made in the Strategic Advisory Group that CES could include biomass limits in the terms of leases, thereby enabling enforcement through contract law.

More importantly, there is the issue of how to ensure that this significant industry can develop in the long term and avoid the need to contract in scale because lack of sustainability. Fish farm deaths from external impacts, such as ISA, gill disease and toxic algae in sea water, and the prevention of negative impacts on the marine environment, and thereby on wild fish and other fauna, must be addressed. At its extreme, current open cage technology fails on animal welfare grounds alone, never mind the huge losses of end product. It is our view that conversion to closed containment technology will require significant expenditure and we hope that CES will be successful in mobilising such funding as is required from both private, and if need be, from public spending also. It is in everybody's interest that this industry should move to sustainable production methods - including CES's interest as the monopoly supplier of sea bed leases.

Q 18. *Can you suggest any changes to the approach that will help us reach our goals?*

Answer: As noted earlier, climate change effects, and measures that are designed to ameliorate them, need to be writ large in the next RBM Plan.

Summary of objectives

Q 19. *Do you support the aims set out in this plan?*

Answer: Because water habitats are critical to the existence of fish species, the aims of the RBMP cannot be gainsaid. Of course, SANA must be in favour of the aspirations of the consultation document. However, we have concerns about whether the measures intended to satisfy these aims are adequate.

At several places in this response to the consultation, we have expressed our reservations. It may be helpful to summarise them:-

1. River restoration projects need instigators and managers. Angling clubs should be included in the range of potential agents.
2. While not disregarding threats from other sources, we regard point source pollution from CSOs and WWT plants as the most urgent problem affecting water bodies in Scotland.
3. The consultation has downplayed the influences on the water environment arising from climate change and from consequential effects on public policy.
4. We suggest that the final plan should pay more attention to the impact on water courses from aforestation, agricultural practices and urbanisation of the countryside.
5. Barriers to fish migrations must be handled with greater subtlety than indicted. Inter alia, this is not only an issue for salmon and sea trout.
6. Finfish aquaculture remains a blot on the sustainability landscape. This can only be resolved by a change in production technology to closed containment systems - in freshwater as well as seawater.

Q 20. *The consultation Spotfire tool is a draft update of the Water Environment Hub. It will contain the data on RBMP pressures, actions and objectives for the third cycle (2021 to 2027). Please provide any feedback you have on the tool below.*

Answer: A recurring theme in our comments is that game fish are iconic species in the public imagination of what constitutes Scottish wildlife and that the RBMP should march in step with fish conservation efforts. For instance, a pressures mapping tool for salmon conservation is being developed by Marine Scotland (in conjunction with other fishery management interests). SEPA's mapping tool for RBMP may be a useful adjunct to that work. However, we have reservations about its apparent "averaging" of water condition targets in each catchment, rather than assessing and recording condition at multiple points.

The Spotfire tool can be found at: https://www.sepa.org.uk/data-visualisation/water-environment-hub/

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25 April 2021