SWMI Consultation
Water Advisory Unit
Department of Housing Planning and Local Government
Custom House
Dublin 1
D01 W6X0

06 August 2020

Re: EPA Submission on the Significant Water Management Issues in Ireland Consultation

Dear Sir/Madam

The Environmental Protection Agency (EPA) welcomes the opportunity to comment on the Significant Water Management Issues in Ireland (SWMI) Public Consultation Document. As you know the EPA has a specific role under legislation in providing scientific and technical assistance to the Minister in developing the programme of measures and this work is on-going to support the preparation of the draft River Basin Management Plan 2022-2027. The EPA also has a role in advocating that the key environmental challenges facing Ireland are addressed and it is in this context that this submission is made.

We welcome the publication of the SWMI in line with the 3rd cycle planning timeframes and the opportunity for public engagement which is a key component of the Water Framework Directive. We welcome also the recognition that all sectors must play their part in protecting and improving Ireland's water resources, and that ensuring consistent policy integration across the River Basin Management Planning Process with other national and local plans is a key priority.

The EPA's Water Quality in Ireland Report 2013-2018, published in December 2019, found that water quality had declined after a period of relative stability and improvement. Only 53% of surface water bodies are in satisfactory ecological condition. We reported an increase in the number of the most polluted river sites, and an increase in the number of rivers in poor ecological health. Positive trends reported previously by the EPA had reversed. Not only have we failed to improve overall water quality, we are also failing to prevent further deterioration of our rivers. The Water Quality Report made clear the challenges that face Ireland in achieving good water quality status. While there have been improvements, an additional 400 water bodies are now not meeting their targets. It is essential that we halt both the declines in water quality and continue to prioritise work to restore waters to at least good status.

It is widely accepted that the first River Basin Management Plan (2009-2015) did not deliver the projected improvements in water quality. It appears at this stage that the second River Basin Management Plan (2018-2021) will also not deliver the scale of improvements required. It is therefore essential that this next River Basin Management Plan delivers on real and sustained water quality improvements.

Notwithstanding the water quality results, the EPA notes that substantial progress has been made under the second cycle in establishing the new governance structures, the LAWPRO/ASSAP programme and the Community Development Fund. We need to build on this progress to further embed the integrated catchment management approach, and to expand and target the programmes of measures developed for the second cycle plan. Progress has also been made in areas such as forestry, peat rehabilitation and in developing the evidence base on hydromorphology. We hope and expect that these measures will soon start to deliver in terms of actual improvements in water quality.

Some areas however require urgent and increased attention and action; the increasing nutrient levels particularly nitrogen from agriculture, the rate of delivery of the required wastewater infrastructure, impacts from drainage works, addressing and mitigating the impacts of climate change, and the on-going declines in our high status objective (HSO) water bodies.

Agriculture

Agriculture is the sector with the most widespread impact on water quality in Ireland, impacting on almost 800 waterbodies at risk of not achieving their WFD objectives. The water quality issues arising from agriculture include excess nutrients, the loss of fine sediment, chemicals (pesticides and herbicides) and microbiological pathogens (e.g. VTEC) from animal faeces entering waters causing a risk to aquatic life and human health.

The scale of the challenge ahead for the agriculture sector is significant; the environmental indicators for water quality, air quality, greenhouse gases and biodiversity demonstrate that we are not meeting our environmental targets, and that the trends are all going in the wrong direction at present. It is essential that we take the steps needed to halt the current declines and begin to reverse the trends.

A significant number of plans and strategies have recently been published, or are in development, which point towards the need for changes in farming practices to meet our environmental targets. These include the Farm to Fork strategy, the EU biodiversity Strategy, the CAP strategic plan, the 5th Nitrates Action programme, the 2030 Agri-food strategy and the Climate Action Plan. An opportunity now exists to align these policies and strategies to ensure that any measures to address water quality can deliver multiple benefits including reductions in greenhouse gas and air pollutant emissions, and enhanced biodiversity. Additional benefits may also include natural flood mitigation and amenity values that can support improved health and wellbeing.

Nutrient pollution from agriculture is the most prevalent water quality issue. The manner in which nitrogen and phosphorus emissions to water arise, and their impact in the water environment, varies with catchment, soil type and farming activity. This means the messaging, supports and policy responses for achieving water quality improvements need to become more targeted and specific to the local environmental issues and setting, and we need to find ways to better support and engage farmers to embrace and implement the practice change that is needed. The principle of 'the right measure in the right place' should be further emphasised in the 3rd cycle plan. In addition, there needs to be an emphasis on ensuring optimum use of organic manures as per Teagasc advice, and an overall reduction in the use of mineral fertilisers, as called for recently in the Farm to Fork strategy.

Wastewater

Waste water (urban and domestic) is the second most prevalent significant pressure impacting on water quality generally, and the most significant pressure impacting on bathing waters and shellfish waters. The serious challenges facing Ireland's water environment and water/wastewater treatment infrastructure are reported extensively in our most recent Drinking Water, Urban Waste Water Treatment and Water Quality Reports. Irish Water will not now deliver on the targets set out in the second cycle and unsatisfactory progress has been made to date, particularly in addressing sole significant pressures.

Establishment of, and infrastructural and operational improvement to, waste water facilities must be progressed at a much faster pace. Continued investment is also needed in the upgrade of combined drainage systems, storm water overflow devices and extending collecting systems. Funding and investment in water services should be aligned with the specific priorities of the RBMP nationally and within the Priority Areas for Action.

Climate

Climate change is a significant threat to water quality, water quantity and water services. These challenges are clearly set out in the Climate Change Sectoral Adaptation Plan for the Water Quality and Water Services Infrastructure Sectors. The national attention and focus on climate mitigation and adaptation presents an opportunity to achieve benefits for water quality and water resources and conversely water quality measures under the RBMP can be key climate measures.

The potential role of climate to interact with all the significant pressures needs to be considered and all measures under the plan should be climate proofed. Funding of research on the interface between water and climate should continue to be supported and funded.

With climate change, and a growing population placing increased pressure on water resources the implementation of an effective regulatory regime for abstractions is essential to manage these risks. The two significant periods of dry weather in 2018 and 2020 have highlighted the importance of this measure. We recommend the proposed legislation should be progressed without further delay.

Physical changes to rivers

The evidence base from the characterisation process and the work of LAWPRO illustrates that hydromorphological pressures have a widespread and significant impact on the condition of our waters, yet they are currently poorly managed. Key pressures include land drainage, channel maintenance and dredging, removal of riparian vegetation, excessive use of hard engineering, and barriers which restrict flow, fish migration and sediment transport.

The 3rd cycle plan should strive to develop and implement better management and enforcement of appropriate measures to restore and improve the hydromorphological condition of waters. The work being carried out by the Department to develop guidance for bringing the WFD into the planning framework should be progressed and implemented as a matter of urgency. This work needs to be widely disseminated and appropriately resourced so that it can be implemented in full. Strong leadership will be required to improve cooperation across the range of public bodies that are involved, and to accelerate and drive the work forward.

The links between the objectives of the Floods Directive and the WFD need to be strengthened in the 3rd cycle plan. A greater emphasis should be placed on reducing potential impacts of flood defence works on hydromorphology and ecology. Implementing natural water retention measures throughout whole catchments ('slowing the flow') should play an important role as these measures can reduce flooding, prevent sediment and nutrients reaching waters, and can provide wetland habitats for a range of species thereby improving biodiversity.

High status water bodies

Only 20 of our highest quality river sites now remain and the trend is going in the wrong direction. Securing funding for the Waters of LIFE project has been a success under the current cycle however by its nature it will be limited in the number of water bodes which will benefit. The establishment of the Blue Dots Programme is also welcome however in order to be in a position to make any substantial improvements and to halt the declines this programme will need to be adequately resourced. High status waters are particularly sensitive, so prevention is better than cure. There should be an increased and urgent focus in the third cycle plan on protecting the remaining high status waters. Sediment losses from forestry operations in upland catchments is the most significant pressure impacting on our high status waters. There needs to be on-going focus on ensuring the full implementation and enforcement of the environmental requirements for afforestation and an increase in the level of oversight when operations are planned in high status catchments.

The outcome of the EU WFD fitness check is that the Directive is fit for purpose and that the focus should be on improving implementation. The 2027 deadline for achieving at least good status in all waterbodies is an extremely ambitious target which will be very challenging to meet. It is nevertheless an important target that is needed to underpin a sustainable, vibrant, healthy economy into the future. Primary legislation to fully implement the directive is required to put attainment of the objectives on a firm legal standing and should be prioritised in this cycle.

Achieving our Water Framework Directive objectives will require leadership, ambition, investment, and an integration of policy across departments and sectors. Significant progress has been made in the second cycle in establishing structures which promote knowledge sharing and collaboration. Collaboration between the public and private sectors, and greater engagement and involvement of communities will be essential. The EPA is committed to working with the Department and stakeholders within the governance framework and will play its part in contributing to achieving this important goal.

We have included specific comments in relation to some of the other SWMI issues and suggestions for potential measures in Appendix 1 below.

Yours sincerely

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Dr Micheál Lehane
Director, Office of Evidence and Assessment

Appendix 1

Prioritisation

There are early indications that we are achieving improvements in water quality in the Priority Areas for Action (PAA). The EPA therefore supports the continuation of the prioritised approach for restoration of water bodies. The gains being made in PAAs however were offset by sometimes significant deteriorations in water quality in other areas and that needs to stop. A key objective of the WFD is to prevent deterioration and the basic measures in place do not appear to be achieving this. There is a need to greatly enhance the protect function under the next RBMP so that the investment and effort in securing improvements in PAAs delivers on a national scale and to cease or mitigate activities that are causing the declines.

There is also a need to scale up learnings made in funded projects, pilots and schemes to a national level. There is potential to optimise the resources involved and maximise the outcomes by better integrating, coordinating and consolidating the efforts being made by implementing bodies, communities, research and other funded programmes, to protect and improve water quality in each catchment.

In selecting measures, priority should be given to actions that achieve multiple benefits for as many of our environmental assets as possible (i.e. air quality, greenhouse gases, biodiversity, natural flood mitigation and water quality), as well as supporting our economic and social goals.

Public Participation

The EPA welcomes the significant improvements in the level of public engagement in water related activities in the current cycle and the efforts and resources put in place to encourage public and community participation. There are a number of areas which should be developed further or supported to continue to build on the progress made. The role of An Foram Uisce in raising public awareness and engagement could be enhanced. Further opportunities could be sought to establish and support Rivers Trusts and other community groups to help put themselves on a solid foundation. Learnings from the experiences of the Maigue and Inishowen Rivers Trusts in the coming years will provide valuable insights in this regard.

Citizen science is an effective way of both engaging and educating the public and communities and in producing valuable scientific data. Consideration should be given to supporting the development and rollout of a National Citizen Science Programme or Strategy for Water which integrates and delivers a range of tools suited to all levels. An accompanying plan should also be put in place to allow for the safe collection, storage and dissemination of these data, as a valuable source of knowledge to support the wider aim of protecting and maintaining our waters.

We have made significant progress during the 2nd cycle plan in sharing data, knowledge and experiences widely and this should be continued over the course of the new plan. The public interest in environmental issues, particularly in the younger generations, is continuing to grow. Opportunities to increase awareness of the integrated catchment management approach and the value of good water quality, through community education programmes, professional development courses and academic institutions should be explored.

Planning

Effective and coherent planning at local, regional and national levels is key to delivering the environmental improvements required in both water, climate, air and biodiversity and to optimise the potential for multiple benefits from any measures taken.

The planning system should be used to ensure the delivery of nature-based and natural water retention measures as solutions for flood protection, the wide spread role out of green and blue infrastructure and sustainable urban development schemes and the protection of water resources through implementation of water efficiency measures. We agree with the statement in the SMWI that future infrastructure needs to be 'WFD-proofed'.

Domestic Wastewater

The recent extension of the Domestic Waste Water Grant Scheme is welcome. The findings of the National Inspection Plan Implementation Report 2019 that over half of DWWTS inspected fail to meet the necessary standard and that 27% of systems that failed during 2013–2019 had not been fixed is a concern given these inspections are targeted at areas where DWWTS are most likely to impact on water quality. More action is needed to ensure that householders fix systems that fail inspections and to improve overall public awareness to encourage good practice.

Public Health / Drinking water quality

Water is vital for life but also can present a threat to health from exposure to contaminated drinking water, bathing water and shellfish. Issues such as microbial and nitrate contamination of groundwater, the incidence of VTEC in Ireland and the continuing detection of pesticides in waterbodies are of concern.

In the recent report on Drinking Water Quality in Public Supplies in 2019, the EPA highlighted the need to take a drinking water safety plan approach to assess risks to drinking water and to prioritise action to address the greatest risks. As the application of such a risk-based approach is likely to be included in the revised Drinking Water Directive, the next River Basin Management Plan should integrate drinking water safety planning into its application of the Integration Catchment Management approach and progress measures on drinking water source protection. Private water supplies continue to lag behind public supplies in terms of compliance and addressing private supplies should be considered in the programme of measures under the next RBMP.

The EPA agrees that all the measures identified in this section of the SWMI document are required. It is essential that enough resources are provided to progress these. The resilience of water supplies to extreme weather events also needs to be improved.

We need to continue to build our knowledge and evidence base in relation to public health aspects of water protection in areas such as VTEC, anti-microbial resistance, and combined effects of chemicals. A study on the economics of source protection versus treatment should be carried out. The EPA is completing its review of Nutrient Sensitive Areas as required by the Urban Waste Water Treatment Directive. These areas need to be placed on a statutory footing to ensure a high level of protection.

The benefits to health of improving water quality as well as access to blue spaces for wellbeing could be highlighted more and measures to promote and develop this aspect should be considered.

Invasive Alien Species

Invasive alien species are a threat to Ireland's water quality, protected habitats and biodiversity and a cost to the economy. The National Biodiversity Action Plan highlights that the occurrence and spread of invasive alien species in Ireland is increasing, and that the impact of invasive species on Ireland's protected species is expected to increase over the next decade. Several of the invasive species of concern are aquatic species or colonise riparian habitats. Invasive species impact ecosystems and may out-compete native species, leading to a loss of biodiversity.

An interim review of the National Biodiversity Action Plan 2017-2021 published in 2020 highlighted that there has been limited progress in tackling invasive species. The EPA agrees with the call in the SWMI for a strategic approach to this issue and that a coordinated approach among public bodies and stakeholders is required. An action plan is needed that is adequately resourced and supported. Strong leadership will be required to progress the relevant actions in an integrated way. Opportunities for engaging citizens through citizen science initiatives should be explored.

Hazardous Chemicals

While the overall chemical status of our water bodies is relatively good (when the ubiquitous substances such as mercury and polycyclic aromatic hydrocarbons or PAHs are excluded) the growing range and increasing levels of hazardous chemicals being detected in waterbodies is a significant concern from both an ecological and human health perspective.

The regulation on the manufacture, use and disposal of chemicals across all sectors (healthcare, animal health, agriculture, personal care products etc) is, by its nature, fragmented. Coordination in the development and implementation of plans and measures between the relevant authorities and organisations should be strongly promoted. The establishment of the National Aquatic Environmental Chemistry Group is a positive step in this regard and should continue to be supported. Similarly the National Pesticides in Drinking Water Action Group should continue to be supported.

There are several strategies and action plans which have recently or will shortly be published and which should be considered/implemented in terms of measures. The EU Biodiversity and Farm to Fork Strategies set out ambitious targets for reductions in pesticide usage. Ireland's National Action Plan (INAP) on antimicrobial resistance is currently being prepared for the period 2021 to 2024. The proposed EU Strategy on the Sustainable use of Chemicals will likely include measures to increase awareness and influence behaviours in terms of chemical management (including medicines). The European Union Strategic Approach to Pharmaceuticals in the Environment (COM(2019) 128) provides a useful overview of the sources and potential measures which could be taken, many of which could be applied to the broader range of chemicals such as awareness raising, producer responsibility initiatives, and improved management of waste. In addition, the European

Commission has recently launched a review of the directive which regulates the use of sewage sludge in agriculture. This review identifies that the directive fails to regulate a range of potential pollutants in sludges which can impact on soil and waters when spread on land. The outcome of this process will be relevant in terms of introducing additional measures to reduce the impacts of chemicals.

Monitoring for priority substances and priority hazardous substances is expensive. Additional monitoring is needed but it is important that it is targeted to ensure best use of resources. Opportunities should be explored to capture where the sale, use and disposal of pesticides and animal health products is taking place, so that they can be linked to local water quality impacts, so that we can improve our risk assessment processes. The findings and recommendations from the Disposal of Unused Medicinal Products (DUMP) Study should be examined and consideration given to the setting up of a PRI scheme to address the lack of a clear disposal route for unused pharmaceuticals. Investment into research on the risks and treatment technologies for hazardous substance should be supported to continue to inform policy and identify solutions.

Urban Pressures

Urban aquatic environments in our cities and rural towns are frequently characterised by unsatisfactory water quality. The types of pressures in these environments include runoff from paved surfaces, leaks and spills, misconnections where domestic discharges are piped straight to the river, unlicensed discharges, storm water overflows, and hydromorphological pressures such as culverts, barriers, modifications to the riparian zones, ports and harbours. These pressures can have impacts on ecological status, on the quality of waters used for industrial and drinking water purposes, and on bathing waters. Urban issues are typically challenging to disentangle and costly to mitigate.

Irish Water are currently progressing development of a number of drainage area plans which will map and assess the condition of the existing drainage network in 44 urban areas. Progress with this work is time consuming and slow. Significant future investment will be needed to implement the mitigation measures identified in those plans.

Consideration should also be given through the planning framework to how green and blue infrastructure can be retrospectively integrated into the existing urban environment, and progressively embedded in future in conjunction with new development applications. Although this is being progressed in some local authorities, opportunities should be explored for leadership and sharing of knowledge and experiences throughout the Local Authority sector. A strategic approach to river restoration in urban areas will likely be needed to ensure that multiple benefits are being targeted, so the best return on the investment is being achieved. As well as environmental benefits the potential public health and wellbeing value of green and blue spaces in urban environments has been highlighted in recent research by the Economic and Social Research Institute.

The issue of domestic misconnections is significant as addressing them retrospectively is very resource intensive, time consuming and costly. Creative mechanisms should be identified for preventing the problem at source, for example through an information, education and awareness program for landholders and contractors, a certification scheme, planning enforcement, or by other means. The learnings from the Dublin Urban Rivers LIFE project may be helpful in this regard.

Any further comments

The EPA is aware of concerns arising in relation to topics such as aquaculture, commercial sea-weed harvesting, anti-microbial resistance, microplastics etc. It is important that the risks and impacts of activities, whether existing or new, are identified, assessed and communicated and that we continue to both build the evidence base in relation to such topics and scan for future issues or topics which may be of concern.