



Significant Water Management Issues Consultation

A response from the FWTF, June 2014

The Northern Ireland Freshwater Taskforce (FWTF) represents a range of organisations working together to ensure that Northern Ireland preserves and improves freshwater eco-systems by encouraging Government and wider society to adopt a sustainable and integrated approach to water management.

The FWTF acknowledges the significant amount of work carried out by NIEA to compile the range of SWMI documents across NI which are collectively very comprehensive. The FWTF welcomes the opportunity to respond to this Significant Water Management Issues (SWMI) consultation at a national level, however we do not have the resource to respond at river basin district level. We have therefore changed the specific question to Northern Ireland level. We look forward to seeing how the views put forward in this consultation from a range of organisations impacts the content of the River Basin Management Plans.

The FWTF believe the Water Framework Directive (WFD) provides a key chance to review our use of rivers, lakes and coasts, and to improve them wherever this is worthwhile. All public bodies, organisations and industries should play a part in this – it is the responsibility of the NI Executive as a whole, not one sole department.

It is therefore vital that the next round of River Basin Management Plans should be seen as more than mere reporting tools for the European Commission. Instead they should be make a clear a statement of ambition about how we will seek to tackle long-standing and emerging problems our waterbodies face in a way that is accessible to business, communities and individuals. Crucially they must also drive action by inspiring the willing and holding those causing damage to account.

To date, we have been disappointed at the slow progress made in improving the health and use of our water environment. NI's rivers, lakes, wetlands and coasts are some of the best-loved parts of our country, and waterbodies often sit at the heart of the local community. Yet only 28% of our waterbodies are at good ecological status, much less than the European average of 40%. This is not a record we should be proud of, especially as NI has a less ambitious programme to fix this than many other north European countries.

1. What do you consider to be the most significant issues affecting the water environment in Northern Ireland?

In general the FWTF believes that funding dedicated towards the delivery of the River Basin Management Plans to be the major issue affecting a water bodies in NI. Improved water quality should be a NI Executive priority, and therefore should be funded appropriately.

The FWTF broadly agree with the list of significant issues provided within all the consultation documents, although we feel that some of the risks have been underplayed. This is particularly true of

diffuse pollution and invasive species. Nitrate pollution, as an example, has well-documented risks to the health of future generations; the European Environment Agency costs this risk to the UK at €2.6bn annually.¹ Furthermore invasive species along riverbanks are known to affect the integrity of flood defences, increase silting of rivers and decrease water quality due to an increase in soil erosion.² Given this, we would like more clarity on how these tables, and their assessment of the magnitude of impacts, will affect the next round of River Basin Management Plans and the delivery of the Water Framework Directive.

2. What do you consider to be the most significant issues affecting the water environment in your Local Management Area?

As mentioned about, the FWTF will provide comments on NI nationally, as we believe there are many issues still to be addressed at a national level. In particular we believe the issues of funding the implementation of WFD in NI to be of major concern, and one that must be addressed by the NI Assembly immediately.

With regards to specific measures, the FWTF would be keen to meet with statutory bodies to discuss the potential of a pilot project that could test a range of solutions for a sustainable freshwater environment.

3. How do you think these issues should be tackled, and what would you choose to do first?

If co-ordinated and implemented effectively, there are many management and policy tools that can address the problems facing our waterways, and enable more of them to achieve good status or potential. Many of these measures are described through the consultation document. It would be useful, however, to have a more detailed insight into the actual or likely effectiveness of each of these tools, as there seems to be an assumption that because a management option exists that it *has* or *will* deliver a solution. For example, one of the solutions attributed to diffuse pollution and agriculture is the potential of agri-environment. However, without any decisions on the budget for the Rural Development Plan there is no guarantee that Agri-environment schemes will be an effective solution.

The FWTF notes the publication of a recent report published by the European Court of Auditors (ECA) in May 2014 which reveals that the EU has been only partially successful in integrating water policy goals into CAP. The audit highlighted weaknesses in the two instruments currently used to integrate water concerns into the CAP (namely cross-compliance and rural development) and pointed out delays and weaknesses in the implementation of the Water Framework Directive. While there has been progress, the Commission and Member States need to better integrate water policy concerns with the common agricultural policy to ensure long-term sustainable water use. The EU auditors found that cross-compliance and rural development funding have thus far had a positive impact in supporting the policy objectives to improve water quantity and quality, *'but these instruments are limited, relative to the policy ambitions set for the CAP, and the even more ambitious goals set by the CAP regulations for the 2014-2020 period'*. We suggest therefore that these concerns over water quality are addressed now

¹ European Environment Agency (2013) *Late lessons from early warnings: science, precaution, innovation*. EEA Report No 1/2013.

² House of Commons Environmental Audit Committee (2014) *Invasive non native species*. Fourteenth report of session 2013/2014.

through the design of the new Cross-Compliance requirements for Northern Ireland and the provision of adequate rural development funding under Pillar 2 to ensure we meet our European requirements.

It is clear that current cross compliance measures are failing to protect watercourses, as only 28% of NIs water bodies are achieving Water Framework Directive compliance. NIEA statistics show that the majority of water bodies failing are because of diffuse pollution from agriculture. Although agriculture is contributing in part to the problem, it can also be the solution. Within the current GAEC 19 in England, farmers are strongly encouraged to implement 6m buffer strips next to vulnerable water courses. This is in line with evidence that 2m buffer strips are not sufficient to intercept pollutants³. We therefore believe there is an opportunity and a need to increase the benefits of this measure for resource protection by increasing the width of buffer strips in line with the best available evidence.

We and other environmental charities believe that to date, measures to achieve GES and GEP have been unambitious and that much more could be done to achieve improvements in the status of our water bodies. This is especially true regarding the control of diffuse pollution and mitigation of heavily modified waters. The FWTF acknowledge that NIEA have embraced delivery at a catchment level. However, more effective, larger-scale measures are available and should be taken. In tackling the problems facing our waters and wetlands, we believe there are a number of key areas that require particular attention:

1. Improvements to protected areas

Improving and maintaining the health of protected areas is vital for looking after our most important wetland habitats and wildlife, a key plank of climate change adaptation and an obligation of the Water Framework Directive.

As far as pressures on habitats and species are concerned, the key messages for Northern Ireland from the current round of Article 17 Report on the Habitats Directive reporting are similar to those for the rest of UK, namely:

- i. Habitats and species are still being lost, primarily through agricultural intensification on the one hand, and abandonment on the other;
- ii. Water pollution (eutrophication) is still a major factor in freshwater systems;
- iii. Aerial deposition of Nitrogen is predicted to be a major factor in the future, with critical thresholds exceeded for many habitats across NI (one of the major sources in NI is from intensive livestock farming);
- iv. Invasive species are a major problem in achieving the favourable condition of our protected sites, in Northern Ireland invasive species are now the leading cause for the unfavourable condition of our protected sites.⁴

Four years ago, NIEA published lists of water dependant protected areas within the River Basin

³ See for example Rasmussen, J.J. et al. (2011). [Buffer strip width and agricultural pesticide contamination in Danish lowland streams: Implications for stream and riparian management](#). *Ecological Engineering* 37: 1990-1997

⁴ *The condition of Northern Ireland's Areas of Special Scientific Interest: the Results of the First Condition Assessment Monitoring Cycle 2002-2008. A report by the Northern Ireland Environment Agency (2008), Research and Development Series No. 08/10*

Management Plans. However no commitment was made to fixing those which did not reach favourable conservation status by 2015, as stipulated by the WFD. The FWTF is encouraged to note the documents dedicated to protected areas, however it is disappointing to note no evidence of success or indeed failure on progress of favourable conservation status within the current round of plans. The FWTF notes the comment *“Work is ongoing to align, as far as possible, the objectives and standards for the Water Framework Directive and Natura 2000 Protected Areas. This will enable better targeting and coordination of measures at these most sensitive sites”*. The FWTF has not seen any evidence of this work and would be keen to work alongside the relevant statutory agencies where possible.

There are key systemic issues preventing site improvement, including a failure to address water pollution (primarily from diffuse sources), inappropriate water level management and coastal squeeze. Many of the existing mechanisms designed to address these pressures, such as farm level nitrate action plans, water level management plans (WLMPs) and shoreline management plans, may not be fit for purpose and ineffective to respond to the current and future challenges facing water-dependent Natura 2000 sites in NI.

We also believe that there is also a gap between NIEA, DARD and Rivers Agency, which determines whether measures are in place, and the reality on the ground as to whether that measure is operational and adequate to meet legal obligations.

River Basin Management Plans must include summaries of measures, targets and timelines for sites to meet favourable condition, and should not (as was the case in the first round) delegate decisions and responsibility to other government plans (eg. Biodiversity Action Plans) many of which were not drawn up in sufficient detail to ensure obligations would be met.

Measures set out in the plans must clearly read across to the work plans and processes of other public and private bodies, so that responsibilities are clear and delivery can be tracked.

2. Catchment interventions

Wherever possible, damage to freshwaters and coasts should be fixed at source in the catchment. Intercepting pollutants, and constructing and maintaining mitigation measures, seldom delivers the wider benefits of a healthy and well-managed catchment, and often comes at a much higher long-term cost to the taxpayer.

3. Wetland restoration

Wetlands and floodplains are part of hydro-morphological elements of a water body (part of riparian zones) and are ecologically inseparable from the water body itself. In many cases, floodplains will be directly relevant to achieving the WFD objectives. These habitats are crucial to fish and invertebrate populations, and to the absorption of nutrient and priority chemical pollutants. It is these places that are most valued by nearby communities, as places to explore, walk, use and appreciate.

In light of the above we would like to see greater emphasis given to the role that wetland restoration could play as a “measure” to address pressures on failing water bodies.

4. Uplands

The FWTF think that much more could and should be done to address damage to waterbodies from degraded upland areas. Erosion and sedimentation driven by over-grazing, burning and drainage are common problems in upland areas, with a direct impact on waterbody morphology and ecology and secondary impacts through downstream flood risk and measures taken to control it. Colour impacts

from historic grip drainage and ongoing burning are threatening drinking water protection obligations, and there is evidence of direct ecological impact on invertebrate communities⁵.

The extent of such pressures and their impact on ecology and WFD quality elements objectives is difficult to determine because monitoring in upland catchments is sparse.

However, evidence from upland Natura 2000 sites shows they are still failing to meet water-dependent objectives, due largely to over-drainage, inappropriate burning and inadequate water levels. We expect these problems within these sites to be addressed as a matter of urgency with greater investigative effort targeted in non designated upland catchments. The Neagh Bann basin is a good example of this, where large parts of the 1760 square miles of the catchment is in the uplands.

5. Coasts and estuaries

Coastal waters and estuaries are another area where urgent effort is needed. Improvements to these waterbodies are lagging behind those for freshwaters, and less effort seems to be put into protecting and restoring coastal habitats.

These intertidal habitats play a vital role in supporting abundance and diversity of Coastal and Transitional Water quality elements not least angiosperms (seed bearing plants) and invertebrates⁶. They are also important spawning and refuge areas for fish, a quality element in Transitional Waters and perform a vital function for migratory fish as they move from saline to freshwater environment.

The protection and restoration of estuarine habitats is of particular critical importance, as these are vital to migratory fish species and will strongly affect upstream waterbodies. With robust Marine legislation now in place, the opportunity exists to meld the delivery of both the WFD with Marine policy so both important areas of work can compliment each other.

6. Cultural attitudes

There are deeply held and often unfounded assumptions about the scale and causes of ecosystem decline in NI. Deterioration has occurred over so many decades, and often in such an interlinked way that it can be difficult for the public and land managers to understand their role in the bigger picture of ecosystem decline. Also, land managers and individuals today have become detached from the cultural knowledge of just how spectacular our wetlands once were and the wellbeing that could be derived from them – the baseline reference point has been lost. This hinders people’s willingness to engage in community based wetland restoration projects, for example.

Fixes to these issues are harder to address, but include initiatives to bring families in close contact with wetlands, and awareness raising and support within the land owning community. There is a need for a positive and proactive approach to barriers such as health and safety, seeking and finding solutions to enable safe enjoyment of the natural world.

7. Catchment level working

We welcome the catchment based approach as a mechanism that has the potential to deliver elevated WFD delivery and eventually, true integrated catchment management that integrates all catchment issues. We applaud NIEA for the architecture of RBMPs and LMAs which adhere to management at a

⁵ [*The effects of managed burning on upland peatland biodiversity, carbon and water Natural England \(2004\)*](#)

⁶ *Saltmarsh: Restoration Requirements under the Water Framework Directive RSPB (2005)*

catchment scale. However, we are concerned that a vision for a catchment based approach will not succeed unless communities and water users begin to see the benefits of that approach. The FWTF has long called for pilot areas, or indeed a pilot area where solutions can be tested and results quantified to show what difference the different measures have made to water quality. At this stage we believe this level of engagement has been lethargic.

If this approach was taken forward it would fulfil the WFD's requirement for community and stakeholder involvement. It should be clear where civil society groups can make joint decisions and where they may not, and these decisions should be screened by the NIEA or other relevant bodies to ensure that they meet the requirements of the WFD.

If it was appropriate the FWTF would be keen to meet and talk with NIEA to discuss the potential of a pilot area where new and innovative measures to tackle water quality can be taken forward.

8. Clear use of regulation

Regulation of potentially damaging activities is crucial to limiting any damage, and to providing a level playing field for regulated businesses. We believe that current enforcement is not sufficient to act as a deterrent to polluters, nor to follow the polluter pays principle. We consider it vital that existing regulations to protect our freshwaters and coasts, and the conditions for government grants, are robustly enforced.

This is particularly true of cross-compliance, where in England the RPA finds on average only 72 failures a year to meet all watercourse and hedgerow standards⁷ in contrast to catchment walkover results that suggest at least one watercourse failure for every kilometre of riverbank. Where we have talked to members of the public on this issue, they are shocked that cross-compliance checking and penalties are so rare.

The benefits of regulation are frequently underestimated, while the 'burden' of regulation is often overstated. Defra have shown that wildlife regulations have a benefit-cost ratio of almost 9:1, with direct costs that are only a small fraction of any sector's turnover⁸. Voluntary and certified approaches have a far worse track record. As examples, FERA research shows that members of the 'Red Tractor' scheme are less likely than non-members to meet cross-compliance requirements for watercourses and hedgerows⁹, while the Catchment Sensitive Farming programme has only shown ecological benefits in one catchment¹⁰. The FWTF looks forward to seeing the results of the Derg catchment project to see if this trend is also adhered to in NI. The consultation places great emphasis on regulation e.g. the Nitrates Directive, to deliver the necessary changes in farming practice to reduce phosphates and nitrates levels. However if this policy is not properly policed with properly trained people then it is unlikely to deliver the changes necessary. It is unclear from the booklet what resources are going to be put in place.

Specific measures

We support many of the measures presented in the consultation document, but believe that the list is missing a number of key options.

⁷ RPA (9/9/2013) Online Cross Compliance Inspection Statistics (<http://tinyurl.com/rpastats>)

⁸ Defra (2011) "The Costs and Benefits of Defra's Regulatory Stock: Emerging Findings from Defra's Regulation Assessment."

⁹ FERA (2013) Project BR0114: Study on farm assurance scheme membership and compliance with regulation under cross compliance. Report to Defra.

¹⁰ Natural England (2011) Catchment Sensitive Farming ECSFDI phase 1 & 2 Evaluation

Abstraction and flow

With demand for water predicted to increase while water resources become increasingly stressed and less reliable, there is a clear need to tackle our legacy of unsustainable abstraction to ensure that our rivers and wetlands are more resilient to these future pressures. Efforts to encourage water efficiency and tackle waste across all sectors need to be accelerated. Over-abstraction and reductions in flow have a profound impact on fish, aquatic invertebrate communities and aquatic plants – particularly in our globally important chalk streams and rivers. The presence of vulnerable freshwater habitats and the availability of water resources needs to have a stronger influence on future land use planning and on crop planning and management.

Currently one of the main reasons for significant abstraction in our waterways is to generate power. Whilst regulations exist this can still leave riverbeds dry at certain times of the year. In addition not all generators have the proper screens and migratory fish returning downstream can at times be drawn into the turbine resulting in considerable fatalities.

Any licensing system will require an in-depth knowledge of the link between flows and good ecological condition and status. We would like RBMPs to include provision for monitoring systems that are adequate to accurately monitor flow and to facilitate a near real-time link between abstraction and e-flows.

We believe that the issue of abstraction and flow within WFD delivery is cross-cutting with physical modification and we would like to see research into the role river restoration and re-creation could have on making abstraction more sustainable and resilient while meeting good ecological status. Abstraction and flows clearly cross-cuts with water quality on a number of issues and we believe it is important to use existing regulations to protect abstraction sources from degradation and pollution that may lead, if unchecked, to their closure and the need to develop new resources.

Sewerage

Large improvements have been made in sewerage collection treatment, with benefits to the wildlife in many rivers and lakes.

These improvements must continue. Many smaller sewage treatment works still fail to meet modern standards, while un-sewered areas with often poorly-maintained septic tanks are causing considerable damage through nutrient and faecal pollution. The European Commission places the UK barely above Spain, and substantially below France, Germany and other northern European countries, in our implementation of the Urban Wastewater Treatment Directive¹¹ - particularly the requirement for tertiary treatment upstream of sensitive areas.

We agree with recommendations to tackle misconnections. The water industry estimates that misconnections cause a daily sewage discharge to streams and rivers equivalent to all the foul waste produced by a town the size of Swindon (or about enough to fill 16 Olympic-sized swimming pools)¹².

¹¹ *European Commission (2013) Seventh Report on the Implementation of the Urban Waste Water Treatment Directive (91/271/EEC)*

¹² <http://www.water.org.uk/home/resources-and-links/snap/misconnects> *Sewer Network Action Programme (downloaded 05/09/2013)*

However, we believe that management measures should include efforts to remove combined sewer overflows (CSOs). Overflow from sewers results in untreated sewage being dumped straight into rivers which will include FIOs & sanitary pollutants. These excess volumes are predominantly caused by significant amounts of surface water runoff generated by extreme weather events – e.g. intense storms, or the substantial rain of 2012. We believe that the Government should look to prevent phosphate use in all domestic and commercial cleaning products. In 2008 DEFRA reported that they had been discussing this issue with detergent companies and that voluntary bans and regulatory bans were achievable by the end of 2015. Progression on this issue could lead to an 11% drop in levels of phosphates entering our water systems¹³.

It is estimated that there are some 120 000 septic tanks in NI. However, there are no accurate records, as regulatory controls were only introduced in the early 1970s. While a properly installed and maintained septic tank system is not likely to have any adverse impact on the environment, it is estimated that at least 12 000 septic tanks are not in possession of necessary discharge consents. The FWTF believe the NI Executive should commit to better regulation of septic tanks supported by community awareness campaigns to ensure compliance. Upgraded septic tanks must be installed in accordance with manufactures instructions. The FWTF would also like to see a commitment towards innovative natural solutions to treat water such as constructed wetlands.

Sustainable drainage systems (SuDS)

SuDS are a low impact, natural way of reducing surface water run-off. They also can provide a wealth of additional benefits, such as silting out fine sediment and treating low levels of pollution. SuDS can therefore be used to help reduce levels of chemicals, faecal pollutants, phosphorus, nitrates and fine sediments in a similar way to treatment wetlands (see further details below).

In England it is mandatory for Government to enact Schedule 3 of the Flooding and Water Management Act requiring all new developments to include SuDS in their plans can help to reduce chemicals, nitrates, phosphates, fine sediment and faecal pollutants from entering our rivers. The FWTF would like to see SuDS implemented and integrated from design phase of all new planned developments as part of a holistic approach to sustainable development. This would align with guidance given under PPS15 We would also like to see clarity provided on the role of SuDS retrofitting to deal with surface water overflows that affects both urban and rural environments. A strategy for promoting the use of SuDS across both of these environments needs to be implemented as a matter of urgency.

Improved land management

Land management has lagged behind other sectors in reducing its pollution of watercourses. This must be addressed urgently, using the most effective and fair measures available. We believe this requires a careful combination of incentives and regulation, as the current approach has reached the limits of what it can do.

There are dozens of designated wetlands and hundreds of water bodies being damaged by ongoing diffuse pollution that incentives have not managed to staunch. Being able to back these incentives and funding with a requirement to change polluting practices would allow statutory bodies to achieve much more. The FWTF notes the Catchment Sensitive Farming programme in other parts of the UK and would

¹³ *SNIFFER (2008) Sources of Phosphorus to Sewer*

recommend a similar approach, starting with a pilot project, in NI. The Derg would be well placed to take forward this project as work there is already underway. This will allow the consistent and targeted use of specific measures, including changes to land management, enhanced use of precision application technology and well-placed treatment wetlands.

The future agri-environment and land management programme must have WFD measures included, which will be funded appropriately, target to the right places and provide land managers with regular advisory/training support.

Wetland treatment systems

There is evidence that wetland treatment systems can be used to significantly reduce a number of chemicals^{14,15}, nitrates¹⁶, phosphates¹⁷, fine sediment¹⁷ and faecal pollutants¹⁸ from entering water bodies. If well designed, there are also tangible benefits to biodiversity and assistance in delivering associated government targets (e.g. Biodiversity 2020). In addition there are other associated benefits to carefully designed SuDS such as amenity, education, well-being and recreational value.

We strongly support the use of well-placed and maintained wetlands to improve water quality and provide connecting habitat for damaged waterbodies.

Invasive non-native species (INNS)

The 'Invasive Alien Species Strategy for Northern Ireland' (May 2013) estimates that the current annual cost of invasive species to the economies of Ireland and Northern Ireland is £161,027,307 (€202,894,406) and £46,526,218 (€58,623,034) respectively.

There is a real need for legislative change in relation to INNS and for the harmonisation of allied legislation right across the UK. For example, Scottish law has made provisions for 'species orders' which allow allocated authorities to enter private land to deal with problem organisms, and then recover those costs. There is no such provision in England or Northern Ireland and it is causing serious implications on the resources of landowners that are responsibly managing invasive species on their land but are struggling to get neighbouring landowners to accept responsibility. Furthermore, as seen with the Zebra Mussel situation in Lough Erne it is imperative that action is taken quickly otherwise the costs become massive and likelihood of eradication decrease to the point where it is not reasonably practical to deal with the problem.

Although the GB Secretariat dedicated to tackling invasive non-native species have achieved much, the current array of measures and tools available to tackle invasive non-native species will not be sufficient

¹⁴ Di Luca, G. A., Maine, M. A., Mufarrege, M. M., Hadad, H. R., Sánchez, G. C., & Bonetto, C. A. (2011). Metal retention and distribution in the sediment of a constructed wetland for industrial wastewater treatment. *Ecological Engineering*, 37(9), 1267-1275.

¹⁵ Gregoire, C., et al. (2009). Mitigation of Agricultural Nonpoint-Source Pesticide Pollution in Artificial Wetland Ecosystems—A Review. *Climate Change, Intercropping, Pest Control and Beneficial Microorganisms*, 293-338.

¹⁶ Dunne, E. J., Culleton, N., O'Donovan, G., Harrington, R., & Olsen, A. E. (2005). An integrated constructed wetland to treat contaminants and nutrients from dairy farmyard dirty water. *Ecological Engineering*, 24(3), 219-232.

¹⁷ Dunne, E. J., Culleton, N., O'Donovan, G., Harrington, R., & Olsen, A. E. (2005). An integrated constructed wetland to treat contaminants and nutrients from dairy farmyard dirty water. *Ecological Engineering*, 24(3), 219-232.

¹⁸ Tanner, C. C., Clayton, J. S., & Upsdell, M. P. (1995). Effect of loading rate and planting on treatment of dairy farm wastewaters in constructed wetlands—I. Removal of oxygen demand, suspended solids and faecal coliforms. *Water Research*, 29(1), 17-26.

to address this issue. Awareness campaigns such as 'Be Plantwise' and 'Check, Clean, Dry' have stimulated an increased awareness in some circles, but there are significant improvements that could be made including the inclusion of other species, and a reporting mechanism that can demonstrate its success. There are many other stakeholders who are not currently being reached, which suggests a more far reaching, and adequately funded campaign is needed which also attracts the resources and commitments of more organisations.

The FWTF believe there is a need for a strategic approach to tackling the issue of INNS which is currently lacking. This should include the development of Action Plans for species of highest priority/risk, causing the most environmental damage, rather than the current ad hoc approach to selecting problem species. We also need the development of pathway action plans, to work out how species are arriving and developing measures to address the points of entry. There are some particularly worrying species on our doorstep such as *Gyrodactylus salaris* which, like in other parts of Europe has the potential to decimate our remaining salmon populations. In Norway for example, since *Gyrodactylus salaris* was first detected in 1978, the annual rod and commercial catch on the river has reduced from 100 tonnes per year to less than 100 fish¹⁹.

Currently some Local Action Groups deliver and coordinate significant work to address INNS; however, there is a need to co-ordinate local action towards more strategic, landscape scale goals, using catchments as the geographical framework.

Physical modification

Physical modification is the most common cause of damage to waterbodies. The FWTF believes more effort needs to go into effort removing in-stream obstructions to fish passage, and believe that much more must also be done to reconnect rivers with their banks and floodplains, lakes with their shores, and all waterbodies with the wildlife around them.

Projects to improve riverbank and coastal habitat, and to return fish to rivers, are often the most important ones to the people that live near rivers, lakes and coasts. A well-designed and ambitious scheme can make a world of difference to a community.

The consultation does not recognise this and the FWTF believe a list of options should be proposed, that includes finance, regulation and guidance to support the necessary work. As a whole, effort to deal with physical modification must be substantially bolstered. Statutory bodies have been too complacent that meeting the poorly defined mitigation measures set out in the current RBMPs is 'enough', and have often overlooked better environmental options and visionary projects. This must be addressed in the new plans, and in the guidance and requirements for each body, including changes to the Environment Agency's appraisal guidance and process, and duties on all flood management authorities to act in a way that secures the goals of the Directive. Private and commercial activities that could physically damage rivers must be carefully checked and controlled – in clear contrast to the proposed regulatory position statement on the dredging of main rivers.

¹⁹ Holland (2012) Rotenone to Eradicate *Gyrodactylus salaris* in Norway
<http://www.thefishsite.com/articles/1341/rotenone-to-eradicate-gyrodactylus-salaris-in-norway#sthash.vswlzROi.dpuf> (downloaded 19/06/2014)

4. Are there any projects that we could work on in partnership to help improve the water environment in the Neagh Bann River Basin District?

Integrated Constructed Wetland project - FWTF would be interested in working in partnership with a range of farmers in the area, in a targeted fashion in the establishment of a pilot area of constructed wetlands. We believe this partnership would bring a number of benefits including:

- Treat and greatly improve the effluent quality of a wide range of point and diffuse sources of polluted water, through the removal of nutrients and other contaminants such as heavy metals, pathogens and harmful organic compounds, thus meeting both regulatory and ecological requirements.
- Impede water flow during high rainfall events, thereby reducing the potential impacts of flooding whilst also providing storage of water for use.
- Facilitate de-watering, composting (fungal and bacterial) and re-use of accumulated detritus and organic matter.
- Reuse of intercepted water from different sources and at selected stages in the ICW treatment-train (whether; municipal, industrial or agricultural, etc.).
- Support biodiversity through the reanimation of habitat-infrastructure.
- Capacity to interface and facilitate other land uses; agricultural, forestry and fishing enterprises.
- Sustained long-term in situ sequestration of carbon-C, phosphorus-P and nitrogen-N
- Education, amenity and recreation use.