

10th March 2019
Wageningen, The Netherlands

To: EC DG Environment.

Subject: Response to the Public Consultation to inform the Fitness Check of the EU Water Framework Directive, it's associated Directives (Groundwater Directive and Environmental Quality Standards Directive) and the Floods Directive.

From: European Centre for River Restoration (ECRR; www.ecrr.org, info@ecrr.org)



ECRR's Rationale and Approach

ECRR represents organisations¹ and initiatives with an interest European Water Policy and related practice. The ECRR is an independent Association, free to voice opinions, irrespective of the interests of partners and supporters. As much of the REFIT questionnaire focused on national situations, it was not best suited to our response on the overarching European views and messages of ECRR's members.

Therefore we have provided this paper.

Our viewpoint is that the conservation and restoration of rivers, and their related riparian zones, wetland and floodplain ecosystems and the services they provide, is essential to mankind's health, wellbeing and prosperity. River restoration is a green infrastructure approach increasingly used in resolving river management challenges in many parts of Europe. It is a broad ecological approach and often covers other evolving EU policies and strategies such as Natural Water Retention Measures (particularly fluvial flooding) and Nature-Based Solutions (working with nature in urban and rural development).

The ECRR defines river restoration as:

"Restoring towards the natural state and functioning of the river and the riverine environment, by assisting the recovery of river ecosystems that have been degraded, damaged or destroyed. River restoration promotes the sustainable multifunctional use of rivers to benefit society."

Planning and implementation of river restoration at the national strategic and local delivery scales is varied across Europe, in its robustness, use of evidence and availability of experienced practitioners. There is a pressing need to build capacity (nationally) and knowledge exchange (internationally) to meet the need of legislative requirements through accepted, and by developing, best practice. The purpose of the Association is: *to encourage and support ecological river restoration throughout greater Europe.*

ECRR's role is as a knowledge network and as a catalyst for enabling continual improvement.

"The network for best practice river restoration in greater Europe."

Achieved by:

- Connecting people and organisations working on river restoration and management.
- Supporting the development of best practices of river restoration and management.
- Exchanging information about river restoration.

For the ECRR the EU Fitness Check of the WFD and related Directives is an important opportunity to highlight the areas of success, but also some areas of concern of the directives planning and implementation activities and work, specifically in relation to river restoration planning and implementation. River restoration refers to a large variety of ecological, physical, spatial and management measures and practices that aim to restore the natural state and functioning of river systems. Restoring rivers reconnects ecosystems and the services they provide, including: water quality, biodiversity and habitats, flood safety and green infrastructure. By restoring natural conditions, river restoration promotes healthier, more resilient ecosystems that support a wide range of ecosystem services.

¹ Finnish Environment Institute, French Agency for Biodiversity, Global Water Partnership Central and East European Countries, Iberian River Restoration Centre, International Network of Basin Organisations, Italian River Restoration Centre, Netherlands Foundation for Applied Water Research STOWA, Norwegian Environment Agency, Russian Institute of Integrated Water Management and Problems, Swedish Agency for Marine and Waters Management, The UK River Restoration Centre, Ukrainian Institute of Water Problems and Land Reclamation, Warsaw University of Life Sciences, Wetlands International European Association.

Executive Summary

i) Improved Understanding

Evidence gathered by the ECRR at its national and international river restoration conferences, from the EU LIFE RESTORE project, the RiverWiki case studies inventory and the FP7 REFORM project highlight the extensive work done on WFD implementation in cycles 1 & 2. With water quality having been significantly understood and improved in many basins, the focus is more and more on overall ecology and addressing hydromorphological pressures and re-establishing lateral and longitudinal connectivity. Practical applications commonly rely on pilot projects in small and large rivers targeted for subsequent upscaling, using qualitative and quantitative survey, modelling and monitoring tools. This work on rivers also inevitably combines urban resilience, sustainable land use and hydropower, as well as ecological and economic benefits.

ii) River Basin Management Planning

The WFD prescribes a River Basin Management Planning process integrating all activities within sustainable water management. The ECRR can confirm the significant shift from local science-oriented river restoration practices targeting single species or river reaches towards much larger-scale integrated, cross-sectoral approaches at the river valley and river basin level. River and floodplain restoration, re-establishing fish migration and sustainable flood protection requires consultation with and support of local stakeholders and public, as well as sound preparation – inventories, modelling, long-term monitoring and adaptive working. Increasingly attention is paid to balancing ecological and socio-economic needs and the application of accepted principles such as ecosystem services, sustainable & precautionary planning and decision making, and stakeholder involvement at all relevant levels, including at transboundary scale. Though this, WFD implementation strengthens common understanding, and creates the enabling environment for targeted action on addressing ecological concerns in sustainable development planning, design and implementation.

iii) Progress of Implementation

The ambitions of the WFD are high, for governance as well as ecology. To achieve these ambitions in the iterative process over several implementation cycles requires time and, in all countries, more time than was initially expected. Some countries started from less developed positions than others. The ‘one-out-all-out’ rule reflects this high ambition. It provides good protection and ensures all pressures and impacts are addressed. But all progress should be reported more to recognise national investment of public funds, to provide politicians with greater confidence and to reflect the incremental achievement of restoring the ecology of natural systems.

In Central and Eastern European countries the RBMP approach is seen as a powerful tool, however the restoration of the natural condition of rivers is seen by many to be unrealistic in terms of economics and timescale. In these countries the WFD is often seen as overambitious and hard to incorporate at the national level. These regional pressures and economic constraints need to be recognized and managed to allow these countries to reach achievement, from what is often a lower starting point.

In southern Europe in Spain, the Directive created opportunities for much needed sound long term monitoring plans, providing more availability of information and data and better scientific information, but once again this is still taking significant time and energy, which has not then been able to have been spent on implementation. In the UK and the Netherlands, understanding of the ‘ecological status’ concept, both through science and practice, was already well advanced providing a better starting point. On morphology, ecology, flood risk, the initial work was to better integrate understanding in government planning. However, achieving good status or potential in these countries is still problematic due to diffuse pollution. But even this is beginning to be overcome by the empowerment of local groups as delivery partners working with in their communities to encourage change.

iv) Institutional Integration

The integrative complexity between European policies and within national government departments can cause very significant blockages and delays, with directives institutionally divided among different administrative agencies. For example, Sweden has developed strong hydropower legislation, but this took 15 years to achieve, to enable work to begin in a coordinated way. In Norway it has taken 12 years to reach integrated objectives for water management that cover most of the relevant sectoral authorities like environment, energy, agriculture and aquaculture. In the UK integrating biodiversity and flood ‘enhancement works’ programmes took time to align, and in some Central and Eastern European countries water management and nature protection still have opposing remits. In Poland, ministry collaboration has resulted in the recent ‘Catalogue of good practices in hydrotechnical works and river maintenance including the methods of their application’². Issued together by the Ministry of Maritime Economy and Inland Navigation and the Ministry of Environment, the catalogue has been prepared by a wide range of specialists and has been accepted widely both by Water Management authorities and NGOs.

Often progress has been slower than might have been desirable, but these large-scale institutional changes show that although the WFD might be difficult to implement, it has been an important driver to improve water governance and increase focus on, and funding for water management, and the member states are doing a lot to fulfil its requirements.

ECRR’s Conclusion

It is generally not the WFD and RBMP instruments causing problems in achieving results. The regulation itself is clear and well justified. The aspect that fails is the implementation at the local, regional and national levels. This is often based on conflicting objectives, lack of policy coherence or lack of political willingness and understanding, that often negatively influence the use of the instruments. This is further compounded by a lack of positive feedback from the Commission, due to the reliance upon percentage GES/GEP attainment reporting. ECRR remains very much supportive of the WFD and does not want to see it or its ambition weakened. The WFD fits very well with the concept and vision of river restoration promoted by the ECRR, which is expressed by the UN Decade on Ecosystem Restoration aim to restore degraded and destroyed ecosystems. It is likely if the requirements for the WFD are lowered, then the status of rivers will not be subject to as many restoration actions at either a national or an EU-scale.

² https://www.gov.pl/documents/1379842/1381036/KDP_01_-_Summary_2.pdf/19dc14d1-fb53-ee6a-7de5-82a5c010baa8

Specific Themed Comments

1. Integration of Ecology into Water Management

WFD has increased the understanding of water in nature conservation and has created a shared understanding of the importance of good ecological status of water.

In Sweden, the proportion of water-related LIFE projects has increased significantly. In Norway, this ecosystem focus has worked to break from the previous point-source-based water quality focus to wider river basin ecosystem approach. For the UK, WFD has further developed, pushed and reinforced early science based messages of the importance of many water related attributes to river health and ecology. In Spain, the benefits of better ecological evaluation are being seen, with better participation by NGO's and universities in that evaluation work. The WFD has given the opportunity to develop sound long term monitoring programs and develop scientific models to support ecosystem management.

2. River Continuity

For the EU Water Conference 2018, the EC provided a background document, 'Restoring our Rivers'. This report and its conclusions suggested that river continuity has not been viewed as a significant issue thus far.

The Policy Brief of the FP7 REFORM (Restoring Rivers for Effective Catchment Management) Project, states that in most EU Member States, the consideration of physical processes remains the main gap in hydromorphological assessment methods. There is a need for more comprehensive process-based hydromorphological assessments that consider the character and dynamics of river reaches and how these are affected by present and past natural and human-induced changes within the catchment as well as the reach (Belletti et al 2015³).

The French Agency for Biodiversity recently (2018) undertook a survey of ECRR members on river connectivity restoration best practices, and the availability of river connectivity national, policies, strategies, plans and approaches. The survey revealed that there were few policies, strategies, plans or programmes on river continuity restoration across these countries.

The I.S.Rivers 2018 conference in Lyon featured two ECRR workshops. One on river continuity as part of the programme and another one on the integral river basin connectivity. The key conclusions from these workshops were:

- Concern for the impact on river continuity of both low-head weirs and high dams, with in particular:
 - Evidence of impact of low weirs on non-migratory-fish movement and habitat accessibility.
 - Evidence of impact of high dams on the whole fish community.
- Concern about the importance of longitudinal hydromorphological continuity, in particular:
 - Importance of combining stakeholders' interest with hydromorphological changes approaches.
 - Evidence of positive hydromorphological effects from lowering dams in in incised rivers.

River science is being challenged to provide knowledge and greater evidence for discussions and stakeholder engagement in the river continuity decision-making process in many countries.

³ Belletti, B., Rinaldi, M., Buijse, A.D., Gurnell, A.M., Mosselman, E (2014) A review of assessment methods for river hydromorphology. Environmental Earth Sciences

ECRR's view is that whilst there is a considerable body of evidence and a range of benefits, there is in most countries still no integrated programmed approach to river continuity restoration. ECRR has chosen river connectivity restoration as a guiding theme for its promotion plans and supporting activities.

a. The Support for River Continuity

In Western Europe, WFD has a very positive effect on hydromorphology and river continuity as it has raised its importance at a national level. In France there has been national legislation for river continuity since 2007 and an increasing number of hydromorphology restoration projects have been carried out the past 15 years. Within the UK, hydromorphology is a key driver for assessing GES/GEP and restoration of this underpinning element to support the key indicators of GES. Most of Scotland's rivers have been hydromorphologically assessed, on which the decision of prioritising catchments for WFD investment is made. Hydromorphology is also now more integrated with the Floods Directive. For example, flood risk management of structures (weirs, dams, culverts, etc.) – continuity and flooding being seen as interlinked in urban situations.

In the north, in Sweden, the WFD has raised awareness of the critical importance of the need for river continuity. It increased the understanding of water in nature conservation. Demonstrated by the proportion of new water related LIFE projects. In Norway the WFD has helped to increase attention to the issue of river continuity, and has already resulted in an acceleration of the number of measures being implemented: revision of hydropower licenses, improvement of culverts under road crossings (including a handbook), and the reopening and restoration of urban rivers.

In Mediterranean countries, e.g. Spain, river connectivity is one of the most important issues of river restoration for the 2016-2021 planning cycle. The projects are mainly to improve connectivity interrupted by dams, weirs and other obstacles. There is also a wide range of dam removal projects. The NGO's Wetlands International European Association and CIREF have collaborated to define the criteria to assess before removing dams, focussed on invasive species. This is reported in a set of guidelines for decision-making. Improving river continuity is also high priority in Italy. But, at the same time, in some parts of the country extensive river narrowing and incision problems due to gravel extraction and protection works since the 1940 are using engineered 'check dams' as an appropriate 'restoration' measure (working with river processes to initiate aggradation). Whilst introducing barriers, this activity combines the appropriate understanding of hydromorphology with necessary engineered structural changes.

For Eastern Europe, there are still issues around the assessment of hydro-morphological impact: for biological elements; in relation to infrastructure projects; in applying Art 4.7 screening; for criteria and data needed; and when dealing with ephemeral rivers.

b. Dam and Barrier Removal

There is growing attention on removal of dams (Dam Removal Europe) for river continuity restoration. It is also clear that not all dams can, or have to be, removed because many have important functions required by society, including hydropower production, water supply and water safety.

The focus is on obsolete structures and those with limited use for society where they mostly act as a barrier for water, sediment and river biology. In most cases the removal of obsolete dams is a viable solution for river restoration. Barrier removal restores local river morphology and results in a return to natural functioning for sediment dynamics and river wildlife. No other mitigation measures, for example fish passes, can do this. This can lead to the rapid restoration of fauna and flora that have been suppressed since the structures in question were first built.

There is a need to integrate the issue of dam removal into River Basin Management Plans. They should include:

- Development of an action plan to prioritise removal of dams that are obsolete or have insignificant benefits to society, and integration of this plan within the 3rd River Basin Management Plans;
- Redirection of finances to make funds available for barrier removal in the 3rd River Basin Management Plans;
- Delivery of status reports on the progress of dam and barrier removal, including presenting the positive benefits of removals

3. Hydropower

The use of water for hydropower is one of the biggest impacts on ecology and continuity of river systems and has caused the loss of valuable fish stocks in many Nordic rivers. It is also one of the key solutions supported by the renewable energy directive, which in many cases may compromise the achievement of WFD objectives if the two directives are not implemented in a mutually balanced manner. In the renewable energy directive, there is comprehensive sustainability criteria for biofuels but not for hydropower. This situation can lead to competing objectives in safeguarding or re-establishing connectivity of rivers.

Across Europe there are existing and now redundant hydropower dams, existing plants that require renewal or renegotiation of licenses and newly planned hydropower development, especially in Central and Eastern Europe. Each scenario requires evaluating differently but there needs to be coherence between the renewable energy and WFD legislation.

From the side of the energy sector, hydropower is considered important because of the ability to generate according to energy usage, to balance the production by other sources. The majority of hydropower is produced by big hydropower stations which are designed to be regulated in this way. Conversely, small or pico 'run-of-river' hydropower contributes only a minor percentage to the total generation of renewable energy and cannot provide this energy regulation facility. However, they can have a big cumulative impact on river continuity and river ecology.

In some countries there has had to be significant progress to implement strict guidelines and permitting for low head micro/pico hydro, due to the increased demand from rapidly introduced government incentive schemes. In some countries like Finland and Sweden there are examples from municipalities and municipal power companies choosing to stop their existing small hydropower because of other more important uses like recreational fishing. There are now examples also of projects to demolish big hydropower plants and dams, to revive migratory fish stocks. The biggest ongoing dam and power plant removal project in Europe is on the Sèlune River in France.

New hydropower projects that compromise the achievement of WFD objectives should not be subsidised. New permits should comply with the requirements of the WFD article 4.7, including up-to date mitigation measures for all new permits. At existing power plants, permit renewal applications or license revision should always assess the possibility to improve fish passage provision and also restoration and construction of habitats for ensuring natural life cycles, including the necessary environmental flows.

There are promising results in terms of restoring natural reproduction in old or constructed channels with the introduction of ecological flows, but this is still not yet a common measure across Europe. In the national fish pass strategy of Finland new habitats in bypass channels are seen as an important tool. River

sections which have been left dry because of water abstraction into power plants have been restored by agreeing sufficient ecological flows.

To better manage the interaction between sustainable hydropower energy and good river ecosystems, national level change of legislation will be needed in many countries.

In 2019 in Sweden, a new law enters into force that compels all water power plants to apply for re-examination to ensure compliance with modern environmental requirements and EU directives.

In Norway, there are positive examples of the development of new tools and mitigation measures that allow for continued hydropower production in combination with significantly reduced environmental impacts, like the "manual for environmental design in regulated salmon rivers"⁴. The national plan for revision of over 100 prioritized hydropower licenses, in combination with introduction and increased use of "nature management clauses" in licenses in Norway, aim to reduce the negative environmental impact through modernized environmental requirements, for instance introduction of ecological flows, improved fish passage and restoration of salmon spawning grounds and river mussel habitats.

There should be clear cross-cutting guidance for hydropower at the EU level. This guidance should include:

- not subsidizing projects that compromise the achievement of WFD objectives,
- to require strict mitigation measures in the permitting policy of member and aspirant countries,
- implement revision of licenses for existing facilities to bring them in line with WFD requirements,
- and to assess the possible removal of hydropower dams that are obsolete or have insignificant benefits to society.

4. Water Governance

a. National Political Governance

Implementation of the WFD is the main tool for European countries in fulfilling the UN Sustainable development Goal number 6 on water, especially the targets concerning:

- achievement of safe drinking water,
- improvement of water quality by reducing pollution,
- increased water-use efficiency and reduced water scarcity,
- implementation of integrated water resources management,
- protection and restoration of water-related ecosystems, and
- strengthening the participation of local communities in water management.

We see across Member States that there is a big difference in how easily the WFD goals are understood, and the level of commitment that is made, to translate into national legislation and resource this work. We see this not as a failure of WFD, more so the implementation at this regional and national scale. For Central and Eastern Europe WFD is seen as an excellent, powerful tool, through the use of RBMP's. However, it is not clear how these plans are being prioritized in national budgets (and which budgets) and how plans are being implemented. Because the process stipulated in the WFD is highly bureaucratic – the competent authorities often feel that they do not have a time to really involve the stakeholders.

Many European countries have found that participation in the OECD Water Governance Initiative (WGI) is a useful supplement to the WFD Common Implementation Strategy. The WGI is a network of members from the public, private and non-for-profit sectors sharing good practices in support of better governance

⁴ https://www.researchgate.net/publication/309075303_Handbook_for_environmental_design_in_regulated_salmon_rivers

in the water sector, and one of its main accomplishments is the publication of the OECD Principles of Water Governance in 2015 aimed at enhancing effectiveness, efficiency, trust and engagement in Water Governance.

In Norway, WFD has contributed to improved sectoral integration through the establishment of cross-sectoral water boards at local (inter-municipal) and river basin district level, as well as national sector integration committees at both ministry and agency level. However, integration of WFD objectives into other sectors planning (including land use planning) is still a major challenge.

Also at a national level, large NGO's are also having success in holding the political 'machine' to account now that targets and direction have had to be set. This has been seen in the UK and Norway.

b. Local Governance

Many countries have struggled to resource the WFD ambition adequately, underestimating the extent and cost of the actions that have been planned. In some countries this resourcing issue has prompted good progress in public involvement due to the need for local funding sources to be generated to bridge the national shortfall.

Starting from a position of strong public involvement, in France the main tools are local versions of river sub basin management plans. Implemented on a voluntary basis, these are the main tool for carrying out the WFD programme of measures. They address issues specific to each territory. It is a planning instrument that sets, coordinates and prioritises overall objectives concerning the use and protection of water resources and aquatic ecosystems, and the preservation of wetlands. The WFD helped to reinforce these local planning tools that were already in existence in the 1990s.

In Norway, in many local catchments, water coordinators have been employed, co-financed by the state and the municipalities. Local participation and support for River Basin Management Plans have proven to be essential to achieve the actual implementation of the environmental measures.

In England, RBMP's have been divided into 100 WFD 'Management Catchments' each with an NGO-led Catchment Partnership, who all share and coordinate local activities to improve their watercourse for WFD targets. These 'partnerships' are now seen as a significant delivery mechanism by UK government for WFD targets – this has only come about as a result of need to engage local community and stakeholders for RBMPs.

For Italy, the importance of public participation in river basin management planning is very well highlighted in the existing regulatory framework, but local implementation strategies often fail in the identification and/or engagement of relevant stakeholders. More attention and commitment should be given to developing appropriate governance strategies and tools, as well as to put in place more effort both at national and catchment scale for fostering a targeted and inclusive processes.

In Central and Eastern Europe the view is different to UK, France and others with river 'contracts'. Whilst the WFD has a very advanced process established to ensure stakeholder involvement, the procedures are organized at the basin level. With the aim of empowering river basin organizations to supervise the planning process. However, administratively it often falls to a competent authority that is supposed to steer the overall process. As a result, two particular groups find it difficult to become involved: municipalities and water users. Experience in Central and Eastern European countries shows that the planning process is an exercise of river basin authorities with a formal attendance of broad stakeholders, such as representatives of municipalities and a variety of water users from agriculture or industry sectors. Wider involvement is often only achieved through formal consultation questionnaires. There is a big

difference between this, and really exploring the situation of how water users want to be involved. For this reason, stakeholders are often not really involved in the planning process.

This is similar in Spain where there are only a few good 'river contracts' (similar to France). An important association in Catalonia has promoted river stewardship within other habitat contracts, with a model that could be useful for other river basins. There are also, other examples of good governance related to NGO's and stakeholders who have joined to participate and discuss the main issues of a river basin. Discussions between stakeholders, river managers, environmental NGO's and scientists about the main pressures and impacts of the river and possible solutions. But these are the exception rather than the rule at present in Spain.

5. Transboundary Rivers and Cooperation

The UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) aims to ensure the sustainable use of transboundary water resources. This is achieved by strengthening transboundary water cooperation and measures for the ecologically-sound management and protection of transboundary surface waters and groundwaters. The Convention fosters the implementation of integrated water resources management, in particular the basin approach.

Europe's River Basins are, for more than 70%, international. This means that the introduction and practical implementation of River Basin Management Planning requires this international cooperation. The WFD is an important driver for international legal agreements between these transboundary joint water bodies, as it requires countries to identify the competent authority for the whole river basin district regardless of political boundaries. It has been a significant step towards further cooperation and enhanced exchange of knowledge among European countries.

The WFD supported the development of existing International River Basin Commissions (e.g. the International Rhine Commission, International Danube Commission) and promoted the establishment of new ones (e.g. the International Sava Commission). There are numerous examples of initiatives for joint monitoring and multilateral data exchange protocols.

Also, joint projects of exchange of knowledge and of the INTERREG type are contributing to better understanding among EU member states, often going far beyond just water management. In some Nordic countries there has been a significant improvement in cross border river cooperation, for example an INTERREG project to remove barriers to fish passage.

The European Union and the Member States should continue to develop these coordination and cooperation structures with a high level of support to ensure more coherence and transboundary efficiency. Transboundary coordination and exchanges of experience should be strengthened both within the EU and between Member States and neighbouring countries.

The EUROPE-INBO Group recommends to:

- develop common databases and modelling tools,
- mobilize together European funds for cooperation projects, guaranteeing greater coherence and transboundary efficiency,
- increase the resources of river commissions and cooperation structures,
- promote the participation and education of young people, especially through transboundary youth parliaments for water,
- increase the awareness, agreements and management of transboundary aquifers,
- give particularly attention to the interconnection between rivers, lakes and aquifers and their joint management in cases of surface and groundwater transboundary waters.

The objective is to accelerate the implementation of these actions. Such actions are particularly relevant in countries most affected by climate change, as resources are insufficient and are likely to be reduced further due to the effects of climate change.

6. Integration, Scale and Multiple Benefits

The need for integration amongst Directives, in particular WFD and Floods, WFD and Renewable Energy and WFD and Marine Strategy, is well communicated within the existing European regulatory framework. However, in many countries it is poorly reflected at the national scale. Greater effort should be put in place by Member States, authorities and relevant stakeholders, in order to avoid conflicts and to seek win-win solutions so that implementation measures are linked and work together.

The WFD and Habitats and Species Directives share objectives of improving the environment. Restoring the natural processes of functioning river systems maintains and improves conditions for wildlife and connecting habitats. The return of endangered migratory fish stocks into European rivers is a success, but many stocks remain impoverished and still need river restoration for improved habitats. There is a need to identify the environmental flows necessary to help recover fish populations. Estimates suggest that today, 70-90% of Europe's floodplain area is ecologically degraded because of human activities over the centuries, in particular those taking place since the 1950's⁵. It is generally accepted that restoring these fragmented aquatic habitats is key to achieving successful restoration, either by removing barriers or by linking river corridors to floodplains, wetlands and saltmarshes. Additionally, many countries still consider their freshwater and estuarine systems separately. Better integration at a larger scale is needed to protect and restore habitats such as Natura 2000 sites.

Climate change will affect biodiversity by increasing the frequency of extreme weather events, reducing flows and warming rivers. River restoration needs to be implemented to help reduce these pressures and allow biodiversity time to adapt to these changes. This accords with the newly announced UN General Assembly's 'UN Decade on Ecosystem Restoration' aiming to massively scale up the restoration of degraded and destroyed ecosystems as a proven measure to fight the climate crisis and enhance food security, water supply and biodiversity.

Strategic concepts such as Green Infrastructure, NBS, Natural Capital Accounting and Ecosystem Services are being developed into national legislation and strategy. England's 25 year Environment Plan states it is underpinned by these principles. In Spain and other south European Countries there is a confluence of interest between the Floods Directive and WFD, considering Green Infrastructure with the whole vision of ecosystem services offered by rehabilitation projects.

As a result restoration practitioners need to address wider land-use issues affecting urban, rural and agricultural sectors and communities. More integration of other directives such as CAP is needed. However, there is very little common ground between Agricultural policy (CAP) and WFD. All over Europe good practices in farming and forestry should be applied through erosion control, buffer zones and wetlands, to prevent nutrients and solid substances running off into watercourses. Natural and constructed wetlands have benefits for flood control and diversity of fauna such as fish and birds. In drainage projects and dredging of existing streams, ecology and landscape should be considered. Natural vegetation on stream banks, protecting streams from erosion and overheating, should be maintained and planted.

Flood risk managers are increasingly turning to river restoration to create space for flood water. Reconnecting floodplains to the river and managed realignment in estuaries is an important mechanism

⁵ European Environment Agency, 2018. Why should we care about floodplains? Briefing no. 14/2018.

of water management as future climate change will potentially affect all aspects of the rainfall regime. Natural Water Retention Measures (NWRM) are multi-functional measures that aim to protect and manage water resources and address water-related challenges and are well suited for cross-sectoral use.

Spatial planning in both urban and rural areas was found by the LIFE RESTORE Project to be a fundamental tool for delivering river restoration in Europe. It enables planning authorities to incorporate river restoration in developments by reflecting objectives such as the WFD, the Common Agricultural Policy (CAP) the green infrastructure approach in planning policy and delivering these through planning decisions. This can generate multi-functional benefits such as reduced pollution, improved flood prevention, increased recreational facilities, reduced heat stress and increased value of waterfront housing.

The forecast increase in pressures on water resources from population growth, economic development and climate change strengthen the need towards proactive, integrated, adaptive planning, decision making and action as being delivered by integrating policies and River Basin Management Planning. Reaching on-the-ground success requires political will & courage, appropriate national legal frameworks, comprehensive economic valuation, sufficient financial resources, and increased knowledge, information and scientific understanding.

All of this cannot be achieved by just the water sector, therefore the ECRR states the need for greater coordination and compatibility between EU water policy and other EU economic and sectoral policies to improve the effectiveness of the available resources to realise the obvious multiple benefits available. River restoration needs to move from the local to the basin scale, and river basin management and restoration of ecosystems are needed.

7. WFD Targets & Reporting

The 'one-out-all-out' rule is both a positive and tough measure of results and ambition. It should not be lost or diminished. We agree with the 5th WFD Implementation Report statement that "The one-out-all-out principle is at the heart of an integrated river basin management that addresses all pressures and impacts on aquatic environment". However, in addition there needs to be an equally positive method to report ongoing progress to achieving quality elements towards the target of GES/GEP for the catchment, and progress within its constituent waterbodies.

At a Member State level, the WFD has been transposed into national law and policy. Therefore those national politicians need to see measurable results to match against the large commitment of public money. WFD is both:

- Political, detailed and technical, informing natural sciences and research, with targets and metrics;
And,
- Part of people's lives, those local communities with water needs and uses who are interested in their river, stream or lake (they are not interested in an arbitrarily defined 'waterbody'!).

But these two aspects (national policy and local engagement) require very different communication tools. So there needs to be recognition of these aspects within the reporting and communications of the country and the European Commission.

- Politicians need to know that the work they are agreeing to and funding with public monies is resulting in a positive trajectory of change – currently this is not visible via the WFD scorecards and politicians will not read the scientific reporting.

- People want to know how their river is improving, but the standard metrics are not easy to interpret. Reporting positive incremental steps helps to enthuse these stakeholders to do more and care more for their freshwater habitats.
- The science is not easily condensed into metrics. As we understand more of the process of change from implementing measures to restoring the characteristic ecology, we see the time lag implicit within this type of recovery process. As the remaining challenges reach the hard-to-do category, in future cycles, the longer the recovery will be.

Some of this requires better reporting methods in the member states, but it also requires a lead from the Commission to trigger the positive news back to people and politicians.

ECRR Concluding Statements

ECRR supports the aim and ambition of the Water Framework directive. ECRR does not wish to see it diluted or reduced in its scope. ECRR is confident that much of the change in water governance and management across Europe over the past 20 years would not have taken place, been slower and delayed and not as effective without the WFD.

ECRR has highlighted for different themes where there are issues and where improvements can be made by the European Commission, by national governments and by ministries.

ECRR has shown that river continuity restoration urgently needs EU backing to integrate it into national strategies that underpin the ambitions of the WFD and the implementation of RBMP's. This should specifically include the removal of obsolete dams and barriers.

ECRR has reported the ongoing tensions between Renewable Energy and WFD targets in relation to hydropower. Cross-policy EU guidance is needed to ensure the proper regulation and correct balance between sustainable hydropower generation and a healthy natural river environment.

ECRR has indicated the progress and shortcomings of different approaches to water governance at the national and local levels. The successes of some countries should be shared and guidance produced to aid other countries to better interpret and implement truly meaningful and engaging local community planning and problem solving.

ECRR has highlighted the impact of WFD in supporting and creating more and better transboundary cooperation and action. Existing calls to increase and extend this success should be actioned.

ECRR has responded across the various EU directives, policies and strategies that relate to the water environment. We have shown that there are many areas where clarity and better integration would result in the achievement of greater benefits, and ensure a more sustainable natural and built environment for future generations.

ECRR supports the 'one-out-all-out' tough target, and has suggested the need for more transparent and positive reporting of positive progress towards the aims and goals of the WFD. This is to ensure that implementation effort is clearly, visibly and politically seen to be delivering the significant (but gradual) improvement to our water environment.