



7 June 2012  
Ede, The Netherlands

**To: DG Environment, Unit D1 – Protection of Water Resources**

**Subject: Submission on Consultation on Policy Options for the Blueprint to Safeguard Europe's waters**

#### Key points

- River restoration as part of ensuring green infrastructure is a key means to help reduce and counter the impacts of land and water use and provides the basis for resilient and sustainable water resource management.
- Sectoral impacts on water resources are much wider than just water quality impacts related to agriculture, which have a recognized strong impact, and the Blueprint needs to consider a multi-sectoral and more clearly integrated approach if the correct measures, including green infrastructure, are to be put in place.
- There is a wealth of existing experience and knowledge from practical implementation of river restoration. This must play a key role in developing and implementing the options identified in the Blueprint. Networks and related projects tasked with brokering knowledge and bridging science practice and science policy gaps must continue to be supported to achieve this.

#### Introduction

We<sup>1</sup> represent organizations and initiatives with an interest in European water policy and related practice, the conservation and restoration of rivers and their related wetland ecosystems and the services they provide. Through our partnerships and networks, many of us promote the benefits of river restoration in Europe by brokering and exchanging practical knowledge and experience in this field through web-based platforms, capacity building, exchange visits, networking, learning and knowledge-focused events, advocacy and the general dissemination of information.

#### Key concepts and linkage to the Blueprint

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, and flood safety. By restoring natural

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<sup>1</sup>Wetlands International, European Centre for River Restoration, EU LIFE+ RESTORE project, EU Seventh Framework Programme REFORM project, UK River Restoration Centre, FACE - Federation of Associations for Hunting and Conservation of the EU. Additionally consulted organisations and individuals include: Sergey Moroz, WWF European Policy Office; Jukka Jormola Finnish Environment Institute (SYKE); Toni Scarr, UK Environment Agency, Guido Schmidt INTECSA-INARSA; David Corbelli, Cascade Consulting; Jean-Philippe Torterotot, European Water Association (EWA) and French National Research Institute of Science and Technology for Environment and Agriculture (IRSTEA), Andrea Goltara, Italian Centre for River Restoration (CIRF).

conditions, river restoration promotes healthier, more resilient ecosystems that support green infrastructure. River restoration is integral to the maintenance of existing green infrastructure and the restoration and creation of new green infrastructure.

The EU Blueprint 2012 review is an important opportunity to improve the implementation of the Water Framework Directive (WFD). Both river restoration and green infrastructure directly support the aims of the WFD, but guidance to date has not been enough to stimulate action, and there has been no obligation to look at the value of green infrastructure and specifically river restoration. The Blueprint rightly highlights the benefits of green infrastructure as a solution to the water-related challenges of land use. These efforts could contribute significantly to help meet water-related policy targets in Europe (and other policy objectives such as the Floods Directive, Natura 2000 and EU 2020 Biodiversity Plan).

To enhance the prospects that the Blueprint is a useful tool to stimulate the integration of river restoration into mainstream river basin planning there are several areas for further attention that are outlined below. Furthermore, whilst we are broadly positive about the emphasis on green infrastructure, we are concerned about the challenges this will present in terms of implementation and how these might be met. Bridging the gap between policy and implementation and between science and implementation by supporting organisations and networks that broker knowledge to provide support and guidance is a key requirement in this.

### **General Comments on the Blueprint**

The WFD is a valuable policy tool that attempts to tackle some of the most daunting water-related challenges, from morphology change, to meeting standards in densely populated areas and climate change. It is an important policy and the targets are helping to drive real achievements and further ambitions. Implementation should continue to be strengthened and optimized. The ambitions must be kept open to address these longer-term challenges and promote innovation, including green infrastructure approaches. For instance, WFD implementation has not looked strongly enough at the urban river management issues where green infrastructure is essential for a feasible pathway to good status.

While WFD deadlines are important for driving improvements, it must be recognised that not everything will be achieved in the short-term, but it is a legal requirement of the directive that such restoration strategies are included in the current plans. Europe has a long history of morphological change that has driven degradation over long periods of time. Given the recovery time of ecosystems, the restoration of ecological processes is an ambition that will take an extended period of time to achieve, however, it is important that the action starts now, including some larger scale projects in order to learn lessons and be prepared for upscaling in the next cycles.

As a Blueprint for water resources, the Blueprint should link all aspects of water policy in an integrated way. This should reflect the links between water quality, water resources and the morphology of our rivers and estuaries. The document tends towards a more sectoral analysis of problems and options without sufficient emphasis being made on an integrated approach to achieve them.

In terms of policies that contribute to greater resilience for climate variability and global change, green infrastructure will bring the most benefits and offers the most in terms of resilience over the long term. River restoration is all about restoring natural processes, increasing resilience and enhancing capacity to adapt to climate variability and global change. The long life-cycle of most water-related infrastructures, either green or grey, and the need to optimize the use of any resources, makes adaptability and resilience of green infrastructures all the more important.

The high degree of regional variation across the EU zone and those neighbouring countries sharing water resources represents a particular challenge to achieving improved water resources. This is insufficiently highlighted in the paper and is important both in wider water resource management terms and with respect to the integration of green infrastructure and river restoration. It relates to multiple dimensions such as governance, institutional capacity, climate and environmental context. The Blueprint should more strongly recognize this generally in the relevant problems and options.

The Blueprint seeks to tackle issues related to the ecological environment. It highlights both the need to maintain nature for its own sake and the need to maintain and restore the wider services that nature provides to people. Central to this approach is the 'ecosystem approach'. The Blueprint would benefit from a statement highlighting the multiple services and value provisions of ecosystems, the role of the ecosystem approach, and the importance of integrated, multi-sectoral planning and management solutions in this regard.

Green infrastructure, and more generally ecological engineering works and assets, still raise legal issues, such as land ownership, the legal status of such pieces of ecosystems modified and used by society, and responsibility for maintaining over time the corresponding ecosystem services. For instance, is a pond, managed for abating the pesticide concentrations of water a treatment asset or nature?

### **Specific comments on the Blueprint**

#### ***Section 4, Problem 1***

##### *Observations*

The lack of common definition and application of environmental flows is rightly identified as a barrier to setting targets and achieving good ecological status.

Problem 1 rightly highlights that this presents problems in allocating water for users including nature. However, we would prefer to see nature referred to as a multiple service provider here; current wording referring to the 'basic needs' of nature will tend to bias thinking towards giving biodiversity the minimum rather than optimizing the needs to ensure balanced ecosystem service provision.

The current text includes environmental flows in a wider analysis of how to achieve better water efficiency and related allocations, against a backdrop of scarcity. They are also an important means to inform the balanced delivery of water-related services by different users, including ecosystems, and in line with this to help establish parameters for green infrastructure and related river restoration.

Globally there is a wide range of experience in terms of the establishment and implementation of environmental flows that should help inform development of the methodology and standards. Countries and organisations with strong experience in this regard include South Africa, Mexico, the United States and IUCN, The Nature Conservancy, World Wide Fund for Nature and Wetlands International.

##### *Suggestions*

Modify the text to include emphasis on the value of environmental flows in balancing service provisions amongst users, including ecosystems, as well as in the context of water scarcity.

Highlight the importance of understanding environmental flows in the establishment of parameters for river restoration.

Under option a) refer to the wide range of global experience in environmental flows (including outside the EU) and the intention to draw upon this in establishing methodologies.

#### ***Section 5, Problem 3***

##### *Observations*

This section and the related problem 3 statement and options are in general welcomed, providing as it does the clearest rationale for bringing green infrastructure into play as an approach to help tackle water-related problems.

Bringing green infrastructure and with this river restoration into water resource management will prove challenging to Member States. Whilst measures such as water quality improvement can be easily monitored and targets easily set, this is not the case for green infrastructure. The multiple service provisions of green infrastructure and its contribution to problems such as flood defence, water quality improvement and biodiversity are challenging to measure and evaluate. Issues such as ecosystem response versus political decision-making timescales, the low

awareness of related concepts and practice in the water sector and the lack of established standards for measurement present particular challenges. However, through knowledge brokering networks and related projects there is increasingly a knowledge base built on practice that can be used to inform these developments.

The preamble analysis begins by introducing land use as an important issue, but the emphasis of the Blueprint quickly shifts to agricultural use and policy. Whilst we recognize that this is one of the single biggest drivers of degradation of water resources, it is not sufficient to only focus on this sector for solutions. Analysis of the river basin management plans and the CIS hydromorphological working group report<sup>2</sup> submitted under the WFD shows that navigation, flood defence and hydropower are driving major hydromorphological change and are key sectors as well as agriculture. This would also improve the rationale for the wider scope of the call for guidance on green infrastructure under option a).

The multiple impacts of different sectors on water are at least in part driven by multiple, often conflicting policy initiatives. Improved compliance, coherence and implementation between different EU level Directives could help drive better sectoral integration to better balance sectoral impacts on water.

To bridge policy and practice within and between sectors requires that terminology is appropriate and accurate to build the right understanding and basis to stimulate cooperation between the respective networks and expertise. We find that this could be strengthened. For instance, the Problem 3 statement uses the term ‘deregulate’ which we do not fully understand in this context; rivers have been regulated in many parts of Europe for centuries. Under option a) terms such as ‘re-meandering of rivers’ are used which is not in line with current understandings of river restoration and green infrastructure concepts.

Option f) in relation to Strategic Environmental Assessment, we are supportive of this statement. It is important that any energy development, including hydropower, be included in SEAs due to the importance and influence upon river restoration and green infrastructure. However, we also see the need to highlight the benefit of other pre-planning approaches of a different scale that can improve the sustainability of water resource management. Such approaches include broad stakeholder processes, mapping agreed criteria, and determining areas that are ‘no go’ as a basis for permits. These complement SEA and EIA referred to in options e) and f).

#### *Suggestions*

Include the need for target-setting, monitoring and evaluation to be part of the guidance defining a framework for green infrastructures and for restoration projects. Ensure that existing networks of scientists and practitioners are engaged to help broker knowledge and overcome bottlenecks, based on field activities and experience involving both professionals and scientists.

Review the terminology under Problem 3 and in particular the use of the word deregulate.

Reword option a) to reflect a basin view of river management. This should integrate water management from the source of the river, including associated wetlands and groundwater, right out to sea. This is the approach taken by the WFD and any guidance on green infrastructure should include urban, terrestrial, freshwater, estuarine and coastal areas. It is important also to include sectors outside of environmental, including transport, energy, spatial planning. For example, strategic spatial and land use planning can help to make land available for hydromorphological river restoration. This approach will better capture the full range of benefits to both urban and rural settings.

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<sup>2</sup> WFD and Hydro-morphological pressures policy paper: Focus on hydropower, navigation and flood defence activities. Recommendations for better policy integration. See also, WFD and Hydromorphological Pressures Technical Report: Good practice in managing the ecological impacts of hydropower schemes; flood protection works; and works designed to facilitate navigation under the Water Framework Directive

Add reference to an ecosystem approach in the preamble to Problem 3 and the need to balance differing sectoral uses and impacts on water.

The preamble should address a fuller range of sectors impacting on water resources, especially including those that are affecting the hydromorphology such as hydropower, navigation and flood risk policy. River restoration as green infrastructure has the potential to contribute many measures that are required in the WFD to gain maximum ecological potential in Heavily Modified Water Bodies. For instance, through river restoration it is possible to mitigate impacts for migration, spawning and reproduction of fish species.

We support option g) and emphasise that future changes to CAP should support the delivery of WFD measures.

Better compliance, coherence and cooperation are needed to unlock measures in key sectors. As a matter of priority, CIS should look at best practices and work out a best methodology for pre-planning approaches.<sup>3</sup>

Best practice, pilots and demonstration projects are needed in member states in order to develop best practice approaches to show how green infrastructure and river restoration can help enhance sustainability. The ECRR, RESTORE and REFORM are available to assist in brokering knowledge to this end.

### ***Section 6, Problems 8 and 9***

#### *Observations*

We welcome recognition of the need to quantify the benefits of ecosystem services and the potential this has to unlock payment for ecosystem services schemes in the EU. This could be a critically important step for improving the means to develop and restore green infrastructure. It should also be recognized that such information makes the costs and benefits of different sectoral uses of water more transparent and can support improved sustainability as highlighted in section 5.

We support the Commission's proposals to develop guidance to bring costs and benefits of river restoration into water resource planning. Targets are needed and are a key to the success of achieving the green infrastructure elements in the Blueprint. However, this is a very complex subject area and the challenge will be to develop clear and simple guidance that can be implemented in a proportionate way by Member States that is responsive to their specific environmental and economic contexts.

Problem 8 does not refer to the need to integrate the wider environmental costs to maintain ecosystem services.

Problem 9, option b). We would be cautious of any mandatory approach to recover costs as it would need to be sufficiently flexible over time and between member states.

#### *Suggestions*

Additional methodology and research into costs and benefits is needed and we are keen to help explore this. There is a lot of knowledge, experience, information and practice to draw upon from existing networks of practitioners. There are many good examples of existing cases where methodologies have been applied and information on costs and benefits is available.

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<sup>3</sup> Water management, Water Framework Directive & Hydropower. Common Implementation Strategy Workshop, Brussels, 13-14 September 2011. Issue Paper (final version), November 2011. See Section 7, examples from France, Norway and Switzerland on Strategic Planning Tools. See also, Box 1, earlier CIS principles and recommendations on WFD & Hydropower include the following key recommendation from the 2010 Water Directors Statement: "Pre-planning mechanisms allocating "no-go" areas for new hydro-power projects should be developed. This designation should be based on a dialogue between the different competent authorities, stakeholders and NGOs."

Highlight the importance of making the costs and benefits of ecosystem service maintenance and restoration transparent in water pricing in the text of section 6 and to assist in supporting sustainable integrated land and water management planning under section 5.

As part of the development of Problem 9, option a), commission a quick scan of socio-economic methodologies and their application across Europe that is based on practical implementation on the ground.

### **Section 7, Problem 10**

#### *Observations*

We agree with the statement that ineffective governance can undermine policy objectives. This applies as much in the field of restoring rivers as it does in wider water resource management. There are many examples in Europe where good governance has helped to stimulate river restoration.

#### *Suggestions*

Under option a) include best practices in relation to river restoration and related governance models.

### **Section 8, Problem 11**

#### *Observations*

In order to help our understanding of the problems facing Europe's waters and to identify water management choices, the options need to look more broadly than just sharing reporting data. We need to support knowledge sharing and ensure current science is available for practitioners and policy makers. This is a point that cuts across many of the problems and related options highlighted in the Blueprint.

Current efforts to make guidance documents available fall short of what is necessary for effective cooperation. Our experience is that information is often difficult to obtain, people do not know it exists and it doesn't reach the people it should.

#### *Suggestions*

The option of further developing WISE is not the only solution. Knowledge brokering is a better option to address options a and b. More than research, outputs of research must feed into the knowledge base, best practices and dissemination as exemplified by RESTORE, REFORM and ECRR. Knowledge sharing needs also to consider how the data is used to improve water management. The data collected as part of reporting must also be used to shape the measures and implementation of basin management plans. Support for both formal and informal networks is essential for generating and sharing data.

The ECRR network and the EU Life+ project RESTORE and the FP7 funded project REFORM are important to aid knowledge sharing around Member States and also to improving the existing tools. The RESTORE website now contains knowledge gained across Europe on various different aspect of water management relating to restoring rivers.

Wiki's are a useful way forward to share information and best practices, not only for water and river restoration, but also for other sectors such as agriculture and hydropower. RESTORE is currently developing a 'River Wiki' that will hold river restoration case studies from around Europe. It will be possible to search for river restoration projects using parameters such as cost, substrate, land use or hydropower schemes. Practitioners are invited to contribute river restoration case studies, good practice and research to the database (<http://www.restorerivers.eu/CasestudiesWIKI/tabid/2604/Default.aspx>). This is building on the existing Forecaster (<http://forecaster.deltares.nl>), a web-based compilation of case study outputs from restoration and rehabilitation projects that is intended to help practitioners.

### **The Way Forward**

Throughout the analysis above it is clear that we see the need for sharing knowledge and experience in relation to actual practice on the ground as a key strategy for developing and implementing many of the options identified in

the Blueprint. Many of the contributors to this paper work either in such organisations or benefit from their engagement with them. Key networks and projects in this respect are:

European Centre for River Restoration, ECRR ([www.ecrr.org](http://www.ecrr.org)). ECRR fosters the establishment of national river restoration centres and disseminates information on river restoration within its networks and to external target audiences.

EU Life+ project RESTORE ([www.restoreivers.eu/](http://www.restoreivers.eu/)). RESTORE is helping us to understand ‘state of the art’ best practice in Europe and to communicate to key practitioners, sectors and audiences.

FP7 funded project REFORM ([www.reformrivers.eu/](http://www.reformrivers.eu/)). REFORM seeks to improve existing tools and develop new ones to increase the success and cost-effectiveness of river restoration measures and procedures to monitor the biological responses to hydromorphological changes with greater precision and sensitivity.

Given our role and niche to develop and broker knowledge, bridging gaps between scientists and practitioners and policy makers and practitioners, we would like to explore further engagement with the Commission as part of the Blueprint drafting process and roll out of relevant options therein.