



## **Freshwater Habitats Trust: working towards the Protection and Management of Small Water Bodies**

**14th November 2013, Brussels**

In November 2013, the Freshwater Habitats Trust, in partnership with the European Environmental Bureau, and the backing of the European Commission and the government of Lithuania, brought together water and nature managers from 18 EU states to discuss how better to protect the continent's small waters. Small water bodies – headwaters, small streams, ponds, flushes and ditches – are vital for freshwater biodiversity but remain largely overlooked by Member States and widely excluded from the provisions of the Water Framework Directive and River Basin Management Plans which describe how we should be protecting freshwaters. The workshop was the first step in producing a manual of best practice guidance, which will be available for the 2<sup>nd</sup> cycle of River Basin Management Plans in summer 2014.

Small water bodies are a major part of Europe's freshwater network; they include many of the least damaged freshwaters across the continent, support a large proportion of its freshwater biodiversity, mediate many ecosystem processes, influence the condition of larger water bodies and are often of considerable interest to citizens. Their protection and management is thus relevant both for the improved implementation of the Water Framework Directive (WFD) and for other EU water-related legislation and policies, in particular the Nature Directives and EU Biodiversity Strategy to 2020.

The purpose of the workshop was to:

- provide a forum to discuss possible ways to better protect and manage small water bodies and
- begin the process of developing a manual of best practice advice for the protection and management of small water bodies in EU Member States.

Small water bodies are abundant in Europe but it is only comparatively recently that research has shown how important they are for freshwater biodiversity and ecosystem services. There is now growing awareness of their significance, as shown by the European Environment Agency's *European waters – assessment of status and pressures* and the European Commission's *Blueprint to Safeguard Europe's Water Resources*, both published in 2012. However, small waters remain relatively neglected in water and management policy and practice. The workshop therefore aimed to bring together specialists and stakeholders to consider how to better manage small waters without excessive cost.

## Opening speeches

The workshop was opened Dalius Krinickas, Water Director for Lithuania, and Peter Gammeltoft, Head of the Water Unit DG ENV C1 – which manages the implementation of the WFD across Europe. Mr Krinickas noted the wide concern about small water bodies and their importance in Europe. For example, 80% of Europe's river network consists of small rivers, commonly known as headwaters, creeks, streams or brooks. He also noted the common understanding of their exceptional value from an ecological and economic viewpoint, and their greater vulnerability to human activities compared to larger waters. He concluded that the goal of good environmental status should be applied to small waters, and that the workshop, and the advisory information which would be produced as the eventual output from the workshop, would contribute towards this ambitious goal.

Mr Gammeltoft summarised the substantial progress that had been made in the implementation of the WFD, particularly the impressive improvement in the knowledge of water status, increased transparency in setting objectives and managing water, and the firm integration of the ecological perspective into water management. He noted that there are still areas where additional guidance may be needed (monitoring, chemical status, costs and benefits analysis, hydro-morphology, etc) and that there is still a need for determined effort to ensure achievement of WFD objectives in the 2015 and 2021 cycles. Finally, he commented on the areas where small waters have been identified in the Blueprint and, although the Blueprint does not contain specific measures for small waters, noted that the output from the workshop, and the guidance it produces, should usefully contribute to the working groups on Natural Water Retention Measures, hydromorphology, Pressures and E-flows.

## Summary of detailed presentations

Representatives from the European Environment Agency, and the scientific, NGO and water management communities presented information about the value and characteristics of small water bodies in different parts of Europe, and practical monitoring and management case studies. Presentations dealt with the relationship between small waters and the WFD, the special features of small running and still waters, links between WFD and the Habitats Directive, low cost approaches to monitoring, and case studies from western, southern and central / eastern Europe.

Jeremy Biggs, Director of the Freshwater Habitats Trust (United Kingdom), introduced the technical component of the day talking on **Small Waters and the WFD**. He noted that small water are increasingly recognised as important in a global context, both for freshwater biodiversity and ecosystem services, and that much of the information describing their importance has only become available in the last 10-15 years, after the introduction of the WFD.

Nikolai Friberg, of Aarhus University (Denmark) spoke on **Small running waters: their value and function for freshwater biodiversity** and their special features compared to larger running waters, particularly their contribution to catchment aquatic biodiversity, which has only recently been recognised and is greater than would be expected from their size. He noted that many headwater streams, although apparently connected to the rest of the network, are in practice quite isolated – rather like standing waters – and to protect them requires

management of landscapes regionally to maintain networks of small headwater catchments, rather than simply protecting individual water bodies.

Pascale Nicolet, Director for Policy and Implementation at Freshwater Habitats Trust, reviewed the **role of small standing waters in maintaining diversity in the freshwater landscape**. She described the particular importance of small standing waters (ponds and small lakes) compared to other freshwaters. In all landscapes so far investigated, ponds support a larger proportion of freshwater biodiversity than lakes or rivers, and are especially important for endangered species. Collectively, at the landscape scale, small standing waters are critical to maintaining freshwater biodiversity. The targeted protection and creation of small standing waters is particularly important for populations of threatened species. Collectively we need to recognise the value of small standing waters, and recognise that protecting them is relatively cheap and easy because of their small catchments.

Peter Kristensen, of the European Environment Agency, spoke on linking of Habitats Directive freshwater habitats with WFD water types. He noted that EU policies on water, nature and biodiversity are closely linked and that both the nature directives and the WFD aim at ensuring healthy aquatic ecosystems. However, for the moment, assessing status and pressures of freshwater habitat types and the WFD water bodies are run in parallel, and there are not enough synergies between the two processes. He concluded that a more coordinated assessment of status, pressures and impacts, would result in co-benefits for both processes. He noted that the inclusion of small water bodies into the 2014 assessment of the state of European ecosystems would be valuable for raising awareness of both their importance (many are still amongst the highest quality freshwater ecosystems) and, conversely, the poor state of many small water bodies which require targeted improvement.

Martin McGarrigle of the Environmental Protection Agency of Ireland considered the question of **How can you protect small waters without excessive cost?** Specifically he described the Small Streams Risk Score, an invertebrate-based rapid assessment monitoring method to deal with the large numbers of small headwater streams in many Irish catchments. Using simplified taxonomy the SSRS system assesses risk on first and second order streams, which make up 70-80% of stream length in many catchments. SSRS allows surveyors to concentrate on small streams that are potentially subject to the biggest diffuse pollution risk and is a rapid technique to pinpoint where Programmes of Measures are needed within catchments. Although quicker than standard WFD methods it is still quality assured.

## Case studies

Case studies from different parts of the continent provided the meeting with an introduction to issues associated with broader ecosystem service delivery, the special problems, and opportunities, of small waters in the Mediterranean, and approaches to small water management in a less intensive landscape in Lithuania.

Chris Stoate of the Allerton Project, Game and Wildlife Conservation Trust (United Kingdom) introduced **Small water bodies and ecosystem services in agricultural landscapes** describing the range of services provided by small waters (e.g. clean water, retention of water within catchments, treating pollutants) with examples from trial projects in the UK. He described the examples of field experiments using small waterbodies and wetlands showing the level of water

quality improvements possible in real-world farming scenarios, which are often more variable than is widely understood.

Jose Prenda, from Huelva University (Spain) presented **Small water bodies and WFD in the Mediterranean region: case study from Spain**, emphasising the special problems of Mediterranean small waters which may either have too much water, when seasonal streams become permanent because of waste water and agricultural discharges, or too little water as permanent streams are over-abstracted. The Mediterranean basin is an IUCN hot spot of freshwater biodiversity, much of this associated with small waters. For example, about 60% of all freshwater fishes assessed as Critically Endangered in Europe occur in this area. The significance of these water bodies may not be immediately apparent because species diversity per water body is often low, whereas the rate of endemism is high. Although pressures are very severe in the Mediterranean, some small waters are amongst the best preserved and act as reservoirs of biodiversity and ecosystems processes and services.

Audrius Sepikas of the Environmental Protection Agency, Lithuania, presented a **Case study on the protection of small water bodies in Lithuania**. The work has included special programmes to protect small and isolated populations of the pond tortoise (*Emys orbicularis*) and the European Tree Frog (*Hyla arborea*) and the development of a pilot ecological network in Southern Lithuania.

## Workshop sessions

The meeting held three workshop discussion sessions which began the process of creating practical advice and guidance for policy makers and practitioners to better protect and manage small waters. The discussion are briefly summarised below and will be reported more fully in the Workshop Meeting Notes to be published in January 2014.

### Workshop Session 1: How should we protect small waters practically?

The first session covered practical management and monitoring of small water bodies. Participants discussed ways in which small water bodies could be included in monitoring programmes without excessive costs, for example by using a risk based approach or by identifying and monitoring representative groups of small water bodies. The heterogeneity of small water bodies, both at the catchment and continental scale, was identified as a potential issue in the context of developing overarching European WFD compatible methods for assessing the status of small waters, particularly given the current lack of available data and resources. However participants supported the development of a research programme to address gaps.

### Workshop Session 2: Can we integrate EU legislation and policies to protect small waters?

The second breakout session was focused on integration of water and nature policies, and the possibilities of using small waters for enhancing ecosystems services. The participants specifically discussed small water body protection in relation to Biodiversity 2020 targets, and the integration of WFD and nature directives. They reported that better implementation of the Birds and Habitats Directive and better integration of WFD and nature directives was indeed likely to result in better protection and increased monitoring for small water bodies, although there were doubts as to the extent of protection for small water bodies outside the Natura 2000 network.

The group also recommended that small water bodies should be included in MAES so that their value for specific ecosystem services was better established. Gaps in knowledge included what additional benefits small water bodies might bring compared to larger water bodies, and the actual services delivered by different types of small water bodies. With respect to CAP, participants were keen for funding to be used to protect high biodiversity sites, rather than for constructed wetlands to mitigate pollution from nutrients and sediments.

### **Workshop Session 3: What is the role of small waters in spreading knowledge of freshwater issues and engaging citizens?**

The third breakout session looked at the role of small waters in spreading knowledge of wider freshwater issues and engaging citizens in their management. All participants agreed on the need for further public participation, and recognised that people tend to have a strong feeling of ownership for small waters near their dwelling places, and highly value the cultural services they provide (e.g. tourism, sites of leisure). Participants also underlined that a large-scale public involvement, with individuals or landowners volunteering to monitor and be involved in protecting a particular pond or stream, could provide, if well designed and implemented, cost-effective ways of monitoring small water bodies.

The next steps will be to publish a workshop report in late January or early February 2014, and follow up on the key findings in consultation with participants and the wider water and nature management community.

Work is now starting on the policy and practice advisory manual, which will be produced in time for the second cycle of River Basin Management Planning in Summer 2014. A consultation draft will also be available from April 2014. To stay up to date with this, and other research and project news from Freshwater Habitats Trust, please sign-up for their free e-update, Ripples: <http://www.freshwaterhabitats.org.uk/get-involved/ripples/>