



Natural Water Retention Measures (NWRM), a tool to manage hydrological issues in Europe?

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Manage water quantity has often been considered in Europe as an engineer question and thus implying artificial infrastructures able to control excess or lack of water by storing, damming and providing end users with the correct water quantity at the right moment. With the progress in scientific knowledge on the ecosystem functioning and ecosystem services provided by a healthy aquatic environment, focussed has been gained to using more Nature Based Solutions (NBS). Providing multiple benefits, they allow a more integrated approach towards water management than usual civil engineering solutions and can complement them in a River Basin context.

In Europe the policy context largely frame the management of hydrological issues: the Water Framework Directive (2000/60/CE) is focussed on achieving and maintaining a good status for all water bodies and water quantity management is particularly important in this context to support aquatic life but also for all water uses. In addition, the Floods Directive (2007/60/EC) is specifically targeting flood risk and its management. In 2012 the DG Environment (DGENV) of the EC published a “Blueprint to safeguard Europe’s water resources” which was assessing the situation of water policy and included a water scarcity and drought policy review. It also introduced the concept of Natural Water Retention Measures (NWRMs), NBS for Water.

NWRM can represent a promising solution by combining land and water management to provide for a more integrated approach and contribute simultaneously to the achievement of the objectives of different European policies (WFD, FD, Biodiversity strategy ...).

To support the gathering and development of knowledge on NWRM, DGENV funded a project to produce the official European Platform on NWRM (www.nwrn.eu). The International Office for Water (IOW) with 10 partners throughout Europe have organised the information so as to provide an homogenised and detailed information for end users willing to implement such measures.

In 2018, the IOW is mandated by the EC to continue looking for new case studies and also to improve the web-platform in order to transfer it to the EC authorities by end of 2019.

In the presentation, IOW will explain how NWRM can help manage quantities of water in support of hydrological issues in catchments and represent a logical and desirable alternative to usual end of pipe approaches. A specific focus on biophysical impacts, ecosystem services and matching of policy objectives will be given. The presentation of 2 case studies, focussed on the watershed management of hydrology will illustrate key aspects of these water NBS approach: multi functionality like storing and slowing run-off and river water or reducing it, indirect impacts on other water-related aspects like pollution, resilience and robustness in a changing environment.

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