Restoring Europe’s rivers

Europe’s rivers face multiple pressures. An EU-funded initiative developed guidelines and tools to address the challenges and help restore these vital ecosystems.

Recent research has shown that 40 % of European rivers are affected by hydropower, navigation, agriculture, flood protection measures and urban development. As a consequence, restoration of river hydrology and morphology has become a priority.

The aim of the REFORM (Restoring rivers for effective catchment management) project was to provide the guidance and tools needed for successful and cost-effective river restoration. This was achieved through research in the fields of hydrology, hydraulics, geomorphology, ecology, socioeconomics and water management.

The initiative provided a framework for improving the success of restoration.
The initiative provided a framework for improving the success of restoration measures to meet targets regarding the ecological status or potential of rivers. To achieve this goal the consortium developed protocols and procedures for monitoring the biological responses to changes in the ecosystem with greater precision. This will support the design of programmes of restoration and mitigation measures for the Water Framework Directive.

Project partners reviewed existing information on river restoration and compiled relevant data sets. For instance, researchers examined medium-sized river catchments in order to compare the benefits of flagship restoration measures with normal restoration and control sites.

Scientists also developed a sampling protocol to provide standardised data for river restoration planning. They also developed a protocol to benchmark restoration activities, with an emphasis on communication and information dissemination.

Much of the project focused on the most effective ways to restore rivers and found that flow rate was a major indicator of river health, with aquatic vegetation playing a key role. The project also increased awareness and appreciation for the need, potential and benefits of river restoration.

REFORM provided guidance to relevant EU directives to improve the conservation and restoration of rivers as sustainable ecosystems. In addition the management of groundwater, floods, energy from renewable resources and agriculture will benefit from this knowledge.

**Keywords**

REFORM, river restoration, ecological status, Water Framework Directive, groundwater floods

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**Project Information**

**REFORM**

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