Restoring Europe's Rivers

RESTORE Bulletin

May 2013

Catchment pages now on RiverWiki

We are always looking for ways to improve our RiverWiki and we now have river catchment pages for England.

These pages will help you find good examples of catchment management and will provide a better way to understand the larger water environment. We also hope it will encourage a more diverse audience to use our case studies.

If you are outside England and want a catchment page please contact us and we will set it up for you.

Email: restore@environment-agency.gov.uk

RRC conference demonstrates passion of people working to restore rivers

With over 300 delegates, *an RRC record*, this year's conference held at Whittlebury Hall demonstrated the increasing interest in river and catchment restoration. Thank you to everyone who

News in May

Articles

Upcoming events

5th European river restoration conference,
RRC river restoration conference, NL

attended and in particular those who presented talks and posters, and helped to facilitate workshops and site visits.

RRC conference dinner

The RRC will produce a special item next month about the outputs from the conference.

Please pass any feedback to the RRC as soon as possible as they are already looking ahead to next year: rrc@therrc.co.uk

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Tweet of the month

RESTORE rivers @RESTORErivers

A scary view for a fish! With @ymparisto in Germany. pic.twitter.com/3zoELnkMfI

Re-wilding the River Bure: Low cost river restoration

'How should a river be restored?' can often be translated as 'How much will it cost?'

One inexpensive low tech approach, that has sometimes led to divided opinions, is now gaining acceptance as a suitable method of restoring natural riverine processes.

A pioneering plan to recreate natural tree-fall was carried out on the River Bure, a chalk stream on the Bickling Hall Estate in Norfolk. The only equipment needed was an old boat, a hand winch and a chainsaw.

Phase 1 of restoration (photo D. Brady)

See the re-wilding of the R. Bure in action here

Like many other British rivers the River Bure had been engineered and cleared of trees for flood prevention and navigation. The river had also suffered from over-widening due to historic dredging activities and was heavily silted. Wild trout stocks and overall conservation value was relatively low.

Dave Brady from the National Trust, one of Britain's leading conservation charities, was the project manager for the venture. He identified an opportunity to use a straightforward, no frills approach by felling entire trees into the river to diversify the flow and restore habitat. The approach, although it is simple, is grounded in scientific theory.

Dave Brady said,

'It was this idea of exerting a simple influence that guided my approach to the 'restoration' work on the River Bure .

For many decades the desire to keep the water moving resulted in all 'obstacles' being removed so the most simple approach to restore natural processes would be to stop removing large woody debris, and to do the opposite by re-introducing it. Taking into account increased flooding of upstream meadows trees were felled in to the river and left roughly where they fell to start the natural ball rolling.

To me restoring or re-wilding is, in simple terms, allowing nature to resume the management of our environment with, wherever possible, no new negative influences from man and a minimum of designed restoration'.

The problems resulting from re-introducing large woody debris into rivers are generally identified as changes to the river flow and also a genuine issue of material breaking loose and blocking culverts. There is also a public perception that a river that was previously reliant on dredging for maintenance will be

made more liable to flood.

However, according to findings by the Environment Agency (UK) unless woody debris is blocking more than 10% of the cross-sectional area of a river it is unlikely to impact on water levels, therefore it will not increase flooding. Trees and other woody debris reintroduced to the river can be anchored to prevent possible movement and if debris is directed in a downstream direction and positioned close to the bank it will reduce bank erosion with little effect on channel shape.

Dave Brady explains that *'Nature will always take advantage of opportunities that are either of its own making or have been provide by man'.*

As a result of this approach water now flows faster, moving silt and sediment to clean and expose gravel. This provides spawning grounds for a now thriving population of wild trout. Silt is now trapped in the slack pools behind the woody debris and provides opportunities for colonisation by plants and habitat for invertebrates and fish.

The restoration of the River Bure is one of the case studies on our RiverWiki you can also find information about visiting the site on the National Trust's website .

For further information contact: Dave Brady (Head Ranger), National Trust dave.brady@nationaltrust.org.uk

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River restoration in Bulgaria

A new programme of measures, integrating the aims of the Water Framework Directive and Natura 2000, has been applied to protect and restore riverine ecosystems in the Tundzha, Maritsa, Yantra, Rusenski Lom river basins in Bulgaria.

As in much of Europe, Bulgaria has traditionally engineered its rivers to protect towns and cities from flooding, leading to a decline in fish, habitat and water quality, reduced flows, the loss of surrounding land ecosystems and in some instances complete ecological loss in some stretches of its rivers. The stresses on Bulgarian rivers have been intensified by illegal sand and gravel extraction from river beds, logging of riparian forests, the drying out of wetlands to increase agricultural lands and modifications to river beds and flows for flood protection.

Although NGOs and local authorities have been trying for 20 years to reverse this decline in riverine, a lack of co-ordination between stakeholders has prevented the successful implementation of their strategies.

However, a new national approach began in April 2012 to restore rivers by establishing partnerships between NGOs, state and local

institutions and is leading to significant success in re-establishing healthier river processes.

In the protected areas bans and restrictions have been put on sand and gravel extraction, construction of small hydropower plants, changes to the riverbed, construction of dam walls, cutting natural forest vegetation on shores and island, and replacing local riparian forests with non-native tree species. Obligations have also been imposed to ensure the free passage of fish fauna when constructing new developments and considering the use of fish ladders.

Protected area of Vesselina River following restoration

Since the start of the scheme a further seven projects have been identified through the new partnership approach including restoration of the Vesselina_River in the Danube River basin which contains wetlands, riparian forests and a river meander.

During the past year all river basin directorates have been involved in collecting information, identifying main target audiences and promoting the RESTORE project.. Representatives of the 4 river basin directorates met in Ruse in November 2012.

For more information please contact Vasil Uzunov, East Aegean River Basin Directorate, vasilu@yahoo.com.

Upcoming events

Book now for

5th European River Restoration Conference in Vienna 11th to 13th September 2013 & first European River Prize

Deadline for Early Bird registration rate for our Vienna final conference extended to 10 June!

The event will include a presentation of work, networking events, site visit and post conference report. The announcement of the first European river prize will be held in association with the conference.

The conference will also assess the results of RESTORE and how gathering and transferring knowledge has benefited the practical work of those involved in river restoration during the course of the project.

For more information: restore@environment-agency.gov.uk

RRC led river restoration training course in June, Netherlands

The RRC is leading a river restoration training course in Utrecht, Netherlands, 25-26th June.

The deadline for registering interest is Monday 10th June 2013. Bookings will be taken on a first-come, first-served basis.

“Understanding River Restoration” will provide participants with an appreciation of the importance of understanding natural river processes in designing river restoration projects for ecological and habitat benefits. It will also include sessions on how to monitor schemes to determine success.

The event includes classroom activities and site visits to demonstrate the need to understand the science that underpins river restoration and the practical implementation of design and monitoring.

Further information from RRC

Read more on the RESTORE partnership.

If you have any news items for us please email by 20th June 2013: restore@environment-agency.gov.uk

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