



Drinking water

A mechanism for the revitalization of Danube side-channels: urban drinking water as a motivation for wetland restoration

What futures for European landscapes? What are the key drivers pushing changes in the way we manage our land and water resources? Who are the key economic players? How can we work them for the benefit of nature, as well as people? Are there new opportunities for landscape change of which we can take advantage?

Can “Payments for Environmental Services” type mechanisms work in Europe?

In seeking innovative forms of partnership, and in scoping possibilities for kicking-off self-sustaining mechanisms, WWF Hungary began a co-operation with a large drinking water supply company in southern Hungary. Not located on the Tisza this time, but on the river Danube, near the town of Pécs (population 200,000). An unusual type of partnership, perhaps, but one which certainly has potential as a mechanism which shows how to engage industry for nature conservation. It also clearly links the public and their everyday life – who does not drink water? – with biodiversity and the restoration of nearby valuable habitats.

The mechanism is simple: the water company abstracts the city’s water supply from bank-filtered wells alongside the Danube, but problems regarding environmental quality have started to be evident. Sedimentation was as high as 2 cm per year, impacting upon both water quality and quantity. Now, the water company – Transdanubian Regional Water Utility (DRV) – has joined forces with WWF and other local players in restoring the side-arms in order to protect the drinking water supply from further degradation. The logic is clear: healthy wetlands, when restored and allowed to function according to their full ecological potential, will supply healthy drinking water for the nearby city.

By investing in nature now, DRV and WWF believe that costly rehabilitation measures in the future can be avoided, saving money whilst at the same time ensuring valuable wetland habitats are returned to their former glory as havens for plant, animal, and bird species. Local communities can also benefit from using the wetlands as recreational and economic resources.



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How was this mechanism established?

The satellite image shows sedimentation of the left bank of Szabadság island due to harmful water supply management in the channel. Two kilometers downstream, the situation is quite similar, leading to the municipality of Mohács declaring its interest in the revitalization planning of Cigány island.

WWF aims to restore and reconnect all Danube side-channels where the conservation priorities match the ideas of the partner organizations. These two mentioned side-channels are perfect ground to kick off the process and show visible results on the ground.

The potential for replication is significant, even just along this stretch of the Danube. A 2003 WWF Hungary study discovered 33 side-channels and oxbows which could be re-connected with specific focus on sedimentation, water supply, management responsibilities and revitalization plans, including of course nature restoration and re-connection to the main channel.

The study shows that for 14 out of the 33 side-branches the Danube-Drava National Park Directorate would have the main interest in the revitalization, for nature conservation reasons. But since WWF is focusing on new partnerships, we were not looking for only conservation interests. In 8 cases the Local Governments are the engines of the planning process and an additional 5 side-channels could be restored by the support of the local fishermen groups. Currently 3 of them have clear water management functions, as shipping harbours, irrigation pumps and providing cooling water for the Paks Nuclear Power Plant. In only 3 cases do administrative bodies have no clear idea about the revitalization motivation or mechanism.



Photo: DRV



Base-map: LANDSAT TM satellite image from the year 2000



Photo: ADUKÖVIZIG



What was the mechanism for moving from this...

Photo: ADUKÖVIZIG



... to this?



Not the usual motivation for nature conservation, the Mohács pumping station depends upon the natural functioning of the side-channels to continue operating

Photo: DRV





Background information

The **city of Mohács** (population: 30,000) is located on the right bank of the Danube, near the southern border. Mohács is a historical city of about 900 years and is famous for the “battle of Mohács” in 1526, when the army of the Turkish empire entered the country and conquered Hungary. Thousands of people visit the city each year for various cultural events.

The **Danube-Dráva National Park (DDNP)** was established in 1996, between the Danube-Sió confluence and the southern border of Hungary. It covers a total 49,400 hectares of protected land, including the famous Gemenc flooded forests.

The **Lower Danube Water Management Directorate (ADUKÖVIZIG)** is a water management association, which controls the regulation of the river Danube, protects the population against floods, oversees the water facilities and operates in the catchment basin.

The **Transdanubian Regional Water Utilities (DRV)** is a regional water facility for the Trans-Danubian area, which includes lake Balaton and the district of Pécs. The primary fields of activities are water production, handling and distribution, and sewage drainage and handling services.

WWF Hungary started its operations in Central and Eastern Europe more than a decade ago. Its conservation activities in Hungary concentrate on forests, rivers, extensive land use, the protection of certain endangered species, and the environmental challenges of joining the European Union. One of its projects – One Europe, More Nature – is uncovering and demonstrating innovative approaches to nature conservation through the facilitation of new partnerships, switches from failed to progressive land-uses, and the stimulation of new economic activities based upon sustainable use of available natural resources.

WWF expects this model co-operation and successful field demonstrations to be replicated not just along the Danube, but also in appropriate locations on other Hungarian rivers too, and elsewhere in Europe where urban drinking water supply and ecologically functioning wetlands are so obviously mutually interdependent.

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WWF's One Europe, More Nature initiative is a pan-European project making positive changes to valuable landscapes across the continent. It is funded by WWF Netherlands and is jointly managed by WWF's teams on agriculture, freshwater and forestry.
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