



# Fostering Ecosystem Services in the Danube Basin

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“The aim [is] to develop integrated solutions that can demonstrate how it is possible to create viable livelihoods for people while maintaining the rich natural as well as cultural heritage of the region. And we hope that any successes in this can be applied to or at least inspire and inform development in other areas.”

- Erika Stanciu, Head of Carpathian Forests and Protected Areas Program at WWF

## Project Background

The Tisza river is the longest tributary in the Danube river basin passing through Slovakia, Ukraine, Hungary, Romania, and Serbia and draining 157,186 km<sup>2</sup>. In 2000, heavy metal spills and repeated catastrophic flood events threatened the livelihood of local residents and wildlife. In response to this issue, the One Europe More Nature (OEMN) initiative was created in 2003 to promote integrated river basin management (IRBM) in order to restore floodplains and stimulate sustainable rural development in the region.

Pulling together a group of stakeholders including business partners, local communities, and landowners, OEMN developed a conservation vision, and business approach that included market research, technical feasibilities, communications, and policy work where necessary. In Marmures (Romania), WWF and part-ners repopulated grassland areas with beef cattle capable of thriving in natural conditions and at the same time producing quality meat. Local land-owning entrepreneurs invested heavily to develop tourist accommodations high on the scenic Oas-Gutai plateau along-side the cows – in order to diversify the revenue streams derived from nature.



As part of the pilot project in the Maramures region, one city, Baia Mare, has adopted a Payments for Ecosystem Service (PES) approach for river conservation and sustainable development.

Timber extraction and livestock grazing are major sources of income in Baia Mare. The project is hoping that a PES program can be established that helps these local resource users maintain the hydrological system’s

water purification and flood protection capacities.

At the end of 2006, WWF funded an assessment of ecosystem services provided by sustainably managed forests and agricultural land for the pilot project. Once a payment scheme is established The Water Management Authority in Baia Mare will be measuring the river and wetland status in order to ensure that changes in resource use will indeed contribute to water filtration and better flood protection.

In 2008, the WWF hired a private company to measure Baia Mare citizens’ willingness to pay for varying ecosystem services. The next step is creating a method to transfer payments from beneficiaries to local farmers and foresters.

The One Europe More Nature initiative is a partnership between the World Wildlife Fund (WWF) Hungary and the Danube Carpathian Program. The group hopes to create strategic relationships between local government, farmers, foresters and businesses in order to create a “new economy” throughout the whole Tisza region. Three specific localities in the Tisza Basin: the Maramures region in Romania, Ecseda on the border of Romania and Hungary and Nagykoru in Hungary, have been chosen as pilot projects to help demonstrate and establish the WWF’s vision for the Tisza region as a whole. Currently, this project is still in the visionary stage. Over the next 3 to 5 years the project plans to identify appropriate conservation strategies for each ecologically unique region. As part of the pilot project in the Maramures region, one city, Baia Mare, has adopted a Payments for Ecosystem Service (PES) approach for river conservation and sustainable development. Timber extraction and livestock grazing are

"In Romania, for instance, where much of the population is currently involved in agriculture, WWF expects a trend towards commercialization, in the next few years. People will be pushed out and will leave agriculture, which can be bad for the environment if they're abandoning ecosystems that have a natural value."

- Andreas Beckmann,  
WWF Danube  
Carpathian Program  
Office (DCP) Deputy  
Director

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*Firiza Reservoir, Baia Mare, Romania*

## Looking Forward

The WWF is waiting for funding from the European Union (EU) and the Global Environment Facility (GEF) to finance the finalization of the PES scheme and its trial implementation. This will include the selection of the payment scenario, definition of the buyers and sellers as well as the appropriate administration of the PES scheme.

If scenario one, two or three are pursued, there is some concern that the Baia Mare citizens will oppose any water tax increases. PES are voluntary transactions; in order for the community to be a willing buyer, local people must be aware of the personal benefits that they will derive from the PES scheme. Community education will be essential going forward.

Even after buyers and sellers are properly identified a legal framework for money collection and distribution will have to be established. This will require participation and negotiation from all major stakeholders invested in the project.

## Challenges

The project is currently trying to establish how payment systems are going to be set up for this PES scheme. It is estimated that an initial payment of 4,049,865 Euro is needed as a one time investment by the Romanian government. After the initial set up, a yearly payment of 477,345 Euro is required to pay for the delivery of the ecosystem services. There are three direct payment scenarios that are currently being explored. Scenario one would collect yearly money from individual water users. This would require a payment of 3.48 Euros per person per year. Scenario two would divide the yearly payment

between a private water company, Vital Co., and the citizens Baia Mare who will pay 1.74 Euro per person per year. In the third scenario Vital Co. would pay 160,000 Euro per year, local citizens would pay 1.14 Euros per person per year, and tourists would pay 1.65 Euro per tourist per year. A fourth scenario is to create a trust fund using a 500,000 Euro grant. The fund would be managed by a local association established through a stakeholder engagement process. This is currently considered to be the most feasible scenario.