



Fostering Payments for Environmental Services (PES) in the Danube Basin



Why the Danube Basin and Why Payments for Environmental Services?

The Danube Basin

Extending over 817,000 km², the Danube is the most international river basin in the world. The river crosses through 10 countries while the basin drains lands from 18 countries. Until the end of the 18th century, the Danube was a wide branching river with an extensive network of tributaries and backwaters. Since then, drastic interventions, especially canalization, resulted in the loss of most of the basin wetlands, and a severe reduction in habitats and biodiversity. In the Northern and Western parts of the watershed the rapid economic growth of the 19th and 20th century further reduced the basin's biodiversity, eroding lands, cutting down forests, and polluting waters. Only in the last 30 years has conservation begun to gain priority among the more wealthy countries of the basin, and resources and policies are now being devoted to environmental restoration.

The history of the Lower Danube and Danube Delta, flowing through Central and Eastern Europe, is somehow different. There, slower economic growth before and during the communist period, coupled with little concern for the environment, resulted in some cases of egregious pollution and natural resources loss, but overall many natural areas remained untouched and to this day feature a biodiversity unparalleled in the rest of the basin, making it a first rank environmental asset. With over 100 different types of fish including sturgeon - more than half of all European species – the Lower Danube is also one of the last European refuges to many rare bird species, including pelicans and red-breasted geese. The Danube Delta, which encompasses 600,000 ha. and empties into the Black Sea coasts of Romania and Ukraine, is an UNESCO World Biosphere Reserve and is the largest reed bed in the world.

Threats to Danube Basin Environments

In the last ten years many analyses – including the Danube Strategic Action Plan and its International Commission for the Protection of the Danube River's (ICPDR's) recent updates, as well as WWF's own work – agreed on the diagnosis of the main threats to the Danube environment. These threats include: (a) past and current loss of wetlands and floodplains that have

reduced the biodiversity and stability of ecosystems; (b) eutrophication and pollution of the watercourses and groundwater resulting from agriculture, industry and household discharges that endanger environment and people alike; (c) unsustainable rural development that results in the loss of biodiversity-rich areas, yet adds very little in terms of incomes; (d) careless land restitution and privatization processes that, due to a lack of regulatory frameworks and economic opportunities, encourage short-term unsustainable activities; (e) inadequate financial and technical resources to support conservation, and to make it more attractive to rural and urban dwellers; (f) non-sustainable tourism that is turning an opportunity into a threat; and (g) potential loss of remaining stretches of high ecological value as a result of careless infrastructure expansion, including the extension of the inland navigation component of the EU Trans-European Networks for Transport.

A Window of Opportunity to Put in Place a PES System in the Danube

The Danube countries, the basin agencies, and many other stakeholders, including WWF and its partners, are working to address the environmental threats listed above, mainly through (a) programs to reduce nutrient overloading and pollution from municipal, industrial and rural sources; (b) wetland and flood plain restoration programs; (c) biodiversity conservation programs; and (d) support for the sustainable use of rural environments so as to reduce pollution, natural resource depletion and natural hazards (see for example the ICPDR Joint Action Program 2001-2005). Yet, due to lack of moneys many of these projects may never go beyond the "pilot" phase or will be at risk as soon as the initial funds dry up. As stated in a recent report,

"The lack of appropriate financing mechanisms at the national as well as the regional level is perhaps the largest deterrent to the implementation of pollution reduction measures" (from *"Financial Mechanisms in the Danube River Basin Countries"* Danube Pollution Reduction Programme, UNDP/GEF Assistance June 1999),

Non-sustainable financing may hamper any type of environmental project, but it is particularly pervasive in the case of rural conservation programs that expect



farmers and other natural resource managers to adopt environment-friendly practices without devising ways to compensate them for the extra costs they may incur in so doing. In such cases a system of payments for environmental services (PES) could be the source of sustainable financing for conservation.

Payments for environmental services is the generic name of a variety of arrangements whereby governments, businesses and other users pay farmers and other water and land managers for conservation activities that deliver environmental services. For the Danube, watershed-related environmental services may include flood control, erosion control, sedimentation control, water quality control, maintenance of aquatic habitats, and maintenance of dry season flows. Additionally, to the extent that watershed protection is achieved by keeping or restoring vegetation and natural landscapes, other environmental services may arise, including forests conservation, biodiversity conservation, carbon sequestration, landscape beauty, etc. Although the PES concept is rather new there are many PES or similar schemes at work around the world, including (a) spontaneous, private market-type arrangements (very common in nature based tourism or protection of small watersheds) (b) PES markets created by regulation (e.g. carbon sequestration markets created by the Kyoto Protocol on Climate Change) (c) government led PES arrangements (e.g. in Costa Rica, Brazil, China or the EU, where public moneys are used to pay farmers to adopt rural conservation practices). Whatever the arrangement, the core concept of any PES scheme is that those who pay should be aware that they do so to secure the provision of a valuable environmental service, and those that receive the payment should be paid to engage in meaningful and measurable activities to secure the supply of that environmental services.

WWF has assessed that in the case of the Danube there is a real opportunity to put in place a large system of

PES. Large both in its geographical coverage and in the amount of resources mobilized. This window of opportunity has been created by the Danube countries' commitment to the conservation of the Danube basin; by the Eastern-bound enlargement of the EU; by the recent EU Water Framework Directive, plus the ongoing greening of the EU Common Agricultural Policy. Last but not least, this window of opportunity arises from the commitment of dedicated international and national conservation organizations. Through a collaborative effort, the Danube Basin in general and the Lower Danube and Danube Delta in particular now offer an extraordinary opportunity to achieve results that can benefit Europe's environment and improve livelihoods in some of the poorer rural areas of the continent. This effort also can provide much needed models and lessons for watershed management elsewhere in the world.

To Know More

- About the WWF Danube PES initiative, please ask for the companion brochure: "Fostering Payments for Environmental Services (PES) in the Danube Basin. The Goal: to conserve rural environments and improve rural livelihoods"
- You can also visit our websites or contact us directly (see names and addressees below)

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