

Theme 3 – The Wonders of the Danube

Presentation: The Danube: a Highway across Europe or a Green Lifeline?

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The Danube is a remarkable river. It binds together a multitude of different cultures and peoples as well as a diversity of ecosystems, including the Black Forest, the rugged mountaintops of the Alps and Carpathians, the wide-open plains on the Puszta and the extensive reed beds of the Danube Delta. Eighty million people call the Danube Basin “home”.

The river, its tributaries, and its floodplains have greatly influenced human history, culture and development. In turn, human culture and development have greatly affected the Danube River and surrounding landscape.

Is the Danube a highway across Europe or a green lifeline? The answer to this question is not simple. Clearly the Danube can, and should be, both a means of transport and connection between peoples. Unfortunately, our amazement at our own ability to manage and manipulate nature has often meant that development in the Danube region for transportation or other purposes has been done at the expense of the Danube as a living system. It is my belief that the Danube can continue to be a transportation corridor and can also be restored to a living, dynamic system that sustains and nourishes the human population in the region.

The history

Up until the middle of the last century, the Danube was dynamic and free flowing with an extensive network of side arms and backwaters.

The winding, weaving network of rivers and streams that made up the Danube ecosystem can be compared with the veins and arteries of a human body. Like blood in the veins of a human body, a natural river does not simply flow at a constant and regular rate. It pulses and ebbs both spatially and in time. The volume of water in the Danube varies considerably depending upon the time of year, the weather and the location. There is a dynamic interface between water and land; the changing volume of water in the river has a significant influence on its relation with the floodplain. The floodplains of rivers can be compared with the kidneys of a human body: they cleanse and purify the river waters as they spill out over the land.

Unfortunately, human development over the past two centuries has seriously damaged the Danube ecosystems’ arterial system and its connecting floodplains. Canalisation and straightening of the river for transport and flood protection have constricted and shortened the river; dams for energy have blocked its flow; land-use alterations, such as draining of wetlands and forest clearing, and pollution have all combined to reduce the naturalness, and hence the vitality and life-giving ability, of the Danube and other rivers.

A recent study completed by the World Wide Fund for Nature (WWF) for the Danube River Pollution Reduction Programme found that over 80% of the original floodplain area in the Danube has been lost since the turn of the last century. This has greatly reduced biodiversity in the region. Breeding places for fish, such as the five species of sturgeon that formerly lived in the Danube, have been destroyed and now only remnant populations of these magnificent creatures remain. The majestic Black Poplar, a tree of the floodplain with numerous branches and thick trunk, has likewise all but disappeared from the region, as has the beaver.

The loss of floodplains has not only meant loss of biodiversity (which, one might argue, is only of concern to a few nature lovers) but also loss of important functions such as the purification of water, flood storage and groundwater recharge.

These functions have enormous consequences, both ecological and economic, for the Danube as well as for the Black Sea. A 1994 study placed an average economic value on the Danube floodplains at €383 per hectare per year. The annual value for the 1.7 million hectares of the Danube floodplain, from Germany to the Ukraine, amounted to over €650 million.

Dramatic political changes in Central and Eastern Europe in the late 1980s and early 1990s opened up opportunities to change the way we think about the Danube and to bring environmental concerns to the fore.

Good news

Since 1992, WWF has operated a programme called the Green Danube. This programme, which has been carried out in co-operation with government and non-governmental groups throughout the basin, is focused on conservation, restoration and sustainable management of the Danube as a living river, and recognises the connection between the water and the land.

WWF has implemented five major model projects: Germany; Austria, the Slovak and Czech Republics; Croatia/Hungary; Bulgaria; and the Danube Delta (Romania and the Ukraine). All of these projects are committed to reversing damage done in the past and to demonstrating that when humans live in a manner that is non-destructive to the Danube, humans and nature can both benefit.

Donau-Auen National Park and Regelsbrunner Au

A struggle by WWF and others lasting over a decade led to the opening of the Donau-Auen National Park on the Austrian Danube in October 1996. The establishment of national park status was an important achievement but it was only one part of an overall WWF strategy to restore and conserve the natural floodplain of the Danube. Floodplains should not be static and unchanging. By their nature, they should change with each high and low water. New pools and side arms are constantly formed and disappear. Unfortunately the floodplain in the park was being slowly starved of the life-giving water it needed; it was gradually growing over and becoming constricted to a narrow channel.

In 1996, a partnership that included the newly-formed National Park administration, the water management and transport agency, university scientists and WWF embarked upon a bold experiment. (See page 107.)

The scale of the project at the Donau-Auen National Park, Regelsbrunner Au, and its success make it unique to river management projects in all Europe and perhaps the world. It has become a model project, demonstrating the value of ecologically sustainable river management.

Transborder nature protection: Gemenc Beda and Kopacki Rit

Further east along the Danube, on the Hungarian border with Croatia, WWF and various other partners have been active in a sister project. Campaigning by the WWF Hungary Programme office helped lead to the creation and opening of the 50,000 hectare Danube Drava National Park, a twin to the Donau-Auen National Park. The park is split into two floodplain areas: an area along the lower Drava on the border of Croatia and the Gemenc-Beda-Karapanca.

The Danube near Gemenc, Hungary, is an impressive 500-1000 metres wide. A vast network of side arms and old arms connect with the river, forming at 24,000 hectares the largest floodplain forest on the Danube. Here, the biggest colony of Black Stork in Europe makes its home, as does the rare and magnificent White-tailed Eagle. However, as in the Austrian Danube National Park, the dynamic of water flowing into the backwaters had been steadily decreasing and the rich biodiversity was slowly being lost.

Now that the area has been declared part of a National Park, procedures are in place to rehabilitate the original river dynamics and initiate long-term protection. A component of rehabilitation has been the reintroduction of the original water engineers: beavers. Thirty beavers have been transported from Austria, where they had been re-established, and released in Gemenc to help in the process of creating the natural

dynamics needed for the floodplains. The Honorary President of WWF, Prince Philip, symbolically released the first beaver there in 1997.

The protection and restoration of the Danube/Drava National Park has brought people of different countries together in a way that demonstrates that natural boundaries do not necessarily respect human political boundaries. The National Park in Hungary and the newly formed Kopački Rit Nature Park in Croatia are beginning to co-operate with the aim of forging trans-national nature conservation. As a monument to peace in the region, WWF would now like to see a tri-national nature conservation programme involving the neighbouring natural areas of Yugoslavia.

The Bulgarian Islands

The Bulgarian Islands project further downstream has been carried out in collaboration with the State Forest Authorities in Bulgaria and the Ministry of Environment. Foreign varieties of trees have been introduced to the floodplain all along the Danube, and there are numerous examples of forest farming to be seen, in the shape of rows and rows of hybrid poplars that are planted and then harvested after 30 years. These fields of trees resemble an Iowa cornfield more closely than a floodplain forest and indicate an ecologically impoverished ecosystem.

It is not that forest harvesting cannot and should not be done. Forests are renewable resources, but they must be managed and harvested in a way that does not destroy life-giving potential.

On the Bulgarian island of Vardim, an experiment to convert these plantation forests back to natural forest is underway and demonstrates that forestry that supports and sustains natural values can be profitable and productive for nature and humans.

The Danube Delta

According to a recent assessment by scientists from WWF, the Danube Delta of Romania and Ukraine ranks as one of the world's 200 most important areas of biodiversity. It is a major bird breeding and migration stop-over point. Three hundred and twenty bird species have been observed in the area and the largest populations of globally endangered Dalmatian Pelican and Pygmy Cormorant take refuge here. Fish species, including sturgeon, mullet and Black Sea herring, rely on the wetlands for spawning and feeding.

The Delta's fantastic value has fortunately been recognised by the people of the region and in both Ukraine and Romania, the Delta has been designated a Biosphere Reserve.

However, the Delta does not only need protection; it needs restoration. Tens of thousands of hectares of the Delta had been foolishly converted from wetland to what was intended to be agricultural land. However, the plans of former governments to produce massive quantities of rice and other food here were largely unsuccessful because natural processes were ignored. WWF has been working with local partners in Ukraine and Romania to restore these failed experiments.

WWF hopes that such projects will form the basis of local redevelopment strategies that will bring both economic and ecological health to the region. Protecting and restoring nature has to be done in conjunction with local people, and in using its financial and technical resources, WWF hopes to expand environmental awareness and encourage decision-making bodies to recognise the immense human, environmental and economical benefit of the Danube's wetlands.

WWF is not the only organisation that is involved. The Austrian government has committed to a project called Living Rivers, a countrywide programme of river conservation and restoration that could be a model for other governments, while the Romanian Ministry of Environment, together with representatives of the governments of Bulgaria, Moldova and Ukraine, have embarked upon the Lower Danube Green Corridor initiative. The latter have recognised the importance of a healthy floodplain and wetlands for the maintenance of water quality and environmental health in the Danube River and Black Sea and also as a basis for creating economic development opportunities (fish harvesting, tourism etc). They are working

towards an agreement to:

- (1) take concerted action to create a Lower Danube Green Corridor that will expand the co-operation, coordination and consultation between Bulgaria, Moldova, Romania and Ukraine in the field of Danube River floodplain and wetland protection and restoration;
- (2) establish the Lower Danube Green Corridor with a minimum commitment of existing protected areas, a minimum commitment of proposed new protected areas, and areas proposed to be restored to natural floodplain;
- (3) present on behalf of the Governments of Bulgaria, Moldova, Romania and Ukraine, the Lower Danube Green Corridor as a Gift to the Earth as part of the WWF Living Planet Campaign, which is aimed at securing the conservation of the world's most important biological resources and ecosystems into the next millennium.

The future

Human intervention, particularly in the last 100 to 150 years, has imposed numerous changes on river ecosystems. However, taking action at the cost of severe ecological damage is no longer justifiable - we know better. WWF alone cannot restore the Danube; nor does it expect to. The success of its projects has depended on the support and co-operation of governments, non-governmental organisations, private companies, local people and the concerned public in general. It is WWF's hope that this Symposium will further stimulate and encourage the necessary healing and rejuvenation in the Danube Basin and that the work being done here will serve as an example for other parts of the world.