



IN  
COOPERATION  
WITH

**EURO**NATUR

**MURA  
DRAVA  
DANUBE**

# CONSERVING THE "AMAZON OF EUROPE"

Mura-Drava-Danube: Rivers at a crossroad between Protection and Destruction

# TRANSBOUNDARY RIVER SYSTEM OF THE MURA, DRAVA AND DANUBE



Restoration of Mura (AT)

© Johann Pfeiler



Wooden mill on Mura (SI)

© Ecology in Progress



European otter at Mura (HU)

© D. Kaltenecker/4nature



Nearly extinct: Ship sturgeon at Danube (HU)

© Sztekl Endre



Bee eater at Drava (HU)

© W. Gernerth/4nature



Borl Castle at Drava (SI)

© Borut Sturjberger



## Protected areas network

Core and Buffer Zones (ca. 260,000 ha) of  
Future Transboundary UNESCO Biosphere Reserve

- 1: Natura 2000 Site, Mura, AT
- 2: Natura 2000 Site, Mura, SI
- 3: Natura 2000 Site, Drava, SI
- 4: Natura 2000 Site, Mura, HU
- 5: National Park "Danube-Drava", HU
- 6: Natura 2000 Sites, Ormánság, HU
- 7: Ornithological Reserve "Veliki Pažut", HR
- 8: Regional Park "Drava-Mura", HR
- 9: Nature Park "Kopački Rit", HR
- 10: National Ecological Network, Danube, HR
- 11: Special Nature Reserve "Gornje Podunavlje", RS
- 12: Special Nature Reserve "Karadjordjevo" and Nature Park "Tikvara", RS

## Hydropower dams



"Drava Day" in Koprivnica (HR)

© A. Mohl/WWF



Bodrog Festival in Bački Monoštor (RS)

© Boris Erg



White-tailed eagle in Kopački Rit (HR)

© Mario Romulic, www.romulic.com



### 1 Natura 2000 Site, Mura

**Protection status:** Natura 2000, part of Protected Landscape  
**Size:** 2,159 ha **Country:** Austria

The Natura 2000 site in Austria covers 34 km along the Mura River, which shares its border with Slovenia. It marks the origin of the free-flowing lower stretches of the Mura and hosts the second largest floodplain forest in Austria. Nevertheless, the river's course has been regulated in the past and many side branches have been cut off from the river. EU-funded restoration projects are now trying to restore natural conditions.

### 2 Natura 2000 Site, Mura

**Protection status:** Natura 2000 **Size:** 12,767 ha **Country:** Slovenia

The Mura River in Slovenia, partly bordering Austria and Croatia, has been included in the Natura 2000 network and hosts the largest floodplain forest in Slovenia. The border stretch to Croatia is a unique example of natural, dynamic rivers with large, still shifting meanders and colonies of sand martin in the natural river banks. Wooden mills on the Mura are evidence of a long lasting culture and sustainable use of the river, and are now important tourist attractions.

### 3 Natura 2000 Site, Drava

**Protection status:** Natura 2000 **Size:** 9,525 ha  
**Country:** Slovenia

The Drava floodplains in Slovenia between Maribor and Ormož have been severely impacted by three large reservoirs built in the 1970s and 80s for hydropower generation. However, remnants of characteristic riverine habitats and species have been preserved in the old riverbed, the so-called "Stara Drava" (Old Drava), which are protected as Natura 2000 sites. The impressive Borl castle above the Drava dates back to 1199.

### 4 Natura 2000 Site, Mura

**Protection status:** Natura 2000, Protected Landscape  
**Size:** 2,135 ha **Country:** Hungary

The Natura 2000 site encloses the lowest section of the river Mura on the Hungarian side, bordering Croatia. It is well known for its abundance of fish species. More than 50 species have already been recorded. Many threatened mammal species such as the European otter find shelter there. Beavers have recolonized the area over the past 10 years after being released in the Mura-Drava confluence.

### 5 "Danube-Drava" National Park

**Protection status:** National Park, Natura 2000, partly Ramsar Site  
**Size:** 50,441 ha **Country:** Hungary

The "Danube-Drava" National Park was established in 1996. It comprises the entire length of the Drava within Hungarian territory and the extensive floodplain system of "Gemenc-Béda Karapancsa" along the Danube. The large floodplain forests and wetlands are a major feeding and breeding ground for some 110 bird species including heron, cormorant colonies and a high density of kingfishers. The area is home to the largest population of black stork in Hungary.

### 8 "Drava-Mura" Regional Park

**Protection status:** Regional Park **Size:** 87,681 ha **Country:** Croatia

The "Drava-Mura" Regional Park is the largest single protected area in the region. It stretches from the Croatian-Slovenian border to the Danube through five Croatian counties. The gravel and sand banks of the Drava are one of the last breeding grounds for the endangered little tern in Continental Europe. Several thousands of pairs of sand martin breed in the steep banks. The surrounding settlements are home to a rich culture, such as the village of Hlebine at the Drava, which became world famous for the origin of Croatian Naive Art.

### 9 "Kopački Rit" Nature Park

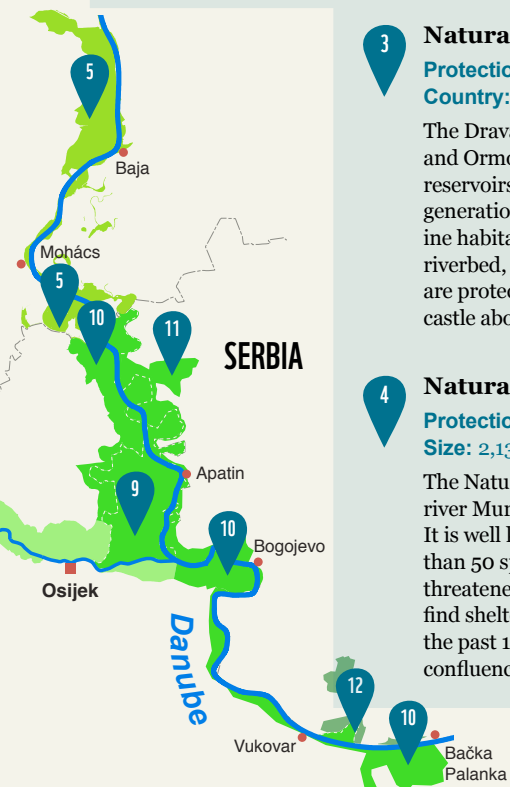
**Protection status:** Nature Park, Special Zoological Reserve, Ramsar Site **Size:** 23,126 ha **Country:** Croatia

"Kopački Rit" Nature Park was established in 1967 and covers the vast floodplain area between the confluence of the Danube and the Drava River. It hosts the largest and best preserved willow forests in the Danube Basin. This area is flooded up to three months per year. Nearly 300 bird species have been recorded so far, including 50 breeding pairs of white-tailed eagle. It is the second most important fish spawning area after the Danube Delta. Planned channelling of the Danube and Drava in the area would severely impact this core area of the TBR MDD.

### 11 "Gornje Podunavlje" Special Nature Reserve

**Protection status:** Special Nature Reserve, Ramsar Site  
**Size:** 19,605 ha **Country:** Serbia

"Gornje Podunavlje" Special Nature Reserve is located east of the Danube in the Vojvodina region. It is one of the few remaining massive floodplains in Serbia. Recently, the nearly extinct ship sturgeon has been caught at Apatin. To this day, traditional methods of management such as fisheries are still an important source of income for the local communities.



# A TREASURE TROVE OF NATURE AND CULTURE

Spanning Austria, Croatia, Hungary, Serbia and Slovenia, the lower courses of the Drava and Mura Rivers and related sections of the Danube are among Europe's most ecologically important riverine areas: the so-called "Amazon of Europe".

The rivers form a 700 kilometers long "green belt" connecting more than 800,000 hectares of highly valuable natural and cultural landscapes from all five countries and shall therefore become a symbol of unity between them: The area shall soon be protected as a **Transboundary UNESCO Biosphere Reserve "Mura-Drava-Danube" (TBR MDD)**.

Despite numerous man-made changes in the past, this stunning river landscape hosts an **amazing biological diversity** and is a hot spot of rare natural habitats such as large floodplain forests, river islands, gravel and sand banks, side branches and oxbows. These habitats are home to the highest density of breeding pairs of white-tailed eagles in Continental Europe and other endangered species such as the little tern, black stork, beaver, otter and the nearly extinct ship sturgeon. Every year, more than 250,000 migratory waterfowls use the rivers to rest and to feed.

A coherent network of **13 protected areas** along the rivers highlight their ecological values including the world famous "Kopački Rit" Nature Park in the Danube-Drava confluence, the "Drava-Mura" Regional Park in Croatia, the "Gornje Podunavlje" Special Nature Reserve in Serbia and the "Danube-Drava" National Park in Hungary as well as Natura 2000 Sites in Slovenia and Austria.

In addition to high levels of biodiversity, the river and floodplain areas are vital to the **people** who live there. Local fishermen rely upon the fish populations for their livelihoods. The extensive floodplains lower the risks from floods, secure

favorable groundwater conditions and self-purification of water. This is essential for drinking water, forests and agriculture. People also find recreation on the rivers by walking, swimming, fishing or canoeing.

The area's **cultural heritage** is evidence of a vibrant past with various peoples and cultures from east and west. The presence of the Ottoman and the Habsburg Empires are visible in the architecture of many old cities in the region. Croats, Hungarians, Serbs and even some Austrian, German or Czech offspring can still be found in many villages in the Croatian Baranja or Serbian Vojvodina.



"Kopački Rit" Nature Park: The confluence of the Danube and Drava rivers is situated in the heart of the Biosphere Reserve

# THE “AMAZON OF EUROPE” UNDER THREAT

The distinctive natural values of the Mura, Drava and Danube are at risk. Conflicting management practices such as ongoing and planned channelling of the natural river courses, extraction of gravel and sand from the riverbed and new hydropower dams are threatening the ecological integrity, biodiversity values and natural resources of the area.

Contrary to EU environmental laws and international standards, river management in Croatia, Hungary and Serbia is still ruled by **outdated concepts**. The idea of transforming natural rivers into uniform channels denuded of gravel and sand is an erroneous and antiquated practice.

These practices (ostensibly for navigation or flood protection) are threatening the ecological values and natural resources of the protected areas network and the Transboundary Biosphere Reserve. River channelling causes devastating **environmental impacts**: it leads to deepening of riverbeds, dries out wetlands and floodplain forests, ruins natural river habitats and threatens endangered species. This is shown in the decline of the sand martin along the Drava from 12,000 breeding pairs in 2005 to 3,000 in 2010.

Beside the loss in biodiversity, irresponsible river management causes considerable **economic damage**: e. g. decreasing water levels have negative impacts on drinking water, forests, agriculture

and fish stocks. River channelling also increases the risk of floods in downstream settlement areas.

Currently, the most affected areas by newly planned large scale river channelling are the natural stretches of the Danube and Drava rivers in the border area between Croatia, Hungary and Serbia impacting the core zone of the Biosphere Reserve like the “Kopački Rit” Nature Park. Planned hydropower dams threaten the Mura River in Slovenia and the Drava River in Croatia.



Nearly extinct little tern relies on gravel and sand banks of the Drava to breed



River channelling destroys living rivers

# A TRANSBOUNDARY BIOSPHERE RESERVE FOR THE BENEFIT OF NATURE AND PEOPLE

Preserving the valuable transboundary ecosystem requires wise conservation efforts.

A Transboundary UNESCO Biosphere Reserve will combine the cluster of thirteen protected areas of the Mura-Drava-Danube region and jointly manage the shared river ecosystem in a sustainable manner, encouraging economic impetus and development in the region.

The Biosphere Reserve concept defines about **260,000 hectares of core and buffer zones** (existing protected area network) and another roughly **540,000 hectares of transition zones**. The **core zone** is the ecological backbone of the reserve. It primarily covers the river and flood-plain areas which are mostly situated within flood control dikes.

The goals and measures in the core zone are predominantly focused on the preservation of natural habitats, species and processes plus restoration of already degraded areas. The **buffer zone** extends along the rivers outside the inundation zone. It is characterised by a mosaic of cultivated land and village areas and also contains some smaller detached zones like oxbow lakes, fish ponds and small wetlands. Extensive agriculture such as cattle grazing, hay making, organic production, marketing of local products and ecotourism occurs here. The outer **transition zone** provides regional economical and scientific support to the buffer zone. The majority of towns and universities are situated within this area.

## EUROPE'S LARGEST PROTECTED RIVER AREA

with an overall size of more than 800,000 hectares.



## THE FIRST PROTECTED AREA

in the world, which is commonly shared and managed across five countries.

## A FLAGSHIP OF INTERNATIONAL UNDERSTANDING

and regional cooperation based on a green vision.



© Anton Voraue/WWF-Canon

Rich fish habitats enable sustainable fisheries

## INFO

Essentially, **biosphere reserves fulfill three functions**: maintaining ecosystems; developing the region in socio-economic and ecologically sustainable terms; and encouraging education, research and environmental monitoring. They are internationally recognized by an UN institution, nominated by national governments and remain under sovereign jurisdiction of the States they are located in. The establishment of Biosphere Reserves started with **UNESCO "Man and the Biosphere" (MAB) Programme** in 1970. Currently, there are 536 biosphere reserves in over 100 countries, only twelve are bilateral and one is trilateral.



# GREEN LIGHT FOR THE TRANSBOUNDARY BIOSPHERE RESERVE

In order to preserve the Mura-Drava-Danube area, WWF, EuroNatur and their conservation partners and alliances have endeavoured to form a Transboundary UNESCO Biosphere Reserve “Mura-Drava-Danube” (TBR MDD). On March 2011, in the Hungarian town of Gödöllő, near Budapest, in an act of great environmental leadership and transboundary cooperation, the **Ministers responsible for environment and nature conservation** of Austria, Croatia, Hungary, Serbia and Slovenia signed a joint declaration to

establish the reserve. The **joint declaration** was founded in the preliminary bilateral agreement between Croatia and Hungary from 2009.

The **EU Commissioner for the Environment**, Janez Potočnik, advocates the initiative because it “perfectly fits into the biodiversity objectives of the EU and the Habitats and Birds Directive”. The initiative is also part of the EU Danube Regional Strategy, the regional basis for future EU funding priorities.

## CALL FOR ACTION

### Achieving the designation

- **2009 – 2012** Five nations apply for nomination of TBR MDD at UNESCO
- **June 2013** UNESCO officially designates the 5-country reserve
- **September 2013** 5 Ministers solemnly open the shared TBR MDD and agree on future cooperation and joint management

### Changing river management

- Transform the customary river management into a modern and ecologic one
- Stop river channelling and any further removal of gravel and sand from the rivers
- Restore degraded river stretches
- Stop high peak mode operation of the last Drava dam at Donja Dubrava
- Halt any further construction plans of new hydropower dams in the TBR MDD area



March 2011: Designated Ministers of Austria, Croatia, Hungary, Serbia and Slovenia sign the joint declaration for a TBR MDD

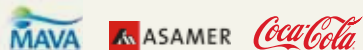
## THE VISION

for the “Mura-Drava-Danube” area is to protect it within a fully functioning Transboundary UNESCO Biosphere Reserve, consisting of a living river ecosystem, which acts as the backbone for the survival of characteristic habitats and species populations, ecological services and nature-friendly development for local communities.

In recent years major milestones have already been achieved. These include the establishment of a coherent protected area network across the five countries, the joint ministerial agreement on the establishment of the reserve as well as the start of the declaration of the reserve. However, there is still a lot to do.

	<p>International, national and local support for the preservation of the “Amazon of Europe”</p> <div> <div>   </div> <div>   </div> <div>   </div> <div>  </div> </div> <div>             </div>
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Would you like to learn more about the WWF’s work for the Transboundary UNESCO Biosphere Reserve “Mura-Drava-Danube”? Visit our website at: [www.amazon-of-europe.com](http://www.amazon-of-europe.com)



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