

"It's not surprising that UNDP-GEF places so much effort here," says DRP Project Manager Ivan Zavadsky. "The Danube is globally important because it's the test case for implementing the Water Framework Directive in Europe; and many see the Directive as the most comprehensive and integrated water legislation in the world."

"There was great cooperation from all the Danube countries," says Phillip Weller, ICPDR's Executive Secretary. "Intense discussions led to a common understanding of the main challenges – a remarkable achievement."

"GEF has been associated with the Danube Basin for over a decade, and in that time has seen the ICPDR grow into a major force for cooperation among nations, and a model of how countries should collaborate in resolving their cross-border concerns," said Alfred Duda from the International Waters section of the GEF Secretariat.

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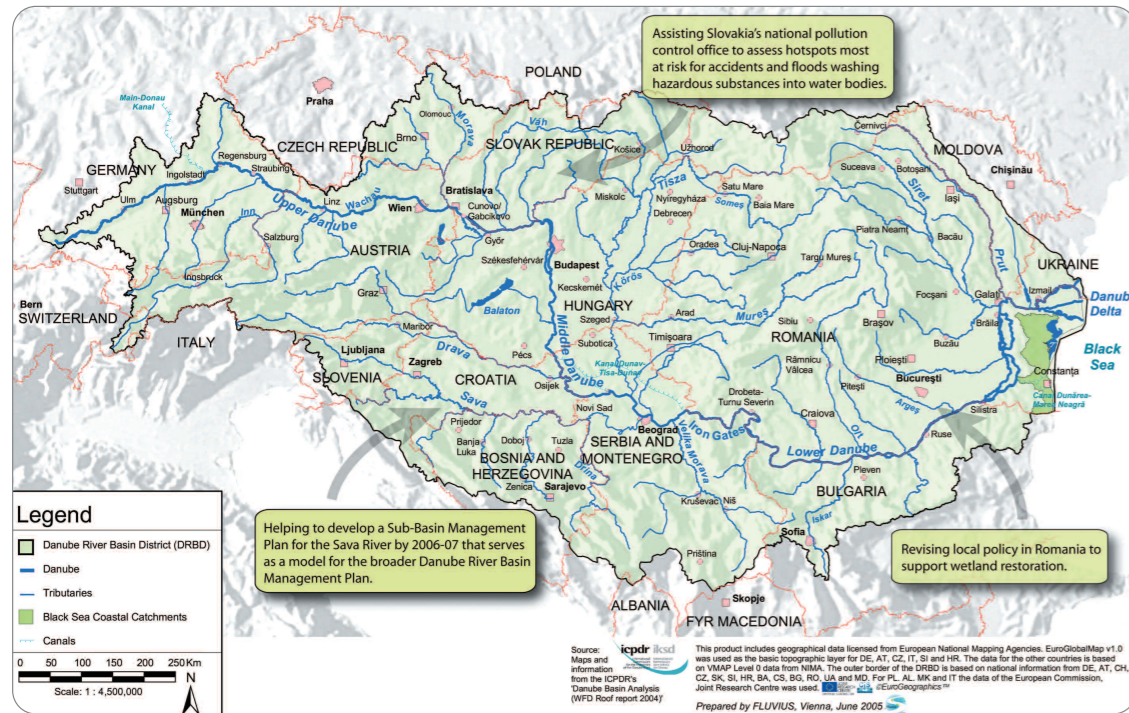


## THE DANUBE REGIONAL PROJECT AND THE 'DANUBE RIVER BASIN ANALYSIS'

Working for the Danube and its people, the Danube Regional Project is tackling key issues recently reported to affect the health of the entire Danube River Basin.



## EXAMPLES OF DRP ACTIVITIES IN THE DANUBE BASIN



The countries of the Danube Basin are committed to ensuring the best possible quality of life for people and nature.

Two international organisations – the International Commission for the Protection of the Danube River (ICPDR) assisted by the UNDP/GEF Danube Regional Project – exist to support them.

To deliver this goal, it is first essential to establish the present status of the Danube and its basin. What are the problems? What are the solutions? Who can deliver them? And how?

The Danube Basin countries, with the coordinating efforts of the ICPDR, carried out the Danube River Basin Analysis in 2004.

This Analysis represents a vital picture of the status of the Danube today – and reveals the steps needed to ensure that the river and its basin can deliver the best quality of life now and in the future.

## THE PLAYERS

### The Danube River Basin

Length of Danube River: 2780 km  
 Average discharge: 6,500 m<sup>3</sup>/s  
 Catchment area: 801,463 km<sup>2</sup>  
 Population: 81 million  
 Number of states: 18 - the world's most international river basin



### EUROPEAN UNION (EU)

The EU is in the process of implementing the Water Framework Directive (WFD) – possibly the most comprehensive water legislation in the world. This legislation has tightly defined timescales and the objective of delivering good ecological status in European rivers by 2015.

### THE DANUBE COUNTRIES

The central players leading to the success of the Analysis were the Danube Basin countries. While not all countries in the Danube basin are EU Member States, all agreed to comply with the requirements of the WFD. There are significant disparities in wealth between the upper and downstream countries. The strength of the countries' economies influences their ability to implement actions for environmental enhancement. In the long-term, stronger economies should make the delivery of environmental initiatives easier. In the meantime, the support of donors such as GEF will help to make the transition possible.

### ICPDR

The Vienna-based International Commission for the Protection of the Danube River (ICPDR) coordinated the report's development. It is the implementing body for the Danube River Protection Convention (DRPC) to which the 13 countries with significant parts of the Danube basin are Contracting Parties.

### DRP

Financial and technical support for the Analysis was provided by the Danube Regional Project (DRP), a 17.2 million USD commitment by the Global Environment Facility (GEF) and the United Nations Development Programme (UNDP) to help Danube countries implement the Danube River Protection Convention.

The DRP is part of the 95 million USD GEF Strategic Partnership for Nutrient Reduction in the Danube/Black Sea Basin – one of GEF's largest and most ambitious water-related projects in the world. The Partnership supports the goals of the Commissions for the Danube and Black Sea to reduce nutrient and toxic loads to levels necessary to allow Black Sea ecosystems to recover to conditions in the 1960s.

## WHAT THE DANUBE RIVER BASIN ANALYSIS HAS REVEALED

The Danube River Basin Analysis 2004 highlights a number of future challenges for protecting and restoring the environmental health of the basin:

### POLLUTION

Most countries appear to be at high risk of groundwater pollution from fertilisers, chemicals, untreated sewage and leaching from contaminated soils. 48 million people depend on groundwater sources for drinking water.

Pollution really starts affecting the Danube's water quality after Budapest. The main sources are urban settlements, industry and agriculture, from both point and non-point sources.

Nutrient pollution, mainly from nitrogen and phosphorus, is a serious concern:

- > Nitrogen use doubled from the 1950s to the mid-1980s followed by a substantial reduction in the late 1980s. But today, levels are still almost twice those of the 1950s.
- > The main source of phosphorus is wastewater from urban settlements. Overall phosphorus levels are 20% higher than in the 1950s.

'Eutrophication' through nutrient pollution has contributed to a severe ecological imbalance in the Black Sea. Many species have been heavily impacted, with fish stocks showing alarming declines. Recently, however, there have been reports of recovery in the biological diversity of the northwest part of the Black Sea.

Overall, pollution has declined in the Basin mainly because most economies of the Central and Eastern European (CEE) countries took major hits following political transformation in the late 1980s that affected both industry and agriculture. While the Black Sea shows signs of recovery, expected economic improvements in CEE countries could see pollution increase again.

Hundreds of hazardous substances are released into the Danube basin and many pose serious threats to environment and health. Of 33 "priority substances" identified by the EU as hazardous and requiring phase-out within 20 years, most are used in the Danube basin. The biggest threat is from DDT, a pesticide banned in Europe - in Danube samples taken, 71% exceeded permissible levels.



### HYDROMORPHOLOGICAL ALTERATIONS

These include the building of dams, weirs and sluices and the canalisation of rivers. The three main "driving forces" have been power generation, flood protection and navigation.

Alterations have "significantly affected" a large part of the Danube – from disconnecting floodplains and oxbows, to eroding the river bed, to lowering water tables. In total, 80% of the river's total length has been regulated.

A nearly uninterrupted chain of 59 dams and power plants cut across the first 1,000 km of the river – about one dam every 16 km. Dams have changed the living conditions for all organisms, with migratory fish especially affected. Downstream, the Iron Gate dam led to the extinction of sturgeon migrating upstream.

Some 80% of the Danube's original floodplains have been lost in the last 150 years. Wetlands have been "drastically altered", negatively impacting many fish and bird species that depend on them for dynamic habitat.

Many plans for future infrastructure projects such as dams and efforts to "improve navigation" pose major threats, some even to the last few remaining free-flowing sections of the Danube.



## THE MAKING OF THE DANUBE RIVER BASIN ANALYSIS 2004

The first ever comprehensive analysis of the Danube Basin's environment and the pressures impacting it

Thirteen countries share large portions of the Danube River Basin, making it the most international river basin in the world. To develop the Analysis, a significant level of cooperation between the countries was necessary – and the countries provided it.

The EU required that each country provide an assessment of water bodies within their borders and cooperate with neighbouring states. The ICPDR was requested to coordinate the activities and to prepare the Analysis report on issues of basin-wide importance to complement the national assessments.

Of the 13 countries involved, six were EU Member States that were obliged under EU law (specifically, the Water Framework Directive) to participate: Germany, Czech Republic, Austria, Slovakia, Hungary and Slovenia. The other seven countries, although not obliged, still voluntarily agreed in November 2000 in Sofia, Bulgaria to co-develop the report.

The Danube River Basin Analysis 2004 will be a very valuable tool in helping to fulfil the environmental goals of national governments, UNDP-GEF and ICPDR in the Danube and Black Sea region by contributing to:

- > River basin management planning and prioritising required investments and policies.
- > Improving the ecological quality of the Danube Basin's waters.
- > Restoring the Black Sea to its former status.

The production of this Analysis report is a significant milestone for the implementation of the Water Framework Directive in the Danube River Basin. The next clear output in the process will be the Danube River Basin Management Plan that will be submitted in 2009.

## THE DRP - WORKING ON SOLUTIONS FOR THE DANUBE



The Analysis clearly shows that the Danube Regional Project has and continues to be on track, working for the right solutions to the key challenges identified by the Analysis.

### RECOMMENDATIONS FROM DANUBE RIVER BASIN ANALYSIS 2004

- > Develop an effective Danube River Basin Management Plan (DRBMP) by 2009, followed by implementation.
- > Reduce diffuse pollution from agriculture throughout basin.
- > Wetlands and floodplains should be protected, restored and reconnected to the river.
- > Introduce 'best available techniques' (BAT) to industry without delay to meet EU law.
- > Introduce phosphate-free detergents.
- > Increase awareness of and access to environmental information about the basin as well as public participation in environmental decision-making.
- > Revise the monitoring network to ensure full compliance with the WFD.
- > Reduce risks associated with hazardous substances entering Danube water bodies.

### DRP SOLUTIONS - PAST, PRESENT AND FUTURE

- > Help develop a Sub-Basin Management Plan for the Sava River by 2006 - 07 that serves as a model for the broader DRBMP.
- > Identify and pilot best available agricultural practices (e.g. for applying fertilisers) and disseminate results to farmers.
- > Pilot projects demonstrate the effectiveness of wetlands in removing and retaining nutrients, and of changing local land-use policy to promote wetland restoration in three countries.
- > Assess how BAT has been applied throughout the basin, and provide countries not acceding to the EU with a 'BAT roadmap'.
- > Help governments implement voluntary bans on phosphates used in washing detergents.
- > Assist governments in how to process and respond to environmental information requests.
- > Review the existing network and make recommendations for its improvement.
- > Help national pollution control offices assess hotspots in the Danube Basin most at risk for accidents and floods washing hazardous substances into water bodies.