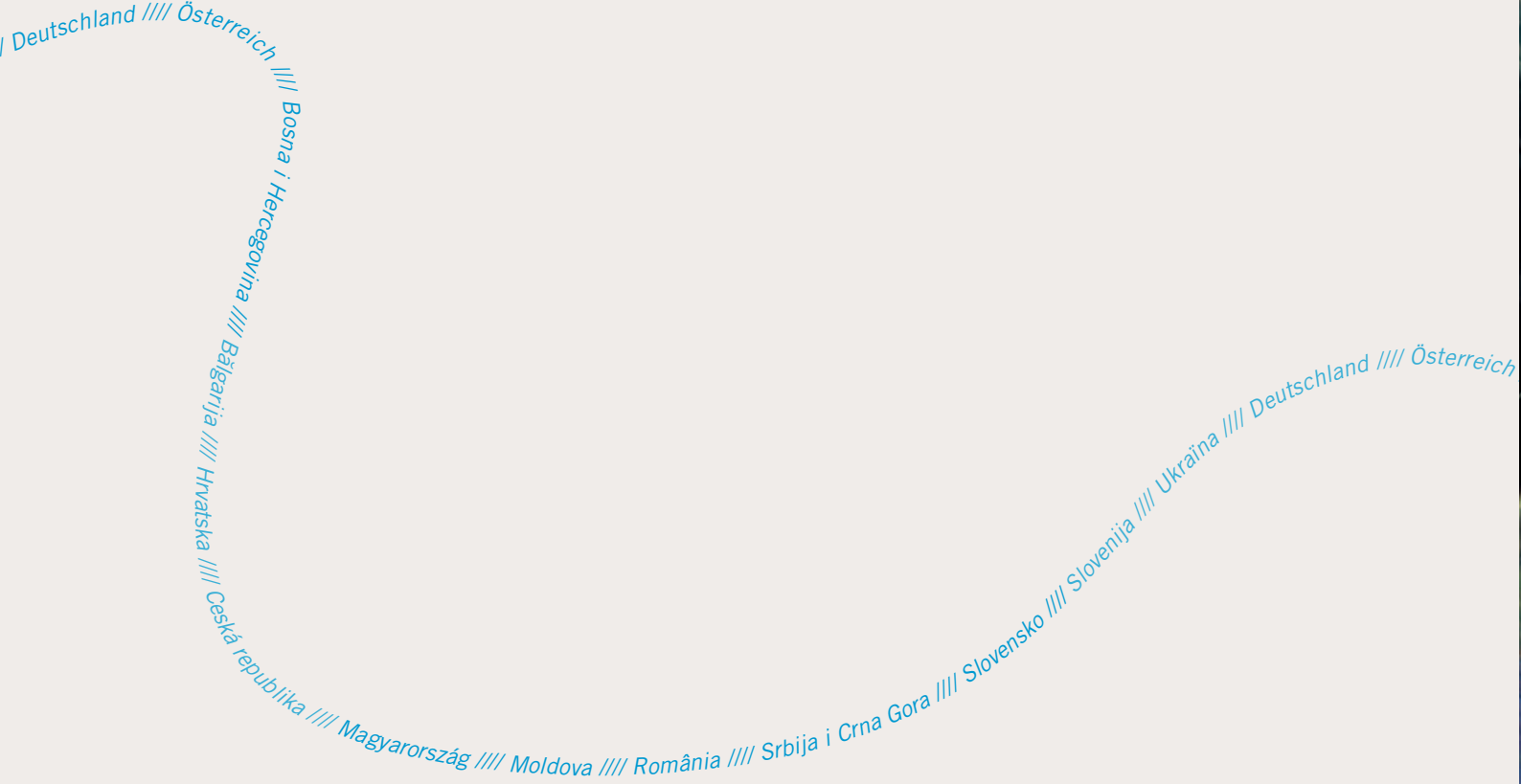
Active for the Danube River Basin

icpdr iksd

International Commission for the Protection of the Danube River

Internationale Kommission zum Schutz der Donau

1994 – 2004: Ten years of cooperation in the Danube River Basin



Main Successes

A few key achievements illustrate the success of ICPDR's work:

- Development of a cooperative strategy for setting up the Danube River Basin Management Plan
- Cooperation with stakeholder groups to build a common understanding of the sustainable use of the Danube
- Identification and facilitation of funding for 45 projects investing in waste water treatment plants
- Setting up a network of more than 75 water quality monitoring stations throughout the Danube River Basin
- Development of an Emission Inventory for pollution originating from municipalities, industry and agriculture
- Operation of a basin-wide Accident Emergency Warning System helping to reduce damage from accidental spills
- Assessment and reduction of potential accidental risk hotspots
- Preparation of the basin-wide Danube Flood Action Programme, which aims to reduce flood damage by
  - improving flood forecasts and warnings
  - restoring natural flood retention features
  - planning land-use carefully to account for areas that are naturally liable to flooding
- Launch of Danube Day on June 29: the inauguration in 2004 included more than 100 events held basin-wide to raise awareness and strengthen "Danube Solidarity"

Main Problems

- Water quality in the Danube River Basin is greatly affected by the activities of over 81 million people
- Excessive nutrients are disturbing the ecological balance in the Danube and the Black Sea
- Cadmium, Lead, Mercury, DDT, Lindane and Atrazine are among the most serious pollutants contaminating the Danube River Basin
- More than 80% of the length of the Danube is regulated, and over 700 dams and weirs have been built along its main tributaries
- The floods of 2002, which caused €14.4 billion of damage in Germany, Austria, the Czech Republic and Slovakia, were made worse by canalisation and the loss of natural floodplains

Goals

- Safeguarding the Danube's water resources for future generations
- Naturally balanced waters free from excess nutrients
- No more risks from toxic chemicals
- Healthy and sustainable river systems
- Damage-free floods

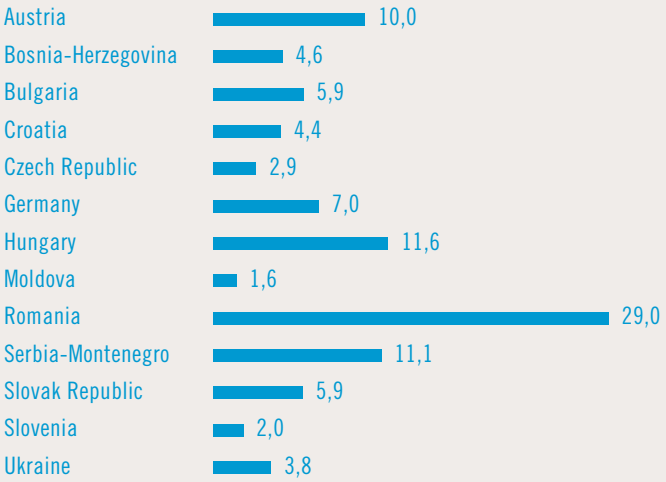
Facts and Figures about the Danube River Basin

18 countries make the Danube River Basin the most international river basin in the world:

Germany (DE), Austria (AT), Czech Republic (CZ), Slovakia (SK), Hungary (HU), Slovenia (SI), Croatia (HR), Bosnia-Herzegovina (BA), Serbia-Montenegro (CS), Romania (RO), Bulgaria (BG), Moldova (MD), Ukraine (UA) as well as Switzerland, Italy, Poland, Albania and Macedonia (with very small shares).

Length of the Danube: 2,780 km (Rhine: 1,320 km; Amazon: 6,437 km)
Size of the Danube River Basin: 801,463 km² (10% of the European continent)
81 million people live in the Danube River Basin.

The graph shows the share of the different countries (%) of the Danube River Basin area (Switzerland, Italy, Poland, Albania and Macedonia are not included)



The main tributaries of the Danube:

The **Inn** is the third largest tributary by water discharge. At its mouth in Passau, it brings more water into the Danube than the latter itself. However, its catchment area is only nearly half as big as the Danube at this point. The main tributary of the Inn is the Salzach.

The **Morava/March** catchment area covers parts of Czech Republic, Slovakia and Austria. It is an ecologically valuable area with high diversity of species and landscape types.

The **Drau/Drava** rises in the southern Alps in Italy and is the dominant river of southern Austria, eastern Slovenia, southern Hungary and Croatia. Main Austrian sub-tributaries are Isel, Möll, Lieser and Gurk, and the Mur/Mura.

The **Tysa/Tisza/Tisa** River basin is the largest sub-basin in the Danube River Basin. The Tysa/Tisza/Tisa River is also the longest tributary (966 km).

The **Sava** is the largest Danube tributary by discharge. It rises in the western Slovenian mountains, passes through Croatian lowland before forming the border between Croatia and Bosnia-Herzegovina. Continuing through Serbia-Montenegro it reaches its confluence with the Danube in Belgrade. Its main sub-tributaries are Krka, Kupa, Una, Vrbas, Bosna, Drina and Kolubara.

The **Iskar** is the largest Danube tributary on Bulgarian territory. It springs from the Rila mountain passes, flows through the outskirts of Sofia and crosses the Balkan mountains.

The **Siret** River Basin is situated to the east of the Carpathians. Its source lies in Ukraine and it flows through the territory of Ukraine and Romania. Its main sub-tributaries are Suceava, Moldova, Bistrita, Trotus, Barlad and Buzau.

The **Prut** is the last tributary of the Danube, with its mouth just upstream of the Danube Delta. Its source is in the Ukrainian Wood Carpathians. Later it forms the border between Romania and Moldova. Main sub-tributaries are Ceremosh, Derelui, Volovat, Baseu, Corogea, Jijia, Chineja, Ciugur and Lapusna.

The **Danube Delta** is largely situated in Romania but is partly in Ukraine. The entire protected area covers 679 000 ha including floodplains and marine areas. The core of the reserve has been established as a “World Nature Heritage” in 1991. The Delta is an environmental buffer between the Danube River and the Black Sea, filtering out pollutants and enabling both water quality conditions and natural habitats for fish in the Delta and in the environmentally vulnerable shallow waters of the north-western Black Sea. Moreover, it is Europe's largest remaining natural wetland – a unique ecosystem.

Interview with **Cathrine Day,** ICPDR President 2004, Director General of the DG Environment

What is the significance of the Danube River?

The Danube is a river that binds and connects people. It is the most international river in the world and links important parts of Europe. It begins in the Black Forest of Germany and passes through ten countries on its remarkable journey to the Black Sea. The river has historically, and to this day, served as a natural bridge between east and west and embraces many diverse cultures and histories.

Has the ICPDR met its goals?

In a very short time the International Commission for the Protection of the Danube River, the ICPDR, has developed into an effective forum for coordination and cooperation and helps the countries of the Danube basin to work towards sustainable water resources management. This is no easy task given the differing economic and political circumstances in each of the Danube countries. Over the last ten years, we have reduced pollution, we have learned to take better care of our wetlands and other areas of high biodiversity value and we are more sensitive to the impact of engineering projects on the environment.

I would also like to highlight some of our latest achievements in 2004 such as the completion of the Danube Basin Analysis Report and the Flood Action Programme. These are key milestones in the efforts to ensure that the waters of the Danube and its tributaries are managed in an effective and sustainable way.

What does the future hold for the Danube Basin?

Despite the success of the past, further pollution reduction efforts are necessary, particularly for nutrients, but also to reduce and stop discharges of a number of hazardous pollutants. We need to ensure that the environmental benefits of pollution reduction in the last ten years are not reversed due to an increase of pollution from economic development in the region. This is the ultimate challenge of sustainability in the Danube: to find ways of continuing economic growth without environmental degradation.

What is the secret of ICPDR's success?

I am very pleased that all Danube countries have demonstrated an active interest in the efforts of the ICPDR. Maintaining and strengthening the efforts to improve and restore the Danube will require concerted and consistent efforts. In addition, the Danube Day on 29th June 2004 showed that there is a tremendous sense of solidarity among Danube peoples. The people of the Danube recognise that this is their river and that their individual actions can contribute to its protection. The continued efforts to mobilise and interest the people of the Danube in the work of the ICPDR will be critical to future success. I am optimistic that this is possible and that the next ten years will bring further success.

History

1985 Signing of the Bucharest Declaration for the Protection of the Danube River, which led to increased international cooperation and an international monitoring programme.

February 1991 The Danube Basin countries decide to set up a Convention on the Protection and Management of the River and an Ecological Agreement.

September 1991 Danube Conference is held in Sofia with international donors and NGOs, resulting in the launch of the Environmental Programme for the Danube River Basin.

March 1992 Signing of the UN ECE Convention on the Protection and use of Transboundary Watercourses and International Lakes in Helsinki.

July 1993 Equipe Cousteau carries out a regional study of the Danube Basin directed at past impacts of pollution, funded by the European Bank for Reconstruction and Development.

29 June 1994 Signing of the Danube River Protection Convention by 11 Danube Basin countries and the European Union in Sofia.

December 1994 Adoption of the Strategic Action Plan for the Danube River Basin by environmental ministers.

January 1996 Official start of the operation of the TransNational Monitoring System.

July 1996 Approval of the Strategic Action Plan Implementation Programme.

22 October 1998 The Danube River Protection Convention comes into force.

October 1998 Establishment of the International Commission for the Protection of the Danube River (ICPDR).

June 1999 The first yearbook of the TransNational Monitoring published.

1 October 1999 The Permanent Secretariat of the ICPDR begins its operation.

8 June 2000 Official transfer of the Bucharest Declaration activities to the Danube River Protection Convention.

October 2000 Nomination of the ICPDR as platform for the implementation of the EU Water Framework Directive.

November 2000 The ICPDR adopts the Joint Action Plan 2001 – 2005.

August/September 2001 The ICPDR organises the Joint Danube Survey, the first comprehensive scientific expedition focusing on the entire stretch of the Danube.

November 2001 The ICPDR prepares the Inventory of Potential Accident Risk Spots.

1 December 2002 Launch of the UNDP/GEF Danube Regional Project.

29 June 2004 Launch of “International Danube Day”, celebrated by all Danube Countries.

13 December 2004 The first ICPDR Ministerial Meeting takes place in Vienna. The ICPDR adopts the Action Programme for Sustainable Flood Protection, the Danube Declaration and the Danube Analysis as required by the EU Water Framework Directive (“Roof Report 2004”).

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The Danube: A Remarkable Journey

It begins as a small trickle of water in the Black Forest Mountains of Germany, but by the time the Danube ends its 2,780 km journey to the Black Sea, almost 300 tributaries have joined the Danube to drain 10% of continental Europe.

The Danube is a remarkable river, and binds together a multitude of different cultures and peoples. Eighteen countries share its basin, making the Danube the most international river on the planet. The river serves as a vital link between East and West, South and North, and has for centuries played an important role in the political, social and economic development of Central and Eastern Europe. The Danube shapes and is shaped by the lives of the 81 million people who call the basin "home".

The Danube River Basin includes all of Hungary; nearly all of Austria, Romania, Slovenia, Slovakia and Serbia and Montenegro; significant areas of Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic and Moldova; and parts of Germany and Ukraine. Five more countries share areas of the Danube basin smaller than 2,000 km²: Switzerland, Italy, Poland, Albania and Macedonia.

A Unique Environment

It is hard to imagine a more diverse region – the Danube River Basin's geographical biodiversity includes high Alpine zones, large plains, sand dunes, forested and marshy wetlands, and the unique Danube Delta. Numerous large rivers are tributaries of the Danube – in its middle part, three main tributaries, the Drava, Tisza, and Sava rivers, double the water volume of the main river before it finally joins the waters of the Black Sea.

The importance of this region is evident in the valuable ecological and economic resources of the area, as well as the public dependence on the river and its tributaries for life, leisure and livelihood.

//// Slovensko //// Slovenija //// Ukraïna //// Deutschland //// Österreich //// Bosna i Hercegovina //// Bălgarija //// Hrvatska //// Ceská republika //// Magyarország //// Moldova ////

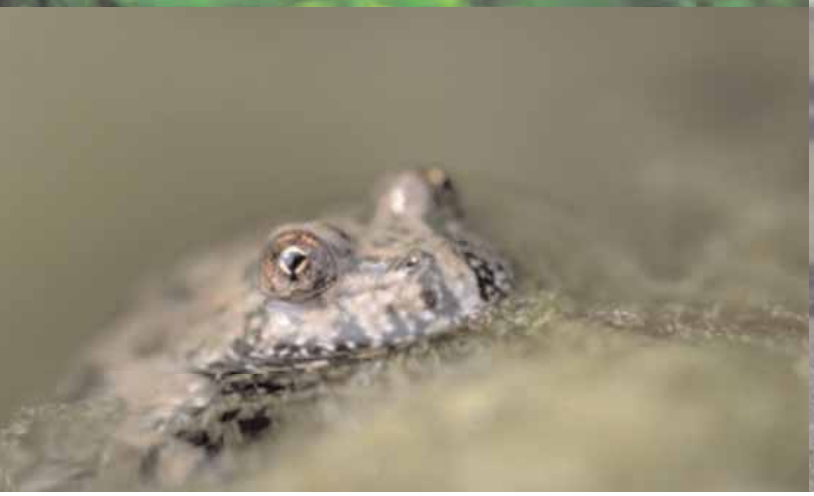
The Danube River Basin

Length of the Danube:	2,780 km
Navigable length of the Danube:	2,412 km
Annual water discharge into the Black Sea:	202 bn m³ (6,460 m³/sec average)
Size of the basin:	801,463 km² (almost 10% of continental Europe)
Inhabitants:	81 million
Number of states:	18
Size of the Danube Delta:	679,000 ha
Main tributaries of the Danube:	Tisza, Sava, Inn, Morava, Drava, Velika Morava, Iskar, Siret, Prut










Rich Biodiversity of the Danube River Basin

The Danube River Basin hosts a variety of fascinating and diverse ecological territories with many unique plants and animals. The habitats created by the Danube and its tributaries house a mix of wildlife, with about 2,000 vascular plants and more than 5,000 animal species. The distinctive nature of the Danube Basin's diverse habitats secure its place as a natural treasure. These include:

The Morava-Dyje Floodplain Meadows

The floodplains and meadows of the Morava-Dyje basin are one of the most valuable ecological resources in Central Europe. The area is an optimal nesting place for threatened birds and home to many valuable plant species. The region is made up of riverside canals, oxbow lakes, sand and gravel banks, reed beds, swamps, periodic pools, the most common, floodplain meadows and forests, and the Morava River itself.

Mike Baltzer, *WWF Danube Carpathian Programme*

"The Lower Danube is one of the most outstanding biodiversity regions in the world. To protect the unique value of its remaining wetlands and to restore impacted floodplain areas, the Environment Ministers of Bulgaria, Moldova, Romania and Ukraine signed the 'Lower Danube Green Corridor' agreement in June 2000, the largest international wetlands protection and restoration initiative in Europe. Its implementation is a leading example of how human welfare, responsible land use and nature protection can drive sustainable development in European countries. WWF is happy and proud to support the ICPDR in implementing this challenging and progressive enterprise."

The Danube Floodplains

One of the largest remaining floodplain areas in Central Europe lies where the Danube and Drava rivers meet. This transboundary area includes territories belonging to Hungary, Croatia, and Serbia and Montenegro, and represents a single ecological unit divided by national borders. The floodplain displays outstanding biodiversity and is the largest and the most important fish-spawning area in the middle section of the Danube basin. The area also provides favourable living conditions for over 20,000 water birds, especially grebes, cormorants, herons and egrets, and is home to a number of threatened species of mammals, such as the river otter, the wildcat and a number of endangered species of bats.

The Danube Delta

At its mouth, the Danube River discharges into the Black Sea through the Delta, an extensive fan-shaped area of river arms, lakes, reed-beds, dunes and salt marshes. As Europe's largest remaining natural wetland, the Danube Delta is one of the continent's most valuable habitats for wetland wildlife and biodiversity. The unique ecosystems of the Delta, consisting of a labyrinthine network of river channels, shallow bays and hundreds of lakes, interspersed with extensive marshes, reed-beds, islands and floodplains, form a valuable natural buffer zone, filtering out pollutants from the river, and helping to improve water quality in the vulnerable waters of the north-western Black Sea.

Tobias Salathé, *RAMSAR Convention on Wetlands*

"Danube floodplains are among the most important remaining floodplains in Europe. They are places where natural dynamics of river flows still create habitats, ephemeral and lasting, that support an impressive biological diversity. Keeping the dynamics of these floodplain ecosystems alive is the best assurance for sustainable development at local and regional scale."

The Black Sea

The Black Sea is one of the most remarkable regional seas in the world. It is nearly cut off from the rest of the world's oceans but is up to 2,212 m deep. Six countries share the Black Sea: Romania, Bulgaria, Turkey, Georgia, Russia and Ukraine, and more than 160 million inhabitants live in the greater Black Sea Basin. The Danube is the most important tributary to the Black Sea, joined by Europe's third and fourth largest rivers, the Dnieper and Don.

One River Basin: Uniting People Across Boundary Lines

The Danube River is impressive not only because of its size but also because it has a rich human history and continues to shape, and be shaped by, the people who live in the river basin. Twenty languages are spoken, there are numerous religious communities, and people living here have disparate historical and cultural experiences. Above all, the vast differences in contemporary social, political and economic circumstances experienced by local people make the Danube River Basin a region of singular character.

The ecosystems of the Danube River Basin are highly valuable in economic and social terms. As one of the major river systems in Europe, the Danube provides millions of people with water and resources. The fertile lowlands along the middle and lower reaches of the Danube rank among the most important agricultural regions in Europe. People rely on the Danube, for drinking water, agriculture, industry, transport, energy, tourism and recreation, all of which are heavily dependent on the rational use and sustainable management of the river and its related ecosystems. Industry, including energy generation, and mining are economically important as they account for a significant amount of employment and revenue of countries in the Danube River Basin.

Politics and the River

The middle and downstream countries in transition face economic and financial challenges, which influence the basin-wide management of water resources and restoration efforts. The future development of human and economic activities must better integrate environmental and water management concerns into municipal, industrial and agricultural policies and strategies. The transition process under way and the accession to the European Union provide some countries with plenty of opportunities for these steps.

Johannes Wolf, *Danube Environmental Forum*

"The challenge we all are faced with is not to simply live next to the Danube or its tributaries but with the rivers. However small the contribution of a single citizen may be, it is another step towards the sustainable development of the Danube River Basin. All the different strategies, methods, mechanisms and programmes to protect the Danube River and its tributaries result in one final decisive obligation for all of us: We simply have to do it."

Using the River

The river and its tributaries have played an important role in human history and development. It is one of the major river systems in Europe, and the fact that it is possible to manage the river for irrigation, flood control, energy and transport has greatly influenced the lives all people living in the basin.

/ Hrvatska //// Ceská republika //// Magyarország //// Moldova //// România //// Srbija i Crna Gora //// Slovensko //// Slovenija //// Ukraïna //// Deutschland //// Österreich //

Holding Back the Danube and its Tributaries

Like all major rivers of Europe, the Danube has been significantly altered and affected by human activities throughout history. Building large dyke systems for flood protection started in the 16th century in Hungary, and old networks of drainage or irrigation systems still exist in all basins. The first major Danube regulation works started in 1830 in Upper Austria; the first hydro dam was built in 1927 at Vilshofen in lower Bavaria. Today hydropower use and energy production vary substantially from country to country. Hydraulic works in the form of dams and reservoirs are found in all mountainous areas of the Danube basin, while most navigation canals, dyke and irrigation networks concentrate on the lowlands along the central and lower Danube. More than 80% of the length of the Danube is regulated, and over 700 dams and weirs have been built along its main tributaries. There is a chain of 59 dams in the upper Danube between the source and Gabcikovo downstream from Bratislava (on average one dam every 16 km) and there are only three important free-flowing sections of the upper Danube left (Straubing-Vilshofen in Bavaria, the Wachau in Austria and Vienna-Bratislava).

Navigating the Waters

Navigation has long been a traditional activity on the Danube, facilitating the region's economic development. Historically the Danube and some of its main tributaries, such as the Sava, have formed important trade routes across Europe.

Ships can navigate the Danube from 2,411 kilometres upstream all the way down to the Delta – for 87% of the river's total length – and can call in at 78 harbours located along the Danube between Kelheim and the Black Sea. The Black Sea itself is almost completely cut off from the world's other seas and ocean, and the Danube and its tributaries play an important role in connecting this area with the rest of the world. Three artificial waterways have been built on the Danube: the Danube-Tisza-Danube Canal in Northern Serbia, the Danube-Black Sea canal in Romania, and the Rhine-Main-Danube Canal. This latter canal system provides a link from the Danube to the North Sea.

Constantin Mihailescu, *Head of Delegation, Moldova*

"Agriculture is a cornerstone of life in the Danube. We must therefore protect this important economic ability by mitigating the hazards and risks: climate changes and climate variability that drastically affect agriculture of the country and the region. We must continue to promote clean production mechanisms, as well as improve access to information and to decision-making processes in order to change the mentality of the people and their attitude toward organic agriculture and nature protection."

The Danube at Risk

The activities of over 81 million people in 18 countries within the catchment area greatly affect the natural environment of the Danube River Basin, leading to problems with water quality and quantity, and significant reductions in biodiversity. In some regions, water availability is endangered not only by pollution, but also by inappropriate reallocation among the users. Furthermore, armed conflict and population displacement have taken an environmental toll, as has general economic recession and lack of financial sustainability of institutions.

Agriculture and Industry

Agriculture has long been a major source of income for many people living in the Danube River Basin, and it has also been a source of pollutants, including fertilisers and pesticides, as well as effluent from huge pig farms and agro-industrial units. Inappropriate agricultural practices have contaminated rivers and groundwater, and led to soil erosion. Many wetlands have been converted into farmland, drained, contaminated or otherwise degraded. Fertile topsoil has eroded in many agricultural regions. These changes have affected the structure and biodiversity of many ecosystems.

Stanko Nick, *ICPDR President 2001, Croatia*

"Pollution – especially one affecting rivers – easily gets transboundary character; the only way to fight it successfully is to combine international efforts and to control it across state borders."

Some industrial facilities are also outdated and have inadequate pollution control technologies and discharge wastewater into sewers without pre-treatment. The chemical, food, and pulp and paper industries are amongst the sectors of industrial polluters in the Danube River Basin and discharges from such plants raise the levels of nutrients, heavy metals and organic micro-pollutants in the river network.

In addition, accidental pollution incidents in the Danube River Basin have caused damage to the environment in the past, and endangered the health of local people. The Baia Mare cyanide spills in Romania in 2000, for example, led to immediately affected plants and aquatic life in the Tisza River. The subsequent tailing dam burst at Baia Borsa, also in 2000, released 20,000 tonnes of heavy metals containing sediments into the Novat River, a tributary of the Viseu and the Tisza.

Eutrophication

Excessive amounts of nutrients have been entering the Danube River Basin for many decades. The excess nutrients cause water where the water moves slowly, particularly to become murky or clogged with algal blooms and disturb the ecological balance of the river. Entire food webs, including valuable fish stocks, are often affected by eutrophication. Eutrophication of natural and artificial lakes is considered one of the most important direct consequences of surface water pollution, as well as an immediate cause of water resource degradation. Of significance is also the impact of the nutrients from the Danube on the Black Sea.

Managing Water

Historically, industrial manufacturing enterprises around the world paid little attention to waste treatment or to environmental protection and enterprises in Danube countries were no different. Wastewater containing toxic contaminants were discharged directly into rivers and contaminated solid wastes were dumped in landfills close to watercourses where seepage polluted soil and groundwater.

Too much inadequately treated waste water still ends up in the Danube, contaminating drinking water supply for millions of people, and leading to problems for irrigation, industry, fishing, tourism, power generation and navigation. Rivers in the basin often serve as a direct waste disposal, leading to water pollution and loss of biodiversity. Nutrients and toxins from agriculture and households as well as chemicals from out-dated industrial plants enter the river system without being properly treated. Half of all households in the middle and lower Danube regions are not connected to central sewerage systems. Treatment facilities have insufficient capacities and are often operated unsuitably. Smaller wastewater treatment facilities for individual buildings such as septic tanks are sometimes insufficiently controlled.

Utilising water resources for important human activities has changed the hydrological systems. Problems of water quality and quantity create significant environmental damage and impair quality of life.

Habitat Loss

Preserving the natural habitats of the many species living in the basin is a constant struggle. The habitats of pelicans in the Danube Delta, sturgeon in the Lower Danube, for example, are particularly under threat. 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 creatures remain. The loss of floodplains has not only meant loss of biodiversity but also loss of important functions such as the purification of water, flood storage and groundwater recharge. Changes in the depth or width of a river typically reduce flow rates, interrupting natural sediment transportation. The taming of wild rivers to improve flood prevention, navigation, agricultural production and energy production has shortened the length of the Danube.

Gyula Holló, *Head of Delegation,Hungary*

"We highly appreciate the results achieved so far by the Danube community in the framework of the ICPDR, and are convinced that we will be enthusiastic and strong enough to develop our cooperation further according to the commitments formulated in the Ministerial Declaration in achieving good status of waters and related ecosystems as well as in increasing flood safety."

Meeting the Challenges of the Basin

Despite the difficulties that face the Danube Basin, all Danube countries have been working together to develop mechanisms to sustain water resources. The achievements made by countries in the framework of the ICPDR over the last ten years have worked to ensure that the problems are reversible and surmountable. Through the dedication from committed individuals and the collective cooperation of dynamic partnerships, the ICPDR has proved to be vital to making the Danube Basin a showcase for sustainable water management in a changing world.

ICPDR: A Catalyst for Change

Since the Danube River Protection Convention (DRPC) was signed in Sofia, Bulgaria, in 1994 and came into force in 1998, the European Community and 13 Danube River Basin countries have used it as the legal basis for protection and sustainable use of water and other ecological resources. Countries cooperating under the convention include: Germany, Austria, the Czech Republic, Slovakia, Hungary, Slovenia, Croatia, Bosnia and Herzegovina, Serbia and Montenegro, Bulgaria, Romania, Moldova and Ukraine. Bosnia and Herzegovina, although participating in the work of the ICPDR, is currently completing the measures to become a full contracting party to the Convention.

National delegates, representatives from the highest ministerial levels, technical experts, and members of civil society and of the scientific community cooperate under the DRPC. To make the convention document a living tool, the International Commission for the Protection of the Danube River (ICPDR) was established. Since this time, the ICPDR has grown into one of the largest and most active international bodies of experts on river basin management in Europe. All countries of the Danube have actively participated in the work groups of the ICPDR and achieved important progress in their joint efforts to manage this shared river system. The ICPDR's ambitious mission is to promote and coordinate sustainable and equitable water management, including conservation and rational use of waters for the benefit of the Danube River Basin countries and their people.

Working for the Danube

ICPDR divides its work into six thematic work areas, for which strategies, guidelines and joint activities are developed: Flood Protection, to develop the action programme for sustainable flood prevention; River Basin Management, to implement the EU Water Framework Directive; Ecology, to address ecological issues related to water management; Emission, to control emission and pollution from point and diffuse sources; Water Quality, to monitor and assess water quality; and Accident Prevention and Control, to develop strategies and programmes for reducing the risk of accidents and to operate an Accident Emergency Warning System.

The ICPDR sets a common platform for sustainable use of ecological resources and coherent and integrated river basin management. In order to achieve substantial progress in the implementation of the DRPC, the ICPDR works to maintain and improve the status of water resource quality and quantity; to prevent, reduce and control water pollution, including pollution from accidents; to improve environmental conditions of aquatic ecosystems and biodiversity; and to contribute to the protection of the Black Sea from land-based sources of pollution.

The ICPDR is also committed to raising public awareness and knowledge of the problems and challenges for water management in the Danube. The communication strategy of ICPDR focuses on effective implementation of nutrient reduction, ecosystem management and transboundary cooperation at the local, national and regional levels. Publications include Danube Watch, which has been produced since 1994 and is distributed for free to interested individuals and institutions in all Danube countries. The magazine aims to inform the public about sustainable water management as well as critical issues of water protection.

A Cooperation Platform

Environmental protection is a community responsibility and to achieve this the ICPDR cooperates with regional and international agencies, non-governmental organisations and the scientific community. From the beginning of the DRPC, the involvement of non-governmental organisations (NGOs) as equal members with government representatives and international organisations was a priority. Today, ten organisations have taken this opportunity to involve themselves actively in the work of the ICPDR and have been granted observer status to the ICPDR. This cooperation, which gives the observers rights to participate in all decision-making meetings and expert groups of the ICPDR, has proven successful and has ensured that different inputs have been brought in to influence and shape the water management in the Danube Basin.

Fritz Holzwarth, *ICPDR President 2003, Head of Delegation, Germany*

"We entrusted ICPDR with difficult tasks to aid river basin management and the reaction to these challenges set an example for other river basins. In my year as President of the ICPDR in 2003, I experienced not only the serious commitment and full engagement of all Danube countries, but also mutual trust and friendship."

Cooperation with Industry

The ICPDR has set the goal to strengthen relationships with business and with other stakeholder groups to build a common understanding of the sustainable use of the Danube and its resources. One positive example of the relationship with business has been the cooperation with the Alcoa Foundation.

Alcoa Foundation
Alcoa, the world's leading producer of primary and fabricated aluminium, as part of its commitment to community support in the countries where it operates, has provided substantial support for pollution monitoring work in transboundary areas. In 2002, Alcoa Foundation donated a Total Organic Carbon/Total Nitrogen analyser to the National Institute for Marine Research and Development in Constanta, Romania. The analyser was needed to improve the assessment of Danube pollution to the Black Sea. Additional cooperation has followed, including a project to purchase technical equipment for water research institutions on the Crisuri River in Romania and to expand community awareness of local pollution problems.

Organisational Structure under the Danube River Protection Convention

International Commission for the Protection of the Danube River (ICPDR)

Strategic Expert Group	River Basin Management Expert Group	Emission Expert Group	Monitoring Laboratory Information Management Expert Group	Accident Prevention Control Expert Group	Ecology Expert Group	Flood Prevention Control Expert Group

The Roots of the ICPDR

Cooperation in the Danube had early precedents. The Bucharest Declaration of 1985 brought signatories together to take the first steps toward a transboundary water quality network, and by 1991 a convention protecting the Danube Basin was under development. Representatives of the Danube Basin countries met in Sofia of that year, together with international agencies such as the European Commission, United Nations Development Program (UNDP) and the World Bank. Together, they established the Environmental Programme for the Protection of the Danube River Basin (EPDRB). The EU was asked as a neutral party to lead a task force, consisting of Danube country representatives, donors, international financial institutions as well as NGOs. The EU also provided financial and institutional support to the EPDRB through the EU PHARE Multi-Country Programme-Environment Programme (MCP-Environment).

International financial institutions were important in developing the EPDRB and later actively participated in the Task Force. The World Bank was instrumental in conceiving and planning the components of the programme and remained an active participant in the task force as well as in the early stages of programme implementation. The newly established European Bank for Reconstruction and Development also provided valuable help. Bilateral donors such as USAID also joined the task force, eventually coordinating their own technical assistance in the Danube region.

Getting Started

A Programme Coordination Unit (PCU) opened in 1992 to oversee the programme until the convention entered into force and the results were handed over to the new Secretariat. The PCU was responsible for starting operation of the expert sub-groups in monitoring, emergency warning and data management. Additionally, the PCU organised methods for distributing information on programmes and activities, and established an effective NGO network in the basin.

Danube Basin countries readily contributed facilities on a rotating basis. The coordination of their input via focal points was a major success factor of the programme. Country representatives came to regard the PCU as a major catalyst to their own actions to improve their policies, administration and methods to be adopted for initiating environmental improvements.

Mitja Bricelj, *Head of Delegation, Slovenia*

"The ICPDR activities significantly contribute to better collaboration on bilateral and sub-regional levels with the introduction of sustainable water management standards in the region. The results of ICPDR's work are significant: from the extremely pragmatic and important tool for early warning notification of accidents, to the first common Danube Roof Report prepared along EU-WFD standards. ICPDR is in an excellent position to make a significant contribution to sustainable development in that region."

PHARE and UNDP/GEF: Sharing the Challenge

The EU PHARE Programme began in 1990 to support the political transitions in Central and Eastern Europe and to address transboundary environmental issues. The Danube Programme was the first regional programme approved, and was considered to be a significant success story of the PHARE Multi-Country Programme (MCP). PHARE-MCP was the largest donor to the EPDRB. The other major supporter of progress, the United Nations Development Programme (UNDP), with support from the Global Environment Facility (GEF), has been working to address priority environmental problems in the Danube since 1992.

Partners in River Protection

The cooperation agreement between the EU PHARE programme and UNDP/GEF to coordinate their activities and to jointly manage the PCU for the EPDRB was a successful model for the implementation of other transboundary water projects in the Black Sea, the Dnieper River and the Caspian Sea. A clear agreement to share responsibilities allowed the EU PHARE team members and UNDP/GEF-funded staff to plan the strategic direction and handle the administrative tasks of the PCU. While both groups had the same overall objective of improving the sustainable management of the Danube River Basin, activities were divided according to priorities.

PHARE's activities reflected their priorities of promoting social, political and economic stability in the region; preparing non-EU countries for EU accession; establishing the operational and legal structures necessary for ratifying and implementing the Danube River Protection Convention; and filling knowledge gaps with applied research activities. UNDP/GEF's activities concentrated on their priorities of understanding the global and transboundary aspects of environmental problems; building capacity for environmental management; promoting NGOs and civil society as a means for developing activities and ensuring transparency; and promoting an ecosystem approach. The groups worked together on several programme activities, such as: wetland rehabilitation, sustainable agriculture, raising public awareness through Danube Watch and Danube Information System, and developing the Strategic Action Plan.

UNDP/GEF Pollution Reduction Programme

The pollution reduction project was a major international response to the degradation of surface and groundwater quality in the Danube River Basin and eutrophication of the Black Sea. To complete the project, a transboundary analysis was accomplished to obtain more complete knowledge of pollution loads and their effects in the Danube River Basin. Basic data was gathered from the National Reviews and from the National Planning Workshops. The main pollution sources were identified in the frame of the analysis and a list of "hot spots" was drafted. The Danube Water Quality Model was also designed as part of this programme to estimate and evaluate the flow of pollution through the Danube into the Black Sea.

UNDP/GEF Danube Regional Project

The support of GEF through the Pollution Reduction Programme has been followed up by a major programme of support called the, Danube Regional Project as one of three components of the GEF Strategic Partnership for Nutrient Reduction in the Danube and the Black Sea Basin – the largest and perhaps most ambitious water-related project supported by the GEF anywhere in the world. The project aims to strengthen capacity of the ICPDR and Danube Basin countries to develop effective mechanisms for regional cooperation and to ensure the protection of international waters, sustainable management of natural resources and biodiversity. Key targets include reducing nutrient pollution and supporting trans-boundary cooperation, paying particular attention to the sustainable ecological effects within the Danube River Basin and the Black Sea. The Danube Regional Project also contributes to the development of programmes for public participation, communication and strengthening NGOs.

The specific objective of the Danube Regional Project was to prepare and initiate basin-wide capacity building activities, setting up institutional and legal instruments at the national and regional levels to assure nutrient reduction and sustainable management of water bodies and ecological resources, involving all stakeholders and building up adequate monitoring and information systems. Sustainable ecological conditions for land use and water management are targeted through activities to build capacity and reinforcement of transboundary cooperation. Public involvement remains a key step to achieving these targets, and community actions are reinforced through the Small Grants Programme.

Alfred Duda, *GEF Secretariat, International Waters*

"Rivers that cross borders can be a source of conflict or can present an opportunity for cooperation. The Global Environment Facility (GEF) has been associated with the Danube Basin for a decade, and in that time has seen the ICPDR grow into a major force for cooperation among nations, and a model for how countries should collaborate in resolving their cross-border water concerns."

A Framework for the Future

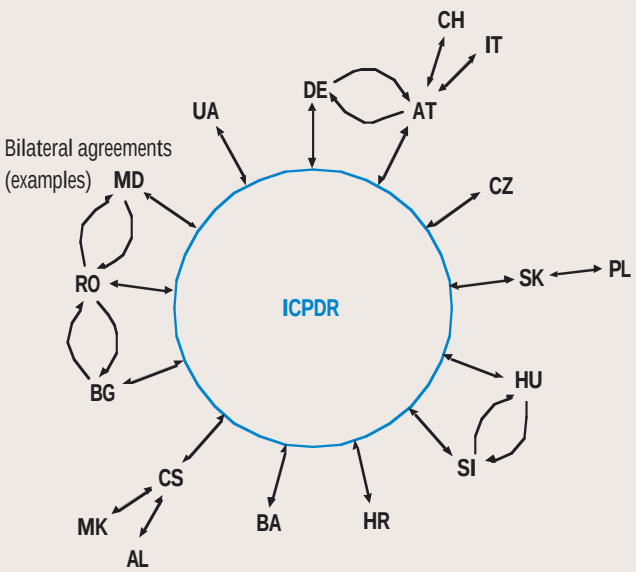
Water flow does not take place according to administrative or political boundaries, so the best way to protect and manage water is by close international cooperation between all countries within the natural geographical and hydrological unit of the river basin – bringing together all interests upstream and downstream.

The transboundary cooperation in managing Danube waters was reinforced when the Water Framework Directive (WFD) was adopted by the European Union in 2000. The EU Member States are obliged to fulfil the WFD, which emphasises using a river basin approach for managing water resources. However, all countries cooperating under the DRPC expressed their firm political commitment to support the implementation of the WFD in their countries and pledged to cooperate in the framework of the ICPDR to achieve a single, basin-wide coordinated Danube River Basin Management Plan.

The ICPDR provides the platform for coordination necessary to develop and establish a river basin management plan for the Danube River Basin. The WFD has added strength to the efforts to coordinate actions in support of integrated river basin management and created a new tool for the effective management of water resources.

Wolfgang Stalzer, *ICPDR President 1998 – 1999, Head of Delegation, Austria*

"The ICPDR can be seen as a successful model for transboundary cooperation in an international river basin. With 18 countries sharing its basin, the Danube ranks highest in the need for international coordination. Since the ICPDR successfully facilitates the development of the Danube River Basin Management Plan as requested by the EU Water Framework Directive, this also emphasises the importance this organisation will play in the future."



Bringing Change to the Basin

The River Basin Management Expert Group was created to prepare and coordinate the necessary actions for the implementation of the WFD. One of its first tasks was to develop a strategic paper for the development of the Danube River Basin District Management Plan. The Danube River Basin Plan will consist of the roof plan, dealing with all the issues of basin-wide importance and the detailed national plans dealing with all national issues and those that have been coordinated bilaterally.

The WFD brings major changes to water management practices. Most importantly, it sets uniform standards in water policy throughout the European Union and integrates different policy areas involving water issues. The directive requires cross-border cooperation in the development of integrated and coordinated river basin management plans, encouraging active involvement from stakeholders, NGOs and local citizens. The WFD stipulates a defined timeframe for the achievement of the good status of surface water and groundwater, as well as requiring a comprehensive ecological assessment and classification of a water body based on the composition and abundance of aquatic fauna and flora. Finally, the WFD introduces economic analysis of water use in order to estimate the most cost-effective combination of measures for water uses.

Nikola Marjanovic, *Head of Delegation, Serbia and Montenegro*

"ICPDR is instrumental for integrated river basin management. When decentralization processes are required, it is very difficult for the water sector to provide integrated river basin management, as required by the Water Frame Directive. However, the activities of the ICPDR are proving that if integrated river basin management is possible at an international level, it must be possible at a national level."

New Standards for European Waters

The implementation of the WFD stipulates the achievement of good ecological status and good chemical status by 2015. Ecological status assessment is not only based on water quality but on the occurrence of species and their habitats in comparison with undisturbed reference conditions. This legal instrument poses new challenges to the Danube River Basin countries, but it is an important tool for the long-term success of protection measures for Danube waters.

Sustainable river basin management is at the heart of the WFD, but it also:

- Stipulates a programme of measures for all water bodies at risk of failing to reach the environmental objectives
- Requests cost-effective combinations of measures for respect to water use
- Includes the involvement of the public (including stakeholders and NGOs) in the development of river basin management
- Sets a binding time frame by which all Member States must reach the “good” status of surface and groundwater by 2015.

//// Ceská republika //// Magyarország //// Moldova //// România //// Srbija i Crna Gora //// Slovensko //// Slovenija //// Ukraïna //// Deutschland //// Österreich ////

The Accident Emergency Warning System: Spreading the Message

Recognising the growing needs of the Danube countries for early information on accidental water pollution incidents, the ICPDR developed the Accident and Emergency Warning System (AEWS). The objective of the AEWS system is to increase safety in the Danube River Basin in order to enable national authorities to protect water users against accidental pollution and other emergency situations by providing early information on transboundary water pollution incidents for those countries affected. The system is activated whenever there is a risk of transboundary water pollution, or threshold danger levels of certain hazardous substances are exceeded. The AEWS sends out international warning messages to countries downstream to help the authorities put environmental protection and public safety measures into action.

Signalling Risk

The AEWS operates on a network of Principal International Alert Centres in each of the participating countries. The main function of the centres is to coordinate emergency warning at the international level. Three units work together in the alert centres: the communication unit (operating 24 hours a day) sends and receives warnings and other messages, the expert unit is responsible for transboundary impact assessment, and the decision-making unit decides on the extent of the international warnings needed. A data bank of dangerous chemicals and the Danube Basin Alarm Model assist the experts to assess the environmental impacts of accidental pollution on the river and its important tributaries. The speed, the maximum concentrations or concentration distribution of the polluted water body can be predicted using this system model.

Expanding the System

The system is currently being upgraded to improve its effectiveness and cost-efficiency. The satellite-based communications links are being replaced by a web-based communication system using the Internet and SMS messages. This system will form an integral part of the ICPDR information system, DANUBIS. Other supporting tools, including the Danube Basin Alarm Model and the database of dangerous substances, are meanwhile being improved. The system deals at present only with waste pollution, but the scope can be extended in the future to include other environmental hazards, such as ice and floods.

There is a need for further actions to strengthen cooperation with the Danube Navigation Commission on accident systems. Both organisations have worked together in the past and each are registered observers to the other body. During 2004, the ICPDR will complete an evaluation of the environmental impacts of discharges from inland navigation, including discharged bilge water, wastewater from tank washings and sewage from passenger boats. The report will also include proposals related to future cooperation with the Danube Commission.

Emil Marinov, *ICPDR President 2000, Bulgaria*

"During the accidental spills in 2000, I was impressed with how quickly the Accident and Emergency Warning System went into action for these emergencies and its effective operation. Moreover, the successful cooperation proved the vital necessity of this tool for the entire river basin."

Looking After the Danube

Frequently referred to as the Blue Danube, the river still evokes nostalgic memories of past eras. Today, the Danube is grey-green rather than blue, the result of natural processes and many decades of human activity throughout the Danube River Basin.

After the first multinational agreement on the Danube in 1985, a series of monitoring stations and a programme of sampling and analysis was established. These stations originally focused on political boundaries where the Danube River entered or left a country and covered a relatively limited range of chemical determinants. The Monitoring, Laboratory and Information Management Expert Group of the ICPDR (MLIM) was central to the introduction of the Trans-National Monitoring Network for the Danube Basin (TNMN) in 1996. The expert group recognised that additional monitoring programmes were needed to support these stations, including sites upstream and downstream of embouchure points of major tributaries or of cities where the main pollutants were believed to be coming from. An important feature of the TNMN has been that all stations used were existing national monitoring stations. This kept costs down for each country by creating less additional work.

The main objective of the TNMN is to provide an overall view of pollution and long-term trends in water quality and pollution loads in the major rivers in the Danube River Basin. The monitoring network is based on national surface water monitoring networks and includes a total of 79 monitoring locations with up to three sampling points across the river. The minimum sampling frequency is 12 times per year for chemical determinants in water and twice a year for biological parameters. Importantly, the ICPDR has developed and managed a quality control system to ensure that the information collected is comparable and consistent in its quality.

Exchanging Knowledge

The final challenge for any monitoring programme is to provide a means of exchanging data in a common format. MLIM experts developed the Data Exchange File Format in order to ensure that each monitoring station has access to the same information and interpretations can be made on equal platforms. The process of collecting data is not an end it itself but provides information for decision makers at local, national and international levels. The decision makers are then in a position to make informed policy changes that lead to water quality improvements and to redefine their information needs. Improvements in the Transnational Monitoring Network are also planned to meet the requirements of the EU Water Framework Directive. In this way, the cycle continues.

Reducing Emissions to the Danube

Information about emission of pollutants to the Danube is essential for effective implementation of the DRPC. Several articles of the DRPC contain provisions for emissions. The overall objective of the Emission Expert Group is to identify measures that will reduce polluting emissions to the Danube River Basin. The key role of the Emission Expert Group within the ICPDR is to establish and update inventories of relevant point and non-point sources of pollution within the Danube River Basin.

The Emission Expert Group has coordinated actions for the reduction of polluting loads mainly from point sources to the Danube River Basin for the time period up to 2005. This includes identifying the most significant types of water pollution; preparing inventories of municipal and industrial discharges; making proposals for the appropriate measures required, including guidance for best available technologies, assessing the investments and other costs involved; and estimating the reduction of water pollution that can be achieved with the various measures. The Emission Expert Group cooperates with other expert groups on the establishment of a list of pollutants, monitoring requirements for wastewater discharges, and the elaboration of water quality targets.

Milan Matuska, *Global Water Partnership*

"Water resources management promotes the coordinated development of water, land and related resources, in order to maximise economic and social welfare in an equitable manner without compromising the sustainability of vital eco-systems. Those goals are the reasons GWP of Central and Eastern Europe participates as a committed observer in the programmes supported by ICPDR in the Danube region. ICPDR pays special attention to public participation issues, a promising field of cooperation for both partners, to approach water as the source of life and to apply solutions based on open dialogues with all stakeholders involved."

Reducing the Risk of Damage from Floods

The disastrous floods that occurred in August 2002 in the Danube and Elbe river basins accelerated the efforts of the ICPDR in coordinating and harmonising basin-wide actions to cope with flood hazards. An expert group on Flood Protection was established in November 2002 to develop the Action Programme for Sustainable Flood Protection in the Danube River Basin. The action programme has been taking into account the initiative of the European Water Directors concerning flood management and the ICPDR welcomed an offer from the European Commission for access to the LISFLOOD programme aimed at developing a European Flood Alert System for major European catchments.

The Danube Flood Action Programme calls for unified and coordinated strategies for reducing flood damages by reconnecting natural flood retention areas and emphasising land-use planning that takes into account areas that are naturally liable to flooding. The action programme defines the underlying principles and objectives for sustainable flood protection for the entire basin. The first stage defines a set of general objectives, the need to network existing national flood reporting and forecasting systems, and sets out several categories of measures likely to reduce the risk of flooding.

In the future, it will be crucial to advance the planning process and the level of detail of specific action plans for the various sub-basins of the river Danube rapidly, in order to be able to assemble from these components an overall programme by 2009. During this planning stage, it must be ensured that a harmonious development process ultimately leads to a consistent flood action programme for the entire Danube River Basin, incorporating the future developments of the EU initiative on flood risk management planning where possible.

Restoring the River Basin Floodplains

The overall objective of the Ecology Expert Group is to support ICPDR activities related to the conservation, restoration and sustainable management of river basin ecosystems, and those ecosystems and wetlands directly depending on them.

The expert group is currently working on provisions of the WFD to make an inventory of protected areas that are part of the river basin ecosystem in the Danube River Basin. In addition, the expert group provides guidance for the monitoring of habitat and species protection areas and works to support actively the dissemination of information on the conservation, restoration and sustainable management of wetlands, especially floodplains.

Martina Motlova, *ICPDR President 2002, Czech Republic*

"In August 2002, the Czech Republic recorded the greatest floods on its territory. In spite of repeated warnings of experts, citizens as well as municipal politicians were caught off guard. The floods reminded us that our civilizing interventions to the landscape are often negative. The floods issued a bill to people for their irresponsibility, blindness and arrogance; it took human lives and caused considerable damage. Nevertheless, the floods helped to uncover some of our better features which were almost forgotten: unification, compassion and solidarity."

A Cleaner River Basin

Water quality in the Danube has improved significantly during the last decade and considerable improvements in environmental conditions in the Danube basin have been achieved. Pollution from municipalities and industry is declining due to the following factors: economic recession in the lower Danube; successful measures taken to reduce nutrient discharges, particularly in the upper Danube countries; dramatic reduction in the use of fertilisers and considerable improvements in the treatment of wastewater; and the implementation of a ban or limitation on phosphate detergents in some countries. Most stretches of the Danube can be described as only moderately polluted, since conditions correspond to targets where concentrations of key substances are identical or close to the target values set by the ICPDR.

Total nitrogen levels in the Black Sea have been reduced, while current phosphate levels appear to be roughly the same as in the 1960s. According to the national reports of the Black Sea Commission, efforts to reduce discharges from high priority pollution sources and insufficiently treated wastewater are beginning to bear fruit, since fewer and less intense algal blooms are now being recorded in the sea, while total fish catches have increased.

Marian Supek, *Head of Delegation, Slovakia*

"Maintaining and improving waste water treatment plants has been critical to the reduction of pollution, and the significant investment in waste treatment plants in the last ten years is critical to the future of the entire Danube River Basin."

Assessing the Risks

The ICPDR is working to prevent accidental pollution and to improve response capability by listing all Accident Risk Spots in inventories, and providing tools to lessen the related risks. All Accident Risk Spots identified in the Danube River Basin have been preliminarily ranked according to their overall risk potential. The Accident Risk Spots Inventory encompasses operational industrial sites associated with a major risk of accidental pollution, due to the nature of the chemicals being produced, stored or used at the plants, as well as contaminated sites including landfills, dumps and decommissioned industrial installations in areas liable to flooding. The presence of a plant or site on the inventory only reflects a potential threat. The actual risk to the environment must be determined more accurately by assessing the effectiveness of existing safety measures in a thorough site analysis. The inventory of operating sites was finalised in 2001 for most of the Danube countries, and updated in 2003 with contributions from Austria and Bosnia and Herzegovina.

Florin Stadiu, *Head of Delegation, Romania*

"After ten years of concerted efforts by the Danube and Black Sea countries, the first signs of ecosystem recovery and water quality improvement are evident. I am certain that, based on a reliable protection and rehabilitation managerial mechanism, sustainable development shall finally be achieved in the Danube – Black Sea region, with a similar ecological status to the 1960s, and the Danube will become the desired 'river of life' that will refresh the Black Sea waters, ensuring the welfare of the future generation."

Danube Day: Celebrating the River

Tuesday 29 June 2004 was the inauguration of Danube Day, the largest celebration ever for the Danube Basin and its peoples. This mammoth festival honoured the Danube and the rivers that flow into it. It paid tribute to the vital role they play in providing water, food, power, recreation and livelihood. Danube Day celebrated the peoples of the region and the wildlife that finds refuge there.

Danube Day was about people: getting involved and thinking about how their actions impact neighbours downstream. The Danube Day message spread through discussion forums, river adventures, a Danube schools competition, a cross-border cycle tour, conservation tasks and simply by encouraging people to visit their own river. Fun was the emphasis on riverbanks across the region; festivals showcased the richness of Danube culture, with music and dance enjoyed well into the night. In Germany, children came face-to-face with fascinating river creatures; in Vienna visitors took a virtual cruise down the Danube sampling the delights of each country's cuisine along the way; and in Hungary "surrogate parents" adopted and released young sturgeon into the river.

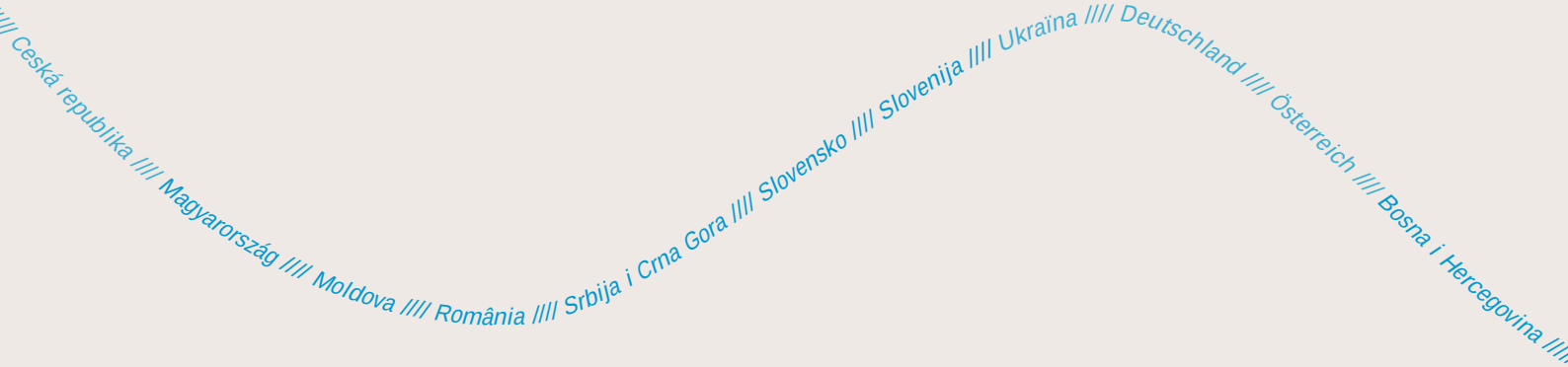
Uniting Peoples

Along with practical events, symbolic gestures promoted solidarity between Danube peoples. Slovakian children sent greetings to river neighbours; a torch was carried along the Danube in Romania; ship workers saluted the river by blasting a 'wave of sound' upstream through Bulgaria, Romania, Hungary and Slovakia; the Danube at Novi Sad was filled with hundreds of paper boats containing goodwill messages and throughout the region school pupils created beautiful, intricate sculptures in honour of their local rivers.

Danube Day was a spectacular celebration that helped highlight the importance of looking after Danube rivers. Danube Day demonstrated the need for Danube countries and organisations to work together to ensure river resources are shared and not abused. Danube Day will become a movement, growing year by year to raise awareness about the Danube and its tributaries – so people and wildlife can use and enjoy the Danube for centuries to come.

Kalman Mizsei, *UNDP Regional Director for Europe and the CIS*

"Environmental challenges cannot be addressed by countries acting alone. The UN community is proud to have been able to contribute to strengthening the capacity of the Danube countries to address these challenges at global, national and community levels, seeking out and sharing best practices, providing innovative policy advice and linking partners through various projects. Danube Day represented a successful cooperation between all the Danube nations to promote the sound use of the river's natural resources."



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The Danube's Future

Despite the achievements of the last ten years, water and water-related ecosystems in the Danube River Basin continue to be at risk from pollution and other negative factors. Furthermore, the frequency of serious flood events due to climatic changes is expected to rise, which in combination with unsustainable human practices may cause substantial economic, social and environmental damage. New challenges are developing, for example in understanding and responding to environmental problems such as the introduction of invasive species and pressures from aquaculture. ICPDR is poised to meet these challenges as well as to achieve the goals set forth in the DRPC.

Recognising the shared responsibility necessary for meeting these concerns, the ICPDR emphasises its commitment to achieve integrated river basin management focusing, in particular, on transboundary and basin-wide impacts by: meeting key objectives of the DRPC through implementing the WFD; developing an internationally coordinated river basin management plan for the Danube basin by 2009, taking coordinated steps to reduce risks from floods in line with the principles as set out in the communication from the European Commission on flood risk management, flood prevention, protection and mitigation.

Facing the Challenges to Come

It will be necessary to terminate discharges of untreated wastewater from cities and towns and from major industries, and to increase efficiency and the level of treatment subsequently. In addition, a major priority will be improving the knowledge base and implementing prevention measures on hazardous substances to ensure the release of these substances into the Danube will be phased out for particular hazardous substances by 2020, and significantly reduced for other relevant pollutants. Monitoring systems and data availability must be improved, particularly for areas relevant for the assessment of trans-boundary impacts. The structural degradation of aquatic ecosystems must be halted and sections of the Danube and its tributaries returned to a more natural state, including adaptations of existing barriers that allow migratory fish to become part of our ecosystem again and reconnecting wetlands and retention areas.

Although there is still much work to be done, the ICPDR will continue to work to improve the well-being of the Danube River Basin, thus ensuring the sustainable use and development of the basin's natural resources for future generations to come.

Dragan Doko, *Minister of Foreign Trade and Economic Relation, Bosnia-Herzegovina*

"Bosnia-Herzegovina is very happy to be joining the ICPDR as a fully participating member. Water is absolutely essential for securing sustainable development, and cooperation within the 'Danube Family' will assist Bosnia-Herzegovina in fulfilling its national and international responsibilities."

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