

# DANUBE WATCH

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International  
Commission  
for the Protection  
of the Danube River

Internationale  
Kommission  
zum Schutz  
der Donau

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Credit: Federal Environment Ministry of Germany

# Dear readers,

On 1 January 2007 Romania and Bulgaria will become members of the EU. I am delighted that this historic event coincides with the commencement of Germany's EU Presidency and the start of Romania's Presidency in the International Commission for the Protection of the Danube River (ICPDR). The accession of Romania and Bulgaria to the EU means not only that two more countries of the Danube region have joined the EU, but also that the EU will directly border the Black Sea.

Romania and Bulgaria have been members of the ICPDR since it was established and the cooperation in the framework of this Commission has played a substantial role in bringing the south-eastern states of the Danube region closer to the EU's water protection policy. We expect the accession of Romania and Bulgaria to bring additional efforts and new momentum to the protection of the Danube and the Black Sea.

The EU Water Framework Directive is the most important instrument of EU water policy and already sets ambitious requirements and tight deadlines for both national implementation in the EU states and international coordination. As the most international river basin in the world, this is a particular challenge for the Danube region. The Danube Ministerial Conference in 2004 not only gave priority to the Flood Action Programme, it also identified key water management issues in the Danube Basin Analysis 2004, adopted in accordance with the EC Water Framework Directive. For me, the ICPDR is a pivotal link for the countries in the Danube region, and will continue to be so in future.

The year 2007 will be another year of change for the Danube. The UNDP/GEF Danube Regional Project, which for many years has complemented and supported the work of the ICPDR, will be concluded in spring 2007. This project is rightly considered throughout the world as a model of success of GEF's work in the water sector. I would like to thank the donors and the team of the Danube Regional Project. For the ICPDR contracting parties the end of the UNDP/GEF support means that in future they will have to shoulder even more responsibility for the protection of the Danube River.

The discussions at the Climate Change Conference in Nairobi have made it clear that water is the key issue when it comes to the impacts of climate change. I believe that the transboundary cooperation along the Danube sets an excellent example for many countries with regard to the efficient management of water resources and the joint development of strategies for adapting to the effects of climate change.

As home to the source of the Danube, Germany feels it has a special responsibility to ensure that the Danube River reaches its downstream neighbours in good status. We will continue to support the international cooperation for the protection of the Danube. I would like personally to wish the work of the ICPDR in 2007 every success.

*Sigmar Gabriel*, Federal Environment Minister of Germany



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Danube Watch is available on the web at [www.icpdr.org](http://www.icpdr.org)



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The ICPDR accepts no responsibility or liability whatsoever with regard to information or opinions of the authors of the articles in this issue.



Credit: CEIE/Dimitrova



Credit: Wiener Wasserwerke



Credit: Vogrin



Credit: Bavarian Water Management Agency

## EU APPROVES BULGARIA AND ROMANIA

Romania and Bulgaria will be admitted to the EU in January 2007. European Commission President Jose Manuel Barroso said the countries had made enough progress to join the union, but only under certain conditions. Both will be checked for progress in curbing organised crime and corruption, ensuring food safety and the proper use of EU funds. Bulgaria's and Romania's accession will bring 30 million people into the EU.

For more information, please visit: [http://ec.europa.eu/enlargement/index\\_en.htm](http://ec.europa.eu/enlargement/index_en.htm)

## EU REACHES AGREEMENT ON GROUNDWATER PROTECTION

The Parliament and the EU Council of Ministers agreed on final details of a new directive to protect groundwater from agricultural residues. The law will introduce a mandatory requirement to prevent the input of hazardous substances into the groundwater and impose a single limit value of 50 milligrams per litre on nitrates in groundwater throughout the EU.

For more information, please visit: [www.europarl.europa.eu/news/expert/default\\_en.htm](http://www.europarl.europa.eu/news/expert/default_en.htm)

## AARHUS CONVENTION ADOPTED

The Aarhus Convention has recently been implemented into EU law governing the EU institutions by Regulation (EC) Number 1367/2006 (the Aarhus Regulation). The Aarhus Convention is an international agreement which establishes the principle that the public should have certain rights in relation to the environment, including access to environmental information, public participation in environmental decision-making, and access to justice. The regulation will come into force on June 28, 2007.

For more information, please visit: [www.unece.org/env/pp/](http://www.unece.org/env/pp/)

## WWF CALLS FOR ECOLOGICAL FLOOD PREVENTION

The Austrian Economic Chamber and WWF released a paper under the slogan, 'Prevention instead of damage repair', calling for more investment in ecological flood prevention. WWF identified approximately 11,000 hectares from 24 Austrian rivers that require renaturation. WWF has also issued a working paper reviewing the flood events of 2006 and highlighting the importance of floodplain restoration.

For more information, please visit: [www.wwf.at/News/news714a/index.html](http://www.wwf.at/News/news714a/index.html)

31/1/2007

BRUSSELS, BELGIUM

**CONFERENCE: NAVIGATING THE EU WATER FRAMEWORK DIRECTIVE**

PIANC, an international association for technical aspects of navigation, together with the Navigation Task Group on the Water Framework Directive (WFD) hosts this conference covering hydromorphology, priority substances, the setting of ecological targets, legal aspects including also the implications of the WFD for new development proposals, river basin planning, and sediment management.

**For more information contact: [info@pianc-aipcn.org](mailto:info@pianc-aipcn.org)**

12-14/2/2007

BERLIN, GERMANY

**SYMPOSIUM: TIME TO ADAPT — CLIMATE CHANGE AND THE EUROPEAN WATER DIMENSION**

Scientific evidence suggests that climate change will result in frequent and severe extreme events and affect the availability of water. As part of the German EU presidency's activities, the Federal Ministry for Environment, Nature Conservation and Nuclear Safety will host this symposium to discuss the likely impacts of climate change on water management and water-dependent sectors such as agriculture, energy, inland navigation and tourism, as well as options for adaptation.

**For more information visit: [www.climate-water-adaptation-berlin2007.org](http://www.climate-water-adaptation-berlin2007.org)**

7-9/6/2007

BELGRADE, SERBIA

**IWA CONFERENCE: GROUNDWATER MANAGEMENT IN THE DANUBE RIVER BASIN AND OTHER LARGE RIVER BASINS**

Groundwater is a vital – but too often hidden – resource for about 75% of all Europeans. One of the goals of this conference is to contribute to better understanding of groundwater processes and groundwater management, especially referring to the requirement of the EU Water Framework Directive. It will also offer a platform for the exchange of technical and scientific information regarding groundwater abstraction and protection.

**For more information visit: [www.jcerni.org/activities/conferences/iwa2007/home.html](http://www.jcerni.org/activities/conferences/iwa2007/home.html)**



**NEW PUBLICATION: INLAND WATERWAYS AND ENVIRONMENTAL PROTECTION**

A new report from the European Conference of Ministers of Transport reviews experience in minimising and mitigating the environmental impacts of inland waterway development and examines effective consultation and planning procedures in a number of European countries. The report also analyses the way the EU Water Framework Directive changes the planning environment for waterways.

**For more information visit: [www.cemt.org/topics/env/envpub.htm](http://www.cemt.org/topics/env/envpub.htm)**



Over 5000 students were inspired to participate in this year's Danube Art Master Competition, including these young girls from Serbia (above), the Czech Republic (below left) and Bosnia and Herzegovina (below right). Credits: Directorate for Water Serbia, Bulgarian Ministry of Environment and Water, Union for Morava/ archive, Ekotim/ archive.





## Danube Day 2006: River of Life

Reaching audiences of several hundred thousand, Danube Day was a massive event that achieved more than ever before. The third basin-wide festival inspired change and made a real difference to the future of the rivers and the people who rely on them.

**Celebrations stretched across the region on June 29, 2006, to mark the 12th anniversary of the signing of the Danube River Protection Convention. Tens of thousands organised or attended over 130 events in 13 countries – 6000 people at one Moldovan–Romanian expedition alone. International ministerial events, conferences, awareness-raising festivities, river clean-ups and fun, hip youth events produced a day of celebration that entertained, educated and enthralled. Beating last year’s amazing record, over 410 organisations from government and civil society came together to make Danube Day work.**

Activities ranged from public festivals in major capitals to groups of children gathered on the banks of tiny tributaries in remote rural areas. The spotlight was on the 2006 ICPDR Presidency, held by Moldova, to host

the biggest celebrations, and they achieved this and far more. Towns and villages along the Prut held events attended by environment ministers, senior international community and civil society representatives and crowds of local people in a grand Danube Week.

**Celebration fills the basin.** Other national highlights included Romania’s week-long celebration including a key conference on international cooperation and the Danube Walk – a day of merriment, awareness-raising and dancing involving ministers, officials, NGOs, the ICPDR and Galati residents. Hungary’s festivities were widespread: on the Danube (in Baja, Bába, Budapest, Esztergom and Győr) and in the Tisza Basin. In Germany the exhibition ‘Water is the Future’ attracted a huge audience of shoppers at a major retail centre.

Schoolchildren in Austria take a close look at protecting the river in activities for Danube Day 2006. *Credit: Austrian Ministry for Water Management/Michalski*

Serbia once again produced a tremendous affair involving 70 organisations in 20 towns, uniting the country. At Belgrade's flagship event, guests were invited to visit 12 towns in one – exhibits presented the sights, distinctive traditions, food and rich history of almost every Serbian city on the river. While in Croatia, a fabulous day in Zlatna Greda got everyone saluting the Danube Rivers and Vukovar held a day of thanks to those who had battled against the floods of April 2006.

**“Let the hearts of Europeans unite as rivers unite, flowing into the Danube.”** Pupils from Ladce Primary School, western Slovakia, sending their Danube greetings to everyone celebrating Danube Day 2006.

**Inspiring Danube solidarity.** Danube Day motivates people to work together for the future of their environment. Cross-border activities promoted

Children in Slovakia find a way to bring the future of river protection within their grasp with their entry in the Danube Art Master Competition (right). The competition inspired over one thousand artworks, including this award-winning entry from Slovenia (below right). *Credit: Ministry of the Environment Slovakia, Ministry of the Environment Slovenia*



Danube solidarity, encouraging people to look beyond boundaries and understand that their actions impact others. Just as rivers do not recognise borders, Danube Day brought together people and towns usually separated by such restrictions.

The Austrian–Slovakian–Hungarian stretch of the Danube provided the link for an annual endeavour, the Three Nations Bicycle Tour. Starting in Vienna, cyclists from six countries travelled farther this year by pedalling into Hungary. Further south on the

Hungarian–Serbian–Croatian stretch, the river was the uniting force for intrepid adventurers in the Baja to Apatin canoe tour. On the Moldovan–Romanian border, environment ministers Sulфина Barbu and Constantin Mhailescu cut a red ribbon on the banks of the Prut and symbolically suspended the border for the day.

**Uniting voices.** Slovakia's rivers provided the impetus for children to send 'Danube Greetings', messages of international goodwill to the basin. The 'Greet the Danube' ship blast was sounded again as workers blasted their ships' horns in tribute to the international route that provides their livelihood. Boats from a different era united 3000 people in Austria, Slovenia, Hungary and Croatia on the Mura River when 20 traditional wooden boats travelled from Cmurek, Austria, to Novakavec, Croatia. While American Mimi Hughes had only her own strength and stamina to get through a gruelling 2950km swim along the length of the Danube, on a personal mission of social and environmental stewardship.

**“Why not throw your rubbish into the river? Everyone else does!”**The thought provoking title of a Ljubljana Water Dragon artwork, created by students from the Biotechnology Educational Centre to raise awareness about the way we treat Danube Rivers.

**Getting children involved.** Inspiring the next generation of Danube users to act on behalf of their rivers is a cornerstone of Danube Day. This year involved more children than ever before in creative and thought-provoking activities. The 'Danube Art Master' competition, inviting every child in the basin to create a piece of art, elicited a huge response. In just four of the participating countries, over 3000 students entered 1200 artworks – including 550 Czech students from the Morava region

alone. National winners will travel to Vienna for a two-day trip in December, courtesy of Coca-Cola and the ICPDR.

In a major youth initiative, the 'Danube Box' was launched, an education kit developed by the ICPDR and expert educators with support from Coca-Cola. A visually eye-catching stimulus for learning about the Danube, it is now available in 18,000 Austrian schools, with plans to launch it across the region (see article on page 11). More than 400 Regensburg youngsters were



captivated by water experiments in Germany, while in Slovakia, 700 children from children's homes took part in a packed day of activities.

**River of life.** The Danube's stunning wildlife was the main theme for 2006 and the basis for many events. Austria's activities focused on capturing the imagination of youngsters with 11 safaris to the Lobau. Pupils were transported to another world: from the Vienna cityscape to an almost untouched natural haven that evoked a sense of wilderness in even the most streetwise child. In Ukraine, river adventures instilled a sense of wonder in youngsters through activities to record threatened species and search for the elusive sturgeon. In Bosnia and Herzegovina, children created artworks and learnt about river science on the riverbanks. Bulgarian pupils quizzed experts on environmental and economic problems and 300 Czech children



ICPDR President Constantin Mihailescu collects samples for a water analysis as part of Moldova's Danube Day week (left). Olympic champion Rita Koeban came out to celebrate Danube solidarity in a canoe tour from Baja to Apatin (below left). Credit: Coca-Cola HBC/Fallander, Ministry of Environment and Water Hungary



took part in an environmental film festival. Hungary's MusicFlow outdoor DJ festival succeeded in raising the Danube's 'street cred,' popularising the Danube message to an age group often ignored in awareness campaigns.

**"The past two days are worth remembering for years to come ... the extraordinary mutually constructive initiative, enthusiasm and determination to further build up cross border solidarity to the benefit of both people and the river environment."**Constantin Mihailescu, ICPDR President 2006 and Moldovan Minister of Ecology and Natural Resources speaking about the Moldovan-Romanian Danube Day celebrations.

**Practical actions that make a real difference.** Danube Day achieves positive change. Immediate results are gained by mobilising people to undertake conservation tasks, such as 2006 clean-up days on the Danube, Prut and Delta and the introduction of rubbish collection

boats in Belgrade. Long-term success is achieved through providing the impetus for officials and local people to improve river management and policies. The events of 2006 served as the catalyst for improving the integration of environmental protection into development plans (at an international conference on Danubian Institutional Cooperation in Romania); the

development of Bulgaria's flood prevention programme; the improved monitoring of the Prut; an inventory of illegal tipping areas on the Mura; and a review of the Water Quality Plan in Bosnia and Herzegovina.

**"Danube Day saw high officials and ordinary people together share a 'no-border' area, a common language and the beautiful landscape."**Petruta Moisi, Eco Counselling Centre Galati, DEF Board Member and Speaker for the Lower Danube, speaking about the Danube Day launch event on the Moldovan-Romanian border.

**Spreading the word.** Above all, communication campaigns made the 2006 Danube Day the most successful to date. A large part of this was due to the formation of the Green Danube Partnership between the ICPDR, Coca-Cola HBC and The Coca-Cola Company. The partnership resulted in national media campaigns and support for key events.

The ICPDR would like to thank all the individuals and organisations who took part in Danube Day 2006 – the world's largest river festival. Over 12 years of international cooperation has resulted in cleaner, safer rivers. The Danube Day partners have made a huge contribution to ensuring these improvements continue.

*Suzie Holt* lives in Devon, UK, and is a freelance environmental communications consultant. She has been involved in Danube Day for the last three years.

## Youth parliaments held in Moldova go to the source

Left: Members of the youth parliament take to the streets of Vorniceni, Moldova, to talk with locals about access to safe drinking water. *Credit: Becquériaux.*

Right: Despite findings that the canal will have a significant impact on wildlife in the area, work continues on the Bystroe Canal. *Credit: WWF/Vorauer*



**The Seventh European Youth Parliament for Water was held in Moldova this September. The event brought together 90 European youth aged 13 to 20 and adult stakeholders in the field of water under the theme, 'Access to drinking water and sanitation in rural areas'.**

To prepare for the parliament, the youngsters worked on a diagnostic of a local village, Vorniceni, together with water experts from the Swiss Development and Cooperation Agency and village elected officials. The diagnostic included a survey of the inhabitants, an assessment of the water sources in the village, and interviews with responsible stakeholders. The results fed debates in the parliament sessions that followed.

“This is a long-term project,” said Nadia Triboi, President of the Seventh European Youth Parliament for Water, “so the benefit will remain for the future generation.”

After the parliamentary session, youth representatives were invited by ICPDR President Constantin Mihaiescu to present the youth parliament process to a forum of NGOs from the Danube and Black Sea, organised by the Moldovan Ministry of Ecology and Natural Resources in partnership with the ICPDR.

“Every problem has more than one solution,” said Triboi, “but the first condition is to work together in order to find the best information and to take the correct decision.”

The Youth Parliaments for Water are organised by Solidarity Water Europe, based in Strasburg, France.

*Kirstie Shepherd* is a freelance journalist living in Vienna and has called the Danube River Basin home since 2000.

## Work resumes on Bystroe Canal



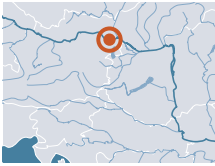
**Work on the Bystroe Canal resumed on November 4th, with the dredger *Tsuryupinsk* returning to the Ukrainian Danube Delta to renew areas already dredged under the first phase of the project, which had silted in following initial dredging in 2004.**

The work comes despite the report issued this summer by the Inquiry Commission of the United Nations Economic Commission for Europe. In the report, the commission unanimously concluded that the canal will have “significant adverse transboundary effects” on the environment. The canal will cause “large-scale, long-term cumulative impacts on fish and bird life from shipping traffic” and habitat loss and destruction, said the commission.

According to the commission’s report, dredging will have an impact on the water level dynamics along the Bystroe branch that will result in the loss of floodplain habitats, which are used by fish for spawning and nurseries, and by birds for nesting and feeding. Furthermore, the commission found “the increase in suspended sediment concentrations downstream of the dredging site will harm fish”.

Ukraine developed the canal without notifying Romania, as required by the ESPOO Convention on Environmental Impact Assessment in a Transboundary Context and triggered the dispute resolution mechanism under the convention. The convention requires countries to notify each other on all planned projects that are likely to have a significant negative environmental impact across a national border.

*Kirstie Shepherd* is a freelance journalist living in Vienna and has called the Danube River Basin home since 2000.



## The Danube goes to school

An innovative new educational tool, in use in Austria and with national versions scheduled for Romania, Hungary and Serbia, is helping schoolchildren in the Danube Basin to understand the vital role rivers play in their lives.

Josef Pröll, Water Minister, Austria; Philip Weller, Executive Secretary of the ICPDR; Ulrike Gehmacher, Coca-Cola HBC; Monika Polster, Coca-Cola Austria; and Ulli Sima, Environment Councillor of Vienna, celebrate the launch of the Danube Box on Danube Day 2006. The Danube Box was developed under the guidance of a team of Austrian education experts, and is available free of charge to teachers interested in using it in their classrooms. *Credit: Coca-Cola HBC/Fallander*



**Most children in the Danube Basin are able to name the closest river. But they might have difficulties saying where the river flows from or to. And it might be impossible for them to name the ten countries the Danube flows through. A new educational tool based on the principles and objectives of sustainability and environmental education will now assist teachers in bringing the Danube closer to the minds and the hearts of the future generation.**

Danube Day 2006 was a special Danube Day – not only did it celebrate the Danube Rivers, but it also saw the launch of the Danube Box. This innovative education kit for teachers was developed over the last 16 months and is now available in German and English. It consists of a teaching kit that will give local schoolchildren a greater understanding of the river, the threats posed to the river, and the need to preserve water resources.

**“We take our corporate social responsibilities very seriously indeed,”** said Sir Michael Llewellyn-Smith, a member of the board of directors of Coca-Cola HBC, **“and we have significant operations along the Danube River which contribute to water conservation and to a wider understanding of the concept of sustainable development.”**

Speaking about the Danube Box, Philip Weller, Executive Secretary of the ICPDR, said, “The Danube Box answers a need to effectively communicate information and appreciation to the younger generation on the importance of the Danube River and its tributaries as part of our natural heritage.”

**Partners in education.** The Danube Box was developed by the ‘Green Danube Partnership’, established in June 2005 between the Coca-Cola Company, Coca-Cola HBC and the ICPDR. The ‘Green Danube Partnership’ is an initiative to demonstrate business responsibility for the future of the Danube. “We take our corporate social responsibilities very seriously indeed,” said Sir Michael Llewellyn-Smith, a member of the board of directors of Coca-Cola HBC, “and we have significant operations along the Danube River which contribute to water conservation and to a wider understanding of the concept of sustainable development.”

The Danube Box is already in use in Austria, where it is supported by the Ministries of Water and Education, and discussions are currently under way for national versions for Romania, Hungary and Serbia. The first step will be to set up national project teams composed of representatives of the Ministries of Water Management and Education, as well as relevant NGOs and pedagogical institutions. It is hoped that the Danube Box will be made available to school authorities in other countries along the Danube.

*Jasmine Bachmann* works on public participation in the ICPDR Permanent Secretariat, and is the Executive Editor of *Danube Watch*.

Framed by Golubac Castle, the research vessel *Argus* collects samples of sediment from the river's bottom to be tested for heavy metals. The vessel was donated by the German government to the Serbian government in 2002. Credit: Szaloky





## Searching for heavy metals behind the Iron Gates

Samples of sediment from the river's bottom are being tested for heavy metals, organic micro-pollutants and nutrients in a project funded by the UNDP-GEF Danube Regional Project.

**At one spot, Béla Csányi had to dive into the murky water to loosen the plastic tube from the mucky bottom with his hands. At others, the tube torpedoed downwards and struck hard rock, just where one would think the bottom muck would be metres in depth. "It was very difficult to figure out where the sediment actually was," says Csányi.**

Csányi was aboard the research vessel *Argus*, donated by the German government to the Serbian government in 2002. The vessel was on the Danube River immediately upstream from the 'Iron Gates' dam along the Romanian and Serbian border. Csányi and colleague Ferenc László from Hungary's 'Vituki' Environmental Protection and Water Management Research Institute, and national teams from Romania and Serbia, were contracted by the UNDP-GEF Danube Regional Project (DRP) to take samples of sediment from the river's bottom last September. Samples would then be tested for heavy metals, organic micro-pollutants and nutrients, with government partners from Romania's National Research and Development Institute for Environmental Protection – ICIM Bucharest and Serbia's Jaroslav Cerni Institute, Belgrade.

The three-day study was needed to assess the sediment 'trapped' by the dam in the massive artificial reservoir that was created behind it. Results will provide valuable information to the two countries as well as the ICPDR about the accumulation and distribution of, and changes in, pollution over time in the reservoir. This will then inform decisions about whether measures need to be taken to clean the sediment as part of basin-wide efforts to meet the EU Water Framework Directive by 2015.

**Understanding the river.** The reservoir itself is over 100 km long with effects that can be felt as far away as Belgrade. Its width ranges from a few km to about 200 m within a beautiful rock-steeped gorge. More than a century ago, the river's fast waters in the gorge had propelled engineers to construct a steam-powered device that pulled ships through the chaos to safety.

Prehistoric tectonic shifts in the earth's crust formed the gorge. "Little is known about its bottom structure other than it is actually lower than the surface of the Black Sea over 1000 km away," says Csányi.

"The result is that nobody knows where exactly the sediment is deposited," adds László. "Besides varied depths, flow conditions also vary. So there are some stagnant zones where sediment settles and other zones where flows are fast and retention is low. Flow conditions also change which means that bottom sediment can be re-suspended and transported away. A full future mapping of the area's depths, structure and flows would help."

**Collecting data.** One sure thing is that sediment is accumulating. This was proven in 2001 by the first 'Joint Danube Survey (JDS)', launched by the ICPDR, which showed that water transparency in some places downstream from the dam was two metres deep, while the average for the entire Danube is 50 cm and in Budapest it's only 30 cm.



JDS 1 assessed water over the entire Danube River. The Iron Gates was included but not in great detail. At that time, pollutants were discovered in the sediment including pesticides. However, no extreme pollution peaks were mapped.

"Initial results from last September show no major changes nor any pollution peaks," says László. Samples are still being tested and final results are expected in November with a final related workshop to be held in February 2007.

The DRP sub-project is also reviewing currently available information on sediment pollution in the reservoir and impacts that might follow the potential remobilisation of sediment pollutants. Recommendations for future monitoring and precautionary measures will also be provided.

*Paul Csagoly* is a communications specialist for the UNDP/GEF Danube Regional Project, and a writer on European environmental issues since 1996.

Sediment samples from the river's bottom are still being tested and final results are expected soon with the last related workshop to be held in February 2007. *Credit: Szaloky*



## From conflict to cooperation

An initiative by the Slovene–Austrian Commission for the Drava demonstrates how cross-border cooperation can overcome past conflicts and enhance the quality of life for people along the river.

Soboth Lake, a storage lake built behind the dam as part of the Koralpe-Golica hydroelectric power plant, has been the centre of cross-border initiatives and has developed into a popular tourist site. Credit: KELAG



In 1989 Carinthian company Kelag began construction of the Koralpe-Golica hydroelectric power plant on the Austrian–Slovenian border. The municipality of Muta, Slovenia, held a referendum opposing the operation of the plant due to detectable cross-border impacts. The referendum argued that any risks caused by the eventual damage to the dam would be incurred on the Slovenian side and there would be a noticeable impact on the ecological condition of the watercourse.

From 1990 to 1992, a team of experts from the Slovenian–Austrian Commission for the Drava River examined the security parameters of the ballast dam and made several technical improvements. Against this background and in cooperation with the representatives of the local community, Kelag compensated the Muta municipality for the detectable impact, and the funds received were invested into the improvement of the public infrastructure.

**Creating opportunities for everyone.** A storage lake was built behind the dam as part of the Koralpe-Golica hydroelectric power plant. This lake, Soboth Lake, has developed into a popular tourist site, attracting thousands of visitors on sunny days. It was the central motive of several cross-border initiatives. The Muta municipality, in cooperation with the

Ministry of the Environment and Spatial Planning of the Republic of Slovenia, organised an international workshop, Muta and the Development Along the River, in September this year. Responses were favourable, with 15 mayors from municipalities along the Drava River and numerous locals attending the discussion with Janez Podobnik, Slovenian Minister for the Environment and Spatial Planning.

Eight new development projects were registered as a result of the workshop, among them the further development of the pathway along the Bystrica to enhance bicycle tourism, and construction of an artificial wetland to reduce the impact on the water body from tourism infrastructure.

**Bringing stakeholders together.** The paramount importance of the workshop is reflected by active public participation in planning the development along the river, and the merit for this can primarily be attributed to the Faculty of Pedagogy at the University in Maribor and the Association of the Slovenian Geographic Societies, which engaged major economic users of the Drava River (Kelag and Drava Power Plants) and the Fishing Association of Slovenia in the participation.

“The interaction of science, economy and civil society aimed at the development along the shared river will also be the central topic of the International Conference on the Drava River in February 2007 in Maribor,” announced Podobnik in his introductory speech to the workshop. The promising results of the LIFE Programme on the Upper Drava in Austria and the Muta Workshops provide a solid base for further cooperation and enhancement of the quality of life for both countries sharing the river.

*Mitja Bricelj* is Understate Secretary of the Ministry of Environment, Slovenia, and Head of the Slovenian Delegation to the ICPDR.

# The ICPDR in the spotlight

Attention from the international community has recently focused on the Danube River Basin and in particular the work of the ICPDR as a successful role model for organising cooperation in international river basins.

**The Danube River and the work of the ICPDR have in recent months figured prominently in a number of important international meetings addressing international river basin management and is increasingly being viewed as a positive example of how to organise cooperation in an international river basin.**

It is hard to imagine a river with a volume 20 times that of the Danube, but the Amazon has exactly that. The Religion, Science and Environment Symposium was held this July in Manaus, Brazil, on the Amazon River. Over 200 scientists, policy makers and religious leaders gathered for a seven-day journey on the Amazon to explore the river and discuss aspects of river basin management and in particular climate change and the intimate connection between the river, the rainforest and global warming. The conference was organised under the auspices of the Ecumenical Patriarch of the Orthodox Church and Kofi Annan and is the sixth in a series of meetings focusing on the problems of the world's waters. In 1999 the third symposium focused on the Danube River.

**Parallels with the Amazon.** The ICPDR was featured at the symposium as a case example of river basin cooperation and was included in a panel addressing the rivers of the world, joining representatives of the Murray Darling in Australia, the Yangtze and the Ganges. While there are clearly many differences between the Danube and the Amazon, there was significant interest in the organisational structures as a basis for future efforts in the Amazon.

**While there are clearly many differences between the Danube and the Amazon, there was significant interest in the organisational structures as a basis for future efforts in the Amazon.**

The Amazon, like the Danube, has a large number of countries in its watershed, eight in total. Only recently have efforts begun to coordinate the work of the countries through an international commission.

**The ICPDR's work sets an example.** The Danube was also highlighted in another international event in Banff, Canada, in September. The Rosenberg International Forum on Water meets every two years and brings together scientists and policy makers from river basins throughout the world. A final panel focusing on management arrangements highlighted the International Joint Commission (IJC) – the bi-national

commission on water issues between Canada and the US – and the ICPDR. The IJC is one of the oldest mechanisms for international cooperation dating back to 1909 and provides a number of important parallels to the ICPDR.

The IJC and the ICPDR are “among the most effective in the world in the management of transboundary waters and their lessons of success will have broad



The Rosenberg International Forum presented the ICPDR and the International Joint Commission as models that could be used to assist the cooperation in other international river basins. *Credit: Rosenberg International Forum*

applicability to transboundary waters throughout the world. Their successes will be of continuing interest to the 55 people from 27 countries who participated in this year's Forum,” said Henry Vaux, chair of the Rosenberg International Forum.

*Philip Weller* is the Executive Secretary of the ICPDR.



## The new riverbank at Hainburg

A LIFE Nature project has revitalised an important Danube floodplain area, bringing back plant and animal species, and allowed the river to create its own riverbanks for the first time in a hundred years.

The riverbank before reconstruction: the strict embankments which were built in the 19th century caused the loss of many plant and animal species indigenous to the area, as they were unable to find adequate habitats.

*Credit: Frank*



The riverbank after reconstruction: Over 50,000 m<sup>3</sup> of material was finally removed to bring back the natural riverbank. Reconnecting the river with its side arms has brought the floodplain back to life and improved flood protection.

*Credit: Frank*



**Until recently, the banks along the Danube east of Vienna, including the Donau-Auen National Park, were steep and strongly regulated, forcing the river into a rigid bed. These strict embankments were built in the 19th century, when construction for flood protection and improved navigation were needed.**

But what was seen as progress then had its drawbacks. Many plant and animal species indigenous to the area disappeared, unable to find adequate habitats. As the abundance of species shrank, the monotonous banks took over the characteristic shoreline. Walking along the banks of the Danube at Hainburg today, looking over the floodplain at Stopfenreuther, it's now possible

to go back in time and see the shoreline as it used to be, thanks to an innovative LIFE project.

**Removing the past.** Reconstruction began during the low-water period of winter 2005/2006. Loose rock-dump was removed between river kilometre 1882.9 and 1885.75. In all, over 50,000 m<sup>3</sup> of material was finally removed by ship in spring 2006.

After removing three kilometres of the former embankment, the river has been allowed to fashion its own banks for the first time in a hundred years. "This project has truly set new international frameworks for bank revitalisation," says Carl Manzano, Director of the Donau-Auen National Park.



## LIFE NATURE

LIFE Nature is a funding instrument of the European Union, supporting nature protection initiatives as part of the European Union's nature conservation policy and the Natura 2000 Network.

The Donau-Auen National Park protects one of the largest natural riparian wetlands in Europe and represents a complexity of ecosystems with an enormous diversity of habitats, and plant and animal species. The Donau-Auen implements several projects in the protected area and so far two LIFE projects have been finalised.

### **Reconnection of the river with cut-off areas and habitat management of the Donau-Auen – 1998 until 2003**

This project reconnected the river with cut-off areas or side arms at Orth and Schönau, revitalised the dam system in the Lobau, reconstructed the breeding areas for the European mud minnow, and managed the meadows along the embankments for flood protection.

The support from LIFE funded 50% of the total costs of the €2.8 million project; other partners included: City of Vienna, Lower Austria, Ministry for Agriculture, Forestry, Environment and Water Management, via donau and the National Park GmbH.

### **Revitalisation: Danube banks – 2002 until 2006**

This project reconnected the ditch system and removed path crossings at Orth, and revitalised the bank of the Danube at Hainburg.

Out of the total project budget of €1.78 million, 40% was covered by LIFE. Other partners included: via donau, Ministry for Agriculture, Forestry, Environment and Water Management, Lower Austria and the National Park GmbH.

**Bringing the floodplain back to life.** As part of the project's goals, erosion and dynamics have returned to the shoreline – spring floods eroded the banks and formed steep banks, shallow water areas and gravel banks. The Danube has reconnected with its cut-off

floodplains. Plants and wildlife have returned. The future looks optimistic now as an important floodplain area is alive again.

“We hope that this reconnection of the river with its floodplain and side arms can also inspire others countries along the Danube and its tributaries,” says Manzano.



The river has been allowed to fashion its own banks for the first time in a hundred years. Reconstruction has brought back many species indigenous to the area, including the little ringed plover.  
*Credit: Kovacs*

**Habitats for wildlife.** Reconstruction of the natural shoreline has produced other benefits as well. Reconnecting the river with its side arms improves flood protection, as the retention areas are larger and the peak values of the floods can be lowered by about ten centimetres.

Positive effects can already be seen. The little ringed plover needs expanded gravel banks for breeding. The surfaces that developed after the bank reconstruction were immediately settled by the birds as new habitat, and four pairs have already bred in the first year after reconstruction.

“It was very exiting for us to see how fast the Danube reassumed its freedom. Only a short time has passed since the end of the project and there might be even more exiting changes in the future,” says Project Manager Georg Frank.

**For more information, please visit:**  
[www.donauauen.at](http://www.donauauen.at)

*Erika Hofer* is responsible for public relations in the Danube Floodplain National Park, Austria.

At its peak, the collapse of the Black Sea ecosystem was estimated to be costing the region more than €500 million a year in lost fishing and tourism revenues. *Credit: Black Sea Programme/Mello*



## New EU members bring their own sea: good news or bad?

As Romania and Bulgaria pack their bags to head to Europe, a third passenger is preparing for the journey. With the long-awaited accession of these two countries, the Black Sea will also, on New Year's Day 2007, come within the geographic and legal boundaries of the European Union.

**One of the most landlocked seas in the world, the Black Sea is almost entirely isolated from the world's oceans and, as a result, is extremely fragile and vulnerable to the impacts of human activities. It is also one of the most naturally anoxic, or oxygen-starved, seas on the planet. Although the sea is as much as 2000 metres deep in parts, only a thin top layer of about 200 metres is alive even at the best of times.**

During the 1970s and 1980s the entire North-West Shelf ecosystem of the Black Sea suddenly collapsed and many thought the Black Sea might be the first sea to 'die' in the sense of ceasing to support typical marine life. Every year thousands of tonnes of nitrogen and phosphorous enter the sea because of poor farming practices and untreated wastewater. These nutrients can stimulate blooms of phytoplankton and create 'dead zones' where other marine life is starved

of light and oxygen with disastrous consequences for the health of the entire ecosystem. At its peak this environmental disaster was estimated to be costing the region more than €500 million a year in lost fishing and tourism revenues.

Ivan Zavadsky, UNDP/GEF Regional Programme Director for the Danube/Black Sea Programme, says there have been recent signs of environmental recovery. This is largely attributed to the economic downturn that followed the break up of the former Soviet Union and the decline in intensive farming and the high levels of fertilisers that had been draining into the Sea during the 1970s and 1980s. But, as Zavadsky says, economic collapse and good luck do not provide a good strategy for managing the Black Sea environment.

“Unless governments make the necessary investments to improve their farming practices and wastewater treatment systems, economic recovery could trigger another environmental disaster, with possibly almost no subsequent chance of recovery,” he says.

**Governments working together.** Zavadsky emphasises that the real test will be how the countries of the Danube and the Black Sea deal with economic recovery. This means governments cannot afford to repeat the policies of subsidisation that encouraged over-fertilisation in the Soviet bloc days when thousands of tonnes of excess nutrients entered the sea as run-off through ground and surface waters. Instead, says Zavadsky, subsidies should, if anything, be used to encourage environmentally friendly agricultural practices.

According to Zavadsky, Black Sea governments have already established the necessary policy platforms to promote regional cooperation and stimulate the required capital investments to protect the Black Sea ecosystem. In 1992 the Black Sea coastal countries of Bulgaria, Georgia, Romania, Ukraine, Turkey and the Russian Federation signed the Bucharest Convention and formed the Black Sea Commission on the Protection of the Black Sea Against Pollution. In 1996 the countries also signed an ambitious Strategic Action Plan for the Protection and Rehabilitation of the Black Sea. Unfortunately the strategic goals and targets contained in the plan have proven somewhat harder for individual countries to implement.

**What EU status will mean to the region.** Zavadsky describes the Black Sea’s impending European status as “a great incentive, a great driving force for cooperation on the Black Sea”. While not expecting unlimited amounts of European funds to flow into the coffers of the Black Sea Commission, he says that with the access

of Bulgaria and Romania to EU funds and the potential for fewer untreated discharges into the Sea from these two countries, the whole region will benefit.

Nonetheless, many are watching and waiting to see how and how much the EU will help. Ana Lucia Varga, State Secretary at Romanian Ministry of Environment and Waters, and Romania’s representative on the Black Sea Commission, wants to see the EU, already an observer, become a full member of the Black Sea Commission “as early as possible”. She says the Black Sea environment will “benefit tremendously from the implementation of the EU legislation”, in particular the Water Framework Directive and the Marine Strategy.

On the other hand, she says the entire region will be better off as Romania and Bulgaria fulfil their Black



Sea commitments and share their Black Sea experiences. “As an example I want to stress that Romania has solved all its urban wastewater discharges into the Black Sea and thus in this moment all of this kind of water is treated before being discharged into the Sea.”

But none of these improvements come without significant costs to these coastal countries. For example in a television interview in November 2005 Turkey’s Environment Minister, Osman Pepe, said the country would have to invest up to €35 billion euros in environmental projects in order to meet standards set by the European Union. Improving the management of wastewater will be one of the toughest challenges in Turkey’s efforts to align with EU environmental norms. Pepe estimated the country was still releasing some 65% of its wastewater into the seas without treatment.

Due to poor farming practices in the past and untreated wastewater, the Black Sea is one of the most naturally oxygen-starved seas on the planet. *Credit: Black Sea Programme/Mello*

**Raising public awareness.** Although ten years have passed since the signing of the Strategic Action Plan, low public awareness of the environmental problems facing the Black Sea remains one of the main barriers to protecting this important ecosystem. This was con-

at the policy-making level. However, he added that in the Black Sea region, more than in the case of the Danube, there was a lack of capacity on the part of local governing bodies, enforcement authorities and policy makers.



The Black Sea Ecosystem Recovery Project organised a survey of 400 people living in coastal towns and cities and found that one of the biggest obstacles to protecting the ecosystem may be the public's low awareness of the environmental problems facing the Black Sea. *Credit: Black Sea Programme / Mello*

firmed in July this year when the Global Environment Facility-funded Black Sea Ecosystem Recovery Project worked together with a number of non-government organisations to survey 400 people living in coastal towns and cities in all six coastal countries.

Over 90% of the respondents said the health of the Black Sea was an issue that was important to them personally and more than half said it was an issue that was very important to them. Strikingly, given the poverty in many of the surveyed areas, nearly 80% of all respondents said they would be prepared to pay extra money towards improving the Black Sea environment. However only 9% acknowledged that poor agricultural practices were having a negative impact on the health of the Black Sea.

Zavadsky feels that increased public awareness could lead to increased pressure and greater political will

Despite these limitations, the Black Sea has made the journey from the intensive care unit to the recovery room. The Black Sea is “on its way”, says Laurence Mee, Director of the Marine Institute and Professor of Marine and Coastal Policy at the University of Plymouth, and “part of the EU’s responsibility is to keep it on its way”.

Mee adds that the world must consider the sea as important if it regards all marine areas as global assets. January 1, 2007, when the sea officially comes to the EU, will provide an important opportunity to enhance that global response.

*Frank A. Campbell*, a former Guyanese journalist, ambassador and Cabinet minister, is now an Ottawa-based communications consultant who writes regularly on issues related to international development and the environment.

## Ecotourism boost in Danube-Drava National Park



**The Danube-Drava National Park received the largest charitable donation for environmental protection in Hungary to date. Coca-Cola Hungary donated HUF 25 million (nearly €95,000) to improve the Danube's water quality and boost eco-tourism in the area.**

Coca-Cola has long been involved in preserving the natural environment of water habitats along the Danube, and has participated in organising events for Danube Day for the last two years. "This agreement, to provide financial support for the fresh water protection and eco-tourism programme of the Danube-Drava National Park, is unmatched in the field of environmental corporate social responsibility in Hungary," said Sir Michael Llewellyn Smith, a member of Coca-Cola HBC's board of directors.

The goal of the agreement between Coca-Cola and the Danube-Drava National Park Directorate is to increase the number of visitors to the park from the current 60,000 a year to 80,000, which is the maximum that can be sustained without compromising the park's mission to preserve the environment, explained Ildikó Iványi, director of the Danube-Drava National Park.

To achieve this goal, organisers will rehabilitate water habitats around Gemenc and Béda-Karapanca, and create a modern eco-tourism infrastructure. The programme will expand the range of water tourism and photo tourism services offered, as well as install a system of signposts needed for cyclists and pedestrian tourists. The new facilities and infrastructure are scheduled to be completed by May 2007.

*Kirstie Shepherd* is a freelance journalist living in Vienna and has called the Danube River Basin home since 2000.

## European industrial companies coming to Bulgaria



With Bulgaria joining the EU in just a few weeks, talk of combating political, economic and social instability casts a shadow on the country's image. Yet, a visit to Sevlievo, a city with a population of 45,000 located between Sofia and Varna, reveals that Bulgaria's hidden gems include more than just cultural and historical sites. The city has in fact established itself as an important industrial site for Western European companies.

With the prospect of highly motivated and qualified staff as well as assistance from the municipality, internationally recognised companies have established offices in town – German sanitary manufacturer Hamberger and ABB, leading supplier of energy and automation technology, already have branches in Sevlievo, and further investors are following suit.

As early as 1992 Ideal Standard, a subsidiary of American Standard, major supplier of bath and kitchen products, secured 2000 jobs by founding a joint venture with 'Vidima', Bulgarian market leader in plumbing fixtures. An additional fixtures plant opened five years later, followed by a logistics centre from which around 30 truckloads of Ideal Standard products set out each day.

The figures clearly reveal Sevlievo's potential as a high quality production site. In the past two years the Ideal Standard's fixtures plant in Vidima has been awarded worldwide recognition as the safest production site among all plants belonging to the American Standard group.

*Renate Haiden* is a Vienna journalist; since 2002 she has been managing a news agency specialised in business economics, environment and Eastern Europe.

Left: Coca-Cola Hungary and the directors of the Danube-Drava National Park Directorate signed a cooperation agreement to launch a joint project to boost tourism.

*Credit: Coca-Cola HBC*

Right: Bulgaria is poised to establish itself as an important industrial country for Western European companies with cooperative efforts under way to maintain attractive conditions for investors, be it by securing a functioning gas supply or through jointly establishing a language school.

*Credit: Haiden*



## Leading by example

Helmut Blöch, Deputy Head of the Water Unit of the Directorate General for the Environment of the European Commission and Head of the EU Delegation to the ICPDR, speaks about cooperation in international river basins, and how the world is learning from the work of the ICPDR.

Helmut Blöch, Deputy Head of the Water Unit of the Directorate General for the Environment of the European Commission and Head of the EU Delegation to the ICPDR.  
*Credit: ICPDR/Jovanovic*



The ICPDR has provided a show-case example that the principles of coordinated river basin management can work even in difficult situations within very large river basins and many with countries involved. If it can work in complicated basins like the Danube, then it can work for other basins.

In its continuing series, Danube Watch presents portraits of the leaders whose passion and commitment actively steer ICPDR processes and help determine the future of the basin.

**Danube Watch: With all 13 Danube countries working together, why is the EU a contracting party to the Danube River Protection Convention?**

**Blöch:** Firstly, because the EU bears a lot of legislative responsibility on water protection. There's a range of EU legislation – the Water Framework Directive, the future floods directive, directives on wastewater treatment – and major elements to achieve good quality of the Danube River will be by implementing EU legislation. Therefore in formal terms there is a legal obligation for the EU to be a contracting party to the Danube Convention.

However, from a more political point of view, the European Commission also sees the Danube cooperation as one of the examples of cooperation across boundaries of the existing, and the future, enlarged European Union and serves as an example for other river basins in Europe but probably across the world as well.

This is why we took on the presidency in 2004 with our Director-General, Catherine Day, as president, and why we agreed to chair the River Basin Management Expert Group – one of the key working groups of the ICPDR.

**Danube Watch: How is the approach of EU water management influencing other countries?**

**Blöch:** The process within the ICPDR has led to all countries committing themselves at ministerial level to the principles and objectives of integrated and sustainable water resources management as set out in the Water Framework Directive. The Danube Declaration of December 2004 is a further political signal to that end and unites all Danube countries. And we look at the achievements; the record is remarkable, e.g. – developing the Danube Basin Analysis defining the key pressures and impacts on our surface waters and groundwater in line with the Water Framework Directive, elaborating a Danube-wide Flood Action Plan, or making the annual Danube Day an event throughout the basin, with participation from school classes to ministers.

This is why these ministers agreed together: they will follow the Water Framework Directive regardless of whether they are already legally bound by it, true for many of the countries in the Danube Basin, or whether they will be bound by it, as for Romania and Bulgaria joining in a month's time, or for Croatia as a candidate country joining the EU sometime this decade. Adopting the EU Water Framework Directive is a political decision, but a political decision based on practical and constructive experience of both the Water Framework Directive itself but also the way it is implemented within the ICPDR.

**Danube Watch: And what influence and experience can the Danube countries share with the Black Sea countries?**

**Blöch:** Given the geography and hydrology, the Danube Basin is inextricably linked to the Black Sea. All efforts taken within the Danube Basin have a positive impact on the Black Sea and therefore solving the problems of the Black Sea will not be possible without addressing the problems in the Danube Basin.

## THE EUROPEAN UNION AND THE ICPDR

The roots of the European Union go back to the European Coal and Steel Community established in 1951 with six members: Belgium, West Germany, Luxembourg, France, Italy and the Netherlands.

Within a few years, these countries decided to further integrate other sectors of their economies. In 1957 the Treaties of Rome created the European Atomic Energy Community and the European Economic Community. The member states set about removing trade barriers between them and forming a 'common market'. By adding further inter-governmental cooperation to the existing 'Community' system, the European Union (EU) was created in 1992 with the Treaty of Maastricht.

In 1992 the EU decided to go for economic and monetary union, involving the introduction of a single European currency managed by a European Central Bank. The single currency - the euro - became a reality on 1 January 2002, when euro notes and coins replaced national currencies in twelve of the 15 countries of the European Union.

The EU has grown in size with successive waves of accessions. Denmark, Ireland and the United Kingdom joined in 1973 followed by Greece in 1981, Spain and Portugal in 1986 and Austria, Finland and Sweden in 1995. The European Union welcomed ten new countries in 2004: Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia. Bulgaria and Romania will follow in 2007.

The EU signed the Danube River Protection Convention in 1994 and has been a Contracting Party since the convention's entry into force in 1998. The EU is represented in the ICPDR by the European Commission's Environment Directorate-General.

**Danube Watch: With its DABLAS (DAnube BLAck Sea) Initiative the European Commission is underlining the need for an even enlarged regional cooperation. Why is the EU so interested in this part of the world?**

**Blöch:** The European Union is not currently a member of the Black Sea Convention, because when the Black Sea Convention was drafted, signed and ratified, there were no EU territories bordering the Black Sea. However, this will change from January 2007 with Romania and Bulgaria joining the European Union and

we will see how a constructive expansion of the Black Sea Convention and Commission that includes the EU can be worked out. And as a way towards the future objective of a full involvement of the European Union into water protection of Black Sea, the DABLAS initiative was created in order to link the two processes and also to ensure the establishment of priorities - for instance the prioritisation of projects for funding.

**Danube Watch: How can other continents take advantage of the lessons learnt by the Danube Basin?**

**Blöch:** The ICPDR has provided a showcase example that the principles of coordinated river basin management can work even in difficult situations within very large river basins and many with countries involved. If it can work in complicated basins like the Danube, then it can work for other basins.

In the past two years there has been considerable interest in the Danube region and the work of the ICPDR. As an example, China has organised visits by high level experts from the Chinese Environment administration to the ICPDR and to the European Commission. So there is considerable interest in how mechanisms, theory and practice of coordinated river basin management within shared river basins work.

The fact that the Chinese delegation has visited the ICPDR is a clear sign: yes, work in the Danube Basin is not only seen and observed, but appreciated far beyond the borders of Europe.

**Danube Watch: Thank you very much, Mr Blöch.**

*Jasmine Bachmann* works on public participation in the ICPDR Permanent Secretariat, and is the Executive Editor of *Danube Watch*.

**"Adopting the EU Water Framework Directive is a political decision, but a political decision based on practical and constructive experience of both the Water Framework Directive itself but also the way it is implemented within the ICPDR."**

**"Given the geography and hydrology, the Danube Basin is inextricably linked to the Black Sea. Solving the problems of the Black Sea will not be possible without addressing the problems in the Danube Basin."**



## Wet plants are there for a reason

A new programme funded by the Danube Regional Project is helping to bring back native reed-grass vegetation with high nutrient removal capacities to help improve water quality and fish habitats.

A herbivorous grass carp, which can eat its own weight in vegetation daily, is removed from the fenced-off area of the lake to allow the native reed-grass to return and control nutrient levels.  
*Credit: Tatár*



Zoltan is surrounded by tins of raw corn and fly larvae, cans of Borsodi beer, and his Trabant playing Hungarian hits from the 70s. Nestled at the side of Malom Lake, he waits two hours before a tug on his translucent line drives him to his rod. The next ten minutes are spent pulling the unwilling victim ashore, presenting the 33 cm grass carp to envious friends, throwing him back in, and opening a fresh Borsodi. The fish returns to what it was doing – eating.

Grass carp, an alien species from Asia, were introduced to Malom Lake in the 1970s because of their appetites – they can eat their own weight in vegetation daily. Requests for the fish came from local fishing associations to clear the lake of reed-grass vegetation to allow more space for fishing and rowing.

In record time, the foreigners ate just about everything. “Fish like grass carp are added to about 50% of the 1000 small lakes in Hungary,” says Sándor Tatár, a representative of the local NGO Tavirozsa. “The result is that nearly half of the lakes have been virtually cleared of vegetation.”

The fish’s impacts on Malom Lake were too much on top of earlier impacts. From the 1920s, landscaping and dredging to make way for new housing developments destroyed large areas of plant life. Waste cesspits were also dug that leached pollution into the groundwater and lake. The remaining lake plants were barely able to handle the increasing nutrient pollution. “But once the grass carp started eating, the lake’s self-cleaning capacity ended and nutrient pollution skyrocketed,”



says Tatár. By 1980, large algal blooms appeared. Water quality deteriorated and fish reproduction decreased.

In 1985, Malom Lake was given national protection status. Despite new laws against adding foreign fish species, fishing associations continued to stock the lake with grass carp. In 1996, a new sewage treatment plant was built near the lake for the local town of Veresegyház and neighbouring villages. Plant capacity was over-used, however, to the point that concentrations of nutrients discharged from the treatment plant were above permitted levels and leached into the lake system. Bacteria levels increased sharply including toxic cyanobacteria and coliform bacteria resulting in human symptoms such as allergic reactions, fever and vomiting.

“Water quality at the sand beach became catastrophic,” says Tatár. Having attracted some 3000 to 4000 people daily in the past, beach numbers went down by 90% after 1990.

**Tavirozsa founded.** In response, some local residents united to form the Tavirózsa NGO in 1996. With funding from the Hungarian government, the NGO assessed local water quality and biological factors in the lake and surrounding Szódrákosi Creek catchment area of 132 sq km. The creek runs north through Veresegyház and its three lakes including Malom Lake before draining into the Danube River above Budapest.

In 2006, with help from the UNDP-GEF Danube Regional Project (DRP) Small Grants Programme, Tavirozsa purchased equipment to test water in three lakes. Monitoring found that big rains in April and May caused significant nutrient pollution to the lakes because of the city’s poorly combined sewage system. The NGO notified local and regional authorities who came to test the water themselves. “But they didn’t test bacteria or algae,” says Tatár.

In early August, Tavirozsa measured algae and cyanobacteria chlorophyll and found counts to be double acceptable limits, and by August 18 counts measured four times the government limit. The Hungarian health authority ANTSZ finally appeared on the scene, but only at the end of the bathing season, and they

failed to measure all parameters as required by law. “The government didn’t want to send out bad news during top season,” says Tatár.

**Goodbye grass carp, hello reed-grass.** DRP funds were also used by the NGO to implement a demonstration wetland rehabilitation project at the top end of one of the city’s three lakes, Pamut Lake. “We support the project because it will bring the reed-grass back, which will help bring back some valuable local fish species that have almost disappeared,” said Gusztáv Kiss, leader of Pamut Lake’s fishing association.

Following a baseline environmental assessment in the spring of 2006, the small lake area was fenced off and all grass carp were removed. Rooted and floating native reed-grass with high nutrient removal capacities were collected from nearby lakes and then manually added to the site. “We are confident that the new reed-grass will help improve water quality and fish habitat,” says Tatár.

The next step is to test the demonstration site water in the future to prove that quality improved. Based on that evidence, Tatár hopes to secure a larger project using the same strategy to restore all three lakes starting in 2007. “It’s a good idea to have all three lakes included,” says Kiss. “Grass carp might return to our lake otherwise, for example carried over by birds.” Tatár also wants to ensure that pollution from the local treatment plant stops soon.

“With small funds, one can improve the natural self-cleaning capacity of wetland areas,” he says. “The bigger problem is getting local support. At Pamut Lake, we were able to convince the fishing association there to accept the project. But the other two lakes each have their own association, and they’re not convinced yet. They still prefer their grass carp and open water space to the reed-grass, clean water, clean beach and healthy ecosystem. Now we’re working to change their perceptions.”

*Paul Csagoly* is a communications specialist for the UNDP/GEF Danube Regional Project, and a writer on European environmental issues since 1996.



# Experience from the Danube River Basin for the Mediterranean Sea

The ICPDR was presented to countries in the Mediterranean as an example of an efficient region body for implementing an international convention.

The Mediterranean Action Plan (MAP) is the first programme in the world established for the protection of a regional sea and includes 21 contracting parties and representation by the EU. In an effort to improve the efficiency of the maritime ecosystem management, Slovenia, currently holding the presidency of the MAP Bureau, organised a meeting, Strengthening the Regional Cooperation for Shared Water Resources, to present a model for the implementation of an international convention – the ICPDR.

The ICPDR as role model. At the invitation of Janez Podobnik, Slovenian Minister for the Environment and Spatial Planning, ICPDR Executive Secretary Philip Weller, Secretary of the International Commission for the Sava River Basin Dejan Komatina, Mediterranean

“This very karstic region has been in the focus of WWF for years. We are active in several river basins, like the Lika basin, the Neretva basin or the Cetina basin. We even plan to intensify our efforts in the coming years to support the dialogue between the stakeholders and to seek solutions for the most pressing problems,” said Francesca Antonelli, Head of the Freshwater Unit of the WWF Mediterranean Programme.

Action Plan Coordinator Paul Mifsud, EU representative Andrew Murphy, and representatives of the Adriatic coastal states and the Regional Environmental Centre (REC) from Budapest met at the Institute for Karst Research in Postojna, Slovenia.

Presentations covered the ICPDR’s achievements and the special role of sub-regional efforts to strengthen cross-border cooperation in the basin, particularly the Framework Agreement for the Sava River Basin. The objective of the meeting was to increase efficiency of MAP operations, and to exchange experience with the ICPDR. “There is no need to reinvent the wheel. All lessons we can share, we should share – for the benefit of the region and the people living there,” said Mifsud.

**Highlighting support.** The active role of the REC, which served as Interim Secretariat in the process of preparing the Framework Agreement for the Sava River Basin, was also emphasised to the MAP Bureau. Stephen Stec, head of REC’s Environmental Law Programme, outlined how REC could help in the Adriatic. “With the ‘Adriatic Sea Partnership Project’ REC can offer to strengthen the current institutional arrangements to enhance cooperation and to facilitate

real actions. Countries could meet their commitments, such as the determination of the Particularly Sensitive Sea Areas or the development of the integrated coastal zone management plan,” said Stec.



The Mediterranean Action Plan brings together 21 countries to improve maritime ecosystem management, with inspiration from the ICPDR. Credit: *Gerfried Koch*

## THE MEDITERRANEAN AT A GLANCE

- The Mediterranean covers more than 2.5 million km<sup>2</sup>, and has 46,000 km of coastline.
- The population is over 425 million, with 150 million living along the coast, and an additional 170 million tourists visit each year.
- Some 48% of urban centres lack sewage treatment facilities and around 80% of wastewater is disposed in the sea untreated.
- Some 60 petrol refineries dump nearly 20,000 tonnes of petrol into the sea each year.

The location of the meeting was ideal, as Postojna is in the heartland of the Dinaric ecoregion, which stretches from the Alps to the Peloponnesus, and is probably the most intensively studied karst region in the world. This particular karst region links the Danube Basin with the Mediterranean due to its specific hydromorphology and is highly vulnerable to pollution.

For more information, please visit [www.unepmap.org](http://www.unepmap.org).

*Mitja Bricelj* is Understate Secretary of the Ministry of Environment, Slovenia, and Head of the Slovenian Delegation to the ICPDR.



# Focusing on the Prut River Basin

The Prut River is the last major tributary of the Danube, with its confluence just upstream of the Danube Delta – but several programmes in three countries are working to make river basin management in the Prut Basin priority.

**A number of initiatives are currently taking place across the Prut River Basin. From workshops to case studies, there is a focus on strengthening the capacity of the Prut River Basin countries, Romania, Moldova and Ukraine, all contracting parties to the ICPDR, to develop the necessary steps regarding the development of Prut River Basin management.**

The concept of cross border cooperation as already implemented in other regions in the Danube River Basin (e.g. Sava, Tisza) offers a much wider scope for the exchange of data and information, methodologies and best practices, especially with regard to the integrated development of shared basin and nutrient reduction. A small project, the UNDP/GEF DRP – Prut River

**Growing through shared experience.** Building on the experience in the Tisza Basin for support by UNDP/GEF and the EC for a project to assist with the implementation of the WFD and the ICPDR’s flood action plan, the countries of the Prut basin have submitted a proposal to build on the initial work conducted by the DRP. It is expected that the ‘PDF-A’ project will lead to a larger ‘Medium Sized Project’ (similar to the one expected to begin soon on the Tisza) in about a year.

With the support of experts from Romania, Hungary, Slovenia, Germany and Slovakia two workshops have been held on WFD implementation in Moldova and Ukraine in October and November. These ICPDR –UNDP/GEF DRP meetings were opportunity for all the experts to share their experiences and collectively work to identify priorities for the next steps on implementing the directive.

**Getting the public involved.** Five NGOs are working on a range of activities supported by the UNDP/GEF DRP Small Grant Programme in the Prut Basin. The one Romanian and four Moldovan organisations are actively developing and implementing programmes on nutrient reduction (e.g. best agricultural practices), awareness raising for the public on environmental issues and providing educational material for schools.

The Prut River is the second longest and last major tributary of the Danube. Its source is located in the forests of the Ukrainian Carpathians, and the Prut forms the border between Romania and Moldova. *Credit: Coca-Cola HBC/Fallander*



Basin Management Case Study, will assist the Prut River Basin countries with the initiation of a regional approach to the development of the river basin management plan, in line with the EU WFD and the countries’ commitments to the ICPDR. In addition, the project is raising awareness on issues such as pollution from agriculture, helping to change consumer behaviour with regard to phosphate containing detergents and generally improving local stakeholder involvement in environmental issues.

Additional future programmes include the incorporation of the protected areas in the lower Prut Basin within a UNESCO ‘Man and Biosphere’ (MAB) programme and linking this with parallel MABs in Ukraine and Romania in the Danube Delta.

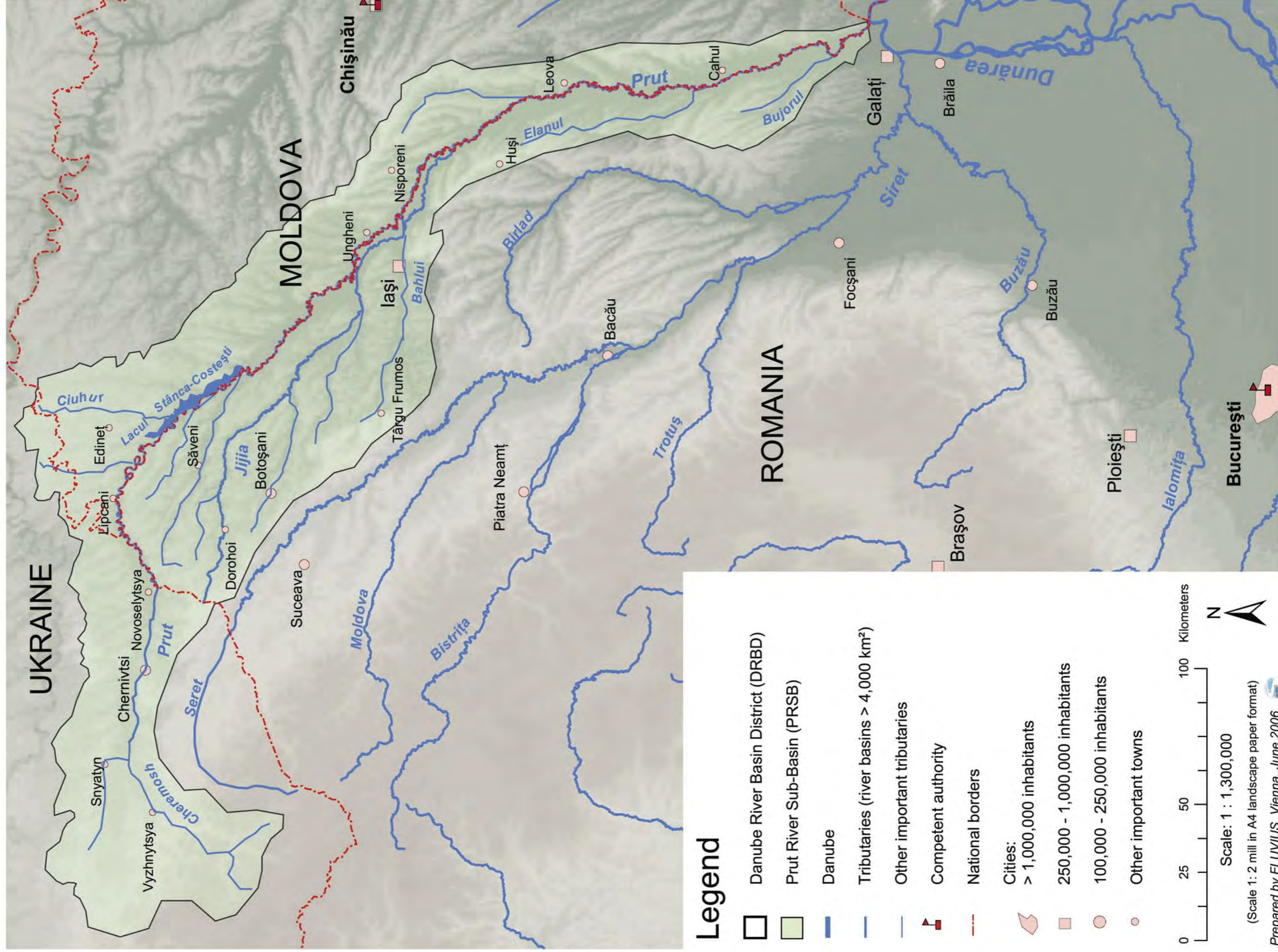
*Peter Whalley is an environmental specialist with the UNDP/GEF Danube Regional Project.*

← The initiatives in the Prut River Basin are working toward a Prut River Basin Management Plan. Fold out to see the Prut River Basin map.

# Prut River Basin Overview Map

## Sub-basin of the Danube River Basin District

UNDP/GEF DRP Support to the development of the Prut River Basin Management Plan (WFD) - DRB pilot project



### Legend

- Danube River Basin District (DRBD)
- Prut River Sub-Basin (PRSB)
- Danube
- Tributaries (river basins > 4,000 km<sup>2</sup>)
- Other important tributaries
- Competent authority
- National borders
- Cities: > 1,000,000 inhabitants
- 250,000 - 1,000,000 inhabitants
- 100,000 - 250,000 inhabitants
- Other important towns



Scale: 1 : 1,300,000

(Scale 1: 2 mill in A4 landscape paper format)

Prepared by FLUVIUS, Vienna, June 2006

**ICPDR MEETINGS**

For final dates, please consult the ICPDR calendar, available at [www.icpdr.org](http://www.icpdr.org).

11-12/12/2006

VIENNA, AUSTRIA

**ICPDR ORDINARY MEETING**

22/1/2007

VIENNA, AUSTRIA

**ICPDR PRESIDENCY 2007: HANDING OVER OF THE PRESIDENCY FROM MOLDOVA TO ROMANIA**

25-26/1/2007

BUCHAREST, ROMANIA

**UNDP/GEF DANUBE REGIONAL PROJECT: SEMINAR ON THE REDUCTION OF PHOSPHATES IN WASHING DETERGENTS**

1-2/2/2007

VIENNA, AUSTRIA

**MONITORING AND ASSESSMENT EXPERT GROUP**

5-6/2/2007

BLED, SLOVENIA

**RIVER BASIN MANAGEMENT EXPERT GROUP**

15-16/2/2007

BUDAPEST, HUNGARY

**GROUNDWATER TASK GROUP**

19-20/2/2007

BUCHAREST, ROMANIA

**TISZA GROUP**

21-22/2/2007

BUCHAREST, ROMANIA

**UNDP/GEF DANUBE REGIONAL PROJECT: FINAL SEMINAR**

23/2/2007

BUCHAREST, ROMANIA

**HIGH-LEVEL DANUBE / BLACK SEA MEETING BY INVITATION OF THE PRIME MINISTER OF ROMANIA**

DW 01/07

UPCOMING ISSUE

**15 years of international funding for the Danube River Basin****Results of the UNDP/GEF Danube Regional Project****ICPDR Presidency 2007: Romania**