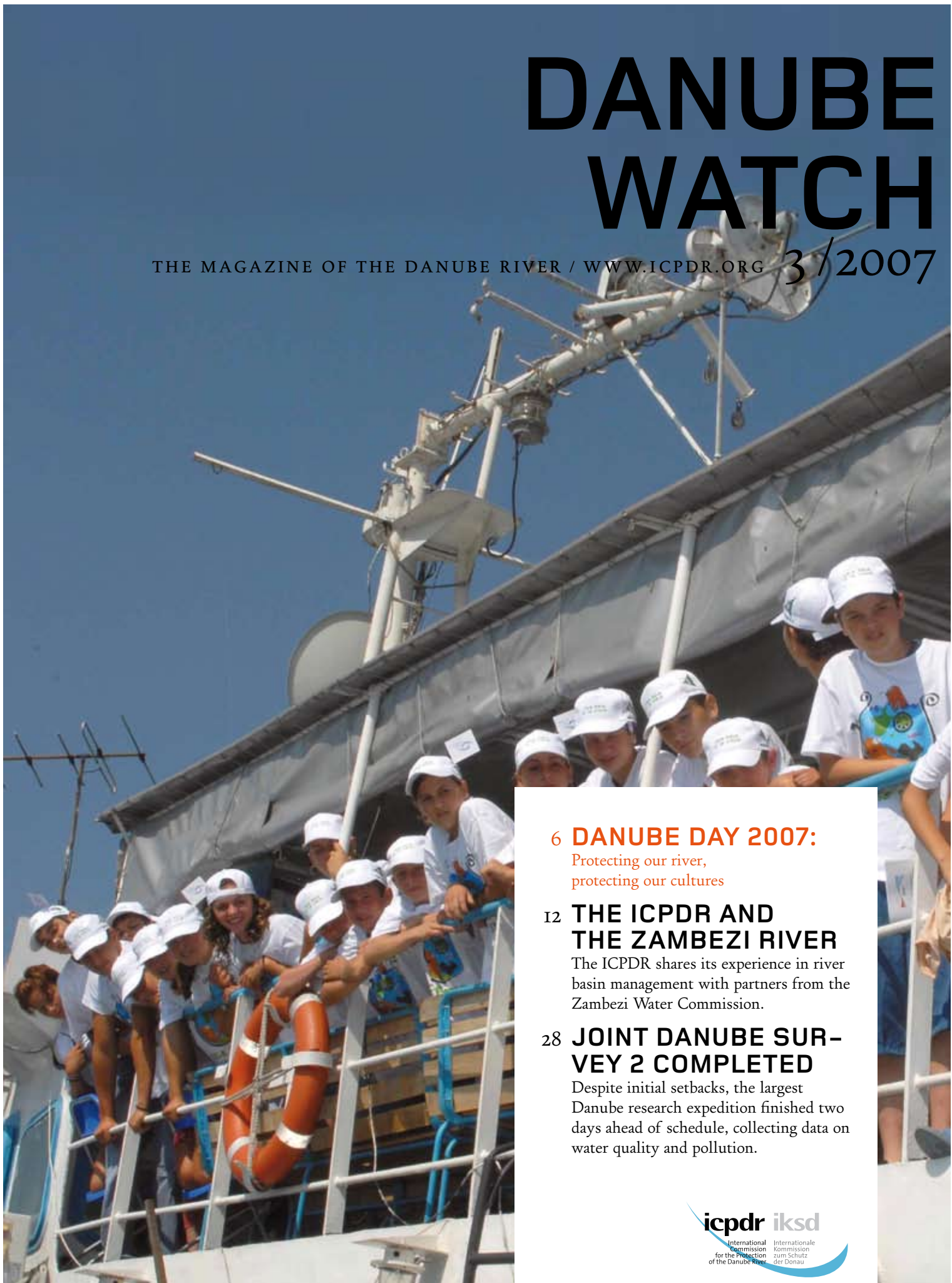


# DANUBE WATCH

THE MAGAZINE OF THE DANUBE RIVER / WWW.ICPDR.ORG 3 / 2007



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protecting our cultures

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Credit: GEF

# Dear readers,

For as long as I have worked at the Global Environment Facility (GEF), 13 years now, there has been a GEF/UNDP Danube Basin project. Over the years, the thousands of people who have made it such a success have much to be proud of. Now that the project has ended, GEF and our other transboundary water projects in 133 countries need you more than ever!

From the start, GEF recognised the importance of project-to-project exchanges as a learning tool. Country officials and staff working on newer or less successful projects can learn from those who have overcome similar barriers and succeeded. We have asked ICPDR officials to help us in the past with this capacity building strategy and we need you more than ever to help us in all facets of operations: from how to run a secretariat and encourage national inter-ministry committees to practical approaches for everything from engaging civil society to harmonising data.

Towards this goal, the GEF Secretariat established a series of face-to-face biennial portfolio conferences to encourage dialogue and interaction. Fittingly, that First GEF Biennial International Waters Conference in 2000 was co-hosted by the ICPDR in Budapest. We recently held the Fourth Biennial Conference in Cape

Town, South Africa, with 300 people participating from 67 GEF international waters projects. Representatives from the ICPDR – Lucia Ana Varga, 2007 ICPDR President, past President Fritz Holzwarth, and Philip Weller – shared their practical experiences with other country officials (see article on page 14). We are grateful for their positive participation, but this is not enough!

We hope that we can send staff from other projects at GEF expense to work for short periods with the ICPDR. We hope that Danube country officials will travel to global meetings with some GEF assistance to share your success stories, especially on the difficult issue of nutrient pollution. We want to involve NGOs and the business community to tell their story of participation in Danube activities.

While GEF funding must now shift to developing countries, please don't forget the GEF – and be assured that we won't forget you!

*Alfred M. Duda, Senior Advisor,  
Global Environment Facility Secretariat*



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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: Gerfried Koch



Credit: Tibor Mikuska



Credit: Ivana Tomic



Credit: CCHellenic/Fallander

## DAM THREATENS MONTENEGRO'S TARA RIVER

A hydroelectric dam is planned on the Tara River, which runs more than 100km through one of the deepest canyons in the world and is a UNESCO World Heritage site. The dam is opposed by local protesters as well as by UNESCO, which fears that it will swamp a large part of the Tara, turning the river into a lake. The dam would meet Montenegro's need for more power, especially for its aluminium plant near Podgorica, which uses nearly half the country's electricity.

For more information, please visit: [news.bbc.co.uk/2/hi/europe/3743698.stm](https://www.bbc.co.uk/2/hi/europe/3743698.stm)

## CROATIA ADOPTS THE NATIONAL ECOLOGICAL NETWORK

Some 47% of Croatian territory is now part of the Croatian National Ecological Network, following a proposal by Croatian scientists and the State Institute for Nature Protection. The network includes sites important for threatened species. At the same time, Croatian NGOs express concerns about the intensive use of the Drava River for gravel extraction, river regulation and unsustainable land use planning – practices which have led to the destruction of several sand martin colonies.

For more information, please visit: [www.cro-nen.hr](http://www.cro-nen.hr)

## NEW GENERAL DIRECTOR FOR DANUBE COMMISSION

István Valkár of Hungary has replaced Danail Nedialkov as General Director of the Secretariat of the Danube Commission. The Danube Commission, established in 1948, consists of representatives of each of the 11 Member States – Austria, Bulgaria, Croatia, Germany, Hungary, Moldova, Slovakia, Romania, Russia, Serbia and Ukraine – and works to ensure best conditions for shipping on the Danube. The Secretariat has a staff of 11 international civil servants and 19 employees.

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

## DANUBE BOX RECOGNISED FOR SUSTAINABLE INITIATIVE

At the Global Bottle Water Congress held in Mexico City in September, Coca-Cola HBC received a prestigious Bottledwaterworld Awards for the Danube Box. The award was selected from 162 submissions by leading companies from 32 countries, and recognised the Danube Box as an initiative “which is delivering the most significant environmental benefit”. The Danube Box was also accepted as a presentation at the ‘CSR solution’ Conference for the European Marketplace on CSR on November 29 in Brussels.

For more information, please visit: [www.bottledwaterworld.com/bbwinner9.asp](http://www.bottledwaterworld.com/bbwinner9.asp)

30/1/2008 – 1/2/2008 MALAGA, SPAIN

#### **WEX 2008 – THE WATER AND ENVIRONMENTAL EXCHANGE**

WEX is an action-oriented international summit, where over 1000 representatives and senior decision makers throughout the global water sector will meet under the slogan ‘Where water does business – building stakeholder collaborations’. Sessions include panel debates, workshops and round table discussions with internationally recognised speakers.

**For more information, please visit: [www.w-e-x.com/](http://www.w-e-x.com/)**

7-12/9/2008 VIENNA, AUSTRIA

#### **IWA WORLD WATER CONGRESS AND EXHIBITION**

The conference, organised by the International Water Association, brings together 3000 leading water professionals to exchange ideas and debate the key issues underlying the science and practice of water. The global event will also focus on cross-cutting themes such as climate change, sustainable development and watershed management, using the Danube as an example.

**For more information, please visit: [www.iwa2008vienna.org](http://www.iwa2008vienna.org)**



*Credit: ICPDR/Stögmüller*

#### **ALL THE BEST FOR SYLVIA KERSCH!**

For six years Sylvia Kersch has supported the work of the ICPDR. Sylvia’s contribution was important for the smooth and successful operation of the ICPDR Secretariat. We would like to express our thanks for her efforts and wish her all the best for the future!

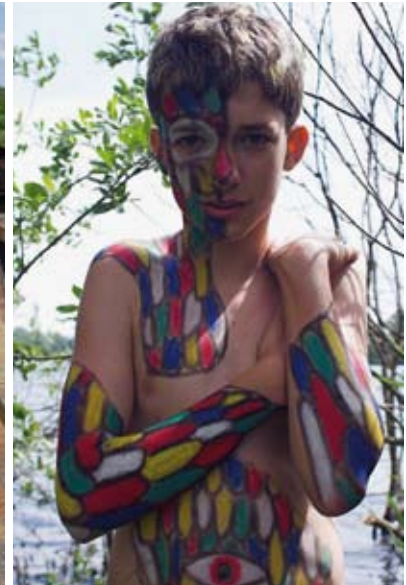


*Credit: ICPDR/Jovanovic*

#### **SERBIA: NIKOLA MARJANOVIC TO MOVE ON**

Nikola Marjanovic led the Serbian Delegation to the ICPDR for over six years. During this period, Serbia actively cooperated in the work of the ICPDR and worked to fulfil all EU Water Framework Directive requirements. We would like to thank Nikola for his professional and personal contributions and hope that in his new position as General Director of Serbia Waters he will continue to be a “voice for the Danube”. The new Head of the ICPDR Delegation to the ICPDR is Aleksandar Prodanovic.

Celebrations across the basin reflected the diverse cultures and traditions of the people living along the Danube and its tributaries. *Credit: Various*



"Water is the blood of life. Protect the river for the next generation." Peter Visvader, Director of the Public Relation Department, Ministry of the Environment





## Danube Day 2007: protecting our river, protecting our cultures

Massive celebrations for Danube Day 2007 brought together 14 countries in the most international river basin in the world. More than 300 organisations took part, with thousands of people gathering to pay tribute to the river that unites them.



The theme of Danube Day, 'Celebrating Danube Cultures', inspired people across the Danube Basin, with folk groups, dancing, music, colourful costumes and traditional crafts. The Prut River in Moldova played host to a folk festival, with dancing, costumes, music and craft stalls. "Preserving Danube cultures gives Moldova a chance to be closer to European values", said Dumitru Drumea, Head of Delegation for Moldova of ICPDR.

In Slovakia, almost 500 children with their families enjoyed cultural performances alongside scientific demonstrations, discussion forums and a chance to meet turtles.

In Vienna, Austria, a 10m by 5m puzzle of the Danube Basin inspired residents and visitors by the many connections and influences that exist between the countries of the basin. "The Danube River is a European lifeline that also binds us in joint responsibility to do everything possible to preserve this common living and cultural environment", said Ursula Plassnik, Federal Minister for European and International Affairs.

**Education and learning.** Education was a focus for many countries – through field trips, eco-camps, environmental competitions, scientific demonstrations, talks and films. More than 200 people visited the Danube Delta Biosphere Reserve in Ukraine as part of an associated campaign to raise awareness of the



ecological importance of the river and the need for environmental protection. “There are no similar regions where the river unites a whole group of countries located on its banks – it is more than just a geographical notion”, said Aleksandr Voloshkeyvych, Director of the Danube Delta Biosphere Reserve.



The Danube Art Master Competition inspired children across the basin to think about the long journey their river takes through many different lands across Europe.  
Credit: ICPDR

**Practical actions to make a difference.** Many Danube Day celebrations were accompanied by hands-on projects to help clean up the river and educate people about how their actions can contribute to change. A major clean-up project took place in Belgrade, at the Lido Beach on the river island of Veliko ratno ostrvo.

In Miskolc, Hungary, there was a fascinating exhibition of messages and art in PET bottles, as well as a huge raft of PET bottles on display, which was floated down the Bodrog River from Slovakia. PET bottles are the most visible form of rubbish found on the river, and focusing on them in this event inspired students to get involved for cleaner rivers.

**“Wherever I might travel on my studies, I will always take with me the Danube Day spirit”, said Alexandru Carp, 18-year-old Danube Day volunteer with ECCG, Galati, Romania.**

**Art and inspiration for the river.** The Danube Art Master competition had another successful year, inspiring more children than ever across the basin to participate in an international competition to celebrate the Danube and its tributaries (see article on page 9). In Germany, children and young people from the upper reaches of the Danube were asked to think about the long journey their river takes through many different lands and cultures across Europe. Inspired by these connections, children created works of art that reflected the Danube’s value. “The Danube is a mirror of our lives: diverse, constantly changing and solid at the same time”, said Wolfgang Kunert, Head of Government, Administration District Oberpfalz.

Danube Day events in the Czech Republic highlighted both the protection of the environment and the

celebration of art and culture. In Prague and Uherské Hradiště, more than 200 pupils watching screenings of Czech and international environmental films to educate a new generation about the importance of nature and ecological issues.

**Celebrating Danube cultures.** Mixing art with serious concern for the environment, students from the Biotechnology Education Centre in Ljubljana, Slovenia, created a traditional Water Dragon, the city’s symbol, in front of Municipality House. Using stone from the Sava River, they shaped the fantastic dragon sculpture to draw attention to the importance of conservation for both the Sava and Danube Rivers.

Danube Day coincided this year with celebrations of the 115th anniversary of the birth of Bosnia’s famous Nobel-prize-winning author Ivo Andric, whose novel ‘The Bridge over Drina’ celebrates the construction of the old bridge in Visegrad during the Turkish period. Each chapter of the book ends with a few sentences about rivers and bridges, and their connection to life. Celebrations and round tables on Andric’s work took place in schools across the whole country.

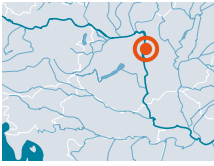
**Promoting cross-border cooperation.** Danube Day served as a forum to inspire new ways of working together. An international conference on the Danube in Ruse, Bulgaria, brought together Bulgarian regional officials and representatives of international organisations to discuss greater cooperation over Danube policies.

In Bucharest, Romania, Danube Day began with a symbolic water filtration event attended by the Romanian government ministers and representatives of other Danube countries, the ICPDR, Coca-Cola and environmental NGOs. River water collected from every Danube country was passed through a special filtration system and poured into a large aquarium, into which native Danube fish and plants were then introduced. This symbolic event represented the long cleaning process of the Danube’s water, so important to maintaining the health of the river’s environment and biodiversity.

On 29 June, ships sailed down the Danube from Vukovar to Ilok, Croatia, to symbolise the links between Croatia and the other Danube countries by taking part in the ‘Greeting the Danube’ ships’ horn blast. Once in Ilok, visitors were treated to a rich cultural programme, organised by the Ministry of Agriculture, Forestry and Water Management and Hrvatske vode (Croatian Waters).

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





# Budapest welcomes national winners of Danube Art Master competition

The remarkable talent and creativity of 32 young Danube Art Masters was celebrated in Budapest, Hungary, as the international winner of the competition was awarded to four children from Hungary.

**The national winners of the Danube Art Master competition, part of this year's Danube Day celebrations, gathered in Budapest, Hungary 9-11 November. The award ceremony honoured the children of the 13 participant countries and declared Hungary the international winner.**

**"We are proud for the International Winner prize, but the fact that we are here now with so many children from other countries fills us with more pride", said Kitti Otlakán from the winning Hungarian team.**

The winning sculpture, made by four Hungarian children, depicted the Danube Fairy hoisting anchor to collect people's waste from the river. The message of the beautiful art work was easily understandable: people should join in the efforts to keep our rivers clean. The sculpture was inspired by the Hungarian folk song 'The wind is blowing from the Danube' and was made from materials found in the Danube River Basin such as wood, grass and flowers. "We are proud for the International Winner prize, but the fact that we are here now with so many children from other countries fills us with more pride", said Kitti Otlakán from the Hungarian team.

ship Hungary and the Hungarian Ministry of Environment and Water. The programme included a Budapest sightseeing tour by bus, a visit to the Tropicarium – Sea World in Budapest, a trip to Esztergom where the children visited the 'Danube Museum' and on the last day a visit to the Hungarian Natural History Museum in Budapest.

During the visit to the Danube Museum children had the opportunity to test-drive the Danube Box and challenge their knowledge of the river. In this contest, the Danube Art Masters competed to complete and colour pictures of a river ecosystem and answer quiz questions, and the winners received small prizes. "This weekend is not only a challenge for me but also an opportunity to learn about other people and cultures", said Veselina Uchkova from the Bulgarian team.

Gyula Hollo, Head of the Hungarian Delegation to the ICPDR, believes that this competition encourages

The Danube Art Masters competitions instil a sense of responsibility for the Danube and its tributaries, and allow children to lead the way in raising awareness of the importance of a clean environment. *Credit: Maria Galambos, Gider (upper right)*

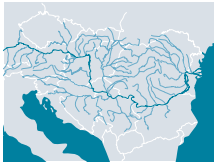


Other winning pieces included Bulgaria's 'Fishermen' made from straw, awarded a special prize from GWP Hungary, and Slovakia's 'New Island' made from mud and leaves, awarded a special prize by Coca-Cola Hungary.

children to learn more about the Danube and how to protect it. "It is also an artistic reminder for adults and the representatives of Danube national governments of their joint responsibility to ensure that the Danube is protected for future generations", said Hollo.

**Channelling creativity into positive change.** After the ceremony, the children and their chaperones took part in a three-day environmental programme supported by Coca-Cola and organised by the Global Water Partner-

*Monika Jetzin* is the Public Participation Danube Task Force Leader for the Global Water Partnership Central and Eastern Europe.



# Balancing the interests of inland navigation and environmental protection

A new guidance document summarises findings about Danube ecology and provides guidance on how countries should prepare and implement new waterway projects.

**On 5 December 2007, the ICPDR's Ordinary Meeting endorsed a guidance paper on future Danube navigation that is seen as a major step forward on this disputed issue. This success is strongly linked to a similar adoption of this key document by two other relevant organisations, the Danube Commission on Navigation in Budapest and the International Commission for the Sava River Basin in Zagreb.**

The 'Joint Statement on Guiding Principles for the Development of Inland Navigation and Environmental Protection in the Danube River Basin' was created following a seven-month process, involving 50 stakeholders (including 12 basin governments and 22 industry and environmental interest groups), and three expert workshops in 2007 (in April in Orth, Austria, in June in Calarasi and Bucharest, Romania, and in October in Zagreb, Croatia).

Transport Forum) in Paris and the European Commission, it was found that only a joint dialogue of experts and interest groups can lead to a solution.

Starting the dialogue. The ICPDR Secretariat therefore worked out a concept for a process that also involved two other relevant organisations, the Danube Commission and the Sava Commission. The process brought together experts from the navigation and ecology sector as well as transport and environment ministries from Danube Basin countries. In the first two workshops, expert presentations and two field visits at the upper and the lower Danube stimulated dynamic discussions. The second step was the joint drafting of the statement that summarised the agreed findings about inland waterway transport and pressures on Danube ecology, and provided guidance on how to prepare and implement new waterway projects.

The question of how to combine future waterway transport with river ecology was presented interactively with an experience on a reconstructed historic ship in the Austrian national park Danube floodplains.  
*Credit: Zinke*



**Accepting other views.** Through the expert discussions, many participants gained more insights and understanding about the functioning of ecology and navigation. "This dialogue had some educational aspects and reduced various misunderstandings", says Philip Weller, Executive Secretary of the ICPDR, "but the actual success was the good involvement of the diverse interest groups and their joint formulation work on this guidance paper."

For Milovan Bozinovic, President of the Danube Commission, "this process had inspiring discussions and the Joint Statement is a good synthesis of our ideas. We have

**Preventing new development conflicts.** The idea of this interdisciplinary process came from the growing concern that the implementation of many waterway construction projects planned and under way along the Danube and its tributaries may lead to conflicts with the EU Water Framework Directive (such as the deterioration of water bodies). When the ICPDR Secretariat discussed this in 2006 with the European Conference of Transport Ministries (now International

also agreed upon concrete follow-up steps for the next years."

The full statement with all annexes can be downloaded from [www.icpdr.org](http://www.icpdr.org)

*Alexander Zinke* is an environment consultant based in Vienna. He supported the ICPDR Secretariat in the navigation statement process.

# Adapting to climate change

Climate change and adaptation measures to address its effects were the topic of several conferences held in Europe this autumn as water managers struggle to address the issues of change and respond to its implications.

**Climate change is one of the most critical challenges facing the planet, threatening the environment, human life and economic activity. Projected global warming is likely to trigger a greater fre-**

with these issues at a management level and it was very helpful to see how people in the region are addressing the problems from a management level or how they would do things differently.”

The Third EWA Brussels Conference in November this year brought European leaders together to face the developments of climate change and discuss the adaptation of water management.

*Credit: EWA*



Highlights of the conference included an in-depth look at climate change at the transboundary river basin level and specifically at the changing nature of the Danube. Weller spoke at the conference, outlining the work of the ICPDR and the need for cooperation with people in the various industries that may be affected.

**Looking at climate change regionally.** On 3 December, a conference on the ‘Adaptation of Water Management to the Effects of Climate Change in the Danube Region’ took place in Vienna. The conference, organised by the Austrian Ministry for European and International Affairs, the Austrian Ministry of Agriculture, Forestry, Environment and Water Management and the ICPDR Secretariat,

addressed the effects of climate change in the Danube River Basin, and included representation from the water supply, hydropower, navigation and wastewater sectors.

“Adaptation strategies must be developed at the local and regional level...it makes sense to focus on the Danube, this valuable water reservoir connecting our region”, said Austrian Foreign Minister Ursula Plassnik.

The results of the conference will directly influence the work of the ICPDR. “The ICPDR has a way forward to respond to climate change”, says Weller. “We need in particular to define clearly what the likely scenarios are and what research or what activities are needed to better understand those, but most importantly to say, ok, given these likely scenarios, what are the actions that maybe should be taken and how do we incorporate that into the programme of measures and the River Basin Management Plan.”

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

**“Mitigating the root causes of climate change is a must, but it has to be accompanied by adaptation measures to be able to cope with the direct effects of climate change on economy and ecology”, said Josef Pröll, Austrian Minister for Agriculture, Forestry, Environment and Water Management.**

**quency and severity of extreme weather events, as well as a rise in sea levels endangering coastal areas. As the effects continue to impact the Danube River Basin, it is vital that countries develop practical measures to adapt water management to the climate change.**

**European water management.** The European Water Association (EWA) held its third EWA Brussels Conference in November this year, bringing together experts and leaders from throughout Europe to address climate change, its impact on the water sector and the mitigation and adaptation measures that can be adopted. The conference outlined the latest scientific knowledge and updated delegates on policy measures being developed by the European Commission.

“The conference was extremely useful to get an overview of the situation of climate change in Europe”, says Philip Weller, Executive Secretary of the ICPDR. “The European Water Association is actually dealing



The Zambezi River Basin supports the Victoria Falls, one of the Seven Wonders of the World.  
*Credit: Eglina Tauya*

## The ICPDR reaches out to the Zambezi Water Commission

The Zambezi River Basin could learn from international commissions as it moves towards operation of the Watercourse Commission.

**All river systems are unique, with special treasures and particular problems specific to their region. How those treasures are protected or how obstacles are approached, however, are experiences that river basins can share in order to help achieve similar goals. Recently, the ICPDR has shared its own experiences in river basin management with partners from the unlikeliest of places – Africa.**

The Zambezi River is the fourth-largest river in Africa, and the largest flowing into the Indian Ocean. The river flows nearly 3,000 kilometres to drain 1.4 million square kilometres in eight countries. The area is home to about 40 million people and features the spectacular Victoria Falls, the world's largest waterfalls.

**The benefits of involving stakeholders.** The 2007 Integrated Water Resources Management Stockholm training programme brought participants from the Zambezi River Basin to support and stimulate the development of Integrated Water Resources Management, and to encourage the participants to get involved with and contribute to networking with other countries. Case studies from the ICPDR and the Helsinki Commission presented in the programme noted that involvement of non-governmental organisations (NGOs) is key to effective operation of the commission, as they are action oriented and can expedite processes.

The Zambezi Water Commission (ZAMCOM) could consider engaging NGOs such as IUCN, the World

Conservation Union, Southern African Research and Documentation Centre (SARDC) and Global Water Partnership (GWP) to spearhead the process. In addition, establishing an expert group would ensure close cooperation and efficient information exchange between the basin states.

As in the Danube Basin, which is financially supported partly by Coca-Cola and many other business organisations, the Zambezi Basin could also create an environment that would encourage business friends of the Zambezi. Awareness and commitment could also be promoted through establishing The Zambezi Day, The Zambezi Box and The Zambezi Art Master competition, as in the Danube River Basin.

**Cooperation in the Zambezi Basin.** ZAMCOM, which was established to promote equitable and reasonable utilisation of the water resources of the river basin, is expected to support efficient management and sustainable development among the eight riparian states of Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania, Zambia and Zimbabwe.



The commission signed in 2004 by all member states except Zambia, which is still consulting its stakeholders, will come into force when six out of eight countries ratify the commission. As of now four countries have already ratified. Meanwhile an interim committee has been established and a draft document prepared to guide the process of operation.

**Finding regional solutions.** Key successes of the process are that the region has adopted a benefit approach as opposed to water sharing, to allow those with less water to benefit. There is also national funding of regional initiatives as a result of the commission.

While there has been considerable progress in the process the basin still faces a number of challenges, which if not addressed will stifle the achievements of current

efforts. Since the establishment of the commission the region has learnt that lack of mutual trust and confidence among the riparian states, lack of accurate knowledge on the state of water resources within the basin, lack of data harmonisation and verification and lack of information sharing are drawbacks to the commission coming into force. In addition, the bureaucracy involved in accessing required information is cumbersome and there is inadequate funding for water institutions. As a result, data collection has been compromised.



For ZAMCOM to operate meaningfully, it requires essential tools such as the Zambezi Water Information System, and the Integrated Water Resources Management strategy, which would inform the ZAMCOM Strategic Plan.

Zambezi basin is host to many wild animals, including the hippopotamus, and inhabitants along the Zambezi River make a living by offering transport across the river.  
*Credit: Munjoma*

An important lesson learnt from sharing experiences with other river basins is that the peculiarities of individual riparian states should be recognised in designing interventions to enhance capacity as a way of levelling the playing field.

*Egline Tauya* is a water and environment programme researcher and writer with Southern African Research and Documentation Centre (SARDC).

#### THE ZAMBEZI

- Length: nearly 3000 km
- Size of basin: 1.4 million sq km
- Countries involved: Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania, Zambia and Zimbabwe
- Inhabitants: about 40 million
- Major tributaries: Lungue-Bungo, Chobe, Shire, Cuando, Kabompo, Kafue, Luangwa, Manyame, Sanyati and Gwayi.

# GEF International Waters Conference

Conference participants competed in a 'Jeopardy!' style game to highlight environmental threats and promote cooperation among GEF International Waters projects. *Credit: GEF*



**"I think the Danube can further be a GEF Flagship. The Danube countries are ready to disseminate the findings, to make sure that they can be replicated. The ICPDR is ready to act", said Holzwarth.**

The Fourth Biennial Global Environment Facility (GEF) International Waters Conference was held in Cape Town, South Africa from 31 July to 3 August. Over 300 participants from 68 countries met to share experiences and innovative practices, promote learning, develop strategies to enhance stakeholder collaboration and encourage GEF International Waters projects to apply evolving GEF policies and procedures during implementation.

GEF investments form the single largest united response to water-related environmental threats, and serve as a catalyst, providing financing as an incentive for cooperation among nations sharing water resource systems.

The conference highlighted the major GEF milestones from around the world, including the UNDP/GEF Danube Regional Project. After 15 years of GEF support, the ICPDR has made the transition to a self-sustaining basin organisation supported by all member countries and stakeholders (see box). "The conference was an important event for us because the Danube has been the most supported project from the GEF over the years", says Philip Weller, Executive Secretary of the ICPDR, "and it was an opportunity for us to express appreciation for the support for the Danube from the GEF."

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

## MY VISION FOR INTERNATIONAL WATERS



Fritz Holzwarth, Deputy-Director General, German Federal Ministry for the Environment, Nature, Conservation and Nuclear Safety and Head of German Delegation to the ICPDR *Credit: ICPDR/ Stögmüller*

The GEF Danube Regional Project made a difference in the Danube Basin – it changed habits, induced investments, raised public awareness and encouraged a new culture of dialogue and cooperation. The diverse social, economic and ecologic development was not an obstacle; we met on the same level and took each other seriously.

The Danube Regional Project encouraged people in the basin to share knowledge with neighbouring countries and to make use of their own competencies and capabilities. The basic support for the whole process came from a clear political commitment among ministers to cooperate throughout the whole basin. We would like to share the lessons we have learned. I think the Danube can further be a GEF Flagship. The Danube countries are ready to disseminate the findings, to make sure that they can be replicated. The ICPDR is ready to act.

The International Waters (IW) Portfolio has a lot to contribute, can provide a lot of success stories. All people involved in IW projects can be proud of the achievements. IW projects made a difference in the regions for the benefits of the people living there. On top of that, without such cooperation all our efforts to achieve the water-related Millennium Development Goals, Integrated Water Resource Management plans, safe drinking water and sanitation will fail.

The water mission has not yet been accomplished; there is a lot to be done all over the world. Without IW we would have missed a lot in a 'water driven' world. The IW Portfolio generated and continues to generate a crystal clear message: Water is not a source of conflict. It is a catalyst for cooperation and a source to share benefits.



## Bringing business together to work for the environment

Government officials and business leaders met at an important conference to take up the challenge of achieving the vision of a healthy ecosystem and landscape through joint action.

**There is a constant need to strengthen the cooperation between the business sector and the water management field in the Danube countries, and in recent years the drive towards public-private partnerships in particular has taken precedence. Yet the scope for business involvement and the levels of success have varied between different regions.**

standing of Danube problems and the best strategies to pursue in meeting the environmental obligations. At the same time, the conference provided an opportunity for companies, government officials, investment advisors and consultancies to expand their business networks and to increase the cooperation and efforts for protection of the marine waters and marine environment of the Black Sea.

The conference brought together high officials in the region, including Philip Weller, Executive Secretary of the ICPDR; Bogdan Olteanu, President Chamber, Romanian Parliament; Lucia Ana Varga, President of the ICPDR; Helmut Bloech, Head of Water Protection Unit, EC DG Environment; Donato Chiarini, EU Ambassador to Romania. *Credit: Micsik*



“Business has an important contribution to make to these goals through ensuring that the actions and activities in production and use of water are environmentally sound and sustainable”, says Ion Radu, Director SC BTL Design. Business can also provide leadership and set an example for others to take positive actions that strengthen the wise and sustainable use of water resources.

**A pledge for support and cooperation.** The participants at the conference expressed their commitment and support

The conference, ‘Environmentally Friendly Business in the Danube’, was organised under the ICPDR Presidency of Romania and held in Bucharest, Romania, on 15–16 November. The conference brought participants together from throughout the basin to identify trends, strategies and profitable areas for business involvement in the water sector, drawing on recent successful models of cooperation and initiatives in the Danube countries.

to secure the sustainable management of water, ensure the ecologically sound use of rivers for transport and energy production, and to protect the biodiversity of rivers and their associated lands including wetlands.

“Institutions at all levels have a contribution to make to the goals expressed in the Danube River Protection Convention of achieving sustainable and equitable management of water resources in the Danube River Basin”, says Lucia Ana Varga, 2007 President of the ICPDR and State Secretary in the Ministry of Environment and Sustainable Development of Romania.

With a wide audience – including high officials of the European Commission, ICPDR, Heads of Delegation of Danube countries, leaders of important companies and governmental officials – the conference was not only a great success, but also a milestone in the acceptance of a statement to strengthen the environment protection activities undertaken in the Danube region to reduce pollution from nutrients and hazardous substances at the same time as achieving economic growth.

*Mihaela Popovici* works as technical expert for water management at the ICPDR.

**Sharing experiences and responsibility.** The conference allowed companies to enhance their under-

The Tisza is the longest tributary of the Danube (966 km) and drains an area of 157,186 km<sup>2</sup> in five countries (Slovakia, Ukraine, Hungary, Romania and Serbia). The states in the Tisza Basin agreed to cooperate closely, aiming to achieve integrated management of the Tisza River Basin.  
*Credit: ICPDR*



## Tisza and Carpathian highlights at Europe's Environment Conference

On October 11, 2007, the ICPDR coordinated a 'side event' geared to recognising and encouraging continued ministerial action in the Tisza River Basin, the largest sub-basin in the Danube River Basin.

**Tisza Basin as a European model for ministerial action.** The sixth ministerial conference of the 'Environment for Europe' (EfE) process included the launch of the 'Tisza River Basin Analysis 2007: Summary Report – A call to action'. The report notes the outstanding diversity of landscapes and species in the Tisza Basin as well as wetland sites and protected areas. However, "this region faces serious threats from pollution and river engineering as well as floods and droughts", it states.

After an informal get-together at the EfE conference, a press conference was held at the conference's Media Centre. The ICPDR's Philip Weller presented the Summary Report and explained its purpose and connection to the larger 'Tisza River Basin Analysis' to be developed by the end of 2007. He noted that the Summary Report highlights the need for Tisza countries to act on specific issues such as pollution and floods, and that water quality and quantity management should be



## DEALING THE CARDS IN THE SAVA RIVER BASIN

On October 10, another side event held during the Belgrade conference was the final regional seminar of the EC CARDS regional project 'Pilot River Basin Plan for Sava River'. The event's main goal was to present the final results of the project, including successes and difficulties, as well as basic information about the current and upcoming activities of the International Sava River Basin Commission.

The results were presented by the project Team Leader, Senad Ploco from SAFEGE Consulting Engineers. Ploco had coordinated a team of 40 experts who provided more than 3000 man-days to the project, as well as 13 regional and six national workshops. The project's main goal was to test the EU Common Implementation Strategy for implementing the EU Water Framework Directive (WFD) in river sub-basins, by preparing 'River Basin Characterisation Reports' for the pilot Sava River sub-basins of Vrbas (Bosnia and Herzegovina), Kupa (Croatia) and Kolubara (Serbia).

Project achievements included assistance to the Secretariat of the Sava Commission and their active participation in the project, and strengthened regional cooperation (including between the two 'entities' in Bosnia and Herzegovina).

Regarding WFD implementation, the project provided a strong push to the Sava Commission and Secretariat to start their WFD-related activities. National experts were also exposed to state-of-the-art European WFD experiences which helped them to develop specific national methodologies and prepare for the process of developing national river basin management plans in accordance with the WFD.

Project outputs included a biological analysis of the Sava Basin ('Biosurvey' manual and report), 'River Basin Characterisation Reports' for three pilot sub-basins and a 'Water Quality Chapter' for the 'Sava River Basin Analysis Report'.

Project difficulties included a lack of human resources working at public water companies responsible for WFD implementation, and a lack of local experts trained in various WFD-related disciplines (e.g. aquatic ecologists).

Recommendations for further activities included raising additional assistance for the Sava Commission and Sava countries to prepare the Sava RBM plan. Water authorities in all of the Sava countries should initiate closer cooperation and data exchange with national institutions not directly belonging to the water sector (e.g. industrial development). Key decision-makers should be informed as soon as possible about the capacities needed for successful WFD implementation, and national WFD implementation teams should be mobilised. Finally, the most serious data gaps noted in the project should be identified, and preparing the RBM plans for the pilot river basins should continue.

integrated. "Tisza cooperation is a European model for ministerial action", he said.

This was followed by water management officials from Tisza country governments (Ukraine, Romania, Slovakia, Hungary and Serbia) and the European Commission (EC) publicly voicing their support for continued cooperation related to Tisza Basin water protection and management and implementation of the EU Water Framework Directive – including support for the recommendations included in the Summary Report.

"I can assure you that we will provide conditions to finish the Tisza River Basin Management Plan in time and with high quality in Slovakia, and that this will be a pilot plan for other such plans in Europe", said Mr. Jaroslav Izak, Slovakia's Minister of the Environment.

At the end of the press conference, the speakers made a toast to continued Tisza cooperation and drank from cups imprinted with pictures of Tisza flowers.

**The Tisza Group and Tisza Plan.** In 2004, representatives of the five Tisza countries signed a Memorandum of Understanding and agreed to prepare a 'Tisza River Basin Management Plan' by the end of 2009. A 'Tisza Group' was also created to coordinate all related activities. The first main activity was the development of the 'Tisza River Basin Analysis 2007' – with support from the EU – to help decision-makers identify a 'Programme of Measures' to be included in the Management Plan.

"The Plan is geared to help the Tisza countries meet the EU Water Framework Directive's requirements by 2015", says Joachim D'Eugenio from the EC's Environment Directorate and Chairman of the Tisza Group. "Europe-wide, the Tisza is probably the most advanced in terms of developing such a Plan at the sub-basin level. This is especially important given the fact that the EU does not require sub-basin level plans, although they are strongly encouraged. Two of the five countries are not even in the EU. Furthermore, the Tisza Plan will go beyond water quality issues to also cover water quantity issues in similar depth, anticipating the future EU Flood Risk Management Directive, EU Water Scarcity Directive and Droughts Action

Plan. It is truly a European model and pilot programme for other European sub-basins.”

By the end of 2008, the draft Plan will be available for public consultation. A list of future infrastructure plans and projects will also be compiled and made publicly available.

Tisza flowers, a type of mayfly, dance on the surface of the Tisza River each spring. The Tisza flower is just one of the treasures found in the Tisza River Basin. *Credit: Zoltan Sallai*

**Pan-European water problems worse in some cases.** The sixth ministerial conference of the ‘Environment for Europe (EfE)’ process, held under the auspices of the United Nations Economic Commission for Europe (UNECE), took place in Belgrade, Serbia, from

people lack access to safe drinking water and sanitation. In many countries, the quality of water supply and sanitation has deteriorated over the past 15 years. There is particular concern also about eutrophication, coastal environments and climate change impacts.

“Our report shows that there has been progress”, said EEA Executive Director Jacqueline McGlade. “We have reduced some air pollution and improved wastewater treatment. However, in an era of change, major concerns remain such as climate, biodiversity and environment-related health threats. To respond to these complex environmental issues, we need continued cooperation across the pan-European region as well as targeted financial and technical support.” She added that further assessment, communication and education to help overcome the “information gap” were required to “better equip those who need to act”.

**Carpathians Environmental Outlook 2007.** Among the many side events held during the EfE conference, the ‘Carpathians Environmental Outlook 2007’ was launched and presented by the United Nations Environment Programme (UNEP). As the Carpathian region covers an extensive area of the Danube River Basin shared by six Danube countries, its results and recommendations are highly valuable for Danube decision-makers, especially to complement the ‘Tisza River Basin Analysis 2007’ now in progress.

The report is divided into five main chapters including a (1) Background and Introduction, (2) Socio-Economic Driving Forces, (3) State of the Carpathians’ Environment and Policy Measures (with a sub-chapter called ‘Water Resources’), (4) Outlook 2005 to 2020: Three Scenarios for the Carpathian Region’s Future Development and (5) Conclusions and Options for Action. It was prepared in its entirety by scientific and governmental experts from the Carpathian countries.

“The report is a source of knowledge that can evolve to support the new and developing needs of the Carpathian countries and relevant organizations in their quest to deliver common and concrete solutions to the challenges and opportunities now and in the years to come”, says UNEP Executive Director Achim Steiner.

*Paul Csagoly* is a communications specialist and writer about European environmental issues.



Water management officials from Tisza country governments (Ukraine, Romania, Slovakia, Hungary and Serbia) and the European Commission publicly voiced their support for continued cooperation related to Tisza Basin water protection and the speakers made a toast to continued Tisza cooperation with mugs imprinted with Tisza flowers. *Credit: ICPCR/ Heilmann*

10 to 12 October. Ministers and high-level officials from 51 UNECE member states and the EC, international organisations, NGOs and other stakeholders discussed progress achieved in the implementation of environmental policies since the Kiev Conference in 2003, capacity building, partnerships and the future of the EfE process.

At the opening session, the key conference report – ‘Europe’s environment – The fourth assessment’ – was presented. The latest in a 15-year series by the European Environment Agency (EEA), the report assesses environmental progress in 53 countries in an area with over 870 million people.

Wide-ranging effects on water across the region are among the report’s highlights. Over 100 million



# Meeting challenges downstream

Lyubka Katchakova, Deputy Minister of Environment and Water of Bulgaria and Head of the Delegation to the ICPDR, speaks about the benefits and responsibilities of EU membership, the value of the Joint Danube Survey 2, and efforts to improve wastewater management in Bulgaria.

Lyubka Katchakova, Deputy Minister of Environment and Water of Bulgaria and Head of the Delegation to the ICPDR. Credit: Bulgarian Ministry of Environment and Water



**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: How has joining the EU affected water issues in Bulgaria?

**Katchakova:** This is very significant for the future management of the water sector in the country. Even before becoming a member of the EU this year, Bulgaria harmonised its national legislation with the *Acquis Communautaire* and began its implementation as part of the negotiation process for accession. Now, as a Member State, Bulgaria has access to the structural and cohesion funds of EU aimed at reaching the European standard for development specifically in the water sector. The percentage of the population connected to urban wastewater treatment plants (UWWTPs), level of treatment, quality of the constructed collecting system, these are all areas of the water sector in Bulgaria that need significant improvement but due to the membership in EU, those challenges have a positive perspective.

Improvements will be seen not only in the wastewater sector, but also in the water supply sector. Although well developed in the past with a high percentage of population connected to a centralised water supply system, at present the water supply network is in poor condition and needs huge investments for renovation. In accordance with the EU's 'full water cycle approach' of resolving problems in the water and the wastewater sector together, investments for improving the water sector are also included in the Operational Programme 2007-2013 for financing from the Cohesion fund.

Therefore, even though from a position of a country catching up with the rest of the EU Member States, Bulgaria has the positive perspective of reaching the European level in the water sector. Combining the obligations of different EU directives and taking into

### BULGARIA: FACTS AND FIGURES

Size of the country	110,910 km <sup>2</sup>
Area within the Danube River Basin	46,930 km <sup>2</sup>
Share of the total Danube River Basin	around 5.9%
Population	around 7.4 million
Population in the Danube River Basin	around 3.4 million
Capital	Sofia
Per-capita GDP	around €3,300
Main tributaries to the Danube	Ogosta, Iskar, Vit, Osam, Yantra, Rusenski Lom

consideration the national policy for providing the public and the business with water in sufficient quality and quantity, the Bulgarian government has adopted a national strategy for management and development of the water sector aiming at the sustainable development of the water sector.

### **Danube Watch: How is Bulgaria working to meet the requirements of the EU Urban Waste Water Directive?**

**Katchakova:** Since Bulgaria began implementing the Urban Wastewater Directive very late, we were able to negotiate transitional periods for the implementation – the end of 2010 for all the agglomerations of above 10,000 population equivalent (PE) and the end of 2014 for those between 2000 and 10,000 PE. The challenge

for Bulgaria is quite large, since at present there are around 70 UWWTPs constructed, and 430 agglomerations that fall within the Directive. Nevertheless, Bulgaria is working on ensuring the implementation of the Directive within the deadlines.

One more aspect of the implementation of the Directive is ensuring the removal of nitrogen and phosphorus in the treatment process of UWWTPs for agglomerations of above 10,000 PE where the recipient is a sensitive area. Unfortunately, most of the water bodies in Bulgaria, including the Danube River and the Black Sea, are sensitive areas. That requires more capital investments and higher operational costs for wastewater treatment plants to comply with the Directive.

### **Danube Watch: The Joint Danube Survey 2 made a stop in Ruse on September 19. How important is this survey to Bulgaria?**

**Katchakova:** First, it was an excellent example for cooperation between the different Danube countries. A lot of preparation and cooperation between the Secretariat and the Danube countries was done and scientists and equipment from different countries were brought together in order to make this survey happen. Secondly, the result from the survey will become an important tool for decision-making since it will give a picture of the quality of the Danube from the EU Water Framework Directive perspective. Once we analyse the results, they will be used as the necessary foundation for elaborating the programmes of measures for the Danube Basin. As a country in the lower course, Bulgaria is very interested in the survey because the analysis of data can give answers about possible sources of pollution that negatively affect the quality of the Bulgarian part of the river.

On a national level, it was an important exercise for Bulgaria to bring together different national stakeholders and raise the public awareness of the importance of protecting the Danube River. Participants from different state organisations, business representatives and NGOs were invited to participate in a workshop where the importance of the Danube Survey and of the environmental policy in general was explained and emphasised. Students from a local university with environment-related majors were invited to step on board to see how scientists take samples and analyse them.

We hope that the Joint Danube Survey 2 will contribute to the efforts of all Danube countries in protecting the Danube River.

**Thank you very much, Ms Katchakova!**

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

#### **HISTORY HIGHLIGHTS**

The territory of Bulgaria has been inhabited since the earliest historical times. The Bulgars, a Central Asian Turkic tribe, merged with the local Slavic inhabitants in the late seventh century to form the first Bulgarian state. In following centuries, Bulgaria struggled with the Byzantine Empire to assert its place in the Balkans, but by the end of the 14th century the country was overrun by the Ottoman Turks, who controlled Bulgaria for nearly five centuries.

In 1876, the April Uprising broke out – the first significant and organised attempt at liberation from Ottoman domination. The bloody uprising was crushed by the Ottomans, but it drew the attention of European countries to the Bulgarian national crisis. In 1878, as a result of the Russian-Turkish War of Liberation, the Bulgarian State was restored, but the Congress of Berlin divided the Bulgarian territories into three parts.

Bulgaria sided with the central powers in World War I, subsequently losing a great part of its lands, and in World War II Bulgaria fought on the side of the Axis. After the war, Bulgaria fell within the Soviet sphere of influence and became a People's Republic in 1946. Communist domination ended in 1990, when Bulgaria held its first multi-party election since World War II. A new constitution was adopted in 1991, and Bulgaria began moving toward a market economy. The country joined NATO in 2004 and the EU in 2007. Bulgaria has been a Contracting Party to the ICPDR since the Danube River Protection Convention was signed in Sophia in 1994.

**“Becoming a member of the family of countries interested in the protection of the Danube River was a driving force for raising awareness and interest in environmental problems on the one hand, and for learning to co-operate with other EU countries on trans-boundary environmental issues on the other.”**



## ICPDR wins Riverprize for water management excellence

The work of the ICPDR was recognised for outstanding achievement in river restoration and management, and was awarded the most significant and valuable prize in the field worldwide.

International Riverfoundation Chair Martin Albrecht presents ICPDR representatives Jasmine Bachmann and Gyula Holló with the International Thies Riverprize 2007. Launched in 1999, the International Thies Riverprize has evolved into one of the most highly regarded and richest international water management awards.

Credit: Koch



**On 4 September 2007, the ICPDR won the International Thies Riverprize 2007 – the world’s largest prize in its field – for excellence in water management. The announcement was made in Brisbane, Australia, during a gala award ceremony at the 10th annual International Riversymposium.**

The award, worth AUD 300,000 (€189,000), was given specifically to the Danube River Basin for its collaborative approach to improve water quality and chosen over three other outstanding government and community groups from China, New Zealand and Canada.

**Recognising excellence in the region.** ICPDR Executive Secretary Philip Weller said the prize is given in recognition of the work undertaken during the past 15 years to overcome political and economic obstacles. “Hundreds of people throughout the Danube Basin were actively involved in the ICPDR project, which made the Danube Basin a cleaner and healthier place. We are honoured by this recognition which means a great deal to the ICPDR family”, he said.

Launched in 1998, the International Thies Riverprize is a partnership between the International Riverfoundation and Riverfestival, an annual ten-day celebration of Brisbane’s river, people, culture and environment. The Riverprize identifies the world’s best practices in water management, preservation and restoration. “As we move into a world of increasing complexity and uncertainty around water security I am convinced those who develop and refine the knowledge and approaches for protecting, restoring and sustainably managing river systems will become our water heroes”, said International Riversymposium Chair Professor Paul Greenfield.

**Rewarding experiences.** “Winning the International Riverprize was a fascinating experience”, says Gyula Holló, Head of Hungary’s Delegation to the ICPDR, who accepted the award on behalf of the ICPDR. “I had the opportunity to give thanks and to present a message on behalf of the Danube River Basin countries and ICPDR. We were immediately congratulated by many organisations and individuals from the international water community, including the other finalists and President of the International Water Association (IWA). Our successful legal framework was particularly praised. As a new member of the club there, we also now have the opportunity to better follow activities happening in that part of the world.”

Martin Albrecht, Chairman of the International Riverfoundation, emphasised the importance of future twinning activities, especially for prize winners to transfer their knowledge to other international river basins. In response, the ICPDR will use some of the prize money to deliver a presentation at the IWA World Water Congress in Vienna in 2008.

*Paul Csagoly* is a communications specialist and writer about European environmental issues.



# Preparing for floods – the new EU Flood Directive

In the last ten years, floods in Europe have caused 700 deaths, the displacement of half a million people, and €25 billion in insured economic losses. A new EU directive is helping to ensure better management of these risks.

**Catastrophic floods endanger lives and cause human tragedies as well as heavy economic losses. Although floods are natural phenomena, society has become more vulnerable to natural hazards. More and more people are living and working in floodplains, reducing the capacity of flood plains to absorb flood waters. In addition, climate change is expected to lead to more intense rainfall and as a result flood risks are likely to increase in Europe in the coming years.**

The EU Flood Directive, which was adopted on 18 September and entered into force on 26 November, aims to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity. The Directive requires Mem-

EU Flood Directive and the Flood Action Programme share the same spirit and principles and the same approach”, says Toth.

The EU’s three-step approach is slightly different than the ICPDR’s Flood Action Programme, and preliminary flood risk assessments are required before the creation of flood hazards maps and flood risk maps. This extra step will be incorporated into the Flood Action Programme.

The Flood Protection Expert Group analysed the two documents and recommended amendments to the Flood Action Programme. These proposals include extending the scope of protection or management of risk to human health and economic activity, which

are both part of the directive but are not explicitly mentioned in the Flood Action Programme. “We concentrated on human life and safety and the environment, and with property, rather than economic activity”, explains Toth.

**Setting a longer timeline.** The biggest difference between the two documents however is the schedule. The ICPDR set the deadline of final action plans at 2009. The preliminary assessments for the EU are set for 2011, flood mappings by 2013 and flood risk management plans are not required until 2015.

While the original ICPDR plan puts countries on a tight schedule, the Flood Directive could provide ample time to overcome obstacles. “Flood risk mapping will be a major road block”, says Toth, “as many countries will want to take advantage of EU funds for this costly task.” However, the evaluation of submitted project proposals will not be achieved earlier than November 2008 and the earliest such projects could begin would be 2009. Adopting the longer EU deadlines could ensure that countries have the vital tools they need to prevent, protect and prepare for floods.

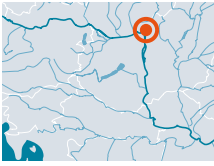
*Kirstie Shepherd* is a freelance journalist living in Vienna and has called the Danube River Basin home since 2000.



ber States to first carry out a preliminary assessment by 2011 to identify river basins and associated coastal areas at risk of flooding. For such areas, countries then need to draw up flood risk maps by 2013 and establish flood risk management plans focused on prevention, protection and preparedness by 2015.

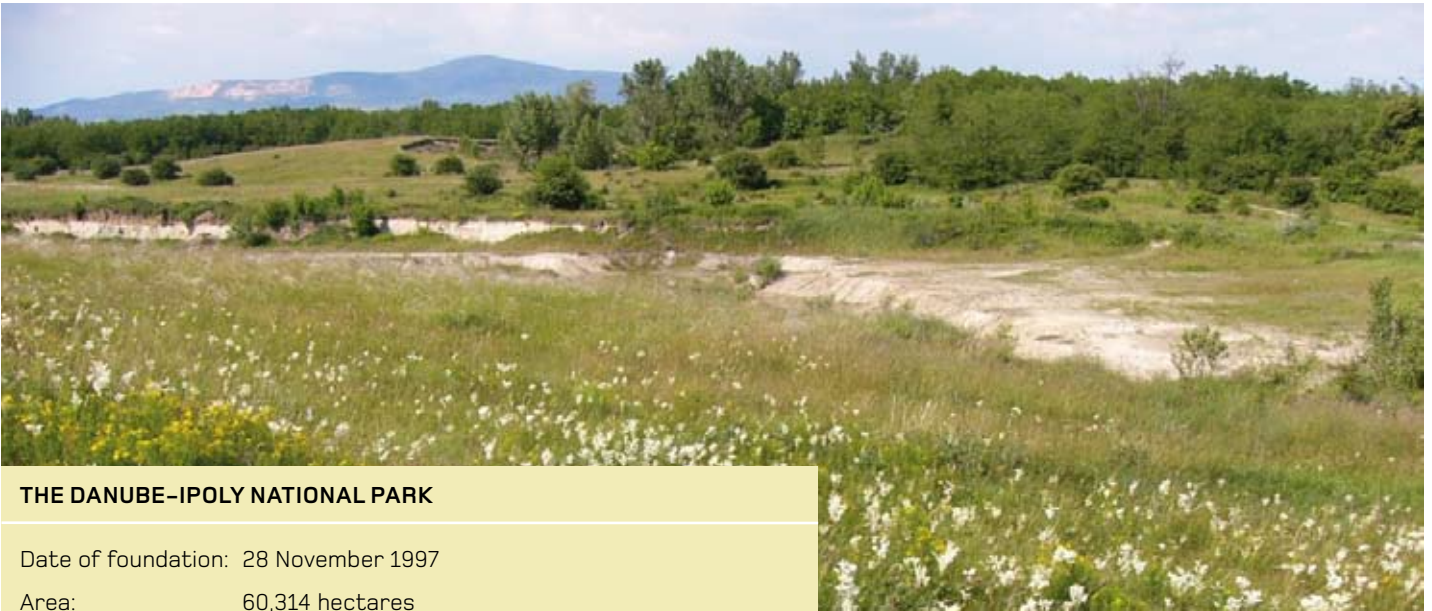
**The ICPDR on target.** The EU Flood Directive fits in “very well” with the ICPDR’s Flood Action Programme, says Sandor Toth, Chairman of the ICPDR’s Flood Protection Expert Group. Both documents are based on the EU’s Best Practices Document on Flood Prevention, adopted in 2003. As a result, “both the

Floods are natural phenomena, which have helped to shape natural landscapes, habitats and ecosystems in floodplains, wetlands and other lowlands. Floods can, however, turn into disasters causing widespread damage, health problems and casualties.  
*Credit: Solymosi Tamás*



# Danube-Ipoly National Park celebrates ten years

One of the most important Hungarian national parks, the beautiful Danube-Ipoly National Park, north of Budapest, continues to shine as one of the treasures of the Danube River Basin.



## THE DANUBE-IPOLY NATIONAL PARK

Date of foundation:	28 November 1997
Area:	60,314 hectares
Rivers:	Danube, Ipoly
Most important peaks:	Csóványos (938 m), Nagy-Hideg Hill (864 m), Pilis Peak (756 m), Dobogó-kő (699 m)
Number of listed caves:	334
Areas of high importance:	Pilis Biosphere Reserve Ipoly Valley Ramsar site Pilis Hillside Forest Reserve Preacher's Podium Forest Reserve Pogány-Rózsási Forest Reserve
Visitor centres:	Esztergom Interpretation Centre Királyrét Open-air School
Nature trails:	Path of Pages nature trail (Drégelypalánk) Páskom Grassland nature trail (Dejtár) Strázsa Hill nature trail (Esztergom)
Website:	<a href="http://www.dinpi.hu">www.dinpi.hu</a>

**Jubilee and foresight.** On October 12, 2007, the Danube-Ipoly National Park invited national representatives and international guests to celebrate the tenth anniversary of this protected area. Official representatives from Hungary, such as State Secretary László Haraszthy, paid tribute to the administration of the National Park for their work in the past ten years. National Park Director András Fűri thanked partners and colleagues for the strong cooperation as the basis of the effective development of Danube-Ipoly National Park. The grand opening of the presentation 'LIVING DANUBE - protected areas along the Danube from the Black Forest to the Black Sea' led to a transnational programme in the afternoon.

A second workshop for the establishment of the 'Danube River Network of Protected Areas' took place under the patronage of the Danube-Ipoly National Park, following the Declaration of Tulcea (see *Danube Watch* 2/2007). The interim speaker of the 'Danube River Network of Protected Areas' and Director of the Danube Flood Plain National Park Carl Manzano summarised the steps realised in the last months. All participants of the workshop - representing 13 protected areas of eight different countries at the Danube River - declared their interest and support for the development of a transnational project for the establishment of the Danube River Network of Protected Areas.

The sand dunes and sandy grasslands of the island are home to Colchicum arenarium and Joint Pine. Credit: Danube-Ipoly National Park

**The national park of the Danube Bend is perhaps the most diverse among all ten Hungarian national parks. Its mission is to protect forested hills as well as riparian and lowland habitats. In addition to national protection and the Biosphere Reserve designation, most of the area has become part of the NATURA 2000 network in recent years, while the Ipoly Valley has been designated a transboundary Ramsar site with Slovakia.**

### **Foundation of the Danube-Ipoly National Park.**

Establishing the national park was quite extraordinary. In the late 1980s and early 1990s, major dam constructions on the Danube River had already been well under way in the former Czechoslovakia and in Hungary. Recognising that these constructions would lead to serious ecological and economic consequences, the Hungarian Parliament decided in April 1991 to stop the works in the Danube Bend and undertake necessary environmental restoration. Parliament also approved a resolution on the environmental tasks concerning the Danube, which included the establishment of the Danube-Ipoly National Park to safeguard the region's natural ecosystems and regenerate natural resources. After several years of thorough technical preparation, the national park was established on 60,134 ha on 28 November 1997.

**Teaching conservation.** School children regularly visit the Királyrét Open-air School and the Esztergom Interpretation Centre, as well as three nature trails. Thanks to the support of the EU INTERREG fund, Slovak-Hungarian bilingual information boards and publications provide information on the national park. Since the Danube Bend is a prominent tourist attraction, the ten rangers working within the national park are kept busy. They have organised several successful actions aiming to eliminate illegal motocross riding, one of the biggest problems in recent years.

**Natural values.** The landscape formed by the millennial wrestling between the Danube and the mountains offers a splendid view. On its way to the Hungarian Plain, the giant river is here forced between steep hillsides, causing it to take a sharp U-turn around the andesite block of Szent Mihály Hill. On the right side of the Danube, the castle hill of Visegrád is crowned by a medieval fortress. On the left, the panorama from the 800-900-metre-high peaks of the Börzsöny Mountains over untouched forests is truly magnificent.

The flora of the Danube-Ipoly National Park is a transition, a virtual meeting area of the plants of the Transdanubian Mountains and the North Hungarian Mountains. Along with other species, the Hellebore (*Helleborus purpurascens*) has a north-easterly range and does not occur further southwest from the Pilis, whereas Odorous Garlic (*Allium suaveolens*) – and numerous similar species – cannot be found to the east of this area. Several valuable survivals of the Hungarian autochthon flora live here, such as Pannon Ferule (*Ferula sadleriana*).

**Pilis Mountain.** In many places, the limestone and dolomite bedrock of the mountain outcrops on steep hillsides. Most of the nearly 200 caves within the national park are found in the Pilis. They are renowned for their





(left) The flora of the Danube-Ipoly National Park is a transition, a virtual meeting area of the plants of the Transdanubian Mountains and the North Hungarian Mountains. Credit: Duna-Ipoly National Park



archeological values (e.g. Paleolithic hunting tools and reindeer bones), thermal formations and some are also important bat roosts. Rock grasslands on rocky hillsides hold some perfectly camouflaged grasshopper species, such as *Saga pedo* and *Acrida hungarica*, as well as the tiny Snake-eyed Skink. The most remarkable features of cultural heritage are the Pauline cloister ruins at Klastrompuszta and the diversity of ethnic traditions maintained by varied minorities such as Swabians, Slovaks and Jassics.

**Börzsöny Mountain.** North of the Danube Bend, the volcanic Börzsöny Mountains are still preserved in relatively untouched conditions. This statement is attested by the richness of fauna. Black Storks nest in eight areas and these forests are a major stronghold of the White-backed Woodpecker in Hungary. In November 2007, park ranger László Darányi first photographed Lynx in the Börzsöny.

**Ipoly River.** The short unregulated stretch of the Ipoly between Hont and Ipolyvece is considered a rarity in Hungary, because its primordial conditions have not been significantly altered by man. Perhaps the most impressive scenery is found in alder bog woods. Flooded for most of the year, the trunks of old alders thicken towards the roots to provide support on the water-logged soil. The vernacular Hungarian term for these trees translates as 'legged alder'. The Ipoly Valley has also been designated under the Ramsar Convention as a wetland of international importance.

**The Szentendrei Island and the Danube.** The sand dunes and sandy grasslands of the island are home to *Colchicum arenarium* and Joint Pine. The banks of open sand pits provide nesting places to protected Bee-eaters and Sand Martins.

The Danube and its flood plain harbour nearly 50 mollusc species. A typical snail species of the fast-flowing stretch in the Danube Bend is *Theodoxus danubialis*. The strong currents of the main branch are preferred by fish species such as Zingel, Danube Streber and Schraetzer. The Danube was once the boundary, known in Latin as 'limes', of the Roman Empire, which is commemorated by numerous ruins of watchtowers.

*Pál Kézdy*

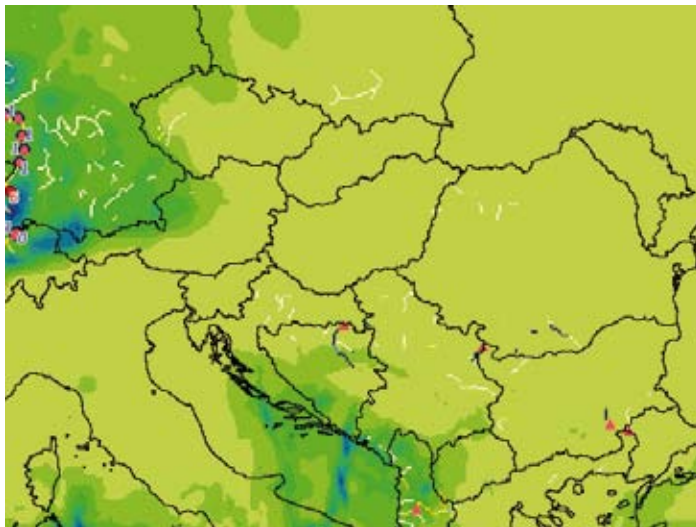
The banks of open sand pits provide nesting places to protected Bee-eaters and Sand Martins. Credit: Danube-Ipoly National Park



# Extending the range of flood forecasting

With the launch of the Danube European Flood Alert System, countries in the Danube River Basin will receive twice daily forecasts and flood warnings for up to ten days.

The EFAS, based on LISFLOOD, combines medium-range weather forecasts from the European Centre for Medium Range Weather Forecasts, the German Weather Service and hydrological data from water authorities.  
*Credit: JRC*



**Flood waters can rise quickly, and a long-term forecast is vital to provide warning to evacuate residents or to minimise damage. Advances in weather forecasting, flood protection models and rainfall radars can now be combined to increase the flood warning time for the Danube River Basin.**

The European Flood Alert System (EFAS) provides national and regional water authorities with an overview of the flood situation in Europe. The Danube EFAS launches in December with catchment-based forecasts to give early warning for floods up to ten days in advance.

The EFAS is based on the computer model LISFLOOD, which combines medium-range weather forecasts from the European Centre for Medium Range Weather Forecasts (ECMWF), the German Weather Service (DWD) and hydrological data from water authorities.

**Additional tools for national centres.** The EFAS is being developed by the EC Joint Research Centre (JRC) with the support of national meteorological and hydrological services. In the Danube Basin, an EFAS Memorandum of Understanding has been signed with Germany, Austria, the Czech Republic, Slovakia, Hungary, Slovenia, Romania, Bulgaria and Moldova. Negotiations are still under way with Serbia, Bosnia

and Herzegovina and Croatia to become members. The EFAS-Danube programme will provide members with access to a protected web-server where EFAS forecasts will be updated twice a day.

The Danube-EFAS won't replace national systems. Instead, it will work in parallel to provide national forecasting services with additional information in the form of earlier flood warnings. The Danube EFAS will be able to predict more accurately the risk of floods from three to ten days, and will help national and regional water authorities alert responsible staff, increase the local flood forecasting frequency or double-check systems and procedures used

in crisis management.

**An expandable system.** The Danube-EFAS will be officially launched this December, but the system will continue to grow. "With better data, we can better calibrate the system and the quality will go up", says Ad de Roo, Action Leader of Weather Driver Natural Hazards at the JRC. Experts are also working on incorporating a greater variety of weather forecasts, "so then you have a wider range of possibilities and a better overall picture of what might happen with different meteorological models", says de Roo.

The JRC will continue to run the Danube-EFAS until 2009, when the operation of the system is expected to be transferred to a permanent home. Negotiations are under way to decide on this transfer, and Slovakia has expressed an interest in participating in the system's management.

The increasing number of devastating floods in recent years has made it clear that effective advance action is needed to protect the environment, prevent human casualties and reduce material losses. Now through the Danube-EFAS, national forecasting centres will have extended warnings enabling them to act quickly.

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

# Picturing a remarkable landscape

An international photography competition invites artists from around the world to capture the beauty and diversity of the Danube and its tributaries while highlighting the connection between people and their rivers.

**The Danube and its tributaries provide habitats for a variety of fascinating and unique plants and animals – about 2000 vascular plants and more than 5000 animal species. And with more than 81 million people living in the Danube Basin, there is no better way to raise awareness of the dangers these previous landscapes face than to ask the world to train their eyes on the river and its tributaries.**

The International Friends of Nature and the ICPDR have organised a photography competition focusing on the Danube and its tributaries. But the river basin is the real winner, as the competition raises awareness of the dangers this previous region faces. *Credit: NFI/Baumgartner*



The International Friends of Nature, together with the ICPDR, has organised a photography competition focusing on the Danube and its tributaries. The competition is open to photographers around the world and is part of the 'Danube Delta - Landscape of the Year 2007/2009' project.

The International Friends organisation, with more than 500,000 members worldwide, supports sustainable development in peripheral, cross border regions of Europe by selecting the Landscape of the Year. The distinction is more than an award; it is the starting point for sustainable regional development that brings together authorities, regional stakeholders and the local population.

The Danube Delta, situated at the border between Romania and Ukraine, is the largest wetland in Europe and provides habitats for over 5000 animal and plant species.

**Capturing the beauty of the region.** The competition is open to photographers around the world to submit photographs – in the form of black and white or monochrome, colour or polychrome and slides or digital images. Entries are invited in either the general category or addressing the theme of 'People and their Anthropospheres (The Danube and its Tributaries)'. No entry fee is required for photographers who are members of Friends of Nature.

A jury will award points to the photographs, and photographers obtaining the highest ratings in the competition categories will each receive a medal and a certificate or award of honour. The title of honour 'IFN Master Photographer 2008' and the awards of honour in the general and theme categories will go to the photographer with the highest total score in any given category. The results of the contest will be published on [www.nfi.at](http://www.nfi.at) and [www.naturfreunde.at](http://www.naturfreunde.at) as soon as the jury has reached its decision.

The exhibition of the photographs will open in Vienna in the autumn of 2008 and will remain on display in a touring exhibition along the Danube.

The deadline for entries is 15 August 2008. For more information, please visit [www.nfi.at](http://www.nfi.at) or [www.landscapeoftheyear.net/danubedelta](http://www.landscapeoftheyear.net/danubedelta).

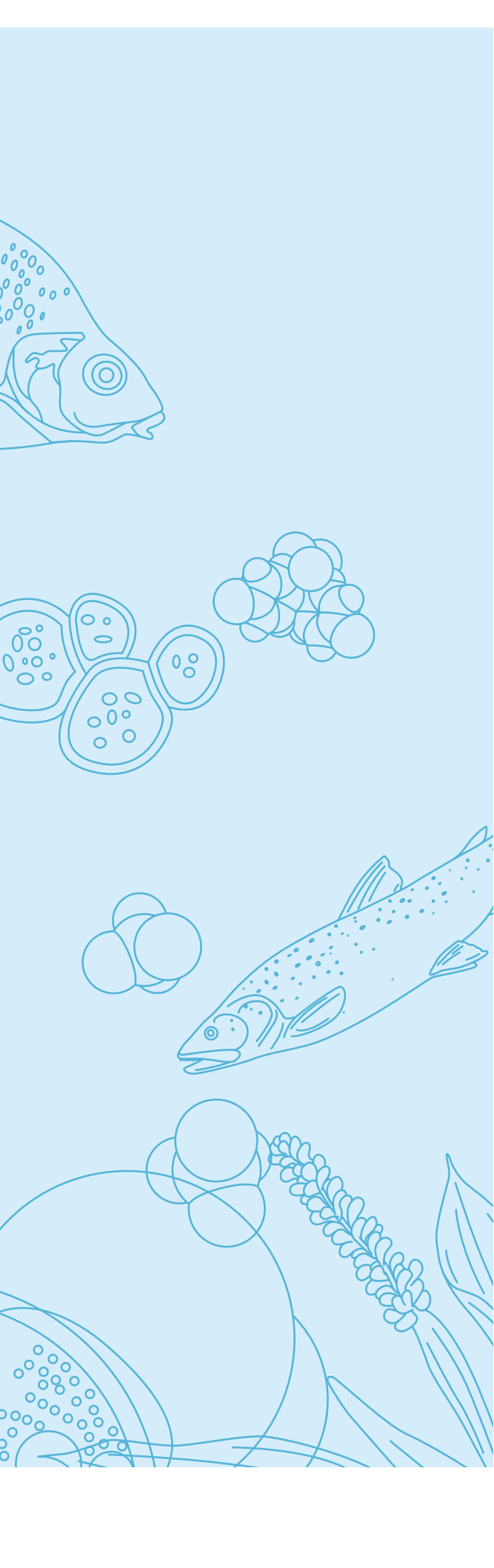
*Kirstie Shepherd* is a freelance journalist living in Vienna and has called the Danube River Basin home since 2000.

## PHOTO CHAMPIONSHIP 2008

The contest is organised by International Friends of Nature in cooperation with the ICPDR under the auspices of VÖAV, FIAP, IWF, PSA (to be confirmed).

**Pictures, slides and entry forms to be sent to:  
Naturfreunde Internationale  
Abteilung Foto  
A-1150 Wien, Diefenbachgasse 36**





## The Joint Danube Survey 2 – nobody said it would be easy

Despite initial setbacks, the largest Danube research expedition finished two days ahead of schedule to bring information on water quality and pollution in the Danube River Basin.

Days before the 'JDS2' boat expedition was even launched, heavy rains forced Hungary's **Széchenyi** ship (complete with cargo, beds and kitchen) to stop 70 km downstream from the launch city of Regensburg, Germany. "The scientists were supposed to first board the **Széchenyi** in Regensburg and find their equipment, but the rain prevented that", said JDS2 Team Leader Béla Csányi. "Afterwards, many just didn't know where their equipment was."

Soon after, the fast opposing Danube current made for a late arrival for Serbia's *Argus* research ship at the first sampling station, forcing it to tie up at a private dock in the dark, and its scientific team to take taxis back to Regensburg. It was only at 5:30 the next morning that they could drive back to the *Argus* and start sampling. And that was only Day 1 with 43 days and 123 sampling stations left!

Once the ships reached Krems, Austria, however, the situation improved. "Now we know where everything is and our work gets better every day", said Csányi. The crew caught up on sleep, sampling times improved (usually three stations a day) and the Austrians brought survival supplies – muesli, yogurt and chocolate.

"The expedition is rich in new data", said Csányi. "We're finding animals never found before."

It would be misleading to say that challenges ended in the first week of the expedition. “The JDS2 is the most difficult survey on the Danube that I was involved in so far”, says Romanian chemist Carmen Hamchevici, who participated in three earlier surveys.

**New species, new technologies.** The ‘Joint Danube Survey 2’, also known as ‘JDS2’, was the world’s biggest river research expedition in 2007. Coordinated by the Secretariat of the ICPDR, its main goal is to produce highly comparable and reliable information on water quality and pollution for the entire Danube River and main tributaries. Costing over one million euros, financial contributions came from Danube countries, the EC and private companies.

The international scientific team travelling the entire Danube included 18 scientists. Teams of national scientists were also a big help on river stretches within their countries. The plan for the three JDS2 boats – the *Argus*, *Széchenyi* and *Pisciis* (donated by the EU’s Joint Research Centre to analyse fish) – was to travel 2375 km down the Danube River, through ten countries, to the Danube Delta. Water, sediment, biology, suspended solids, mussels and fish would be sampled, with some testing taking place on board the ships.

Over the next few weeks, the scientific teams made many fascinating scientific discoveries. “The expedition is rich in new data”, said Csányi. “We’re finding animals never found before.” In Germany, the brief mass emer-



Work on board the *Argus* often lasted into the wee hours of the night – processing samples to be sent for analyses to on-land laboratories, carrying out on-board analyses and preparing and labelling hundreds of bottles, flasks and other vessels. Credit: ICPDR

gence of the mayfly was observed. “Bridges and ships were covered by millions of these insects which were attracted by artificial lighting”, said Austrian biologist Patrick Leitner. Having disappeared for decades in the 20th century due to water pollution, the mayfly’s return was a good sign. And around Vienna, sampling revealed invasive species such as gobi, a fish from the Black Sea. “The population of the gobi pest in the German and Austrian Danube has been exploding over the last 15 years”, said Fish Team Leader Christian Wiesner.

Findings in Slovakia and Hungary included the red-list endangered water fern *Ricciocarpos* and the ‘meat-

eating’ *Utricularia* – a critically endangered plant in Hungary, and never officially detected before in Slovakia. Near Ilok in Croatia, the floating aquatic fern *Azolla* was identified for the first time in the Danube. In Serbia, findings included the smallest flowering plant in the world and green algae (*Spirogyra*) in its reproducing stage – rarely observed in nature. And in Romania, the very rare *Theodoxus transversalis* snail was seen, as was “an unidentifiable Crustacean, completely white, with small eyes”.

“The amount of additional information that will result from the JDS2 is quite incredible”, said ICPDR Executive Secretary Philip Weller. “Besides chemical, biological and physical data, we will also have a database of over 10,000 photographs of the river’s structures. New techniques and technologies were also tested for the first time – many of which could make the work of scientists across the globe more accurate and faster.”

For example, the ‘air-lift’ sediment sampler, the *Argus*’s most prominent feature, was a big success. Used for the first time for Danube sampling, it could take samples at depths up to 11 meters. Before the JDS2, Romanian biologist Gabriel Chiriac had relied on the older methods of ‘kick-and-sweep’ and dredging. “But we couldn’t get to such big depths before”, he said. And ‘core sediment sampling’, a tricky and expensive business, was done at three sites. In the Iron Gate reservoir, a 70 cm core sediment sample was taken from a 33 m river depth – the deepest sample ever in this part of the Danube. Once removed, the cores are sliced into five cm portions and analysed for a range of pollutants.

Other technical initiatives included the installation of new Donau River Information Services (DoRIS) systems on JDS2 ships, a study of ‘endocrine disrupters’ (organic compounds that impact the hormones of animals) and the testing of a ‘benthic fluorometer’ – a hand-held, ‘in-the-field’ device which may replace the need for doing some chemical analyses in laboratories in the future.

**Never a dull moment.** It would be misleading to say that challenges ended in the first week of the expedition. “The JDS2 is the most difficult survey on the Danube that I was involved in so far”, says Romanian chemist Carmen Hamchevici, who participated in three earlier surveys. For the ‘Chemical Trio’ – including Carmen, Romania’s Mary Craciun and the Czech Republic’s Hana Hudcova – work in the *Argus* lab usually lasted until midnight – processing samples to be sent for analyses to on-land laboratories, carrying out on-board analyses and preparing and labelling hundreds of bottles, flasks and other vessels.

One particularly noteworthy day was August 29, the ‘day of disasters’, when the equipment lifting the air-lift sediment sampler and the power supply on board the *Argus* stopped. This stopped the pumps from delivering regular water samples and disabled the crane from lifting a smaller sampling boat in and out of the water. On other days it was the breakdown of the centrifuge needed for microbiological analyses, the sieves used for sampling sediments or the *Piscius* ‘electro-fisher’ for identifying fish species. Then there were the heavy winds, cold, rain, waves and late hours (especially for the Fish Team’s ‘night sampling’). In Bulgaria, fierce waves hurled a small sampling boat against the concrete banks. In Slovakia’s Gabčíkovo reservoir, the waves made by a very unfriendly nearby boat almost overturned the *Piscius*, its crew and equipment.

**Making the news.** The JDS2 stopped at ten cities where local and national authorities had planned events and, in most cases, press conferences. These typically included JDS2 team members, the ICPDR and local and national authorities including high-level officials such as Austrian Minister for Environment Josef Pröll, followed by demonstrations on board the ships. “The news reached the biggest newspapers and radio and TV stations in each country, so that more people than ever now know about the importance of the Danube and what their governments are doing to improve the situation”, said Lucia Ana Varga, ICPDR President 2007 and Romanian State Secretary in the Ministry of Environment and Sustainable Development.

Raising public awareness about the Danube was one of the JDS2 main goals from the start. Public events and media efforts were complemented by the ICPDR’s co-ordination of a ‘Watch your Danube’ campaign, which included a website posting daily ship diary entries and results, fact sheets, posters and leaflets – all for translation and distribution by Danube governments.

On September 25, the ships reached the Black Sea – a first for many of the *Széchenyi*’s sailors who celebrated with ‘baptisms’ of poured saltwater. On the 26th, the team sampled the last site at St Gheorghe, Romania, two days ahead of schedule! “There was an indescribable enthusiastic feeling among the entire scientific team and crew”, said Csányi. They had successfully sampled all 96 sites on the Danube River and 28 on its tributaries. It was over.

On the 27th, the official end of the survey was held in Tulcea, Romania, headed by Romania’s Lucia Ana Varga, including a final ceremony, traditional folk music and dancing. “We are all tired, but we are happy,” said Czech biologist Jarmilla Makovinska. “And a little bit sad. We all became a very close group.”



“It’s hard to believe we’re finally in Tulcea, looking back at all the difficulties we had to go through”, said JDS2 Technical Coordinator Jaroslav Slobodnik, the human link between all of the tasks that needed to be done between ship and land. “It’s almost a miracle that we did it.”

An international team of 18 scientists travelled the length of the river, and national scientists were on hand to help on river stretches within their countries. *Credit: ICPDR*

By the summer of 2008, the results from all analyses will be reviewed, and findings will be reported to the Danube country governments. “The ministries will then be in a much better position to decide on what measures they will need to do to address the pollution and other problems of the Danube River Basin”, said Weller. “The final conclusive results will then be reported to the public and media.”

*(Read the JDS2 background story in the June 2007 Danube Watch; and see the website at [www.icpdr.org/jds](http://www.icpdr.org/jds) for scientific results, maps, photos, fact sheets and short stories.)*

*Paul Csagoly* is a communications specialist and writer about European environmental issues.



The Joint Danube Survey 2 was the world’s biggest river research expedition in 2007. Fold out to see more images from the survey.

# Watch your Danube

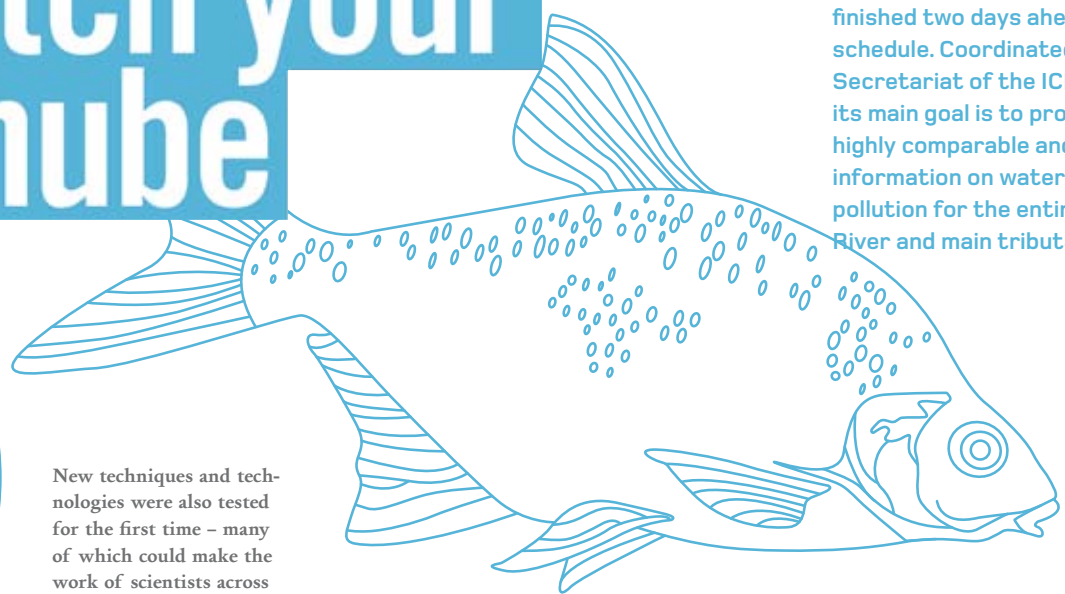
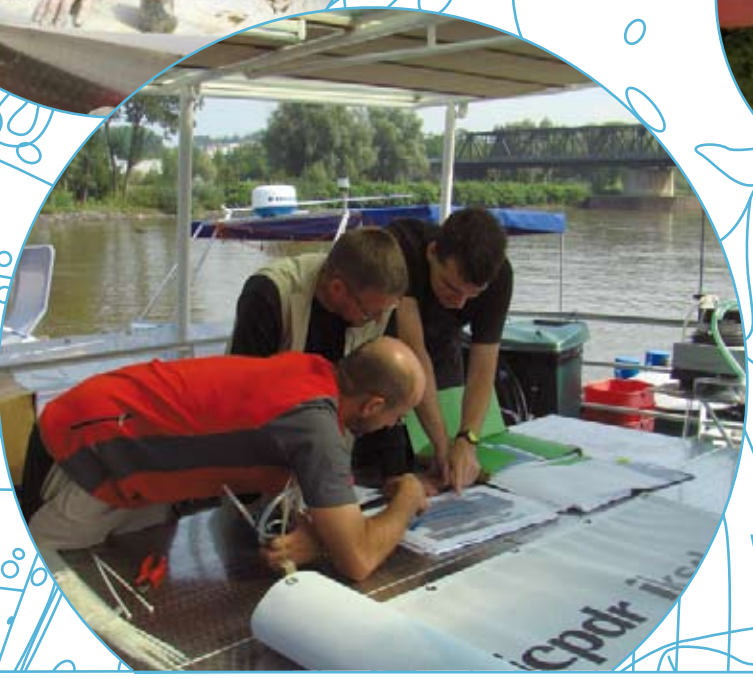
Although the start of the survey was a little rocky, the largest Danube research expedition finished two days ahead of schedule. Coordinated by the Secretariat of the ICPDR, its main goal is to produce highly comparable and reliable information on water quality and pollution for the entire Danube River and main tributaries.

The three survey ships – the *Argus*, *Széchenyi* and *Piscius* – travelled 2375 km down the Danube River, through ten countries, to the Danube Delta. Water, sediment, biology, suspended solids, mussels and fish would be sampled, with some testing taking place on board the ships.

New techniques and technologies were also tested for the first time – many of which could make the work of scientists across the globe faster and more accurate.

Research teams made many fascinating scientific discoveries, including new animals never found before and species that had disappeared for decades or which are rarely observed in nature.

The JDS2 stopped at ten cities where local and national authorities had planned events and, in most cases, press conferences.





**ICPDR MEETINGS**

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

16-17/1/2008

VIENNA, AUSTRIA

**TISZA GROUP**

4-5/2/2008

LJUBLJANA, SLOVENIA

**INFORMATION MANAGEMENT AND GIS EXPERT GROUP**

11-12/2/2008

PRAGUE, CZECH REPUBLIC

**RIVER BASIN MANAGEMENT EXPERT GROUP**

25-27/2/2008

CHISINAU, MOLDOVA

**PRESSURES AND MEASURES MANAGEMENT EXPERT GROUP  
ACCIDENT PREVENTION TASK GROUP**

6-7/3/2008

SENEC, SLOVAKIA

**JOINT DANUBE SURVEY 2 REPORT WRITING WORKSHOP**

3-4/4/2008

BRATISLAVA, SLOVAKIA

**FLOOD PROTECTION EXPERT GROUP**

10-11/4/2008

VIENNA, AUSTRIA

**GROUND WATER TASK GROUP**

21-22/4/2008

BUDAPEST, HUNGARY

**ACCIDENT EMERGENCY WARNING TASK GROUP**

24-25/4/2008

MUNICH, GERMANY

**RIVER BASIN MANAGEMENT EXPERT GROUP****DW 01/08****UPCOMING ISSUE****The achievements of the ICPDR Joint Action Programme (2001-06)****The next steps for the EU Water Framework Directive****Serbia takes over the ICPDR Presidency**