

# DANUBE WATCH

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

3-4/2009

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der Donau

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Credit: ICPDR/Stögmüller

## Dear readers,

The end of 2009 brings a period of intense work to a close with the finalisation of the Danube River Basin Management Plan (DRBMP). The completion of the plan is a remarkable achievement and the ICPDR would like to thank all individuals who have been active in this process – including numerous national and international experts. The development of the DRBMP was only possible through the joint efforts of all governments as well as the various interest groups in the region. I offer my sincere thanks to all.

The completion of DRBMP is an important milestone but not the end of the process of achieving ‘good status’ of Danube waters. Actions are needed to address the problems that exist. This international plan supplements national plans where the actions will be carried out and where immediate results can be seen. Those actions require the political will and support of all Danube countries. The upcoming Danube Ministe-

rial Meeting, which will be held on 16 February 2010 in Vienna, will underscore and reinforce the urgent need for this political will. At the meeting, ministers responsible for water management will formally adopt the DRBMP. For more on this meeting, see the article on page 20.

Finally I would like to announce that because of changes in the Ministry of Environment in Slovakia Ms Olga Srsnova has been replaced by Norbert Halmo as the ICPDR President for 2009. I would like to thank Ms Srsnova for her professional and personal efforts in leading the ICPDR until October, and I am grateful to Mr. Halmo for taking on the role of the ICPDR President until Slovakia hands over the Presidency to Slovenia in January 2010.

*Philip Weller*  
ICPDR Executive Secretary



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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: Euronatur/Schneider-Jacoby



Credit: CC-WaterS



Credit: Sallai



Credit: ICPDR/Igor Liska

## EUROPE'S LARGEST RIVER PROTECTED AREA

Croatia and Hungary have signed a declaration to establish a Transboundary UNESCO Biosphere Reserve that will protect a shared biodiversity area along the Mura, Drava and Danube Rivers. The new protected area covers a 500 kilometre section of the three rivers and about 630,000 hectares of unique natural and cultural landscapes. The protected area, which has been declared with help of WWF and partner organisations, is awaiting UNESCO approval to become a Biosphere Reserve in 2010.

## NEW PROJECT ON CLIMATE CHANGE & IMPACTS ON WATER SUPPLY

A new project supported by the South East Europe Programme is taking a regional approach to assess the extent of climate change and its impacts on local water resources. The main objective of the project, called Climate Change and Impacts on Water Supply (CC-WaterS), is to develop a sustainable water supply management system regarding optimisation of water extraction and land use restrictions regarding climate change scenarios for water suppliers in South East Europe.

For more information, please visit: [www.ccwaters.eu/](http://www.ccwaters.eu/)

## SHIP STURGEON FOUND IN THE DANUBE RIVER

The Danube Drava National Park reported the capture of a live specimen of the elusive ship sturgeon (*Acipenser nudiiventris*) on 2 December in the Danube River near Mohacs, Hungary. The fish is a male weighing 22 kg, and is 140 cm long. It was transported to the Hungarian Fishery Research Institute/HAKI in Szarvas where it is being kept. This important specimen will be used for a breeding programme.

For more information, please visit: [http://ddnp.nemzetipark.gov.hu/index.php?pg=news\\_111\\_1691](http://ddnp.nemzetipark.gov.hu/index.php?pg=news_111_1691)

## REINHARD LIEPOLT AWARD FOR DANUBE RESEARCH 2009

Alexander Kirschner, team member of the Joint Danube Survey 2, has received the Reinhard Liepolt Award for Danube Research 2009, which is awarded by the Austrian Committee of the International Association for Danube Research. Alexander received the award for his publication 'Microbiological Water quality along the Danube river', which was based on the scientific findings of the Joint Danube Survey 2. The ICPDR congratulates Alexander for his achievement!

4–5/2/2010

VIENNA, AUSTRIA

#### **ENVIETECH**

By creating networks of experts from the fields of economy, science and development, and representatives of regional and municipal associations and international sponsors, envietech2010 supports the search for sustainable solutions. Launched in 2008 as a European guiding event in this field, envietech2010 underlines its role as a pioneer and instigator for the growth market of environmental technologies and renewable energies.

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

26–18/4/2010

LILLE, FRANCE

#### **CONFERENCE ON INTEGRATED RIVER BASIN MANAGEMENT UNDER THE WATER FRAMEWORK DIRECTIVE**

The conference will review technical challenges faced by Member States, stakeholder organisations and scientists, while developing the first River Basin Management Plan under the Water Framework Directive. It will focus on aspects of integration, looking at the development of cross-sectoral and multidisciplinary cooperation, and how emerging issues such as adaptation to climate change will be considered in the future.

**For more information, please visit: [www.wfdlille2010.org](http://www.wfdlille2010.org)**

22–25/6/2010

DRESDEN, GERMANY

#### **38TH IAD CONFERENCE: LARGE RIVER BASINS – DANUBE MEETS ELBE, CHALLENGES – STRATEGIES – SOLUTIONS**

The conference, organised by the International Association for Danube Research (IAD) together with the German Federal Institute of Hydrology, focuses on large river basins by comparing the Danube with the Elbe and the catchments of other large rivers. The conference will encompass the wide field of environmental protection in aquatic ecosystems where IAD is an important actor, and aims to cover the full range of spatial scales, from small streams and headwaters to big lowland rivers and floodplains, and ultimately to make a synopsis of river basin management and implementation strategies in river protection and restoration.

**For more information, please visit: [www.iad-dresden-2010.de](http://www.iad-dresden-2010.de)**

#### **NEW DELEGATES TO THE ICPDR**

New heads have been nominated for several delegations to the ICPDR: Ms Ivelina Vassileva is the new head of the Bulgarian Delegation, replacing Ms Ljubca Katchakova. Mr. Zdravko Krmek has replaced Zelko Ostojic as the head of the Croatian Delegation. Mr Velizar Vojinovic has been nominated as head of the Montenegro Delegation. Ms Tatiana Belous took over the leadership of the Moldova Delegation from Dimitru Drumea. Gheorghe Constantin from Romania is replaced by Dan Carlan, and finally Mr Shovkoplias is leading the Ukraine Delegation and replaces Mr Stepan Lyzun. We welcome all new heads of delegation and wish the previous ones the best for their future.



## Water gives life – Danube Art Masters 2009

In September, 26 artists and National Danube Art Master winners aged 6 to 17 from 13 countries gathered in Budapest for a three-day excursion and environmental programme.

**“We didn’t know anything about Ukraine before; we didn’t even know what its relation was to the Danube,” said Tanja Simek, mentor of the Slovenian team. “But now we have made Ukrainian friends and we care about the Danube together.”**

Danube Art Master competitions were organised by the ICPDR and the Danube Environmental Forum (DEF) as part of Danube Day celebrations in 13 Danube Basin countries including Austria, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Germany, Hungary, Moldova, Romania, Serbia, Slovakia, Slovenia and Ukraine. Children were encouraged to visit local rivers and surrounding areas and consider what the environment means to them. They were then asked to reflect their thoughts and aspirations through environmental art using materials from in and around the river. Over 5000 artworks were entered in this year’s competition. The award ceremony held in Budapest, Hungary, on 25–27 September was attended by the national Danube Art Master winners from all Danube countries.

ourselves. All the works demonstrated the children’s understanding of the need for protection of water and the environment.

**Caring about the Danube together.** At first shy, the children quickly began to forge friendships through shared admiration of each other’s artwork displayed in the Award Ceremony Hall. The three-day excursion included a sightseeing tour of Budapest, a trip to the Budapest Zoo, and visits to other towns along the river. The highlight of the stop at Eszergom was a guided tour of the Danube Museum and a fun session of river connected games. Using words and images the children composed messages for their Environment Ministers to underline the importance of water protection. The sentiment of all the children was captured

The three-day excursion included a sightseeing tour of Budapest, a trip to the Budapest Zoo, and visits to other towns along the river. At first shy, the children quickly began to forge friendships.  
*Credit: G2 Foto.*



All the children were awarded certificates of merit for their contributions, and the International Danube Art Master prize was awarded to Vasyl Vataman for his piece ‘Water Gives Life’. The work, a miniaturist recreation of the Danube ecosystem, presents the strip of the Danube most familiar to Vataman: his village cut in half by the river with its wooden bridge, fountain, small houses and roads. Other national prize-winning submissions included works such as Serbia’s ‘From the Black Forest to the Black Sea’, depicting the entire flow of the Danube using rice painted blue, and Austria’s ‘Danube Way of Peace’ with a symbolic message for the need for protection of the river in order to protect

by the team lead by Vasyl Vataman when they wrote, “Let’s think together about the future of our rivers.” Vasyl will also be invited to Vienna in February to attend the ICPDR Ministerial Meeting and to bring the message of the Danube Youth to water ministers.

The Danube Art Masters competition was organised by the ICPDR and the Danube Environmental Forum (DEF), and the three-day environmental programme was supported by Coca-Cola.

*Teodora Artimon* is an MA student at Central European University and a permanent student assistant to Global Water Partnership Hungary.

# Fighting nutrient pollution with precision farming

A new device allows farmers to increase crop yields by providing the exact amount of fertiliser needed, while limiting the amount of nutrients that end up in rivers and water systems.

**Making the most of limited agricultural land is essential to meet the needs of a growing world population. One method for optimising crop production in a sustainable way is 'precision farming' based on providing crops with exactly the right amount of fertiliser needed. This enables farmers to increase crop size and quality while preventing the run-off of excess nutrients.**



The N-Tester is a hand-held device which measures a plant's chlorophyll content, a key indicator of nitrogen. For this, 30 leaves are chosen from across a field, and within a few minutes the N-Tester provides a precise measure of the crop's exact fertiliser needs. *Credit: Borealis*

The amount of nitrogen necessary for an optimal grain harvest changes from year to year and varies according to field and grain type. The N-Tester gives farmers precise information about the nutrient uptake condition of plants making it possible to determine the optimum amount of fertiliser needed at a specific time.

The N-Tester is a hand-held device which measures a plant's chlorophyll content, a key indicator of nitrogen. For this, 30 of the youngest, most fully developed leaves are chosen from across a field, and within a few minutes the N-Tester provides a precise measure of the crop's exact fertiliser needs.

**Equipping farmers with the right tools.** A project to evaluate the N-Tester was initiated in 2002 by Borealis Agrolinz Melamine, the agricultural branch of Borealis, a partner of the Business Friends of the ICPDR. The project, beginning with 40 Austrian farmers, was carried out in cooperation with Yara, RWA Raiffei-

sen Ware Austria AG and the Austrian Agency for Health and Food Safety. "From this small beginning, approximately 130 farmers are now actively using the N-Tester device," says Wolfgang Hofmair, Marketing Manager for Borealis Agrolinz Melamine. "This is of course still a small number when set against the 70,000 full-time farmers in Austria. Cost of the device may have been part of the reason for this slow take-up but this is changing as some farmers are joining together to share an N-Tester."

One possible solution proposed is for agricultural authorities, such as the Austrian Chamber of Agriculture, to buy the N-Tester and allow farmers to borrow the device. The N-Tester has been calibrated for certain types of wheat in Austria as part of the evaluation programme, and the tool is planned to be introduced in Hungary, Romania and Serbia.



"Borealis Agrolinz Melamine always seeks to work closely with farmers to improve the practice of fertilisation," says Hofmair. "Our commitment is to maximising farmers' yields and the quality of their crop while protecting the environment. That is the driver which ensures the sustainable success of our business."

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



# Turning to the public for the draft Danube River Basin Management Plan

Public participation extends to all water users, and citizens' groups likely to be affected by decisions need to be involved. The ICPDR invited the public to comment on the draft Danube River Basin Management Plan, and hundreds responded with valuable concerns, constructive criticisms and suggestions.

By 2015, all rivers, lakes and coasts in the EU must achieve 'good ecological status', according to the EU Water Framework Directive (WFD). European citizens have a key role to play in the implementation of the WFD. The directive calls for the public to be informed and involved in the preparation of river basin management plans, which identify measures to improve water quality. Public input helps Member States balance environmental, economic and social priorities in these plans. *Credit: Coca-Cola Hellenic/Fallander*



## PUBLIC PARTICIPATION

Visit [www.icpdr.org/participate](http://www.icpdr.org/participate) for more information on:

- The Danube River Basin Management Plan including the Joint Programme of Measures
- Outcomes of the on-line questionnaire
- Links to the national River Basin Management Plans including the programme of measures
- Comments received on the draft Danube River Basin Management Plan
- ICPDR response paper on the comments received on the draft Danube River Basin Management Plan

“If you wish to go fast, go alone – if you wish to go far, go together.” This African proverb was used by Ana Grobicki, Executive Secretary of Global Water Partnership, in her opening statement of the 2nd ICPDR Stakeholder Forum. This short proverb perfectly summarises the spirit of the public consultation process on the draft Danube River Basin Management Plan carried out in recent months.

On 18 May, the ICPDR published the draft Danube River Basin Management Plan and invited stakeholders from all over the Danube Basin to provide feedback, comments and criticism. A variety of channels for communication were offered, including the ICPDR Stakeholder Forum, which was organised under the ICPDR Presidency of Slovakia at the end of June in Bratislava. In addition, stakeholders could fill in an on-line questionnaire and send written comments directly to the ICPDR Secretariat.

“The Internet is an excellent tool for this kind of communication. So we developed a special section on the ICPDR website, which included not only the

on line questionnaire, but all important documents, and explained the simple ways how to interact with the ICPDR,” says Alex Höbart, ICPDR Information Management Expert. Over 3000 people visited the ICPDR website [www.icpdr.org/participate](http://www.icpdr.org/participate), more than 50 people filled out the on-line questionnaire and 18 organisations and individuals sent detailed comments. In all, over 300 water issues were raised by stakeholders, ranging from individual infrastructure projects to the wider problem of hormones in waste water.

“I have to admit that I was surprised by the high quality of the feedback, we received,” says Philip Weller, Executive Secretary of the ICPDR. “Not that all comments were positive and supportive, but nearly all were constructive and can be used in the further process.”

**Putting water management issues first.** The online questionnaire was a new tool developed by the



ICPDR Public Participation Expert Group. The goal of the questionnaire was to sound out public interest on international cooperation in general, as well as on some specific water management questions. “Through an open process with the wider stakeholder group such an important document gains additional weight,” says Knut Beyer from the German Federal Ministry for the Environment and Co-Chairperson of the ICPDR River Basin Management Expert Group. “All official ICPDR observers have been involved over the past years, but the audience has been remarkably widened in the past months.”

Of the respondents, 80% support international cooperation even if countries and user groups may need to accept compromises in their water and resource use. This overwhelming support backs up the ongoing efforts undertaken by the Danube countries, and further comments underline the trust the public has in the work of the ICPDR: 70% say, based on their knowledge, that good ecological & chemical status for surface waters can be achieved by 2015 through the suggested technical measures.

In addition, people are also ready to undertake individual measures. Over 95% are ready to pay more for the water service if it improves wastewater and would reduce the use of pesticides and insecticides in their own gardens. Support was also overwhelming for rivers as living systems: 90% of the respondents support the restoration of wetlands, even if it would lead to the loss of agricultural land. The questionnaire serves as a rough initial overview of wider opinion, but so far shows very interesting results.

**Providing feedback to the public.** All comments received, either in writing or through the discussions of the ICPDR Stakeholder Forum, have been collected and discussed by the respective ICPDR experts. Some comments and suggestions have been included straight away, others could not be incorporated now, but will be issues of discussion in future implementation cycles. “We are aware that there are many burning issues which would need our attention. But we simply could not target all problems in this plan,” admits Weller. “Issues such as adaptation to climate change and sediments will be tackled in detail in the coming years and will certainly be of major concern in the next implementation cycle.”

To be fully transparent, the ICPDR will publish a response paper on the results by the end of the year. This document will provide information on how each individual comment has been treated by the ICPDR, if it has been reflected in the final Danube River Basin Management Plan or what the reasons were for not taking it into account. Some issues raised of national importance are therefore not reflected on the international level, and others are too complex to be included in the first cycle and will be tackled in coming years.

The consultation process on the Danube River Basin Management Plan has been quite successful. “Despite the fact that public participation is not legally prescribed to international institutions such as the ICPDR, it has shown its value,” says Marieke van Nood of the Directorate General Environment of the European Commission and Co-Chairperson of the ICPDR River Basin Management Expert Group. For the Danube River Basin Management Plan, and for all the work of the ICPDR, it is clear that quality improves with public participation.

The ICPDR would like to thank all organisations and individuals for their effort in commenting on the draft Danube River Basin Management Plan.

*Jasmine Bachmann* works as Technical Expert for Public Participation at the ICPDR, and is the Executive Editor of Danube Watch.

**People are also ready to undertake individual measures. Over 95% of questionnaire respondents are ready to pay more for the water service if it improves wastewater and would reduce the use of pesticides and insecticides in their own gardens.**



# Transboundary emergencies: managing hazardous spills together

Three Danube countries – Bulgaria, Romania and Serbia – are working together with international experts to improve crisis management during accidental pollution and to strengthen the joint supervision of emergencies in border areas.

**A pilot project on joint management of transboundary emergencies from spills of hazardous substances into the Danube River was launched following a request for assistance by Bulgaria, Romania and Serbia to improve their emergency preparedness and to strengthen the joint management of emergencies in a transboundary context.**

Bulgaria, Romania and Serbia are working together to improve their emergency preparedness and strengthen the joint management of emergencies in a transboundary context. *Credit: UNECE/Wyrowski.*

Organised by the Ministry of Environment, Land and Sea of Italy, the main donor for the project, together with the UNECE Convention on the Transboundary Effects of Industrial Accidents Secretariat and Romania, the project's kick-off meeting was held in March 2009. The partner countries decided on three project phases: a technical workshop, an in-field exercise and a final workshop.



**Assessing emergency procedures.** The technical workshop was hosted by Romania in Drobeta-Turnu Severin on 16–18 June 2009. The meeting led to the exchange of information on management procedures between the three project countries and to the elaboration of a scenario for the in-field exercise.

The in-field exercise took place on 24 September 2009 and was followed by a workshop devoted to a quick exercise evaluation held on 25 September in Prahovo/Negotin, Serbia. The focus of the in-field exercise was notification, emergency management and consequence modelling.

The objectives of the final workshop in Sofia held on 17–18 November were to discuss the detailed analysis carried out after the exercise, to draft blueprints for improving the crisis management based on lessons learnt and conclusions from the exercise, and to share the results of the project with other countries.

**Strengthening cooperation.** Organisations participating were: from Bulgaria – the Ministry of Environment and Water, and the Ministry of Emergency Situations; from Romania – the Ministry of Environment, the General Inspectorate for Emergency Situations with the Ministry of Administration and Interior and its County's Inspectorate, the National Environment Protection Agency, the Romanian Waters National Administration; from Serbia – the Ministry of Environment and Spatial Planning, the Ministry of Interior, the Ministry of Defence, the Hydrometeorological Service, and the Institute for Republic Health, the Municipality of Negotin.

The exercise and the workshop were supported by experts from ICARO – an Italian advisory company that specialises in industrial safety, the Dutch Ministry of Housing, Spatial Planning and Environment, the Polish State Fire Service, the Croatian National Protection and Rescue Directorate, the Secretariat of the UNECE Convention and the ICPDR's Accident Prevention Task Group.

**Conclusions and follow up.** The project offered the possibility to test the ICPDR methodologies (quantification of risks, notification and the Danube Basin Alarm Model), and provided an opportunity to share experiences and practices and strengthen cooperation in the border areas. The Accident Prevention Task Group of the ICPDR will propose options of promoting the UNECE guidelines for emergency management during accidental pollution within the context of the ICPDR.

The ICPDR Secretariat would like to thank Mr. Lukasz Wyrowski from the UNECE secretariat for the invitation to participate in this project.

*Mihaela Popovici* works as Technical Expert for Water Management at the ICPDR.

# The Danube represented at China's Yellow River Forum

The Yellow River in China may seem far removed from the Danube – but the two river basins share similar challenges. In an ongoing dialogue, lessons learned from both regions are shared for joint solutions.



A delegation from the ICPDR joined Mr. Li Guoying, Commissioner of the Yellow River Conservancy Commission, at the Yellow River Commission as part of the EU/China cooperation project. *Credit: Yellow River Forum*

**On 20–23 October, an ICPDR delegation participated in the 4th Yellow River Forum in Zhengzhou, China. The forum, which is held every two years, was hosted by the Yellow River Conservancy Commission. The conference aims to promote the public awareness of river protection and strengthen river management, and the theme of this year's forum was Ecological Civilisation and River Ethics.**

The ICPDR's participation was organised and funded by the European Commission as part of the EU/China cooperation programme. Participating on behalf of the ICPDR was Gheorghe Constantin, Head of the Romanian Delegation to the ICPDR, Gyula Holló, Head of the Hungarian Delegation to the ICPDR, and ICPDR Executive Secretary Philip Weller. In addition, the Co-chair of the ICPDR's River Basin Management Expert Group, Marieke van Nood, participated on behalf of the European Commission.

A delegation from the Yellow River came to visit the Danube twice in 2008 to learn about issues in the region. "They are particularly interested in how different jurisdictions cooperate in a forum such as ours," says

Weller. "Although they are one country, they have a number of different provinces which poses coordination problems."

The Yellow River is a large river basin which faces many challenges, particularly in managing the high amount of sediment the river transports. "We can learn from them how to deal with sediment management," says Weller, "But also how they have begun to deal with questions related to climate change."

Nearly 1500 people participated in the Yellow River Forum. The forum provided an opportunity to share experience and solutions with the Yellow River Commission as well as representatives of other large rivers such as the Rhine and Rhone Rivers. The ICPDR delegation and the Yellow River Commission agreed to further strengthen the cooperation. It is likely that a delegation from the Yellow River will visit Europe next year to explore the ICPDR's activities in more detail.

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

# Tailor-made: Croatia's Twinning Project

A two-year Twinning Project on EU Water Framework Directive implementation, pairing Croatia with Germany as senior twinning partner and the Netherlands as junior partner, has addressed environmental issues to ensure sustainable solutions for water management.

In many ways, the ecological status of rivers in Croatia is surprising. Water quality as indicated by aquatic insects shows that there is a need to reduce organic pollution from households by installing adequate waste water treatment. Yet the impact is less significant than expected.

Croatia is a heterogenic country in terms of its economic and ecologic situation. The Dinaric part on the one hand side is dominated by karstic and coastal areas and is a popular region with tourists. The Pannonian part on the other side comprises the vast floodplains of the rivers Sava, Drava and Danube. Agriculture is the most important source of income in this region. Consequently one size fits all solutions, especially in regard to water management issues, do not apply in Croatia. Tailor-made concepts have to be developed in order to meet the objectives set by the EU Water Framework Directive (WFD).

The main WFD objective for rivers in Europe is to achieve 'good ecological status'. While in EU Member States the results of the assessment are publicly available, there is only very limited information about the ecological status of the rivers Sava, Drava and Danube in Croatia. To get a first impression the EU Twinning Project 'Water Framework Directive Implementation in Croatia', together with the Croatian Ministry of Regional Development, Forestry and Water Management and its background institute 'Croatian Waters', launched joint actions for monitoring, risk analysis and developing a programme of measures.

**Understanding Croatia's water status.** Biological monitoring is the core of WFD compliant monitoring, and the Twinning Project strongly promoted its implementation in Croatia. A team of German and Croatian experts carried out a monitoring campaign in order to compile comparable and reliable information on the ecological status of Croatia's transboundary rivers.

In many ways, the results were surprising. Organic pollution as indicated by aquatic insects (saprobiic index) shows that there is the need to reduce impacts

from households by installing adequate waste water treatment. Yet the impact is less significant than expected, as can be seen on the first saprobic map of



Croatia. An overload of nutrients can also be observed and is indicated by the phytobenthos (microscopic flora found on river bed material) community in areas of intensive agriculture.

A significant but underestimated problem is the structural degradation of rivers. River regulation for flood protection and agricultural purposes has led to a severe loss of river habitats, indicated by macrophytes (free floating or attached plants), fish and macroinvertebrate communities, especially for rivers of the Pannonian flatland.

**Managing a variety of new policies.** To achieve the economic and ecological targets of the WFD it is necessary to consider other water-related directives, especially those on urban wastewater treatment. Most

of these directives came into force before the WFD, and in older Member States the EU water acquis was implemented step by step. Croatia and other Candidate Countries, on the other hand, have to implement these directives simultaneously, and setting priorities carefully is crucial.

While the WFD has a strong focus on the ambient side (the 'good status' is the main objective) the Urban Wastewater Treatment Directive focuses on the implementation of an adequate wastewater infrastructure, and this infrastructure is costly. In rural countries like Croatia, which have scattered settlements and low

instruments such as implementing a user/polluter-pays fee system. Other examples include:

- To improve wastewater treatment in small settlements, robust low-cost, decentralised or semi-centralised systems should have priority. Combined sewerage should be avoided.
- Morphological alterations can be reduced by a more ecological-oriented maintenance. The 'give space to the rivers' approach should be introduced. Examples from Member States demonstrate that natural structures can be developed in harmony with flood protection and agricultural needs.
- Codes of good agriculture practice should be ap-



A significant problem in the region is the structural degradation of rivers, and river regulation for flood protection and agricultural purposes has led to a severe loss of river habitats (left). However, morphological alterations can be reduced by a more ecological-oriented maintenance, introducing the 'give space to the rivers' approach. Examples from Member States demonstrate that natural structures can be developed in harmony with flood protection and agricultural needs (right).  
*Credit: Vidakovic*

population density, many rivers do not show negative impacts from wastewater. Thus, heavy investments in collecting and treatment systems are not always the right answer. Other water problems like diffuse pollution from agriculture or hydromorphology might be more pressing and thus the priority of investments should also be directed to these sectors.

**Project results for real improvement.** The results of the Twinning Project identify the need for improvements, primarily in the field of river structures.

Based on the outcomes of the monitoring and impact analysis, tailor-made toolboxes have been created for all significant pressures. The proposed measures range from wastewater treatment installations to an optimised enforcement of permit systems to economic

plied, such as installing buffer zones or establishing financial mechanisms to promote ecological, friendly farming.

- Water saving irrigation systems should be introduced and water leakages in the drinking water sector should also be reduced for climate change adaptation.
- Finally, the dialogue with major water users, research organisations and NGOs has to be widened, and data should be available, up to date and understandable.

The project was finalised in October 2009 but cooperation is ongoing. For complete project results, including, background information, photos, news coverage and a film clip of the EU DG Enlargement about the project, please visit [www.wfd-croatia.eu](http://www.wfd-croatia.eu).

*Stephan von Keitz* was the resident adviser of the Twinning Project.

**In rural countries like Croatia with scattered settlements and low population density, many rivers do not show negative impacts from wastewater. Thus, heavy investments in collecting and treatment systems are not always the right answer.**

# Searching for balance in inland water transport

The Danube River is one of the most important transportation corridors in Europe. But how do we juggle the current EU plans for developing this transportation corridor while ensuring the protection of the Danube environment?

Karla Peijs is the European Commission's Coordinator for Inland Waterborne Transport, and has also served as Minister of Transport, Infrastructure and Water Management in the Netherlands for 14 years. *Credit: Jansen*

**In this edition of Danube Watch, we had an interview with Karla Peijs, the European Commission's Coordinator for Inland Waterborne Transport.**

**Danube Watch: Why is the Danube important?**

**Peijs:** The Danube River is part of the TEN-T (Trans-European Transport Network) Priority Project 18, which means that it has been identified as an important possibility for environmentally friendly transport.

This TEN-T Corridor I look after is very important for the emerging economies in the region, with their booming transport needs and no doubt future of congested areas. While taking care of the environment, the transport needs will be served without constructing too many roads and railways. Moreover, because the Danube connects ten nation states there can be some difficulties between states or regions. As former Minister of Transport in The Netherlands and member of the European Parliament, the European Commission asked me to try to help to solve such disagreements.

**Danube Watch: Is the ICPDR your logical counterpart?**

**Peijs:** Absolutely! We can't deal only with IWT (Inland Waterway Transport) operators. With organisations like the ICPDR we can achieve better results for IWT and for the environment. The Joint Statement process is a good example. We believe in this process because it sets the conditions for mutual trust between people who are not used to listening to and working with each other. So you find that ICPDR is a natural partner for us in the Danube region...as long as we have the same objective in the end: the Danube as the beautiful river it ever was, but at the same time an important transport route with respect for the environment in waterworks and ships.

The Danube is certainly capable of supporting sustainable Inland Waterway Transport. You can see the advantages for the environment if you look at the whole basin of the river. In the process we need the Joint Statement to make it crystal clear to all parties that we want to reach our goal, yes. But certainly not by destroying everything the ICPDR (and we) stands for. Therefore, in the works that are needed to make the navigation possible, we follow strict European legislation, and the ICPDR can help us there, because

it is not always easy to estimate what is best for rivers in terms of a combination of economic and environmental impact.

**Danube Watch: Do ships have to adapt to river conditions instead of rebuilding rivers to fit to certain types of ships?**

**Peijs:** Certainly we have to use technology in order to better adapt the ships and to reduce the impact of navigation on the living habitat of the rivers to the minimum. In this sense we can and must work for lighter fuels, more efficient engines, control of waste and the use of effective operations, for instance River Information Services for improved safety, improved security, and reduced waiting time and consequently unnecessary emissions, and so on. If it is true that IWT is a 'green' mode of transport, it is also true that it has to be attractive for operators otherwise they will certainly chose a more efficient one, even if it is more polluting. Moreover, 'Danube-ships' may not be able to reach ports like Rotterdam or Hamburg, because of these different features. That will limit their markets and give them a disadvantage compared to others.

I don't believe in the contraposition between ecology and economy. A good economy takes into account an ecological balance. Of course both parties have to be prepared for trade offs, otherwise again the operators will chose another mode, and will pollute more. We take the environmental costs into account in total balance sheet.



**Danube Watch:** While cruise ship numbers on the Danube have been booming over the last 15 years, cargo transport has remained rather stable at modest volumes. How do you see the future market development?

**Peijs:** Cruise ships request lower draught, and ports for passengers are already good co-modal points. For freight transportation on water to be successful, it has to be attractive and competitive with the other modes

of transport. To achieve this we need a reliable waterway, which is navigable for most of the year round; we need equipped ports that have to function as inter-modal points with rail and/or roads for an efficient transfer along the river and then to the final port of destination.

**Danube Watch:** There are various plans to deepen the fairway in order to improve navigability, from Bavaria to the Danube Delta. Critics say these TEN-T projects are not coordinated with the environment protection needs, such as EU Natura 2000 system and the Water Framework Directive. What is your objective in this field?

**Peijs:** Our objective is to achieve a coherent approach and a coherent implementation of different EU legislation – transport, development but mainly environmental legislation. Once more I believe that the Joint Statement approach is the correct one; the active participation of environmental groups in the process has given it the right importance and value. But you won't hear me say that it is easy. It is a very complex process.

**Danube Watch:** What is your vision for the Danube in 2050?

**Peijs:** As I stated at the Ministerial Conference in Stockholm, I believe that the macro-region approach started by the EU is the right way to proceed with a pragmatic and a visionary approach: pragmatic in order to focus on urgent matters and on the real needs of the local population that live in the concerned region. This will lead to tackling issues of primary importance like infrastructure, housing and job opportunities.

But it is also the right visionary approach to keep the direction towards the realisation of a multiethnic, multilingual and multicultural European Union while protecting the environment and creating economic growth.

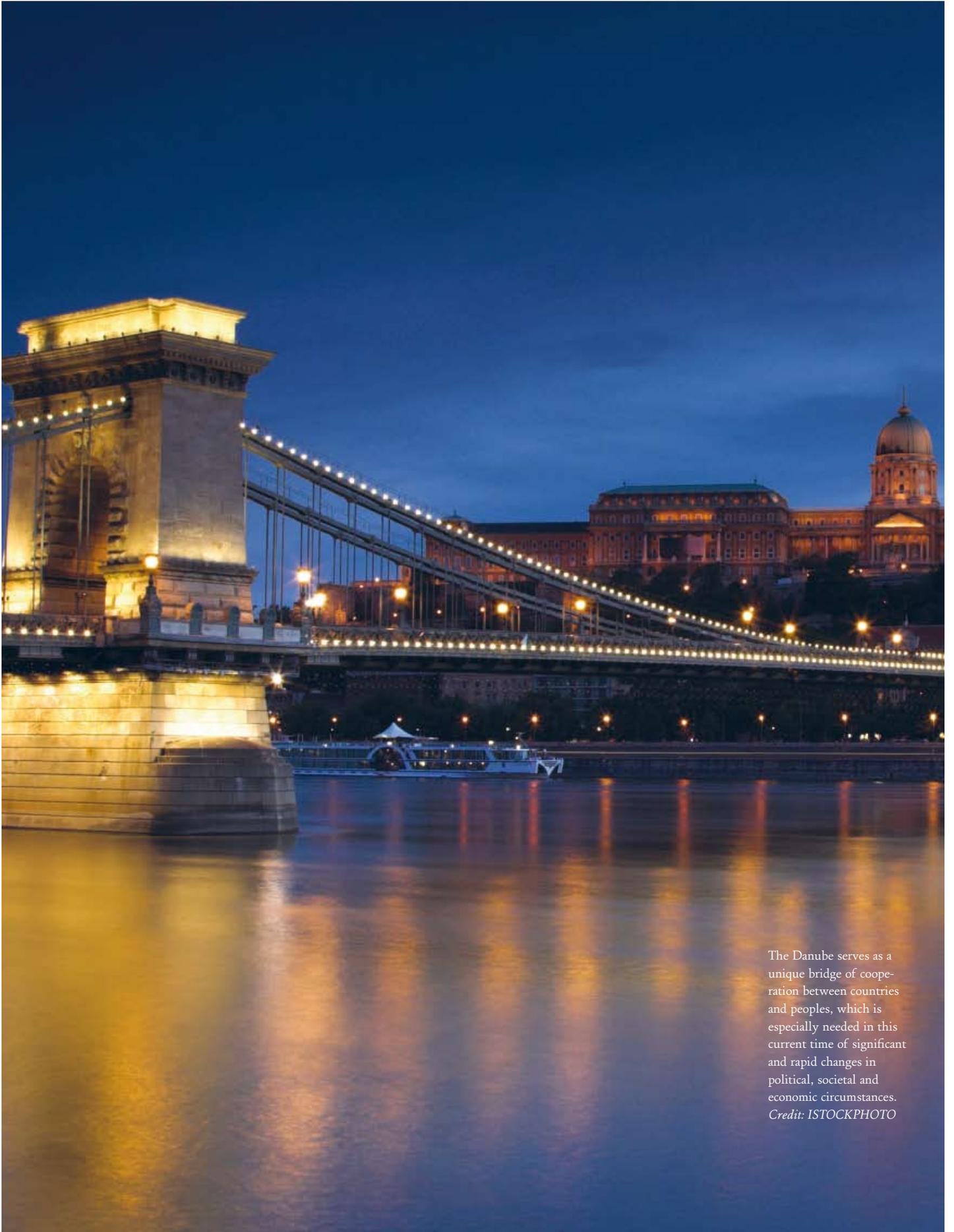
So, I hope there will be a lot of ships on the Danube and a lot of sturgeons and other fauna in the water. We are searching for the balance, nothing less!

**Danube Watch:** Thank you very much!

*Alexander Zinke* is a management consultant for environment based in Vienna, and manages navigation issues for the ICPDR Secretariat.

**"I don't believe in the contraposition between ecology and economy. A good economy takes into account an ecological balance."**





The Danube serves as a unique bridge of cooperation between countries and peoples, which is especially needed in this current time of significant and rapid changes in political, societal and economic circumstances.  
*Credit: ISTOCKPHOTO*

# The European Danube Region Strategy gets on the drawing board

The European Danube Region Strategy should serve as a tool to better face and solve common challenges beyond national borders and to ensure that necessary funding is available.

**When Romania and Bulgaria joined the European Union in 2007, the Danube became an internal river of the EU. As one of the trans-European rivers it represents a significant cultural, social and economic link between ten countries bordering the Danube and nine more as part of its watershed. The Danube serves as a unique bridge of cooperation between countries and peoples, which is especially needed in this current time of significant and rapid changes in political, societal and economic circumstances. In addition, environmental issues demand greater cooperation to address the effects of climate change and the need for a sustainable use of all natural resources. A new European Danube Region Strategy building on the model of the Black Sea Strategy is being prepared to meet these challenges.**

In June 2009, the European Council asked the European Commission to prepare a strategy for the Danube region by the end of 2010. This timeline would allow for adoption by the heads of state and government in the first half of 2011, under the Hungarian EU Presidency. The EU funding period starting in 2014 could then meet the special requirements and goals of the Strategy.

The European Danube Region Strategy will provide additional benefits to the basin. "Cooperation between relevant partners should become more focused and intense," says Viktoria Varga-Lencses, desk officer at the Directorate General Regional Policy of the European Commission. "The visibility of the region, both at the national and European level, should be increased. The European Danube Region Strategy and new cooperation arrangements are relevant in the debate around the future of EU Cohesion Policy. Last but not least the Danube Region – as a European macro-region – could play a greater role in the negotiations of future, cooperation-related funds."

**Building on existing cooperation.** Preparatory works have started in all countries and at all levels: among national ministries, regional institutions and local stakeholders. But the European Danube Region Strategy does not intend to duplicate previously existing successful cooperation, such as the Danube Commission on Transport, the ICPDR or the Working Community of the Danube Regions. "There is a need, nonetheless, to deepen and expand existing cooperation, and to create stronger links among these bodies, as well as with member states and regions," stressed Danuta Hübner, former Commissioner for Regional Policy at the European Commission, at a conference at the end of June in Vienna.

The Strategy is also supported by the European Union's Committee of the Regions. "To reach its full economic, social, environmental and cultural potential," says Committee of the Regions spokesman Wolfgang Reinhart, "the Danube area should be viewed as a single transnational European area of development."

**Elements of the strategy.** The core elements of the European Danube Region Strategy are likely to be connectivity (access to and from the Danube, including transportation as well as energy connections), environment (water quality, biodiversity, risk prevention and management) and unlocking the potential (economic development, education, culture, transport, environment and economic development).

While Danube transport has a huge potential for increasing the amount of freight being moved on Europe's inland waterways, prospects for the latter two elements are more modest. According to Hübner, "there is still too much pollution being pumped into the Danube", and despite much discussion and planning, "there has been insufficient delivery of concrete results on the ground".

Some stakeholder groups also raise concerns. "If the Strategy will not treat the protection of natural assets such as biodiversity and water as the basis of sustainable development of the Danube, it will not contribute to a flourishing region," says Irene Lucius, Senior Policy Officer of the WWF International Danube Carpathian Programme. "Inland navigation, energy supply, agriculture and tourism must be developed in such a way that the resilience of nature and societies to the impacts of climate change is built in."

The coming months will show if the principles of sustainable development will be reflected in the European Danube Region Strategy.

*Jasmine Bachmann* works as Technical Expert for Public Participation at the ICPDR, and is the Executive Editor of Danube Watch.

**"To reach its full economic, social, environmental and cultural potential," says Committee of the Regions spokesman Wolfgang Reinhart, "the Danube area should be viewed as a single transnational European area of development."**

Left: The joint Ukrainian-Romanian environmental campaign cleans the Upper Tisza under the slogan, “Two banks–One clean Tisza”.

Middle: Cleaning of the creek from wooden residues and restoration of its weaving and establishment of the cascades by Dilove forest enterprise.

Right: The Institute of Hydrobiology introduces macrozoobentos from an undisturbed creek.

*Credit: Seizova*



## The Tisza Group experts and stakeholders head towards the Plan

As the Danube River Basin Management Plan heads for adoption, the five countries sharing its largest sub-basin – the Tisza River Basin – enter the last stretch towards an even more advanced and detailed integrated water management plan.

**Ukraine, Romania, Slovakia, Hungary and Serbia have come a long way since 2004, when they established the ICPDR Tisza Group with a mandate to prepare the Integrated Tisza River Basin Management Plan, due in 2010. Today they are a step from raising the stakes in integrated water resources management planning. The latest benchmarks were set in November in Kosice, Slovakia, where the Tisza Group experts, stakeholders and UNDP/GEF project managers met to compare notes and consolidate efforts in the year to come.**

“The Plan will be the first one in Europe on a sub-basin level to integrate water quality and quantity issues,” says Marieke van Nood of the European Commission Environment Directorate-General, and the co-chair of the Tisza Group. The Plan will go beyond the EU Water Framework Directive (WFD) requirements, and provide valuable lessons for dissemination throughout the Danube River Basin and globally.

The first milestone was reached in 2007, when the Tisza Group endorsed the Analysis of the Tisza River Basin. Water quantity management – water flow regulation – and its influence on water quality management was identified as the key issue in the Tisza Basin. The Plan addresses both water quality and quantity issues, and will provide a novel, combined approach for land and water management, flood and drought.

**UNDP/GEF contribution to transboundary management.** As of 2008, a three-year UNDP/GEF Tisza Medium-size Project (Tisza MSP) integrating multiple benefits of wetlands and floodplains into improved transboundary management of the Tisza River Basin supports the efforts of the riparian states to reach the ‘good status’ required by the WFD and to finalise the Plan. The Project focuses on developing strategies for nutrient reduction and flood/drought mitigation, and on implementing demonstration projects. It contributes to the improved transboundary management in two ways:



- By adopting policies and legislation that promote the use of wetlands and floodplains in line with integrated water resource management and the WFD and
- By implementing new policies through community-level demonstration of effective floodplain management for nutrient retention, habitat restoration and flood management.

The links between these are crucial for demonstrating the integrated water quality and quantity management approach. Feedback from the field is being incorporated in the Integrated Tisza River Basin Management Plan, and contributes to the development of the Plan from both a ‘top-down’ and a ‘bottom-up’ perspective.

In line with the WFD, public participation is especially important for the development of river basin management plans because they integrate environmental goals, social concerns and economic factors. Following the strategy developed by the ICPDR for public participation throughout the Danube River Basin, the input from the stakeholders is a central component of the UNDP/GEF Tisza MSP.

**Demonstrating sustainable management.** Three demonstration projects, which started in spring 2009 at several locations throughout the Tisza River Basin, are developing practical and cost-effective ways to address pressures typical for the Tisza River Basin, to be replicated and disseminated:

- Reconnecting wetlands for flood protection: improving the capacity of wetlands to retain, store and drain excess water, implemented in the Bodrog River Basin shared by Slovakia, Hungary and Ukraine;
- Integrated land development: how to overcome fragmentation and unclear land ownership for sustainable resource management, implemented in Hungary, Serbia and Romania; and
- Waste and river bank management: dealing with multiple pressures – hazardous, organic and solid waste pollution, and floods, implemented in two mountainous Upper Tisza villages on Romanian/Ukrainian border.

“The projects cover some of the main problems of the Tisza Basin. The experience gained will greatly contribute to the development of the Plan,” says Peter Whalley, the Tisza MSP project manager.

Although different in nature and in scope, the demo projects already have interesting field progress to report. The most visible and already in use are the changes brought by the Upper Tisza demonstration project: a plastic bottles collection system and recycling programme, and creek restoration. Thanks to joint mobilisation of children, stakeholders and local authorities, the team is now expecting the return of trout to clear creek waters, and is ready to share experiences and tips throughout the basin, in a project supported by local authorities.

*Sonja Seizova* is a freelance communications and media expert.

Although different in nature and scope, the demo projects already have interesting field progress to report.

# Danube countries put pieces in place for river basin management

In February, Danube ministers will put into action an innovative approach to basin-wide issues by offering answers to the pressures and impacts on water status in the region.

The Danube River Basin Management Plan reflects the joint cooperation of 15 contracting parties focusing their efforts to achieve shared goals.  
*Credit: ISTOCKPHOTO*

**The Danube River Basin Management Plan will be a significant first step towards achieving the 'good status' of water bodies that the WFD requires.**

**Celebrating the Danube and capturing the spirit of the interdependence of Danube countries and the need for cooperation in water management will be a focus of a Danube ministers meeting that will take place in February 2010. The Danube River Basin Management Plan, an action plan for achieving good status of all Danube Basin waters, will be at the centre of discussions at the ICPDR Ministerial Meeting to be held in Vienna, Austria.**

The Ministerial Meeting will bring together Water Ministers from Danube countries, as well as representatives of ICPDR observer organizations. The meeting will review the historical problems of the Danube Basin and the successes achieved in addressing them. The meeting will focus on one of the most important milestones recently, the Danube River Basin Management Plan.

“The Ministerial Meeting marks a significant accomplishment for all of us in the Danube Basin,” says Mitja Bricelj, Secretary of the Ministry of Environment and Spatial Planning of Slovenia and ICPDR President for 2010. “The meeting also serves as an excellent reinforcement of the success of the ICPDR as a cooperation and collaboration platform.”

**Innovative cooperation.** The Danube River Basin Management Plan demonstrates an innovative approach to basin-wide issues by offering answers to the pressures and impacts on water status in the region. The Plan, approved by the ICPDR Heads of Delegation at the 12th Ordinary Meeting in December 2009, is a requirement of the EU Water Framework Directive (WFD). While obligatory for all EU Member States, all Danube countries committed themselves to implementing





with visions and management objectives. These issues are addressed by the Joint Programme of Measures, which forms an integral part of the Plan. The Joint Programme of Measures will serve as a common roadmap guiding activities in the region and ensuring the necessary harmonisation of actions at the basin level.

“The ICPDR’s work on the Danube River Basin Management Plan has produced a plan we can all be proud of,” says Philip Weller, Executive Secretary of the ICPDR, “and now is the time to put our plan into action.”

**Additional efforts needed.** The Danube River Basin Management Plan will result in significant first step towards achieving the ‘good status’ of water bodies that the WFD requires. However, the Joint Programme of Measures will not be sufficient to achieve the environmental objectives of the WFD on the basin-side scale by 2015 and will need to be addressed by further actions. In particular, nutrient pollution loads to the Black Sea will be well below present levels, but will still be 40% above targets. Limitations on phosphates in detergents are particularly cost-effective and necessary measures to complement the efforts of implementing urban wastewater treatment. Ministers at the meeting

**“Adoption of the Danube River Basin Management Plan is an historical moment for all Danube countries and a very concrete contribution to an efficient Danube Strategy,” says Mitja Bricelj, Secretary of the Ministry of Environment and Spatial Planning of Slovenia and ICPDR President for 2010.**

the WFD and creating the Plan, and the ICPDR was made the facilitating platform.

“Adoption of the Danube River Basin Management Plan is an historical moment for all Danube countries and a very concrete contribution to an efficient Danube Strategy,” says Bricelj.

The Danube River Basin Management Plan was a particular challenge in a river basin as large and diverse as the Danube. The Plan identifies – from a basin-side perspective – four of the most significant water management issues: organic pollution, nutrient pollution, hazardous substances pollution and hydro-morphological alterations, as well as transboundary groundwater issues. The Danube River Basin Management Plan provides a description of each of the significant water management issues and responds

in February will discuss introducing a phosphate ban in all Danube countries, which would set maximum limits for the total phosphorus content in laundry detergents for consumer use by 2012, and a market launch of phosphate-free dishwasher detergents for consumer use by 2015.

The Danube River Basin Management Plan reflects the joint cooperation of 15 contracting parties focusing their efforts to achieve shared goals. And with the political approval of the Plan, the Ministerial Meeting in February will secure the political commitment for the implementation of the measures identified in the Plan to meet the requirements of the WFD for 2015 and years to come.

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



# Finding solutions that are as good for business as they are for the environment

A new power plant in Ploiesti, Romania, is increasing efficiency and protecting the environment by limiting CO<sub>2</sub> emissions by up to 40% – well ahead of the 2020 deadline for emission reductions set by the European Union – and all the while providing energy for soft drinks.



Managers from Coca-Cola Hellenic, ContourGlobal, join a local municipality at a ribbon-cutting ceremony to inaugurate the plant.  
*Credit: Coca-Cola-Hellenic*

The Combined Heat and Power (CHP) plant, constructed in partnership with the power development company ContourGlobal, has been installed at the Coca-Cola Hellenic bottling facility in Ploiesti, Romania. It is the first of 15 plants that Coca-Cola Hellenic has pledged to build in 12 countries, including eight European Union Member States. “The opening of the CHP plant represents a milestone to ensu-

## COCA-COLA HELLENIC EMPLOYEES CLEAN RIVERS

In the frame of their ‘Living positively!’ week, Coca-Cola Hellenic motivated employees and partners to get active for rivers. Over 600 people were involved on the clean-up alone at several sports along the Tisza River in Ukraine, Slovakia, Romania, Hungary and Serbia. In Austria parts of the Danube National Park near Haslau were cleaned, and Croatia supported a clean-up on the Gacka River in the framework of the UNDP-Coca-Cola Partnership.

“Across all of our 28 territories we have been working to increase efficiencies and reduce CO<sub>2</sub> emissions, the main culprit in climate change,” he said.

## THE PLOIESTI CHP PLANT

- The first of 15 facilities to be inaugurated.
- The first of two to be constructed in Romania. A second is planned to be built at Timisoara.
- Powered by natural gas, the CHP plant supplies electrical energy, hot and cold water, and heat to the bottling operations.
- Capable of reducing CO<sub>2</sub> emissions by at least 40%.
- Construction started in November 2008.
- Total capital investment of €16 million.
- Surplus clean electricity can be sold to the national electricity grid.

re the sustainable development of our operations and of the communities we serve,” said Doros Constantinou, Chief Executive Officer of Coca-Cola Hellenic.

**Staying ahead of deadlines.** The development of the Ploiesti plant follows a pilot project in Hungary in 2006 which reduced CO<sub>2</sub> emissions by 43%. When all 15 plants are operating it will be equivalent to a 20% reduction across all 80 beverage production plants, well ahead of the 2020 deadline for emission reductions set by the European Union. The CHP plant supplies highly efficient, clean electricity as well as heat and cooling for the soft drink production facility. At the same time, clean electricity is delivered to the local grid, providing energy efficient power for the surrounding community in Ploiesti.

Coca-Cola Hellenic and ContourGlobal will open three more plants this year with others following in 2010 and beyond.

*Jasmine Bachmann* works as Technical Expert for Public Participation at the ICPDR, and is the Executive Editor of Danube Watch.



# The living Danube in Budapest

The largest environmental investment to be implemented in Central Europe will fundamentally modernise the wastewater treatment system of Budapest, ensuring cleaner waters for all those living along the banks of the Danube.

**From almost 800,000 households of Budapest, approximately 600,000 cubic metres of wastewater is discharged every day. Less than 50% of this amount is treated biologically with the present capacity of the city's two other wastewater treatment plants; the rest is discharged into the river without biological treatment. This is not only a significant environmental load, but also has public health effects on the lives of citizens living in the Hungarian capital and along the banks of the Danube.**



The Living Danube project – consisting of several subprojects – will ensure that 95% of the wastewater of Budapest is returned to the Danube following biological treatment by modernisation of the city's wastewater treatment system.

As the name of the project reflects, the objective is to turn or rather to return the river to a vital status, which has an impact on everyone in contact with the river.

A new wastewater treatment plant built on the northern part of Csepel Island will raise the proportion of biologically treated wastewater discharged to the river, and the plant will apply a closed-loop technology, complying with stringent noise and odour emission norms. The technology used will allow the complete vicinity of the plant to remain a green belt zone by occupying only the smallest area possible from the surface available.

**Meeting international goals.** In addition to the Central Wastewater Treatment Plant, the project also includes plans to construct the Buda Main Collector, the river crossings to Csepel under the Danube, to increase the capacity of three pumping stations (Ferencváros, Kelenföld and Albertfalva), a flood protection line as well as the building of the road connection to Csepel. The investment will also address the adequate management of sludge which is generated as a final product

of water treatment. The total cost of the investment is €529.1 million, the eligible cost for Cohesion Fund is €428.7 million, and of this, 65% is financed by the European Union from the Cohesion Fund, 20% by the Hungarian state and 15% by the municipality.

By implementing the project Budapest meets the requirements of the Urban Waste Water Directive. "Hungary will also be contributing significantly to the objectives of the Danube Protection Convention – prevention of transboundary impacts, protection of the Danube, maintenance and improvement of the conditions of the river – on the cooperation aimed at the protection and sustainable use of the Danube," says László Kóthay, State Secretary for Water of the Ministry of Environment and Water.

The Budapest Central Wastewater Treatment Plant project reached a significant milestone in the summer of 2009, as the test run of the wastewater treatment system started in August. "The EU always considered



the great importance of this project – reasonably, because this is the most important and biggest environmental investment in Central Eastern Europe," says Dr. László Becker, Senior Engineer for the project. "During my time working on this project, I have experienced first-hand the meaning of the saying that the Danube binds countries to each other."

*Tóthné Nick Dorottya* is the manager of the Public Utility Department of the Municipality of Budapest.

The technology used for the Central Wastewater Treatment Plant on the northern part of Csepel Island will allow the complete vicinity of the plant to remain a green belt zone by occupying only the smallest area possible from the surface available. *Credit: Public Utility Department of the Municipality of Budapest*





## Good for people, business, nature – successes from along the Tisza

Four years ago Danube Watch reported on WWF's plans for harmonising economic development with environmental improvements through its then new programme One Europe, More Nature. Promising 'new perspectives for the Tisza river basin', the initiative has delivered new jobs, new income, new business, new products and services, new green electricity – and new nature.

Local and national media has highlighted again and again the innovative actions taking place in Tiszatarján.  
*Credit: WWF/Avis*

**Business from, and business for, nature.** That was the philosophy behind WWF's flagship economy/ecology programme One Europe, More Nature (OEMN). In practice this meant seeking out unusual partnerships, investigating new possibilities, understanding stakeholder motivations and piecing together a business/nature mechanism which would work to the benefit of all. Two project locations in the Danube River Basin perfectly epitomise this innovative approach: the Tisza floodplains near Tiszatarján in eastern Hungary, and the Oas-Gutai plateau near Baia Mare in Maramures in northern Romania. Six years after kicking off, real progress has been made on all fronts, and opportunities are now ripe for further investment to scale up the businesses and deliver more jobs, more income and more nature.

ty generation. On the cleared floodplain, two new land 'uses' are initiated: on one part, grassland and wetland restoration takes place, using some of the biomass sales revenue. Here, nature returns. On the other, less suitable land, fast-growing (native) willow trees are planted, which also yield profit on a three-year cycle when transported and sold to the power station. The willow transforms this mechanism from a 'one-off' economic and ecological boon, into a sustainable cycle of *Amorpha* clearance, nature restoration and green energy production – guaranteeing that as many as possible of the 40 new jobs are kept, long into the future.

Simple, and effective. On the land and water given back to nature, three indigenous animals which



Water buffaloes have been re-introduced to graze the cleared areas, keeping new *Amorpha* shoots at bay and gradually restoring the species-rich composition. *Credit: WWF/ Vaszko*  
Wetlands like these perform valuable flood management roles as well as being perfect habitats for biodiversity. *Credit: WWF/ Avis*

**Green electricity from, and for, nature.** The Tisza floodplains in Hungary are dominated in many places by the aggressive, invasive, detrimental shrub *Amorpha fruticosa* (False Indigo). This plant is bad for biodiversity and bad for flood management, and extremely unpopular as a result. It has colonised thousands of hectares along the Tisza, even as far as the Danube Delta in Ukraine. Seeking an economic mechanism to drive floodplain restoration, WWF persuaded a power station company, AES Hungary, to carry out burning tests on the shrub to see if it had potential as biomass for green electricity generation. It did.

Next, WWF worked with local communities along the Tisza to develop an ambitious landscape and economic vision for the region, featuring the restoration of the typical Tisza landscape of woody grasslands, wetlands and floodplain forests. The municipal local government of Tiszatarján, together with private landowners, proved to be willing and energetic partners.

The *Amorpha* is cut by local workers, bundled up and transported to a nearby AES power station where it is sold and then burnt as biomass for renewable electricity



long ago disappeared from this region have been re-introduced. Beavers, hunted out of central Europe in the 19th century, were last year released into the wild and can now be seen working as nature's "wetland hydrologists". Nearby, a herd of Hungarian long-horned grey cattle plays a similarly positive role on the newly exposed grassland. Water buffaloes, brought into the Carpathian basin a thousand years ago, have also been released into the wetter grassland areas to do the same. All three animals are directly re-building the ecosystems damaged by the *Amorpha* invasion. More than that, the cattle and buffalo have an additional role to play in that they eat the shoots of young *Amorpha* plants, and thus prevent the jungle from returning. "We are happy to be rid of the *Amorpha* jungle, and are proud of the new landscape taking shape," explains Mrs. Lajos Bögrené, mayor of Tiszatarján. "The jobs and money are much needed here, and on the restored natural areas, new economic opportunities such as animal husbandry, and eventually rural tourism, are beginning to become a reality."

**High quality food from, and for, nature.** Upstream, in the headwaters of the Tisza in Maramures, an entirely

different mechanism is yielding similarly positive results. Here the goal for WWF was the conservation – rather than restoration – of priceless natural capital. But the goal for local landowners and businesses was the same: income diversification, jobs, profits.

The species-rich upland meadows of the Oas-Gutai plateau risk turning into shrub as a result of land abandonment driven by EU accession and the restructuring of agriculture. This would not only hit the plateau’s abundant biodiversity, but also degrade the mosaic landscape of mixed woodland, grassland and wetland which is so attractive to tourists. So OEMN staff assisted governmental authorities to designate more than 19,000 hectares as a Natura 2000 area.



whom now know that what is good for nature, can also be good for business.” Soon, the Tiplea family will give back to WWF the same number of cows as they originally received, and these will then go to another business on another part of the plateau. In this way, the mechanism spreads, as do the benefits.

**Green business, green investments, a green future.**

The success of these projects is relatively modest in size right now, but they are just the beginning. Each has significant potential for expansion or replication. Each is on the cusp of financial, commercial viability. Each is ripe for investment.

“OEMN demonstrates clearly that business and nature can co-exist, and that one can be built from the other



Then, together with a local landowner/entrepreneur family in Ocna Sugatag, WWF assisted an integrated tourism and cattle business up on the plateau. Featuring Romania’s first organic beef herd and a rustic tourist cabana, the business produces healthy, high quality beef products and also offers visitors a unique high-altitude tourism experience. The cows graze the meadows and maintain the natural ecological balance, and a special winter shelter has been built from local materials to enable the cows to stay year-round, even through the long Maramures winters. And prime nature-friendly beef products will soon be available in the guesthouses, restaurants, hotels and organic food shops, not just in Maramures but also further afield. New arrangements are now being worked out with slaughterhouses, butchers and distributors to make the beef available across the country.

“There are many challenges in developing such a green business,” explains Mrs Rodica Tiplea, whose family has invested heavily in this new scheme. “But we believe we will succeed, the animals are multiplying before our very eyes, and we are heartened by the appreciation of our visitors and customers, all of

and vice versa,” concludes Dr Lifeng Li, Director of Freshwater for WWF International. “We predict that the green economy will continue to expand throughout the next decades, and so businesses already on this track will have a huge competitive advantage. What’s more, companies and communities who are actively safeguarding their natural capital – especially water and energy – will find that ever more useful, as society faces up to the challenges presented by climate change.”

Certainly, the ‘new perspectives’ promised by this project four years ago have become a reality, and now the participating communities and companies can face the future with strengthened optimism. When nature returns, all sorts of opportunities spring up.

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

*Charlie Avis* is Project Leader of OEMN for WWF International.

Cutting the *Amorpha* reveals the basis for restoring the species-rich grassland so typical of the Tisza floodplains. *Credit: WWF/Avis*  
The majestic Maramures landscape is valued by tourists but needs to be maintained to ensure that its mosaic quality remains. *Credit: WWF/Avis*

**ICPDR MEETINGS**

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

14/1/2010	VIENNA, AUSTRIA
	<b>HANDOVER EVENT OF THE ICPDR PRESIDENCY</b>
4–5/2/2010	BUDAPEST, HUNGARY
	<b>ACCIDENT PREVENTION TASK GROUP</b>
16/2/2010	VIENNA, AUSTRIA
	<b>ICPDR MINISTERIAL MEETING</b>
23–24/2/2010	MUNICH, GERMANY
	<b>INFORMATION MANAGEMENT AND GIS EXPERT GROUP</b>
8–9/3/2010	BRATISLAVA, SLOVAKIA
	<b>ECONOMIC TASK GROUP</b>
15–16/3/2010	MUNICH, GERMANY
	<b>PROGRAMME AND MEASURES EXPERT GROUP</b>
18–19/3/2010	PRAGUE, CZECH REPUBLIC
	<b>MONITORING AND ASSESSMENT EXPERT GROUP</b>
23–24/3/2010	REGENSBURG, GERMANY
	<b>GROUNDWATER TASK GROUP</b>
12–13/4/2010	SOFIA, BULGARIA
	<b>NUTRIENT TASK GROUP</b>
15–16/4/2010	BELGRADE, SERBIA
	<b>FLOOD PROTECTION EXPERT GROUP</b>
20/4/2010	SARAJEVO, BOSNIA AND HERZEGOVINA
	<b>ACCIDENT EMERGENCY WARNING EXPERT GROUP</b>
22–23/4/2010	LJUBLJANA, SLOVENIA
	<b>PUBLIC PARTICIPATION EXPERT GROUP</b>
27–28/4/2010	SZOLNOK, HUNGARY
	<b>TISZA GROUP</b>
29–30/4/2010	REGENSBURG, GERMANY
	<b>RIVER BASIN MANAGEMENT EXPERT GROUP</b>
DW 01/10	<b>UPCOMING ISSUE</b>

**ICPDR Ministerial Meeting**

**ICPDR Presidency 2010**

**GLOWA Project**