

# DANUBE WATCH

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zum Schutz  
der Donau

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Dear readers,

2013 is the UN Year of International Water Cooperation, a great opportunity to showcase past ICPDR achievements and to prepare the way for future actions. Since the official launch of this theme year on World Water Day in Paris, I have enjoyed a number of occasions through which appreciation for the ICPDR has been expressed – for example at a Joint Program of Measures workshop held in Vienna in April and a conference on hydropower held in Ljubljana in March.

A great example for ICPDR achievement is the Joint Danube Survey (JDS3), which will be undertaken this summer. More than a mere scientific effort, JDS3 will be a link between the ICPDR and those it serves: the people of the Danube River Basin. Public events and communication measures will help raise awareness for the importance of monitoring and environmental protection.

2013 is also a year in which transitions occur among the people behind the successful ICPDR work. After ten years at the helm of the ICPDR Secretariat, Philip Weller will leave the position as Executive Secretary. Many essential steps that the ICPDR undertook in the past decade received his crucial support: active engagement of the private sector through the Business Friends of the Danube, the exchange on navigation through the Joint Statement process, or outreach activities such as Danube Day are only a few examples. I take this opportunity to thank Mr. Weller for his work and wish him all the best for his professional and personal future.

As of August, Ivan Zavadsky will be the new Executive Secretary of the ICPDR Secretariat. Mr. Zavadsky is a water manager with ample experience on many levels – nationally as well as in the UN system, from the policy side as well as project management perspective – and very familiar with the conditions and needs of the Danube River Basin. As a former project manager of the UNDP/GEF-funded Danube Regional Project, he will be familiar to many important actors in the Danubian water sector. I am looking forward to working with Mr. Zavadsky and welcome him to the ICPDR family.

Finally, it is my pleasure to thank Mihaela Popovici for her 15 years of work at the ICPDR Secretariat. Through her exceptional work, she affected the lives of many people in the Danube Basin, which is reflected in the large number of appreciative addresses that Dr. Popovici received as the end of her career approached. Dr. Popovici has retired from her post as Technical Expert for Water Quality and in the name of the ICPDR, I wish her all the best.

2013, the UN Year of International Water Cooperation – it is international cooperation that has made the ICPDR a success story. In times of transition, good will and a spirit of shared responsibility will ensure that the ICPDR will continue to be a success.

*Ermina Salkičević-Dizdarević*  
ICPDR President 2013



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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.



## FORMER CROATIAN HEAD OF DELEGATION MR. ŽELJKO OSTOJIĆ PASSES AWAY

It is with deep sadness and sorrow that the ICPDR has received the news about the death of Mr. Željko Ostojić, former Croatian Head of Delegation to the ICPDR. Mr. Ostojić died on 4 May 2013 after a long and hard illness, a loss not only to his family, but also to the water management community and not last for the ICPDR, which Mr. Ostojić shaped crucially for many years. He will be remembered by the ICPDR community as a great expert, professional, colleague and a true friend. Mr. Ostojić's contribution and personal dedication to the ICPDR are highly valued and will be remembered.



## TECHNICAL GUIDANCE ON FISH MIGRATION AIDS

The ICPDR has published a manual with practical advice for measures that aim to ensure fish migration at transverse structures such as dams and weirs. The document "Measures for ensuring fish migration at transverse structures", which can be downloaded from [icpdr.org](http://icpdr.org) or ordered in print at the ICPDR Secretariat, aims to inform the Danubian countries on solutions for restoring river continuity. For this publication, several guiding documents for the construction of fish passes were reviewed and taken into consideration by the authors Stefan Schmutz and Carina Mielach.

**Download the guidance document here:**  
[www.icpdr.org/main/publications/guidance-documents](http://www.icpdr.org/main/publications/guidance-documents)



## CLIMATE ADAPTATION STRATEGY PUBLISHED IN PRINT

Last December, the ICPDR adopted its "Strategy on Adaptation to Climate Change". This technical document was now published in print with an improved layout. You can order copies at the ICPDR Secretariat or download the lay-outed version from [icpdr.org](http://icpdr.org). The development of the strategy followed a request by the Danube Ministerial Conference in 2010. The strategy, which was finalised in late 2012, will add important aspects to the Danube River Basin Management Plan of 2015.

**Download the climate adaptation strategy here:**  
[www.icpdr.org/main/publications/programmes](http://www.icpdr.org/main/publications/programmes)



Phil Weller



Ivan Zavadsky

## TRANSITIONS 1: IVAN ZAVADSKY SUCCEEDS PHIL WELLER AS EXECUTIVE SECRETARY

After 10 years at the head of the ICPDR Secretariat, the term of Phil Weller as Executive Secretary of the ICPDR is coming to an end. The ICPDR owes many of its core activities to initiatives set by the Canadian environmental scientist, such as Danube Day, the Danube Box or the cooperation with major corporations through the "Business Friends of the Danube". As of August 2013, he will be succeeded by Ivan Zavadsky, already well-known to many members of the ICPDR family. The Slovak water management expert has worked at the UN Global Environment Facility (GEF) in Washington, but before that, he was responsible for the UNDP/GEF Danube/Black Sea Regional Programme and the UNDP/GEF Danube Regional Project, assisting in the implementation of the Danube River Protection Convention. He will be introduced in more detail in the next issue of Danube Watch.



## TRANSITIONS 2: MICHAELA POPOVICI RETIRES, ÁDÁM KOVÁCS NEW TECHNICAL EXPERT

After 15 years as the Technical Expert for Pollution Control, Michaela Popovici has retired. Prior to joining a very different ICPDR Secretariat in 1998, she worked in the field of water resource management and environmental protection first at the Water National Council and later at the Ministry for Water, Forestry and Environmental Protection of Romania for 27 years. She will be succeeded by Ádám Kovács, a Hungarian civil engineer with a specialisation in environmental modelling and watershed management. Mr. Kovács, who has joined the Secretariat as of 1 June 2013, graduated from Budapest University of Technology and Economics before pursuing research for a PhD at the Vienna University of Technology.



## NEW POSITION: ZORAN MAJOR NEW TECHNICAL EXPERT FOR GIS

Mr. Zoran Major is the third new staff member to welcome at the ICPDR Secretariat. As a new Technical Expert for GIS, he will support Alex Höbart to deal with mapping and GIS work. Prior to joining the secretariat, Mr. Major worked at the Croatian National Mapping Agency as the Head of Unit for Quality control and Cartographic databases. Other previous employers of the Croatian geodesist include the Croatian Environment Agency, the OIKON Institute for Applied Technology and International Organisations.



## Turning the Danube into a classroom: Danube Challenge 2013

An innovative programme is combining new media and physical challenges to get teenagers away from their desks and out to the riverbanks to learn about important river habitats and how to protect these valuable water resources.

The Danube Challenge uniquely combines adventure, fun and knowledge transfer on the important topic of water. The Danube Challenge is one of the largest campaigns for awareness-raising among young people in Europe. © Andi Bruckner

In 2012, 56 school classes from all over Austria were invited to leave their classrooms behind to spend the day at the river. Creative challenges waited for them at four locations: Donau-Auen National Park in Stopfenreuth, the Donau-Auen National park in Lobau, Engelhartzell and the Milser Au. This year, some 1500 students will participate in the Danube Challenge event on the Danube River in Stopfenreuth on June 20.

The Danube challenge was launched in 2007 by Coca-Cola Hellenic and Generation Blue, the youth water platform of the Austrian Ministry of Environment. The aim of the Danube Challenge is to highlight the importance of the Danube and its tributaries and to raise awareness among young people for the sustainable use of water resources. The Danube Challenge offers a day of adventure in the Donau-Auen National Park where students learn about the Danube River as a habitat, and where having fun is a top priority. "The Danube Challenge creates a sense of enthusiasm that wouldn't come about in a classroom, because it takes place out in nature", says Susanne Lontzen, Public Affairs & Communications Director for Coca-Cola Hellenic. "And the teenagers get a new awareness for water as a habitat as a 'side effect'", says Lontzen.

**Putting knowledge into action.** The various challenges students face capture their imagination through fun activities related to creating a river course, complete with bridges, ships, towns, plants, dams, etc. To build their river courses, students collect natural materials from riverbanks, in the riverine forests or on the gravel bar. Furthermore, their success on quizzes or action challenges can win them upgrades, in the form of useful tools such as shovels, rakes or buckets.

"The challenge activities were chosen to build water knowledge", says Susanne Brandstetter of the Austrian Ministry of Agriculture, Forestry, Environment and Water Management, "but also to build complementary skills like teamwork and cooperation".

**It all starts with drinking water.** To qualify for the Danube Challenge, students took part in the 'Aktion Trinkpass' initiative in spring to look at their own water consumption habits in a playful way. The Trinkpass campaign was launched by Generation Blue and Römerquelle, bottled by Coca-Cola Hellenic Austria. For two weeks, participants kept track of their water consumption in their Trinkpass, to learn about how important it is to drink enough water and to contribute to improving the daily diet of school kids.

Participants submitted their completed Trinkpass along with an original artwork – this year's creative task was to draw a fantasy fish. Winners, selected by a jury, were invited to participate in the Danube Challenge with their entire class.

The Trinkpass initiative and the Danube Challenge as a whole has been an overwhelming success, with teachers across the country requesting over 32,000 Trinkpass packets. "The strong cooperation and vast experience from both Coca-Cola Hellenic and the Ministry of Agriculture, Forestry, Environment and Water Management make this initiative a special one, and one of the largest awareness-raising campaigns for young people in Europe", says Brandstetter.

**Building an online fan base.** The Danube Challenge has relied on the successful youth platform Generation Blue ([www.generationblue.at](http://www.generationblue.at)), which provides the possibility to share relevant information as well as pictures, videos and other content. Incorporating social media was an important part of the programme, and a clear communication has been a target from the beginning. "It is important to use modern tools to reach out to our target group and use social media to mobilise and connect young people with water issues", says Brandstetter.

Participating classes will present their self-designed ecosystems to a wide community through the programme's Facebook page ([www.facebook.com/danubechallenge](http://www.facebook.com/danubechallenge)) and that online community will choose the overall winner.

Last year's winning class with over 550 fans, the 4C class from HS Pöchlarn, met with Austrian Federal Minister Nikolaus Berlakovich and were treated to a trip down the Danube River on a police boat. The class was also rewarded a supply of Römerquelle water from Coca-Cola Hellenic. "My pupils loved the day in nature; they were really enthusiastic", said Rosemarie Fasching, teacher at HS Pöchlarn. "During the last four years, our class has been carrying out a project on the Danube, since we all live close to the river. The Danube Challenge and our victory has been a great highlight."

In the end, the greatest success of the Danube Challenge is that it's putting the power into the hands of young people. "Students are the decision makers of tomorrow and will be responsible for our environment in the future", says Lontzen. "We see it as part of our social responsibility to impart knowledge about the environment and resources to them."

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

"Water is life – for all of us. Fortunately, Austria has huge water reserves, but we want to create awareness that these reserves must be protected, and of course we start with young people", says Susanne Lontzen, Public Affairs & Communications Director for Coca-Cola Hellenic.

"The Danube Challenge allows participants the unique experience of getting in touch with water, being creative and learning a lot in an outdoor classroom – that's a big advantage for students and teachers alike", says Susanne Brandstetter of the Austrian Ministry of Agriculture, Forestry, Environment and Water Management.

## Joint Danube Survey 3: Getting information on the world's biggest river expedition

An international crew of scientists aboard three ships will travel the Danube this summer to assess water quality and raise public awareness for the work needed to protect the Danube River.



The 'Joint Danube Survey 3' (JDS3) will be launched on August 14, 2013 in Regensburg, Germany. Overall, nearly 100 sites on the Danube River will be sampled by the three JDS3 boats which will travel through ten countries before reaching the Danube Delta in late September – JDS3 will be among the world's biggest river research expedition to date! However, JDS3 is not only a scientific effort – it is also a means to promote the work of the ICPDR through a special website, public events in nine countries and wide-spread communication.

The main goals of JDS3 are to produce highly comparable and reliable information on water quality and pollution from a single source and on parameters not covered by regular monitoring – but also to link the people of the Danube countries with the work of the JDS3 scientists and the ICPDR. The latter will be achieved through active communication work and a series of public events.

**Getting the public involved.** Currently, a series of nine public events are foreseen to be held in an effort to satisfy the curiosity of the general public. The crew of scientists will join policy makers and water managers in press conferences and public talks. Journalists will be provided with in-depth information through press releases and detailed fact sheets, which will also be posted on the JDS3 website [www.danubesurvey.org](http://www.danubesurvey.org) – which contains a special section for media.

The ICPDR will publish a flyer with key information on JDS3, which will be disseminated in English and selected national languages at the public events. At the heart of the communication efforts, the website will link photographs, data and reports almost 'live' from the ships with readers from all over the Danube Basin and beyond.

Highlighting a wide range of supporters. Several of the ICPDR's observer or-

The international crew of scientists working aboard the three JDS ships will assess water quality according to chemical and ecological criteria. © ICPDR/Liska

ganisations such as the DANUBEPARKS network of protected areas plan their own events linked to JDS3 and more activities are likely to come up in the weeks before the launch of the survey. Corporate partners such as the Coca-Cola System or Donauchemie will also be present at some events and present their work related to water management.

Those who are interested in the final results of JDS3 will have to be a bit more patient: the final reports will be developed over the course of months until autumn 2014. Until then, many findings will be announced "live" on the website, at press conferences and through press releases.

*Benedikt Mandl* is the Technical Expert for Public Participation and Communication in the ICPDR Secretariat, and the Executive Editor of Danube Watch.

### GET INVOLVED

A key aspect of JDS3 is communication and the involvement of the public. To achieve this, the official JDS3 website [www.danubesurvey.org](http://www.danubesurvey.org) will be frequently updated during the survey in August and September. In addition, the following public events will be organized:

(DE)	<b>Regensburg</b>	14 August
(AT)	<b>Vienna</b>	20 August
(SK)	<b>Gabcikovo</b>	22 August
(HU)	<b>Budapest</b>	27 August
(HR)	<b>Vukovar</b>	01 September
(RS)	<b>Belgrade</b>	05 September
(BG)	<b>Ruse</b>	17 September
(UA)	<b>Vilkovo</b>	24 September
(RO)	<b>Tulcea</b>	26 September

## Preparing for "The future we want": The 2013 Budapest Water Summit

An upcoming summit in the Danube Basin will bring together water-related developments from around the world as part of the UN International year of Water Cooperation and a follow up to the UN Conference on Sustainable Development (the Rio+20 conference).

In July 2010 the United Nations General Assembly recognised the right to safe and clean drinking water and to sanitation as a human right that is essential for the full enjoyment of life in dignity. Then the Rio+20 UN Conference on Sustainable Development in June 2012 confirmed the cross-cutting importance of water in sustainable development. In the overarching development policy framework – laid down by the Rio+20 outcome document "The Future We Want" – water as horizontal issue is inextricably linked to the majority of priority areas identified for global action.

At the Rio+20 conference, János Áder, President of Hungary, announced an international conference to promote the post-Rio water agenda will be held in Budapest, Hungary. This conference – the 2013 Budapest Water Summit – will be organised in cooperation with UN institutions and the World Water Council, and will form part of the events of the UN International Year of Water Cooperation led by UNESCO.

**Bringing together solutions.** The main objective of the 2013 Budapest Water Summit, which will be held on 8-11 October 2013, is to take stock of the various developments, in and outside the UN system, in the preparation of water-related sustainable development goals under the Rio+20 agenda. The Budapest Water Summit will serve as a policy forum to facilitate consensus-building amongst stakeholders concerning the water and sanitation sustainable development goals and will ad-



To promote the post-Rio water agenda, the President of Hungary announced Hungary's intention to host the 2013 Budapest Water Summit as part of the UN International Year of Water Cooperation led by UNESCO. © Péter Kovács/Hungary

### PRE-EVENT FOCUSING ON THE TISZA RIVER BASIN

In light of the Budapest Water Summit's goal of highlighting water-related issues of international scope and scale, the US National Science Foundation's Integrative Education Research and Traineeship (IGERT) Fellowship Programme of Southern Illinois University Carbondale has submitted a proposal for a formal pre-event to focus on the current status, challenges and opportunities in the Tisza River Basin.

The IGERT programme aims to train a diverse team of PhD students using team-based collaboration to integrate science, management and policy at the river basin level; this year's team is analyzing the Tisza River Basin. The ICPDR is currently hosting one of the doctoral students, to provide data and on-the-ground experience during her research.

To complement and illustrate the issues and principles of the Budapest Water Summit, the IGERT team is planning to develop a half day event consisting of a Plenary Session; a Panel Discussion with 2-3 Breakout Workshops and a Poster Session for graduate students to present hydrological, ecological and river connectivity-related research.

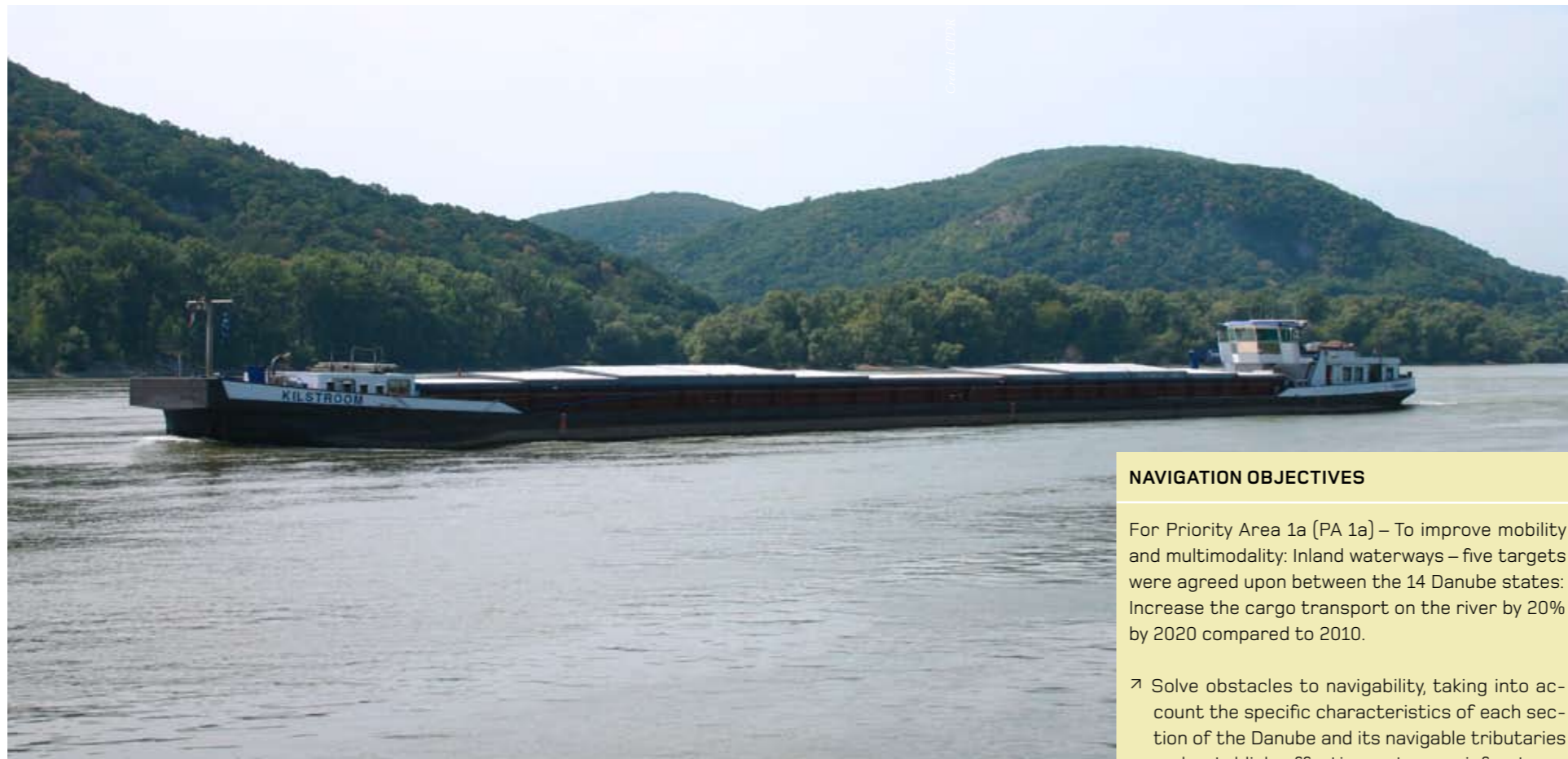
dress the following subjects: Striving for universal access to water and sanitation, Integrated water resources management for the 21st century, Good water governance, Green economy for blue water and financing of water-related development goals.

The Budapest Water Summit will address these issues in a complex and interconnected manner combining policy, scientific, financial-economic as well as governmental and non-governmental approaches and inputs. The results will be summarised in a 'Budapest Recommendations' document. The main policy discussions of the Summit will be accompanied by parallel and interconnected events – including a Science Forum, Youth Forum, Civil Forum, Business Leaders Forum and Expo and a Philanthropy Roundtable – to enhance cooperation between stakeholders.

**For more information, please visit:** <http://budapestwatersummit.hu/index>

*Diana Heilmann* is a Project Staff member for Tisza River Basin Management at the ICPDR Secretariat.

One major milestone for Priority Area 1a on navigation was the signing of the Declaration on Effective Waterway Infrastructure Maintenance on the Danube and its Navigable Tributaries, which stresses obligations to maintain the fairway to a good standard.  
© ICPDR/Liska



## Enhanced Cooperation – A closer look at navigation in the EU Strategy for the Danube Region

Two years after the Danube Strategy was launched, and it looks like smooth sailing for the strategy's Priority Area 1a – Navigation.

**The EU Strategy for the Danube Region (EUSDR) is a macro-regional strategy adopted by the European Commission in December 2010 and endorsed by the European Council in 2011. The Strategy seeks to create synergies and coordination between existing policies and initiatives taking place across the Danube region and addresses 4 thematic pillars and 11 priority areas.**

Coordinating efforts across the Danube River Basin. Each priority area is managed by two Priority Area Coordinators (PACs); the Navigation Priority Area is led by Austria and Romania. To coordinate the discussion on existing and proposed projects in line with the objectives set for Priority Area 1a, the PACs together with the Steering Group established five thematic Working Groups: waterway infrastructure and management, ports and sustainable freight transport,

fleet modernisation, River Information Services and education and jobs.

A Steering Group advises and assists the implementation of PA 1a and ensures that actions are anchored all over the region and in all participating states. Furthermore, the Steering Group is responsible for the labelling of projects. Working Groups serve as a dialogue platform between waterway administrations and the Danube Commission, as well as public and private stakeholders. To tap the latest available knowledge for the Strategy's implementation, regional and international experts are consulted and invited to the sessions of the Working Groups.

**Assessing the progress.** In April 2013, the European Commission published the first Progress Report concerning the implementation of the EUSDR. The paper

### NAVIGATION OBJECTIVES

For Priority Area 1a (PA 1a) – To improve mobility and multimodality: Inland waterways – five targets were agreed upon between the 14 Danube states: Increase the cargo transport on the river by 20% by 2020 compared to 2010.

- Solve obstacles to navigability, taking into account the specific characteristics of each section of the Danube and its navigable tributaries and establish effective waterway infrastructure management by 2015.
- Develop efficient multimodal terminals at river ports along the Danube and its navigable tributaries to connect inland waterways with rail and road transport by 2020.
- Implement harmonised River Information Services (RIS) on the Danube and its navigable tributaries and ensure the international exchange of RIS data preferably by 2015.
- Solve the shortage of qualified personnel and harmonise education standards in inland navigation in the Danube region by 2020, taking duly into account the social dimension of the respective measures.

promotes concrete transnational projects which have a strong impact on the region and focuses on the region's political importance through strategic support at the ministerial level.

Furthermore, at the latest meetings of the Working Groups and the Steering Group in Linz, held 16-18 April 2013, more than 100 participants discussed the progress of the EUSDR's Priority Area 1a, among these representatives from ministries of the Danube countries, the European Commission, the navigation industry, international industry associations, national and local authorities, inter-governmental and non-

governmental organisations, universities and research institutions as well as project coordinators.

**Reaching milestones.** A big step in implementing the goals for Priority Area 1a was the signing of the Declaration on Effective Waterway Infrastructure Maintenance on the Danube and its Navigable Tributaries at the Danube Ministers Meeting on 7 June 2012 in Luxembourg. The Declaration reasserts existing obligations to maintain the fairway to a good standard, and foresees monitoring and reporting on the implementation of the actions in the framework of Priority Area 1a.

On the project level, more than 90 projects have been reported to or identified by the Coordinators of PA 1a which are relevant for the implementation of the defined measures. The PACs promote concrete transnational projects and new initiatives to action in the region.

Another achievement is the coordinative support concerning different national and EU policies and funds with the aim to create more coherence and better results regarding the improvement of mobility and multimodality on inland waterways. This includes strengthening internal implementation structures to ensure sustainable leadership and strategic planning, to monitor continuously the implementation of all Priority Areas with a focus on specific challenges and to report calls on EU Member States to incorporate the targets of the EUSDR into the new generation of programmes for the 2014-2020 period.

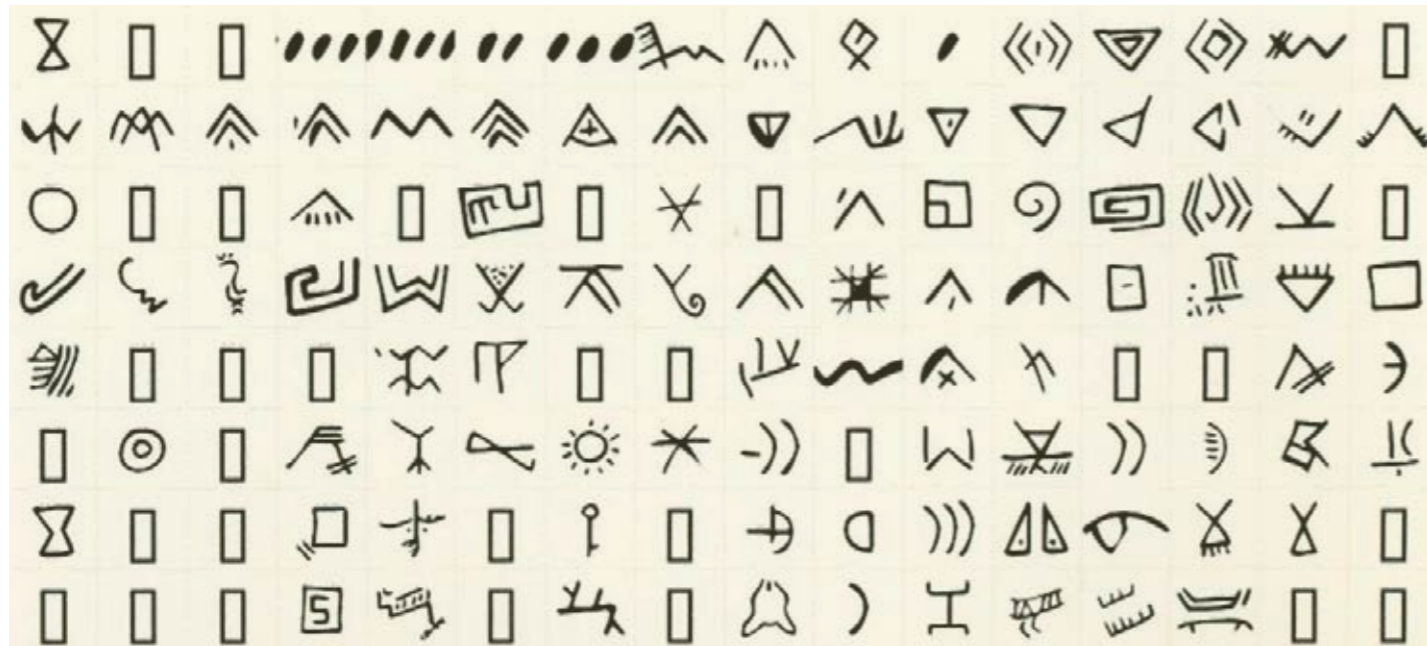
**Taking cooperation to another level.** For successful implementation of the EUSDR, horizontal cooperation with other PACs is crucial. Cooperation with Priority Area 6 on biodiversity contributes to the sustainable implementation of the Joint Statement on Guiding Principles Concerning the Development of Navigation and Environmental Protection in the Danube River Basin. The Joint Statement summarises principles and criteria for environmentally sustainable inland navigation on the Danube and its tributaries, including the maintenance of existing waterways and the development of future waterway infrastructure.

It is this kind of intense cooperation that will contribute to meeting the EUSDR goals for navigation – and for all of the Pas – across the entire Danube River Basin.

**For more information on the EU Strategy for the Danube Region and Priority Area 1a on inland waterways, please visit: [www.danube-navigation.eu](http://www.danube-navigation.eu).**

*Markus Simoner* is the team leader of "Infrastructure Development" at the Austrian waterway management company via donau and head of the Technical Secretariat for the EU Danube Strategy's Priority Area 1a. *Judith Löschl* is project assistant in the Technical Secretariat and is in the process of finalising her studies in spatial planning at the Vienna University of Technology.

**Working with other Priority Areas is crucial, and cooperation with Priority Area 6 on biodiversity contributes to the sustainable implementation of the Joint Statement on Guiding Principles Concerning the Development of Navigation and Environmental Protection in the Danube River Basin.**



The first known form of a writing system anywhere in the world was created in the Vinča culture, with about 700 characters and symbols, mainly carved in pottery goods.  
© H. Schiller

## Uncovering prehistoric Danube culture

At its peak, the Vinča culture along the banks of the Danube, with major advances in writing and farming, was the most sophisticated Neolithic culture in the world.

Though the Vinča culture has been largely forgotten today, this highly sophisticated, prehistoric culture found along the banks of the Danube River was once the largest civilisation in Europe. The Vinča culture existed long before others appeared in Mesopotamia or Egypt, and many of its innovations – in writing, farming and copper metallurgy – are some of the earliest examples of technological advancements, not just in Europe, but in the world.

In 1908, Serbian archaeologist Miloje Vasić discovered a prehistoric settlement on Belo Brdo Hill close to the village of Vinča, a site located 14 km downstream of Belgrade on the right bank of the Danube River. This Neolithic archaeological culture was named Vinča Culture after the first excavation site. Additional sites were found in Serbia and in neighbouring countries.

It is estimated that this culture began around 7800 - 7500 years ago and lasted more than a thousand years, after which most settlements were destroyed and abandoned. The major historical sites associated with this culture were located at Vinča, Lepenski Vir, Belovode and Vršac.

**Life in the Vinča culture.** The people of the Vinča-Danube civilisation lived in permanent settlements of hundreds to a few thousands of people – relatively large for communities of the Neolithic era. Houses were made of clay in wattle and daub construction, built on a foundation of stones and gravel and sometimes fixed with mortar.

The use of domesticated animals and the cultivation of crops was common. The Vinča developed the first known cereal agriculture, especially of wheat, oat and barley. A kind of plough, possibly pulled by cattle, was used to cultivate the soil. In addition to farming, villagers relied on hunting, fishing and foraging for sources of food.

Weaving textiles was generally common in the Vinča culture, with the basic material probably flax, though perhaps nettle or wool were also used. Small weights found at some excavation sites give evidence that vertical loom weaving was used, where small weights – made of clay and marked with signs or a number – were placed at the ends to weigh down threads.

**Cultural innovations.** The first known form of a writing system anywhere in the world was created in the Vinča culture, with about 700 characters and symbols, mainly carved in pottery goods. Some of the signs are figurative, but more than 80% are abstract.

Though the Vinča symbols have not yet been translated, one kind of symbol is related to numbers and was probably used for notations such as marking or indication.

Vinča pottery had a high level of sophistication, and temperatures up to 1000°C were reached in special pottery kilns. They produced kitchen ware, such as plates, cups, howls, pots and other vessels, as well as high quality fine ceramics probably used for religious rituals. Most ceramics were decorated and especially on the fine ritual pieces, signs and symbols were engraved sometimes as seals but often as a type of writing. Many female figurines were found, but also figures of males and animals, as well as vases, amulets and various altars were found in the excavations. Strange hybrid figurines, such as female statuettes with bird faces, were typical for the Vinča culture.

Evidence shows the Vinča used copper vessels and other copper items, indicating an early copper age – about 1000 years before it appeared in Central Europe. At that time, copper ore could be found in the Balkan Mountains and possibly also in the Carpathians. Evidence of copper smelting was found south-east of Belgrade, at the excavation sites of Rudna Glava and Belovode.

**Neolithic neighbours.** The Vinča culture was the most highly developed culture in south-east Europe in Neolithic times, however other cultures existed in neighbouring regions with many shared influences. All these Neolithic cultures are generally known under the term ‘Old European Danube Civilisation’.

North of the Vinča were the Lengyel and the Tisza cultures, in the east was the Karanovo culture, and the Hamangia, Cernavoda and the Varna cultures were situated close to the coast of the Black Sea. At a necropolis near the city of Varna, many golden artefacts were found. This ‘Varna Gold Treasure’ was made between 6500-6400 BP and is the oldest known gold-smithy in the world.

The Cucuteni culture was prevalent in the Carpathian Mountains and further northeast in the Siret and Prut River Basins. The Cucuteni culture is remarkable for huge city-like settlements with populations of up to 10,000 people, which is an enormous number for the Neolithic and Copper Ages. The Cucuteni culture developed a little later than the Vinča, but in quality is rather similar. It is likely that knowledge from the Vinča spread to the Cucuteni.

**A disappearing act.** What is still not understood about the Vinča is why the culture vanished nearly 6200 years ago. One reason for the culture’s disappearance could be the beginning of the Indo-European

an migration of the Kurgan people from the eastern steppes to the west. But why was the knowledge of so many cultural advances lost? Some researchers believe that much of that knowledge shifted to Greece and supported the development of Greek culture.

Equally puzzling is how it was possible for such a sophisticated culture to develop more or less isolated in the Danube region. Most likely, the skills developed by the Vinča and other Danube cultures were based on existing knowledge, perhaps with some influence coming from Anatolia or further east. Wherever the influence came from, the innovations of the Vinča culture – in writing, farming, metallurgy – were phenomenal for this Old European Danube Civilisation.

*Karl Wachter* is a civil engineer and a senior Danube expert from Austria.

Vinča pottery, such as this piece found in Lepenski Vir, had a high level of sophistication, and temperatures up to 1000°C were reached in special pottery kilns. Many female figurines were found, but also figures of males and animals, as well as vases, amulets and various altars were found in the excavations. ©Wachter



Evidence shows the Vinča used copper vessels and other copper items, indicating an early copper age – about 1000 years before it appeared in Central Europe.



## Taking the right steps: A follow-up project for the Danube River Basin Management Plan

An EU-funded project has strengthened the likelihood for success in implementing water management plans in the Danube Basin by addressing needs at the transboundary level and providing all stakeholders with the tools they need to meet requirements. To facilitate discussions between relevant experts and stakeholders several workshops and a conference have been organised in the frame of this EU-Grant project.

In 2010, the ICPDR received a grant from the European Union to implement projects over a two-year period to aid implementation of the Danube and Tisza River Basin Management Plans. The main objective was to support activities related to filling data gaps in the Danube River Basin Management Plan, integrating environmental concerns and water aspects and incorporating other sector policies into river basin management as well as to incorporate climate change into river basin management. To

meet these ends and to bring relevant experts and stakeholders together to discuss on specific issues, five workshops were held on WFD ecological status assessment, hydropower, river and habitat continuity, agriculture and the Joint Programme of Measures, as well as a larger conference on hydropower and water management all supported by the EU Grant - DRBMP-2012.

*Diana Heilmann* is a Project Staff member for Tisza River Basin Management at the ICPDR Secretariat.

### **WORKSHOP ON EU WFD ECOLOGICAL STATUS ASSESSMENT** 26-28 September, 2011 Senec, Slovakia

The workshop was an opportunity for Bosnia and Herzegovina, Moldova, Montenegro, Serbia and Ukraine to improve the data collection process and the evaluation methods of biological quality elements for the assessment of ecological status as required by the EU Water Framework Directive.

### **WORKSHOP ON HYDROPOWER AND WATER MANAGEMENT** 21-22 February, 2012 Timișoara, Romania

Organised by Romania in cooperation with Austria, Slovenia and the ICPDR Permanent Secretariat, participants shared experience on balancing the requirements of renewable energy development and the EU Water Framework Directive, and gave feedback on the 'Assessment Report on Hydropower



Generation in the Danube River Basin' and gathered input for the development of the 'Guiding Principles on Hydropower Generation for the Danube River Basin'.

### **WORKSHOP ON RIVER AND HABITAT CONTINUITY** 4-5 September, 2012 Vienna, Austria

Supporting activities to address pressures from river and habitat continuity interruptions, the workshop, organised by Austria and the ICPDR Permanent Secretariat, included theoretical sessions on the Ecological Prioritisation Approach helping to identify priority barriers for continuity restoration measures on the basin-wide scale, and discussion towards the development of the ICPDR Technical Paper on Fish Migration Aids. In addition, the workshop included excursions to three fish migration aid sites to gain insight into practical solutions.

### **WORKSHOP ON AGRICULTURE AND WATER MANAGEMENT** 5-6 November, 2012 Bucharest, Romania

To aid the dialogue between agriculture and water management, this workshop brought stakeholders together to identify the obstacles or constraints of measures related to the agriculture sector in the Danube and Tisza River Basins, discuss how those activities impact water ecosystems and to develop appropriate solutions.

### **CONFERENCE ON HYDROPOWER AND WATER MANAGEMENT** 26-27 March 2013 Ljubljana, Slovenia

Organised by Slovenia and the ICPDR Permanent Secretariat, this conference was held to discuss the results of work over the last two years to build a dialogue between energy and environment administrations, the hydropower sector, NGOs and the scientific community. The

conference introduced and allowed for discussions of the draft 'Guiding Principles on Sustainable Hydropower Development in the Danube Basin' document, and included presentations of practical examples for its application.

### **WORKSHOP ON JOINT PROGRAMME OF MEASURES** 4-5 April, 2013-05-10 Vienna, Austria

The ICPDR held this workshop to provide an overview on the status of the implementation of the Danube Joint Programme of Measures as well as to learn about funding needs and existing potential funding opportunities for the implementation of the committed measures. The workshop served as a platform to summarise the commitments of the Danube countries and discuss future actions to reach the Danube-wide objectives.





Looking for funding can be one of the biggest challenges Danube countries face in implementing the Joint Programme of Measures. Fortunately, several EU financing instruments are available. © ICPDR/Leitner

## Finding financing: Funding options for the Joint Programme of Measures

Danube countries face a number of challenges in their efforts to meet the objectives of the EU Water Framework Directive. One of the biggest challenges may be finding financing instruments to help fund activities needed to address those objectives.

The interim report on the Joint Programme of Measures, published by the ICPDR in 2012, showed considerable success towards meeting the goals of the EU Water Framework Directive (WFD). Water quality has improved since 1995, mainly due to the impact of investments in pollution

control measures such as sewage systems or wastewater treatment plants. However, significant financial resources are required to put in place a lot of the measures needed to achieve the WFD objectives. While several funding programmes are available, many of those will soon be changing and

Danube countries must become familiar with the new financial instruments to find ways to help fund the measures needed to meet the WFD objectives.

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

## Common Strategic Framework Funds

The Common Strategic Framework Funds will replace the previous European Structural and Investment Funds, and include the Cohesion Fund, the European Regional Development Fund, the European Social Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund. The new framework will set clear investment priorities for 2014-2020 and will provide a single source of guidance for all five funds, strengthening the integration of EU policies and ensuring greater efficiency, while avoiding duplication and reducing administrative burdens.

Eligible Danube countries:  
Austria, Bulgaria, the Czech Republic, Germany, Hungary, Romania, Slovakia and Slovenia

For more information, please visit: [http://ec.europa.eu/regional\\_policy/what/future/index\\_en.cfm](http://ec.europa.eu/regional_policy/what/future/index_en.cfm)

## Danube Transnational Programme

The legislative package for the next period of EU financing for 2014-2020 established a new transnational programme for the Danube region as part of the European Territorial Cooperation programme. The new Danube Transnational Programme covers the same region as the EU Strategy for the Danube Region, and will work to develop and implement macro-regional and sea basin strategies within the thematic objective of enhancing institutional capacity and efficient public administration.

Eligible Danube countries:  
Austria, Bulgaria, Bosnia and Herzegovina, Croatia, the Czech Republic, Germany, Hungary, Moldova, Montenegro, Romania, Serbia, Slovakia, Slovenia and Ukraine

A website for this programme is not yet available. Visit [http://ec.europa.eu/regional\\_policy/index\\_en.cfm](http://ec.europa.eu/regional_policy/index_en.cfm) to check on the programme launch.

## South East Gateway Programme

The South East Gateway Programme covers the Adriatic, Ionian and related areas, and will replace the current South East Europe and the Instrument for Pre-Accession Cross Boarder Cooperation Adriatic programmes. The South East Gateway Programme will ensure continuity of cooperation and guarantee the implementation of any future strategy or cooperation.

Eligible Danube countries:  
Austria, Bosnia and Herzegovina, Croatia, Montenegro, Serbia and Slovenia

A website for this programme is not yet available. Visit [http://ec.europa.eu/regional\\_policy/index\\_en.cfm](http://ec.europa.eu/regional_policy/index_en.cfm) to check on the programme launch.

## Central Europe

Central Europe is an EU programme that encourages cooperation among the countries of central Europe to improve innovation, accessibility and the environment and to enhance the competitiveness and attractiveness of their cities and regions. Central Europe provides funding to transnational cooperation projects involving technology transfer and business innovation, sustainable public transport and logistics, environmental risk management and climate change, energy efficiency and renewable

energies, demographic change and knowledge development, cultural heritage and creative resources.

Eligible Danube countries:  
Austria, the Czech Republic, Germany, Hungary, Slovakia, Slovenia and Ukraine  
The transnational partnership must involve a minimum of three partners from at least three countries, and at least two of the countries should be EU Member States.

For more information, please visit: [www.central2013.eu](http://www.central2013.eu)

## LIFE

The LIFE programme is the European Union's funding instrument for the environment with the general objective to contribute to the implementation, updating and development of EU environmental policy and legislation by co-financing pilot or demonstration projects. The programme's structure for 2014-2020 is made up of two sub-programmes covering the environment (including environment and resource efficiency, nature and biodiversity and governance and information) and climate action (including adaptation, mitigation and governance and information). In addition to funding for projects and NGO operating grants, the new structure includes funding for Integrated Projects, to aid the implementation of plans, programmes or strategies required by EU environmental or climate legislation. This larger scale Integrated Projects aim to involve stakeholders in the areas of nature, water, waste, air, climate mitigation and adaptation.

Eligible Danube countries:  
Austria, Bulgaria, Croatia, the Czech Republic, Germany, Hungary, Romania, Slovakia and Slovenia

For more information, please visit: <http://ec.europa.eu/environment/life/funding/lifeplus.htm>

## Danube Day 2013: Celebrating rivers in 14 countries

For a decade, Danube Day festivities have linked local activities with an international perspective and brought the basin together to celebrate the Danube in the world's largest river festival.



In every Danube Basin country, Danube Day festivities have their own special flavour, ranging from educational lectures on environmental topics to fun events that show how important rivers and their ecosystems are to our lives. © ICPDR/Blue Rivers, UA



For the tenth time, Danube Day will be celebrated on the 29<sup>th</sup> of June 2013 with the motto "Get active for the sturgeons!". Hundreds of organisations in all 14 countries of the Danube Basin have been preparing for events in June, transforming it into a "month of river celebrations" from the Black Forest to the Danube Delta. Read on for a short preview of what to expect of Danube Day in the 'UN International Year of Water Cooperation'.

"Shared waters – joint responsibilities" is a motto often used by the ICPDR to highlight that rivers connect people and commit them to joint actions to improve water quality. This happens on various levels – from the international roof-level to the local grass-root environmental activity. Danube Day on the 29<sup>th</sup> of June celebrates all of these efforts and invites tens of thousands of people throughout this unique river basin to join in the world's biggest river festival. This year, it will do so in the light of a very special group of fish: "Get active for the sturgeons!" will be the motto, which will highlight habitat protection, fish migration and poaching which has driven Danube sturgeons to the brink of extinction.

**Building on successful cooperation.** The 29th of June 1994 was the day on which the major countries of the Danube Basin signed the convention that set up the ICPDR: the "Danube River Protection Convention". Since then, remarkable progress has been made in improving water quality in the Danube and its main tributaries. The celebrations of Danube Day link the local initiatives and people with this international perspective. Last year, no less than 350 events were organised through over 900 partner organisations. For 2013, the 'UN International Year on Water Cooperation', even more events are expected.

**Offering something for everyone.** Take a look at [www.danubeday.org](http://www.danubeday.org) to learn about events in your country or region. In every Danube Basin country, the festivities have their own special flavour, ranging from educational lectures on environmental topics to fun events that show how wonderfully rivers add to recreation. And yet the 10th Danube Day has succeeded in providing a frame that contains the entire basin, mobilising people in 14 countries.

In Germany, for example, celebrations will take place at a sturgeon breeding site; in Austria, slack-liner Lukas Irmeler will cross

the Danube Canal of Vienna; Slovakia is planning a public event at the Gabčíkovo dams; the Hungarian "Danube Flows" initiative will organise events throughout the country; in Serbia, over 350 partner organisations are preparing for the biggest Danube Day celebration the country has seen so far; Bosnia and Herzegovina, holding the ICPDR presidency this year, will target schools in educational events; in Romania, the 11 water basin management centres will host festivities; and Ukraine will try to enter the Guinness Book of Records with the biggest photo exhibition showcasing riverine environments in Uzghorod. Throughout the Danube Basin, children will compete in the Danube Art Master competition organised by ICPDR and Global Water Partnership, Central and Eastern Europe.

These events are only a small selection of many festivities planned. As Danube Day 2013 comes closer, more plans are being finalised and further details will be announced. Keep checking [www.danubeday.org](http://www.danubeday.org) and national websites for updates!

*Benedikt Mandl* is the Technical Expert for Public Participation and Communication in the ICPDR Secretariat, and the Executive Editor of Danube Watch.

## Identifying hazardous substances

Danube countries are working to fill in knowledge gaps on pollution to create the first national inventories on emissions, discharges and losses of hazardous substances in the Danube River Basin.

**Hazardous substances pollution can seriously damage riverine ecology and consequently impact the quality status of water bodies. Furthermore, hazardous substances can remain in the environment for a very long time, can bioaccumulate and can harm human health, even in very low concentrations.**

While the Danube countries have made a lot of progress in addressing the problems associated with hazardous substances – particularly in taking actions to implement the EU Urban Wastewater Treatment Directive and the Integrated Pollution Prevention and Control Directive – there are still significant gaps in knowledge about hazardous substances in the Danube River Basin.

One of the most important ways to improve knowledge of these substances and their pollution is to develop inventories on emissions, discharges and losses. Moreover, Article 5(4) of the Environmental Quality Standards Directive requires that national inventories be included in the EU Water Framework Directive Report to be carried out by the end of 2013.

**A case for national inventories.** In 2010, the European Community launched an EU

### CREATING NATIONAL INVENTORIES

There are a number of steps the Danube countries should take to ensure the best data for their national inventories:

- Ensure that analytical methods fulfil the requirements of the EU Quality Assurance/Quality Control Directive
- Use reliable and comparable data
- Make use of the Transnational Monitoring Network and the results of the Joint Danube Survey
- Anticipate future needs to meet the ICPDR's vision and the EU Water Framework Directive objections.



This year, members of the ICPDR's Pressures and Measures Expert Group will oversee the establishment of national inventories on emissions, discharges and losses of hazardous substances. © ICPDR/Liska

Drafting Group on Priority Substances to develop technical guidelines for the establishment of an inventory on discharges, emissions and losses of priority hazardous substances. The Danube River was chosen as a case study, and the ICPDR's Pressures and Measures Expert Group used the methods proposed in the EC's technical guidance document to establish a list of relevant priority substances for the Danube River Basin, and to calculate riverine loads for the relevant substances.

This year, members of the Pressures and Measures Expert Group will oversee the establishment of inventories at the national level. "A tiered approach should be performed by the Danube countries to establish their inventories", says Elena Tuchi, Director of the Management Plans Department at the Romanian National Administration Apele Romane. "However, for the first inventory to be completed by the end of this year, Danube countries may need to consider point discharges of priority substances from industrial facilities and municipal wastewater plants", says Tuchi.

Once the national inventories have been completed, the ICPDR will coordinate

the compilation of national inventories to ensure a comparable and harmonised development of the first inventory of emissions, discharges and losses for the entire Danube River Basin.

"The knowledge of hazardous substances and their impact on the chemical status of waters will continue to improve as new monitoring data in the next few years will further fill in gaps", says Madalina David, Senior Expert at Romanian National Administration Apele Romane. "The knowledge from these inventories will help establish measures to address pollution sources and reach priority substances management objective and secure the good chemical status for all water bodies in the Danube River Basin", says David.

*Mihaela Popovici* is the Technical Expert on Pollution Control at the ICPDR.



Credit: Kaitab

Danube cooperation is a symbol of what is possible under difficult circumstances. If the Danube states can overcome historical and contemporary challenges in managing the river, similar progress is possible in other regions of the world.

## Danube River Cooperation in Comparative Perspective

The Danube countries have a long history of cooperation, but by sharing experiences on cooperation, there is much the ICDPR can learn from the experiences of other water commissions.

International cooperation on the Danube River Basin has become a growing topic of interest for scholars and practitioners. The ICPDR receives visitors annually; researchers and professionals from river commissions visit Vienna to study cooperation on the most 'internationalised' river basin in the world.

This interest should not come as a surprise. The experience of Danube River cooperation shows that decades of geopolitical tension, economic transformation, and cultural differences are not obstacles to basin-wide river cooperation. Danube cooperation is a symbol of what is possible under difficult circumstances. If the Danube states can overcome historical and contemporary challenges in managing the river, similar progress is possible in other regions of the world.

**Learning from cooperation.** The ICPDR has a unique history that the Secretariat staff share with water professionals and interested researchers. Sharing the experience of Danube cooperation pays dividends,

Scholars learn how international cooperation can emerge after contentious political conditions. Water professionals and practitioners learn what programs have worked well – and the ICPDR learns from the experiences of other river commissions.

What can a comparative perspective on Danube River cooperation provide for scholars and practitioners? The Danube Basin is not the only water basin in Europe with a complicated historical legacy. It is not the only water basin with several neighbouring states maintaining different economies. And it is not the only water basin facing challenges such as climate change adaptation or nutrient pollution.

**Looking at the Baltic Sea.** The Baltic Sea area has shared a similar experience as the Danube Basin. Much like the Danube riparian states, the Baltic coastal states have overcome geopolitical disagreements. They have undergone economic transformations in the eastern half of the basin area. And the European Union has invested to improve environmental conditions and help economic recovery in former socialist states in each basin.

The Baltic states began with a convention in 1974 on the whole sea, although the ecological basin-wide perspective only followed under a 1992 convention. The Baltic states began to cooperate at the sea-wide level decades before the Danube states began to cooperate at the river-basin level. Danube states did not begin with a basin-wide perspective. They had previously made sub-basin and bilateral commissions before adopting the Danube River Protection Convention. The ICPDR and the Danube states have managed to create a strong basin-wide management system in a relatively brief time span.

There are differences, however. The Baltic states have made a nutrient load reduction scheme that allocates maximum allowable inputs by country. It is an ambitious program that the Helsinki Commission (HELCOM) has revised in advance of this year's ministerial meeting. The Danube states have made nutrient inputs a major issue, but they have not allocated allowable inputs among countries. However, the Danube states have institutionalised their emphasis on public awareness-raising in the basin. Danube Day, the International Danube Art Master and other events seek to enhance a basin-wide perspective on the river.

**Balancing national and international efforts.** HELCOM and the ICPDR have similar institutional structures. They are both decentralised: the commissions rely on national experts to collect samples, provide national reports and conduct national-level analyses. The national experts participate in working groups,

divided by specialisation. The commissions have relatively few permanent staff because the commissions can follow through on their objectives and responsibilities in collaboration with national experts. These working groups have contributed to networks of association among national experts who might otherwise not have as much contact and exchange, at least not at such regular intervals and under institutionalised settings.

The European Union has played a growing role in each basin. It provides cohesion funds, contributes to environmental projects and facilitates economic recovery and restructuring in each basin. It has also made harmonisation a priority and legal requirement under the Water Framework Directive and the Marine Strategy Framework Directive. Much like implementation of the Water Framework Directive in the Danube basin relies on the ICPDR; implementation of the Marine Strategy Framework Directive in the Baltic Sea relies on HELCOM.

Cooperation has been beneficial and useful for non-EU states in each basin. In the Danube Basin, Ukraine, Moldova, Serbia and Bosnia and Herzegovina are not EU member states. In the Baltic Sea Basin, Russia is not an EU member state. Russia has benefited from participating in HELCOM and Ukraine, Moldova, Serbia and Bosnia and Herzegovina have benefited from participating in the ICPDR. These non-EU states have gained technical assistance and knowledge of technical issues. And the EU has engaged these countries through the ICPDR and HELCOM, as a party to the Helsinki Convention and the Danube River Protection Convention.

**Working together to overcome challenges.** Both basins face at least two similar challenges: nutrient loading and adaptation to climate change. The Danube states have recognised that agricultural loading in the river may rise because of growing agricultural production. The same is true in the Baltic Sea: governments acknowledge that eutrophication is a common threat to the environmental and ecological status of the sea. They now face an emergent issue because of climate change, which may contribute to volatile precipitation in each basin and more agricultural run-off. HELCOM and the ICPDR have each devoted more attention to the long-term challenges that climate change may bring for the people in each basin. Cooperation in both basins has overcome challenges in the past and there is good reason to expect that it will meet new challenges in the future.

*Alexander Ovodenko* is a PhD student at Princeton University, currently conducting comparative research on different water management bodies throughout Europe.

The Danube states have recognised that agricultural loading in the river may rise because of growing agricultural production; the same is true in the Baltic Sea.

The experience of Danube River cooperation shows that decades of geopolitical tension, economic transformation, and cultural differences are not obstacles to basin-wide river cooperation.



Fascinating freshwater life: the caddisfly species *Triaenodes bicolor* is a typical inhabitant of macrophyte-rich stagnant waterbodies in the floodplain of the Danube.  
© Wolfram Graf/Astrid Schmidt-Kloiber



## BioFresh – a network for global freshwater biodiversity

A new global information platform is providing scientists and water managers with access to data on the distribution, status and trends of freshwater biodiversity – and all in one place.

**The Danube is the largest and most biodiverse freshwater region in Europe and this biodiversity contributes to a range of ecosystem services that enrich the lives of millions of people who live alongside the Danube and its tributaries. Yet, while the importance of freshwater species, ecosystems and their services to human livelihoods and wellbeing is increasingly being recognised, population growth, unsustainable development and climate change are all increasing the pressure on freshwaters.**

A key factor hampering strategic policy responses to the issue of freshwater biodiversity loss is the limited access to reliable information on the status and distribution of the world's freshwater habitats and their

associated species. This fragmented and incomplete knowledge base undermines our ability to develop the evidence-base required to demonstrate the seriousness of the situation and the value of freshwater biodiversity to the Earth and its many inhabitants.

**Putting the pieces together.** Scientists and water managers have collected a vast amount of data on freshwater life, but unfortunately, this data is dispersed in many locally-managed databases which are often difficult to find and not publicly available. If located, combined and made accessible this data would be of unimaginable value. This is the biodiversity informatics vision of a science infrastructure of interoperable databases offering 'big science' data resources and tools. Freshwater scientists have mobilised to engage with this vision and build an information infrastructure capable of addressing this urgent issue.

Over the past three years, the EU has funded the first major international project focusing on freshwater biodiversity. Called BioFresh, the project integrates the competencies and expertise in freshwater science, database technologies and science communication of 18 European institutions into a consortium of actors within an emerging global network. BioFresh is building a global information platform for scientists and ecosystem managers providing access to all available databases on the distribution, status and trends of global freshwater biodiversity, along with a collection of key maps, analytics, and other research resources. BioFresh is funded under the 7th EU Framework Programme, Theme 6 Environment including Climate Change (Contract No. 226874).

**What does BioFresh do?** BioFresh improves the capacity to manage and protect freshwater biodiversity, thereby maintaining the services provided by aquatic ecosystems but also making it possible to establish effective regional plans for conservation.

The 'BioFresh Data Portal' provides a single gateway for freshwater species occurrence data and the 'freshwater node' of the Global Biodiversity Information Facility. Access to the data allows scientists and planners to discover, analyse, evaluate and examine patterns and threats at scales relevant to their needs. The 'BioFresh Global Freshwater Biodiversity Atlas' is a constantly expanding collection of key maps related to freshwater biodiversity. These include outputs of the BioFresh project and the wider scientific community, and cover state-of-the-art scientific models and conservation planning maps, such as the Freshwater Key Biodiversity Areas.

**Building a community.** The BioFresh research and outreach area offers scientists, policy makers, managers consultants and students a quick entry point to the most important journals and publications and on-line learning resources. It also offers a range of services to promote engagement and discussion: a widely read Blog (biofreshblog.com) and two Twitter feeds (@biofreshproject, @biofreshdata) for up-to-date news and comments, a LinkedIn group 'BioFresh: the network for global freshwater biodiversity' for more in-depth community discussion and a virtual Cabinet of Freshwater Curiosities (<http://cabinetoffreshwatercuriosities.com>) that will appeal to anyone with a sense of wonder!

**How can you contribute?** The BioFresh vision is to make biodiversity data freely and openly available. If you are a data holder you can support this vision by publishing your data in the BioFresh portal. You can publish specific information about a dataset you hold in the BioFresh metadatabase, strengthening your collaboration possibilities with scientists working in the same area. Primary biodiversity data can be published in the BioFresh data portal which includes tools to help and to prepare a data paper for publication in one of the new generation of data journals such as the Biodiversity Data Journal from Pensoft Publishers. Another option is to feature your geographic results and maps in the BioFresh Global Freshwater Biodiversity Atlas.

As well as contributing to the development of freshwater biodiversity science, you will increase the visibility of your data and generate more recognition for the hard work that combining such datasets entails. As well as the benefits of reliable storage and archiving, contributors are able to demonstrate a track-record in data publication: something that funders

are increasingly demanding. BioFresh provides full acknowledgment of contributors to the data portal and atlas and provides clear citation guidelines.

A second dimension to the BioFresh vision is to increase the speed of exchange among freshwater biodiversity scientists and our policy impact. By contributing posts, comments and tweets to our on-line services you will help build the vitality of our network and science. At the same time you will add a progressive 'digital native' dimension to your scientific publications!

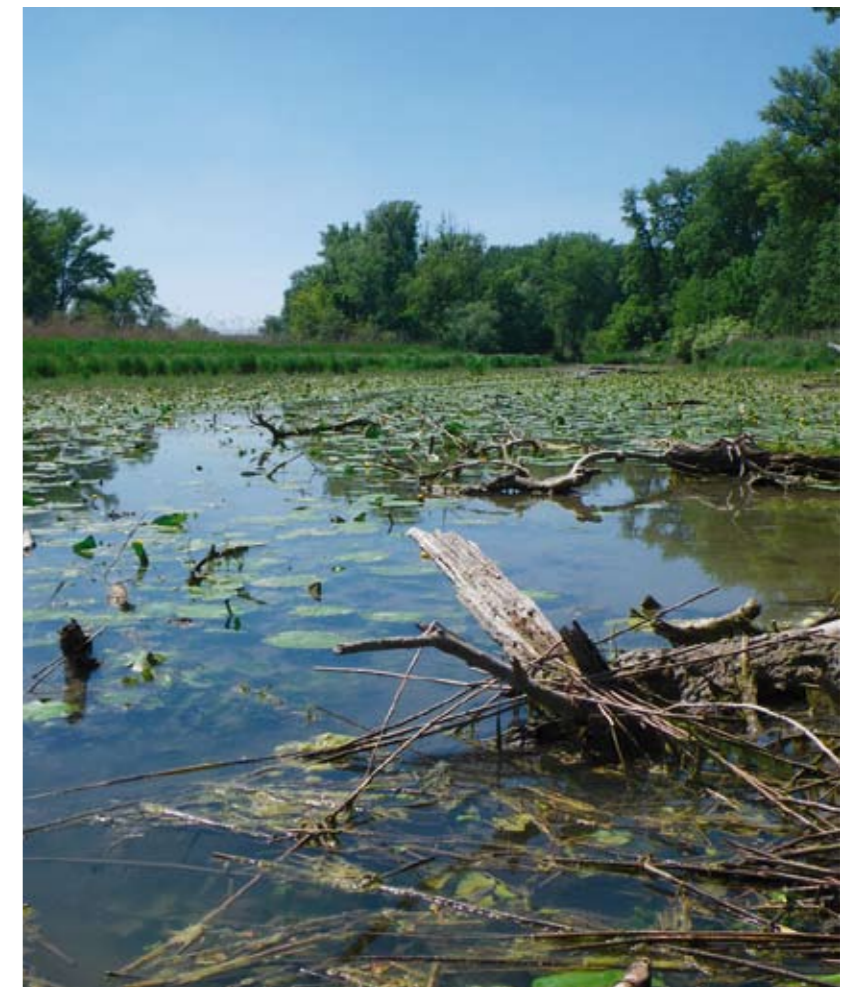
For more information about BioFresh and how to get involved, please visit: [www.freshwaterbiodiversity.eu](http://www.freshwaterbiodiversity.eu).

*Astrid Schmidt-Kloiber* is a river ecologist at the University of Natural Resources and Life Sciences (BOKU) in Vienna.

*Paul Jepson* and *Will Bibby* are conservation geographers at the University of Oxford.

*Jörg Freyhof* is a biodiversity scientist at the Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB) in Berlin. The authors are all BioFresh members.

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The Danubian wetlands are hotspots of biodiversity. Due to channelisation and regulation they have been reduced dramatically over the last centuries. © Wolfram Graf/Astrid Schmidt-Kloiber



**Freshwater ecosystems cover just 1% of the Earth's surface, yet are home to over 10% of all animals and over 35% of all vertebrate wildlife.**

**ICPDR MEETINGS**

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

18-19/6/2013

SARAJEVO, BOSNIA AND HERZEGOVINA

**ICPDR STANDING WORKING GROUP MEETING**

29/6/2013

DANUBE BASIN

**DANUBE DAY**

13/8/2013

GERMANY

**LAUNCH OF JOINT DANUBE SURVEY 3**

11-13/9/2013

VIENNA, AUSTRIA

**FIFTH EUROPEAN RIVER RESTORATION CONFERENCE**

12/9/2013

VIENNA, AUSTRIA

**FIRST EUROPEAN RIVERPRIZE AWARD CEREMONY**

23-26/9/2013

BRISBANE, AUSTRALIA

**16<sup>TH</sup> INTERNATIONAL RIVER SYMPOSIUM**

8-11/10/2013

BUDAPEST, HUNGARY

**BUDAPEST WORLD WATER SUMMIT****DW 03-04/2013****UPCOMING ISSUE****New ICPDR Executive Secretary****Joint Danube Survey completed****Danube Day 2013 Review**