

DANUBE WATCH

THE MAGAZINE OF THE DANUBE RIVER / WWW.ICPDR.ORG I / 2008

6 ICPDR PRESIDENCY 2008: SERBIA

10 JOINT ACTION PROGRAMME 2001-05

Completed last year, the final report of the Joint Action Programme details achievements along the Danube and its tributaries.

26 RECOVERY FOR THE BLACK SEA

A sea almost completely cut off from the world's oceans, the Black Sea is proving that cooperation and joint efforts are the key to reversing ecological damage.

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of the Danube River

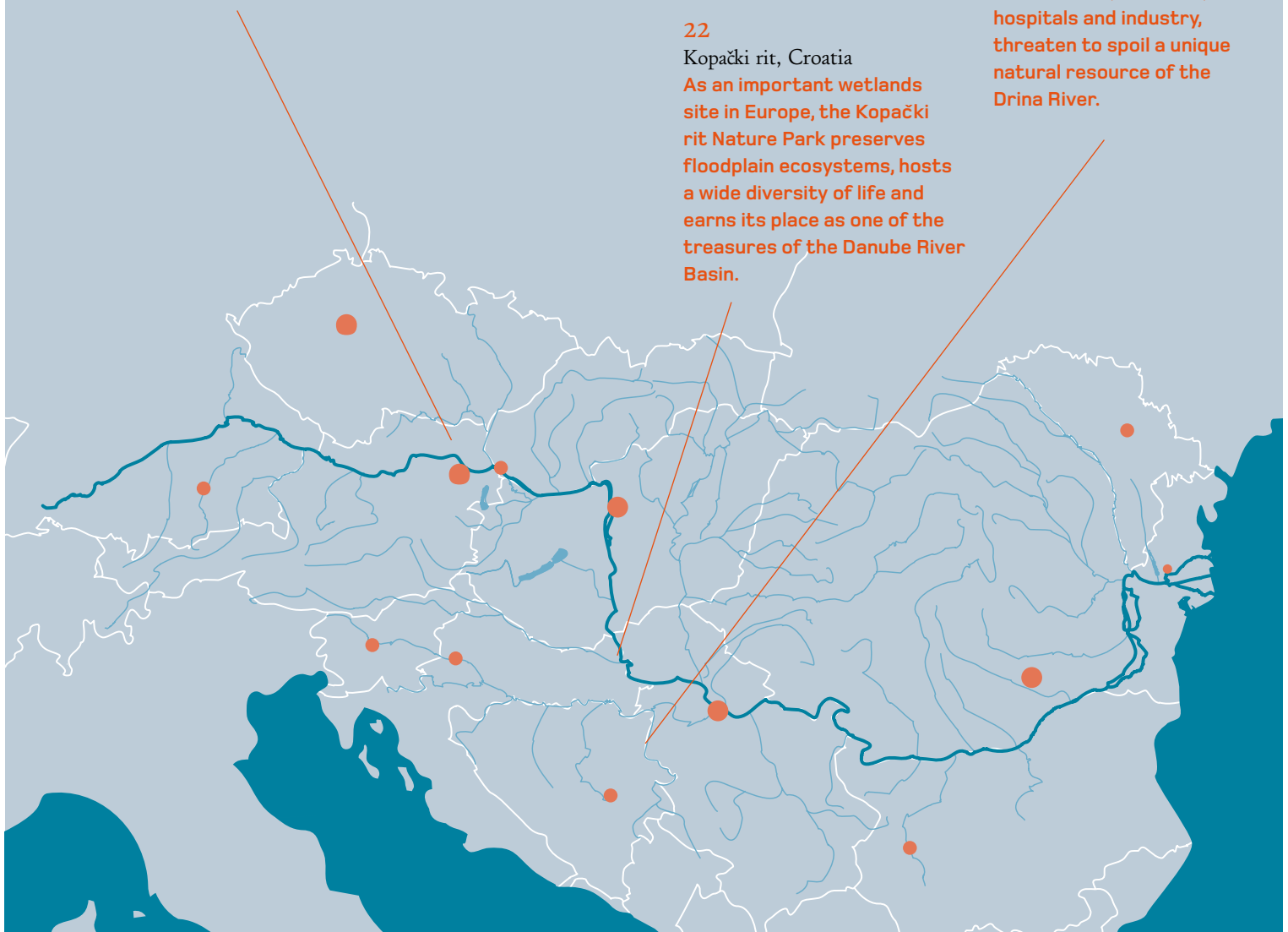
Internationale
Kommission
zum Schutz
der Donau

- 3 Letter to readers
- 4 News & events
- 6 ICPDR Presidency 2008: Serbia
- 8 Where the European Green Belt meets the Danube
- 10 The ICPDR Joint Action Programme 2001-2005
- 14 The Danube needs more business friends
- 15 A new platform for inland waterway transport
- 16 German-Croatian twinning project launches
- 18 Defining the future of the Danube River Basin
- 20 Five years of raising public awareness and participation through Danube Day
- 21 The Danube Box extends its reach
- 22 Kopački rit – wetland paradise in limbo between ongoing threats and future protection
- 25 The Drina River’s floating problem
- 26 Recovery is on the horizon for the Black Sea

16
Vienna, Austria
The PLATINA project puts preparations on track for the European Commission's aims to promote and strengthen the competitive position of inland navigation.

25
Maglić Mountains, Bosnia and Herzegovina
Old tyres, plastic bottles, raw sewage and vast amounts of waste from communities, livestock, hospitals and industry, threaten to spoil a unique natural resource of the Drina River.

22
Kopački rit, Croatia
As an important wetlands site in Europe, the Kopački rit Nature Park preserves floodplain ecosystems, hosts a wide diversity of life and earns its place as one of the treasures of the Danube River Basin.





Credit: ICPDR/Stögmüller

Dear readers,

The implementation of the EU Water Framework Directive – especially the preparation of the Joint Programme of Measures – is a central point of activities of the ICPDR in 2008. However, as this issue of Danube Watch highlights, the Danube countries have, in recent years, already been active in implementing measures to address the issues of concern in the Danube River Basin: The Joint Action Programme report for the years 2001–2005 documents the considerable progress that has been made. I invite you to have a good read of this article as it clearly shows how much the countries have achieved in the past and it also gives direction for the future steps.

Nonetheless, considerable effort is still needed and new challenges have emerged that the countries will have to address in the Joint Programme of Measures, such as the increasing use of pesticides and fertilisers in some agricultural areas. Work is in full swing to prepare the Joint Programme of Measures and collect all the necessary information to make the assessments of those water bodies where actions are particularly needed. As in the past, the success of these efforts depends on the commitment and active involvement of all Danube countries based on the principle of ‘Danube Solidarity’.

It is easy to take for granted that countries cooperate in water management and we are fortunate that this is the case in the Danube region. When one looks around the world, however, there are many river basins where this is not so easy. At the ICPDR Delegation Meeting in December 2007 the Vice President of the International River Foundation, Else Shepherd, came all the way from Brisbane, Australia, to compliment the ICPDR on winning the prestigious 2007 International Thies Riverprize. We should all be proud of the international recognition, but with it comes a responsibility to share our experience and lessons learnt. We have been doing so for a number of years and we are committed to use the funding from the Riverprize to do more of it.

I would like to use this opportunity to congratulate all those individuals who have contributed personally and professionally to the success of the ICPDR; Your continuous support and active involvement is crucial for the continued success of the ICPDR, in the words of Bertrand Russell, “the only thing that will redeem mankind is cooperation”.

Philip Weller,
ICPDR Executive Secretary



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Danube Watch is the official magazine of ICPDR, the International Commission for the Protection of the Danube River. Danube Watch enhances regional cooperation and information sharing on sustainable water management and environmental protection in the Danube River Basin. It reports on current issues affecting the Danube Basin, and on action taken to deal with challenges in the river basin. Striving for scientific accuracy while remaining concise, clear and readable, it is produced for the wide range of people who are actively involved in the Danube River Basin and are working for the improvement of its environment.

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GEF ESTABLISHES NEW PROJECT IN THE TISZA RIVER BASIN

In January the Global Environment Facility approved the Tisza project 'Establishment of a Basin Management Framework for the Integrated Management for the Tisza Transboundary River Basin'. The project will integrate water quality, water quantity, land use and biodiversity objectives within integrated river basin management principles under the legal umbrella of the EU and ICPDR. The project will also test new approaches of wetland and floodplain management through community-based demonstration.

For more information: www.gefweb.org, www.icpdr.org/tisza-basin

PIANC SECTION AUSTRIA HAS A NEW PRESIDENT

Otto Schwetz has replaced Heinz Hagen as President of the Austrian Section of the International Navigation Association (PIANC). Schwetz has served on the executive committee of PIANC in addition to having served as Manager of the Pan-European Transport Corridor VII – Danube. Since its foundation in 1885, PIANC has been the international leader in the development and improvement of inland and maritime navigation and its infrastructure.

For more information, please visit: www.pianc.at

CROATIA PROTECTS 150,000 HECTARES OF RIVERINE LANDSCAPE

In February the Croatian Minister for Culture, Bozo Biškupic, declared 150,000 hectares of the Danube/Drava/Mura wetlands a protected area. The decree for preliminary protection of the area, based on an expert study prepared by the State Institute for Nature Conservation, requires the ministry to take appropriate measures to protect the rivers against threats and apply EU nature protection standards.

For more information, please visit: www.panda.org

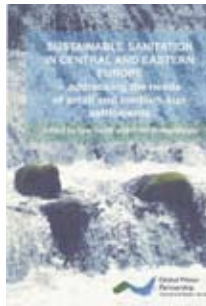
COOPERATION AGREEMENT IN THE DANUBE DELTA

At the ICPDR Ordinary Meeting in December 2007, Heads of Delegation from Moldova, Romania and Ukraine signed a 'Joint Declaration to work towards a River Basin Management Plan for the Danube Delta supporting Sustainable Development in the Region'. The countries will cooperate in the framework of the ICPDR to achieve a good ecological status of the Danube Delta to meet objectives set by the EU Water Framework Directive. A first working meeting of experts – similar to the Tisza Expert Group – should be operational by summer 2008 with possible financial support from the United Nations Economic Commission for Europe.

IWA WORLD WATER CONGRESS AND EXHIBITION

The IWA World Water Congress and Exhibition, organised by the International Water Association, provides an opportunity for leading water professionals to exchange ideas and debate the key issues underlying the science and practice of water management. The global event will also focus on cross-cutting themes like climate change, sustainable development and watershed management, using the Danube as an example. The ICPDR will organise a special workshop to present the work carried out by the Danube countries.

For more information: www.iwa2008vienna.org



GWP CEE LAUNCHES A NEW BOOK ON SUSTAINABLE SANITATION

Global Water Partnership Central and Eastern Europe (GWP CEE) has released a new book, 'Sustainable Sanitation in Central and Eastern Europe: Addressing the needs of small and medium-size settlements'. The book provides a comprehensive overview of the status of sanitation in Central and Eastern European countries. It offers a set of case studies illustrating workable solutions from Hungary, Ukraine and Slovenia, as well as from Germany and Sweden.

For more information, please visit www.gwpceeforum.org



NEW IUCN BULLETIN: LIFE ALONG THE SAVA

The International Union for Conservation of Nature (IUCN) Programme Office for South-Eastern Europe has launched the 'LIFE along the Sava' e-bulletin. The bulletin, published twice a year, covers conservation and sustainable development issues in the Sava River floodplains and will serve as an information platform for a number of stakeholders working in and being closely related to the Sava floodplain.

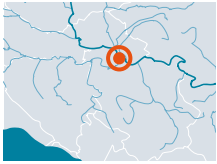
For more information, please contact Boris Erg, Project Manager, at boris.erg@iucn.org



ICPDR/Private

NEW HEAD OF DELEGATION FOR SLOVAKIA

Olga Srsnova, Director General of the Division of Waters and Energy Sources, Ministry of Environment of the Slovak Republic, has taken over as Head of the Slovak Delegation to the ICPDR. She replaces Marian Supek, former General Director of the Division of Waters and Energy Sources now working as a specialist at the Slovak Water Management Enterprise, s.e. The ICPDR would like to welcome Olga and wish Marian all the best for the future.



ICPDR Presidency 2008: Serbia

In its continuing series, Danube Watch presents portraits of the leaders whose passion and commitment help determine the future of our river basin. In this issue we speak to ICPDR President for 2008, Saša Dragin.



Lucia Ana Varga, State Secretary of the Ministry of Environmental Protection and Sustainable Development and ICPDR President for 2007, presents a bottle of Danube Water to Saša Dragin, Minister of Environmental Protection of Serbia and ICPDR President 2008. *Credit: aqua press Int / C. Hahn*

In the presence of diplomatic officials from all Danube Basin countries, Lucia Ana Varga, State Secretary of the Ministry of Environmental Protection and Sustainable Development, presented a bottle of Danube water to Saša Dragin, Minister of Environmental Protection of Serbia, on January 21. With this symbolic gesture, Serbia has taken on the ICPDR Presidency for 2008.

Danube Watch: What objectives do you intend to meet during your presidency?

Saša Dragin: As ICPDR President 2008 – and being responsible for environmental protection in Serbia – I shall focus, above all, on protecting the Danube and its tributaries and overcoming the obstacles in the sustainable use of natural resources. As the Danube suffers from the impact of 81 million people in 19 countries,

cooperation and information exchange are crucial for its preservation. The Upper Danube countries are particularly responsible and timely information exchange is the main instrument for the prevention of damage caused by accidents and flooding in Lower Danube countries.

The following activities will be especially important in 2008: the dissemination of the results of the joint Danube Survey 2, the extensive river monitoring which has been carried out jointly by all Danube countries in 2007; optimal use of the Accident Emergency Warning System; activation of the Danube European Flood Alert System (Danube EFAS); and the reduction of household wastewater pollution in the basin through local projects. A further goal for this year will be to support Montenegro in becoming a Contracting Party of the ICPDR.

Danube Watch: How important is public participation in river protection?

Saša Dragin: It is vital to educate the public and increase their awareness of the importance of river protection.

Danube Day raises public awareness of the role of the Danube, and appeals to all citizens to treat one of Europe's most important ecosystems in responsibly. Year by year, the scope of action and the number of people involved increase significantly, and in addition to the ecological aspect, this year's activities will also include an educational and cultural aspect.

Danube Watch: How is responsibility shared between your Ministry of Environmental Protection and the Ministry of Agriculture, Forestry and Water Management?

Saša Dragin: The Ministry of Environmental Protection shares its competency over waters with the Ministry of Agriculture, Forestry and Water Management, and our responsibilities for the ICPDR are also divided. The ICPDR Presidency has been assigned

to the Ministry of Environmental Protection and the official representation of the Serbian Delegation to the ICPDR has been assigned to the Directorate for Water of the Ministry of Agriculture, Forestry and Water Management, as in previous years. Such a division of responsibilities was made to distinguish water protection and its use, however all these are inseparable and achieved through integrated water management.

All water-related projects, as well as water-related problems, require the involvement of both ministries. A good example for such an intergovernmental project is the 'Serbia Danube River Enterprise Pollution Reduction Project', which is financed by the World Bank to reduce nutrients in the Danube Basin and the Black Sea. This project – prepared by the Ministry of Environment and carried out by the Ministry of Agriculture, Forestry and Water Management – aims to promote sustainable production and environmentally friendly agricultural practices, especially in cattle and pig farms.

Danube Watch: Why has Serbia – not an EU member – decided to take on the burden of implementing the EU Framework Water Directive (WFD)?

Saša Dragin: Addressing problems of water pollution as well as of wastewaters in our country reduces the possibility of transboundary pollution. Meeting water-related EU requirements and standards is a priority goal for our country and an important condition to fulfil in the process of EU integration. Within the ICPDR, the Republic of Serbia has already taken some steps to implement the WFD in the field of surface

waters – including the identification of watercourses with basins bigger than 100 km², the demarcation of the boundary between the basins, as well as the identification and classification of water bodies.

Danube Watch: The whole territory of Serbia lies within the Danube River Basin. What does the Danube mean to you personally?

Saša Dragin: The Danube River Basin is rich in natural resources and cultural heritage. Nevertheless, the fundamental value of the region, especially of the middle and eastern part, lies in its geo-strategic and economic position. The Danube is a transport route connecting not only the northeast with the southeast part of the continent, but also Europe with Asia, with Africa and the whole world. This is extremely important for the economic development of the region – creating possibilities as well as obligations to establish international cooperation between countries. The revitalisation of activities along corridors has revived the possibility of economic and overall development not only for our country but for the whole European continent.

The Danube is a European river with incredible agricultural, tourism and transport potential. This immense treasure should be cherished and well protected. All Danube Basin countries should strive for long-lasting water quality enhancement and the protection of the Danube and its tributaries.

Danube Watch: Thank you and all the best during your presidency!

SAŠA DRAGIN, MINISTER OF ENVIRONMENTAL PROTECTION OF SERBIA

Education:

- 1991 Completed secondary school education at the 'Dr Siniša Stanković' High School for Agricultural Sciences, in the Veterinary Programme
- 1999 Graduated from the Faculty of Agriculture in Novi Sad as an agronomy engineer. Completed postgraduate studies in Genetics and Animal Improvement at the Faculty of Agriculture in Novi Sad
- 2001 Earned a certificate for working in the Laboratory of Molecular Genetics (Winter School of Molecular Genetics – Domžale)
- 2003-2004 Attended several study visits at the Research Institute of Animal Production in Nitra, Slovakia, where he devised an experiment which served as a framework for his Masters and Doctoral theses in the Department of Genetics and Animal Reproduction
- 2003 Received a Master's Degree
- 2007 Received a PhD from the Faculty of Agriculture in Novi Sad

Employment and Professional Experience:

- 2000-2001 Scientific Associate at the Faculty of Agriculture in Novi Sad
- 2001-present Assistant Teacher of Physiology of Domestic Animals, and Associate in Physiology Course – Veterinary Programme
- 2001-2005 Selection Service and Laboratory of Animal Reproduction in the Cattle Breeding Department of the Faculty of Agriculture in Novi Sad
- 2002 Laboratory of Transgenic Animal Design in the Animal Science Department, and in the Laboratory of Domestic Animal Molecular Genetics in the Department of Agriculture, Illinois State University-Urbana, USA
- 2004-present Deputy Secretary of Agriculture, Forestry and Water Management of AP Vojvodina

As a transboundary site, Gornje Podunavlje falls under three different legal frameworks and management practices differ across the floodplains. *Credit: Szilárd*



Where the European Green Belt meets the Danube

In an initiative that runs from the Barents to the Black Sea, the European Green Belt is creating an ecological backbone that is a global symbol for transboundary cooperation in nature conservation and sustainable development.

Few places along the European Green Belt still contain such significant natural and cultural heritage as the transboundary floodplains in the middle course of the Danube. This area spreads over 70,000 hectares in Croatia, Hungary and Serbia, and includes three adjacent protected areas – Danube-Drava National Park in Hungary, Kopački

Rit Nature Park in Croatia and Gornje Podunavlje Special Nature Reserve in Serbia – as well as neighbouring wetlands and adjacent settlements. The whole area is internationally recognised in accordance with the Ramsar Convention. Most recently, Gornje Podunavlje Special Nature Reserve was proclaimed a Ramsar site in 2007.

As a transboundary site, the area falls under three different legal frameworks and management regimes. As a result, management practices differ across the floodplains. That is not the only problem, however. Intensive resources management threatens this unique ecosystem, along with increased construction on the floodplain boundaries. Shortfalls in proper management planning and broad public participation are often neglected.

Supporting natural and cultural values. A few years ago, however, local communities began to benefit considerably from floodplain values, primarily by developing small-scale tourism facilities and by promoting local traditions and cultural heritage with natural values. This led to increased participation by local communities in the area management. To a great extent, these activities have largely been supported and facilitated by international conservation organizations from the very beginning, especially those occurring in Gornje Podunavlje Special Nature Reserve. “Such activities are essential for initiating the mobility of local communities and to raise interest of local stakeholders to actively take part in activities that support conservation of natural and cultural values,” says Sasa Forjic, Coordinator of the local NGO Centre for Civil Activities.

BORDERS SEPARATE. NATURE UNITES!

The European Green Belt is a unique initiative: It aims to transform the former Iron Curtain into a network of protected areas. Launched in 2004, it fosters transboundary cooperation in nature conservation and sustainable regional development along its course of some 8,400 km. It is divided into the Fenno-Scandian, the Central European and the South-Eastern European Green Belt. The Secretariat for the initiative is held by IUCN Europe. By implementing pan European projects (e.g. ‘Mapping the Green Belt’ in all 23 adjacent countries) and supporting local activities, the Green Belt contributes to all major European nature conservation commitments.

For more information, please visit:
www.europeangreenbelt.org



One of the first projects specifically targeted to mobilise local communities in Gornje Podunavlje Special Nature Reserve, and to improve transboundary co-operation in the middle Danube floodplains, was ‘Integrating local communities and nature conservation in the European Green Belt’. Coordinated by the IUCN Programme Office for South-Eastern Europe in cooperation with partners from both Croatia and Serbia, the project aimed to strengthen capacities of local communities to enable them to participate more actively in the resources planning and management procedures.



Linking habitats and communities. One valuable outcome is a Gornje Podunavlje habitat map, following the international EUNIS classification, which will serve as a resource tool for proper management planning. A series of presentations and workshops was held in various communities, and support was provided to local events promoting natural and cultural values. These measures and other activities led to a significant increase of awareness – local communities now consider themselves to be an integral part of the area and its management.

Locals in the region, such as these handicraftsmen in Backi Monostor, began promoting local traditions and cultural heritage with natural values. *Credit: Szilárd*

“Activities of international organisations such as IUCN or WWF shed significant light on the role of local communities in sound management of surrounding wetlands and helped them in initiating ecotourism activities and developing local tourism offer,” says Zoran Miler, Head of the Backi Monostor local community. However, Miler believes that “better coordination and information exchange between the Gornje Podunavlje Special Nature Reserve authorities and local communities on their plans and activities are highly recommended in the future”.

Alois Lang (alois.lang@iucn.org) is the European Green Belt Coordinator and *Boris Erg* (boris.erg@iucn.org) is the IUCN Project Coordinator.

The final report on the Joint Action Programme gave Danube countries reason to celebrate as the information details the progress made throughout the basin on everything from pollution and floodplain restoration to water quality standards.

Credit: Coca-Cola Hellenic/Fallander



The ICPDR Joint Action Programme 2001–2005

The final report of the Joint Action Programme details the achievements that have been made by the Danube countries to make a positive difference to the aquatic environment along the Danube and its tributaries in the period 2001–2005.

In 2007, the ICPDR completed the final report on the implementation of the Joint Action Programme (JAP). The report summarises achievements that have been realised through the work of countries under the ICPDR and the strategy for implementation of the Danube River Protection Convention (DRPC) up to 2006. The JAP adopted by the ICPDR in 2000 focused on pollution from point and diffuse sources, wetland and floodplain restoration, reduction and control of priority substances, water quality standards, prevention of accidental pollution, flood prevention and control and river basin management. Particular attention was given to both structural/investment and non-structural/policy reforms measures that address nutrient reduction and protection of transboundary waters and ecosystems.

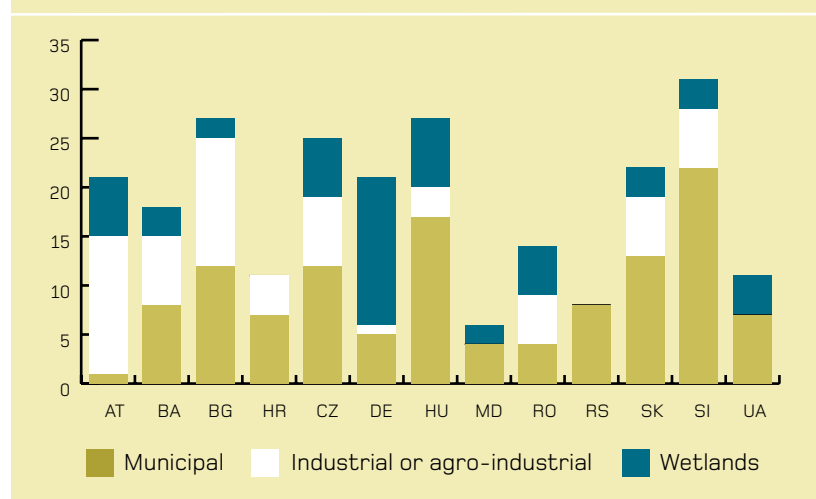
The total investment foreseen in the JAP period 2001–2005 to respond to priority needs is estimated to be about €3.9 billion. Of this, municipal waste water collection and treatment plants amounts to €3.5 billion, industrial waste water treatment amounts to €296 million, agricultural projects and land use amounts to €113 million and rehabilitation of wetlands amounts to €224 million.

Achievements of the countries in the Danube River Basin. In the frame of the ICPDR Joint Action Programme, 251 committed investment projects and strategic measures have been identified out of which 140 are in the municipal sector, 56 in the industrial sector and 55 for floodplain/wetland restoration. Most of these projects, listed generally as ‘hot spots’ or point sources of emission, represent national priorities and take into account the obligation to mitigate transboundary effects.

The largest number of municipal projects has been realised by Hungary and Slovenia. Germany achieved the largest number of wetlands rehabilitation measures, while Austria leads with the largest number of industrial and agro-industrial measures. “The results show that some countries (Austria, Slovakia and Slovenia) have completed or even exceeded the 2000 commitments,” says Joachim Heidemeier, Chairperson of the Pressures and Measures Expert Group of the ICPDR. “Some have fulfilled all commitments within one sector.”

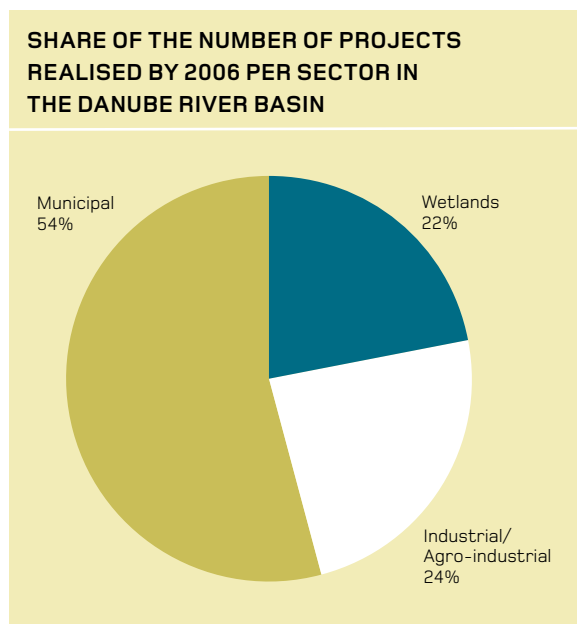
A considerable amount of pollution reduction has been achieved through the implementation of 130 municipal wastewater projects. Annual reductions of more than 198,000 tonnes of Biological Oxygen Demand (BOD), nearly 32,000 tons of total nitrogen, and approximately 11,000 tonnes of total phosphorus are estimated.

NUMBER OF INVESTMENT PROJECTS ACHIEVED PER COUNTRY (2001–2006)



Introducing policies and legal instruments. Commitment to EU directives has been central to success and this commitment must continue to be fostered throughout implementation of the EU Water Framework Directive (WFD). Danube countries faced substantial challenges in establishing and strengthening the policy and institutional framework. Today, progress can be reported with all Danube countries in redesigning policies, programmes and regulations, in establishing appropriate incentive structures, redefining partnerships with stakeholders and strengthening financial sustainability of environmental services. Still, the key policy challenge Danube countries face is to identify the most effective ways of implementing EU environmental directives.

Still, the role of environmental authorities in most of the Danube countries at the local level needs to be strengthened by integrating environmental considerations into economic development.



Most Danube countries have functional institutional administrative structures at the central and regional or local level with clear responsibilities. Inter-ministerial structures exist at the national level, which ensures inter-sectoral coherence and complements in the application of laws and regulations. Investigations show that there is a need for changes or amendments to make institutions in some of the Danube countries more efficient and/or to avoid duplication of mandates and responsibilities in relation to water management and pollution control.

Challenges for local water institutions. There is an increasing tendency of the local authorities in Danube countries to take more responsibility for environmental and water management strategies, due to their increasing role in national policy. Additionally, local water policies will have to consider the transboundary nature of the border rivers and the need to take measures and decisions together with neighbouring communities by implementing solutions at the local or regional scale wherever possible.

Still, the role of environmental authorities in most of the Danube countries at the local level needs to be strengthened by integrating environmental considerations into economic development. There are areas where the absence of adequate policy instruments and institutional capacity to support the monitoring of water use leads to increased service costs and the eventual deterioration of the resource and supporting service infrastructure.

Municipal projects. There has been an improvement in the water quality of Danube rivers since 1995, mainly due to the impact of the investment programme of the water industry and pollution control measures which have dealt with many point sources of pollution such as sewage systems, wastewater treatment plants, industrial sites and agricultural units. Two member states, Austria and Germany, have already implemented the Urban Waste Water Treatment Directive (UWWTD) and applied the nutrient removal. The other six member states are currently implementing the UWWTD in line with the transition periods agreed with the EC.

There are a total of 140 municipal wastewater sector projects amounting to €3.5 million. Many of the municipal sector improvements in Danube countries are only now starting to be realised. Tertiary treatment (nitrogen and phosphorus removal) is being applied for a large number of the upgraded and new wastewater treatment plants. Furthermore, demands for nitrogen and phosphorus removal for wastewater treatment plants in rural communities, representing approximately 40% of the Danube River Basin, are lower than for urban settlements.

International investments. Most of the investment in the wastewater sector has been made in the countries that joined the EU in 2004: the Czech Republic, Hungary, Slovakia and Slovenia. A large proportion of project financing for these investments came from local or national sources. The DABLAS Task Force is a platform for cooperation on water protection and water-related ecosystems in the Danube and Black Sea Region to encourage a more strategic focus to the use of available financing, and to ensure coordinated action between all financial instruments operating in the region.

“Significant progress has been made in Romania”, says Gheorghe Constantin, Head of the Romanian Delegation to the ICPDR, “since the last DABLAS Task Force in 2004, and Bulgaria and Croatia have increased project preparatory efforts though they still lack financing.” Limited development in the wastewater sector has been achieved in downstream, non-EU countries, including Bosnia-Herzegovina, Serbia, Moldova and Ukraine.

International financing has been instrumental behind the development of the municipal wastewater sector in the Danube River Basin. EU grant financing has played a large role in funding several projects throughout the EU countries. The European Bank for Reconstruction and Development and the European Investment Bank have extended loans to municipalities for many of these projects, to help cover co-financing requirements. The World Bank-GEF Investment Fund has also participated in municipal wastewater projects, in addition to agricultural reform and other nutrient reduction efforts.

The presence of the EU, as a contracting party to the Danube Convention and an observer to the Black Sea Convention, helps guarantee success by tying concrete environmental achievements directly to the benefits of EU membership. Large infrastructure investment requirements are essential if countries are to meet EU standards. Overcoming these financial needs is a huge challenge for some lower Danube countries that have rather limited financial resources for investment with expenditure compared to upper and middle Danube countries.

Industrial projects. The degree of industrial development and the importance and amount of the pollution caused by the industrial sector varies within each country. Practically all industrial branches are represented: chemical, electrical, engineering works, metallurgical and galvanic, textile, sugar, papermaking and pulp-mills, wood-making industry, etc. Still, in some cases industrial wastewater is discharged into the public sewer network without any or with insufficient treatment. On the agricultural point sources of pollution, pig and cattle farms have been identified as point sources. These hot spots are generally easy to eliminate by treating the liquid manure.

In developing the Danube River Basin Management Plan, the ICPDR's role is to encourage all the Danube countries to adopt and implement integrated pollution prevention and control legislation. The majority of the countries have a mandatory obligation to the EU while the remaining countries could be encouraged to adopt legislation requiring the application of best available technologies as basic measures in the Joint Programme of Measures.

Showing results. The JAP was a programme of the Danube countries mainly focused on the reduction of pollution. The results of the JAP show considerable

success, many investments and actions are happening. Future actions in the Danube countries in implementing the DRPC should be thoroughly considered in relation to EU directives, in particular the EU Water Framework Directive, and integrated into the respective Joint Programme of Measures. The final implementation report provides a useful starting point for undertaking analysis related to and reporting on the implementation and effectiveness of policies in Danube countries. It shows that appropriate reporting is useful to better address and measure the policy responses within the future Joint Programme of Measures.

The implementation of the JAP raises a number of shared technical challenges for Danube countries. A common understanding and approach is crucial to the successful implementation of the DRPC and EU directives. "Sustainable development in the Danube River Basin requires continuous and enhanced international cooperation", says Philip Weller, Executive Secretary of the ICPDR. "Success will depend on thorough implementation of actions and commitments of the countries and on the effective and coordinated contribution of the international community." The ICPDR provides

The achievement of the Danube countries earned the attention of the International River Foundation (see Editorial), as well as their prestigious International Thiess Riverprize. The celebration of this award brought representatives of the Danube countries together with Else Shepherd, Vice Chair of the International River Foundation, in December 2007. The Heads of Delegations were all awarded diplomas for their countries active role in this remarkable achievement. *Credit: ICPDR/Stögmüller*



a forum for the dialogue, understanding and action needed to meet the challenges that exist. **For more information, please visit: www.icpdr.org/jap.**

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



The Danube needs more business friends

A growing number of businesses are exploring the potential of what sustainability can mean for them. The ICPDR is helping to inspire, engage, support and challenge companies in the key issues of river basin management.



Business as a key stakeholder in the Danube Basin can either make problems or contribute to solutions. Many businesses with operations or markets in the Danube Basin have already embraced the need for sustainable development by voluntarily assisting the ICPDR and Danube countries. By doing so, they also enhanced their 'corporate social responsibility', a principle that encourages business to make decisions based not only on economic or legal factors, but also on the environmental and social consequences of their activities.

As participating partners, companies have attended ICPDR workshops and negotiations to voice their concerns and solutions and cooperate with other stakeholders. As good environmental managers, they have improved their operations such as water and energy efficiencies. As innovators, they have developed new, practical solutions and technologies. And as funders, they have supported ICPDR projects and activities.

Partners in change. Two key contributors are Coca-Cola Hellenic Bottling Company and The Coca-Cola Company, which in 2005 jointly started the 'Green Danube Partnership' with the ICPDR. Results have included raised public awareness about the Danube through support for annual Danube Day celebrations and the development of the Danube Box [see article on page 21] as well as activities to reduce the environmental impacts of their own corporate activities.

Taking this momentum forward, the ICPDR, supported by Coca-Cola, created the 'Business Friends of the Danube Fund'. The Fund offers companies the opportunity to enter into long-term, mutually beneficial partnerships that will help to preserve and protect the basin, its resources and ecosystems.

Shared responsibilities, shared benefits. Fund obligations for businesses include a minimum 'partnership donation' of €25,000 for at least two years, while possibilities for in-kind or project-related donations may be considered. Companies should also aim to use water responsibly in their operations. ICPDR obligations include: reporting on Fund contribution use; partner access to the use of the Fund name, logo and brand; joint communications; and the organisation of annual partner events.

"We take our corporate social responsibilities very seriously indeed, and we have significant operations along the Danube River which contribute to water conservation and to a wider understanding of the concept of sustainable development. Our recent signature of a cooperation agreement with the Duna-Drava National Park authority comes as a direct result of our relationship with the ICPDR and is a leading example of our commitment to sustainability." Sir Michael Llewellyn-Smith, board director Coca-Cola Hellenic

There are also many opportunities to support ICPDR efforts such as sustainable river basin management, environmental protection, nature conservation, pollution reduction, emergency preparedness and disaster relief. Examples include raising public awareness and participation through public events, educational materials and publications; improving scientific knowledge and capacity; or improving the knowledge and training of water managers.

"We are confident that more companies in the basin will partner with the ICPDR," says ICPDR Executive Secretary Philip Weller. "We need their cooperation, and both they and their consumers will gain from improving their water-related operations in the process."

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



A new platform for inland waterway transport

The PLATINA project puts preparations on track for the European Commission's aims to promote and strengthen the competitive position of inland navigation.

Stronger coordination of the European inland waterway transport policy will be possible through the PLATINA project, which will provide technical, organisational and financial support for policy actions. *Credit: via donau*

Inland waterways play an important role for the transport of goods in Europe. More than 35,000 kilometres of waterways connect hundreds of cities and industrial regions. With the new PLATINA project, the European inland navigation programme NAIADES is ready to set sail.

to improved coordination between national and European inland navigation policies.”

Ensuring stakeholder participation. With the involvement of 22 key stakeholders from 9 European countries and the support of 11 European Ministries of Transport, PLATINA has ensured the active participation and support of waterway operators, administrations, representatives of the industry, promotion and development organisations, inland navigation educational institutions, as well as the ICPDR.



“Through its activities, PLATINA will underline the importance of the Joint Statement on Guiding Principles for the Development of Inland Navigation and Environmental Protection in the Danube River Basin,” says Philip Weller, Executive Secretary of the ICPDR. “PLATINA will show ways to turn these general planning guidelines into reality by means of a best practice manual and a series of practical training sessions on state-of-the-art waterway planning.”

The Platform for the Implementation of NAIADES, or PLATINA project proposal, was accepted within the 7th Framework Programme for Research and Technology Development as an action to facilitate NAIADES in the years to come. Covering a broad set of actions in five strategic fields of the NAIADES action (see box), PLATINA will support the European Commission, member states and third countries by providing technical, organisational and financial support for policy actions and by building on strong interrelations with existing expert groups, projects and initiatives.

PLATINA will thereby contribute to the integration of environmental aspects in the development and maintenance of inland waterway infrastructure. PLATINA will be launched in early summer 2008 and will last for four years. **For more information, please visit: www.via-donau.org.**

Gert-Jan Muilerman is team manager ‘Policy Implementation’ with *via donau* and will be responsible for the PLATINA project.

“Apart from its own initiatives, PLATINA will also be providing technical and organisational support for existing expert groups, projects and initiatives to promote inland navigation,” says Manfred Seitz, Managing Director of *via donau* and coordinator of the PLATINA project. “PLATINA will thereby contribute

The European Commission's Action Programme, ‘Navigation and Inland Waterway Action and Development in Europe’ (NAIADES) promotes inland waterway transport in Europe and sets a comprehensive European inland navigation policy. NAIADES, launched in 2006, has five aims: to improve market conditions, modernise the fleet, develop human capital, strengthen the image of inland navigation and improve the infrastructure.



German-Croatian twinning project launches

The new project, 'Implementation of Water Framework Directive in Croatia' builds close partnerships to provide technical and administrative knowledge to implement European water protection policies.

Poreč, located on the coastline of Istria, is one of the most popular tourist destinations because of its beauty and historical values. *Credit: Jacques Croizer*



"With the help of the Twinning Project, the Croatian WFD implementation approach will be in line with other Danubian upstream countries," says Zdravko Krmek, Croatian State Secretary. "Croatia will be well prepared for the upcoming challenges, including its reporting obligations to Brussels."

Known as the country of the thousand islands, Croatia attracts tourists from all over Europe. Named the top destination for 2005 by travel guide publisher Lonely Planet, Croatia's beautiful beaches, ancient cities and ports have created unprecedented tourist travel to the country in the last five years. There were 53 million overnight stays in 2006 – an increase of almost 40% within the last six years.

With most tourists visiting in the summer, seasonal changes are significant in Croatia. Poreč, located on the coastline of Istria, is one of these popular destinations. While 200,000 m³ of wastewater are treated in winter, 550,000 m³ must be treated during the summer season. In addition to the challenges for water supply and wastewater treatment, almost half of the country consists of karstic areas, most of them in coastal zones. A two-year Twinning Project on environmental issues in Croatia will address these problems and ensure sustainable management of resources for the benefit of both residents and tourists alike.

Managing resources in Croatia. Croatia is located between the Danube River Basin in the north and the Adriatic Sea in the south. From a total surface of 87,609 km², 56,538 km² are land areas and 31,071 km² cover coastal areas. While the Sava and Drava





IMPLEMENTATION OF WFD IN CROATIA – TWINNING PROJECT

basins are located in the Danube catchment area, the Dalmatian and Istrian basins empty into the Adriatic Sea. Many watercourses in Croatia have transboundary significance, and transnational cooperation plays an important role in water resource management.

As a candidate country for EU accession since 2005, Croatia is obliged to integrate new requirements of the EU water acquis. While other EU member states have had time to familiarise themselves with the EU Water Framework Directive (WFD), Croatia, as an accession country, has not had this privilege and has to face a particularly challenging timeframe. “It is not a coincidence that the first Croatian Twinning Project in the environmental sector deals with this Directive,” said Fritz Holzwarth, German Water Director, at the kick-off meeting for the project.

Working together to implement changes. The two-year project, ‘Implementation of the EU Water Framework Directive in Croatia’, began in September 2007 with Germany as senior twinning partner and the Netherlands as junior partner. The project covers all aspects of WFD implementation in order to prepare the country’s reporting obligations and to ensure a nation-wide approach.

The main beneficiaries of the project are the newly established Croatian Ministry of Regional Development, Forestry and Water Management and the main water management authority Croatian Waters (Hrvatske vode). “The cooperation is very fruitful,” says Zdravko Krmeč, Croatian State Secretary. “With the help of the Twinning Project, the Croatian WFD implementation

The objectives of the project are based on the following principles:

➤ **Capacity building** enhances the Croatian water administration in organising the process of WFD implementation.

➤ **Integrated approach** aims to identify links within different regions as well as with other policies, such as maritime, agriculture, and land use planning, to name only a few.

➤ **Holistic approach** views the water system including groundwater, surface waters and coastal waters, in a co-ordinated way to enhance synergies and avoid duplication.

➤ **Ecology** supports the administration in applying assessment systems to define the ‘good ecological status’, a true indicator of the health of the ecosystem and its biodiversity.

➤ **Economic principles** seek to promote the efficient use of water through proper pricing policies.

➤ **Transparency** views public participation as one of its central features.

approach will be in line with other Danubian upstream countries. Therefore, Croatia will be well prepared for the upcoming challenges, including its reporting obligations to Brussels.”

And because the water on the Adriatic coast is crystal clear, the number of tourists might further increase. **For more information, please visit: www.wfd-croatia.eu.**

Stephan von Keitz is the Resident Twinning Advisor of the project.

The kick-off for the project was held in September 2007 and brought together (from left to right): Albert Göttle, President of the Bavarian State Office for Environment; Sigfried Heise, Twinning Advisor, Bavarian Ministry for Environment, Public Health and Consumer Protection; Fritz Holzwarth, German Water Director, German Ministry of Environment, Nature Conservation and Nuclear Safety; Stephan von Keitz, RTA, Twinning project ‘Capacity Building and Development of Guidelines for the Implementation of Water Framework Directive’; Zdravko Krmeč, State Secretary at Ministry of Regional Development, Forestry and Water Management; Vincent Degert, Head of EU Delegation to Croatia; Oskar Benedikt, ECD, Head of Section – Social Cohesion, Regional Development and Infrastructure; and Martina Karbowski, Project Leader, German Environmental Ministry.



Defining the future of the Danube River Basin

Based on the results of the Danube Basin Analysis, the ICPDR has defined four significant water management issues that will help guide the work in the basin towards the Danube River Basin Management Plan.



To achieve the ICPDR's vision for organic and nutrient pollution, countries will need to phase out – by 2015 at the latest – all discharges of untreated wastewater from all agricultural installations and apply best environmental practices.
Credit: Silvia Jansen

Countries cooperating under the Danube River Protection Convention, including those outside the European Union, have agreed to implement the EU Water Framework Directive (WFD) throughout the Danube River Basin. The first step of the WFD process was completed in 2004 by finalising the 'Danube River Basin Analysis', or Roof Report, and was the first comprehensive study of the basin's transboundary surface and groundwaters.

The Roof Report helped identify four significant water management issues in the Danube Basin District for surface waters: pollution by organic substances, nutrients and hazardous substances, and alterations to hydromorphology (such as the structural characteristics of the shape, natural morphology and boundaries of rivers and lakes, and transitional and coastal waters), and two transboundary groundwater issues including alterations to quality and quantity.

“It's extremely important that now for the first time at the river basin scale the main issues have been agreed upon,” says Marieke Van Nood, part of the Water

Framework Directive Team at the European Commission, and Co-chairperson of the ICPDR's River Basin Management Expert Group. “Since the Danube is such a large river basin, this is special that this happened on such a large scale and that the document goes further and looks at how to address these issues.”

Zero emission of untreated wastewaters. The ICPDR's basin-wide vision for organic pollution is zero emission of untreated wastewaters into the waters of the Danube River Basin. For EU member states this means phasing out all discharges of untreated wastewater from towns with populations over 10,000 as well as implementing the Urban Wastewater Treatment Directive. In other Danube countries this will mean specifying wastewater collecting systems and wastewater treatment plants planned to be constructed by 2015, as well as specifying treatment levels and emission reduction targets.

Removing the threat of eutrophication. Balanced management of nutrient emissions is the vision for nutrient pollution, to ensure that the waters of the

Danube River Basin and the Black Sea are not threatened by eutrophication. To achieve this, all countries will need to reduce the nutrient discharges entering the Danube and its tributaries; reduce nutrient discharges to the Black Sea to levels that permit those ecosystems to recover to conditions observed in the 1960s; reduce phosphates in detergents; and implement best agricultural practices. In addition, EU member states will need to implement the EU Nitrates Directive.



No risk to human health or aquatic ecosystems. The ICPDR's vision for hazardous pollution is to ensure that human health and the aquatic ecosystem of the waters of the Danube River Basin and those of the Black Sea are not threatened by hazardous substances. For all Danube countries, achieving this vision means eliminating the discharges of hazardous substances entering the Danube and its tributaries; improving treatment efficiency, and setting up quantitative reduction objectives for pesticide emissions. In addition, EU member states will implement the Integrated Pollution and Prevention Control Directive, which also relates to the Dangerous Substances Directive.

Providing a holistic home for all species. Balancing the management of past, ongoing and future structural changes of the surface water environment is the ICPDR's vision to make certain that ecosystems in the Danube River Basin function holistically and are home to all native species. This will mean ensuring migratory species are able to access the Danube and its tributaries, reconnecting and restoring floodplains and wetlands and ensuring that future infrastructure projects follow best environmental practices and best available techniques so that negative transboundary effects are fully prevented, mitigated or compensated.

Protecting groundwater quality and quantity. To meet the ICPDR's vision that groundwater quality is not deteriorated by pollution emissions, and to restore quality in areas that are already polluted, all countries will need to eliminate the hazardous substances and nitrates entering groundwater and increase the efficiency of wastewater treatment. EU member states will

also have to implement a number of EU directives on groundwater, nitrates, plant protection, biocides, wastewater and pollution prevention. Furthermore, the ICPDR aims to ensure that water use is appropriately balanced and does not exceed the available resources by implementing sound groundwater management to avoid over-extraction.

Timeline and public participation. Completing the Danube River Basin Management Plan will require full public participation and consultation, including providing all relevant documents for public review and comment. National data for the Plan and the Joint Programme of Measures will be collected until the



end of this year and public consultation at the international level will run until the end of June 2009. The comments will be analysed and integrated into the final management plan where feasible. The Danube River Basin Management Plan, including the Joint Programme of Measures, will be finally endorsed by the Danube Ministers in 2010.

The visions and management objectives for the significant water management issues guide the Danube countries towards achieving the objectives of the WFD. "These issues will help guide not only the countries themselves but also the work of the ICPDR", says Van Nood, "and the international coordination of the river basin management plans."

The 'Significant Water Management Issues in the Danube River Basin District' (full text and summary) can be found on the ICPDR website: www.icpdr.org/river-basin-management.

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

The ICPDR's vision for surface water is that hazardous substances pose no risk to human health or aquatic systems and that, by balancing management of structural changes, the aquatic ecosystems function holistically and provide habitats for all native species. *Credit: Vogel, Vogrin*



The Danube Box extends its reach

The basin-wide tool, based on the principles and objectives of sustainability and environmental education, will now be assisting teachers in four more Danube countries to bring the Danube River to class.

At Europe's biggest Education Fair, the 'didacta 2008' in Stuttgart, the German Ministry of Environment presented the German version of the Danube Box - the Donau Box - to teachers. *Credit: Jobanssen + Kretschmer*



"Water is one of our most precious resources," says Sigmar Gabriel, Federal Minister of the Environment of Germany. "Especially at this time, in the 'Year of Water' within the UN Decade of 'Education for Sustainable Development', the issue of water protection should be emphasised in schools."

This spring, children in Germany, Hungary, Serbia and Romania will learn more about how they can protect the Danube, save water or explore the river through translated and adapted versions of the Danube Box. 'Donau Box', 'Duna ismerettár', 'Dunav Box' and 'Cartea Dunarii' are ready to help teachers engage young people with water and river-related issues.

The basin-wide educational kit, accompanied by promotional and educational activities, is made possible through cooperation with The Coca-Cola Company, Coca-Cola Hellenic and the ICPDR under the framework of the Green Danube Partnership. The Danube Box includes quizzes, exhibitions, teacher training, online competitions, interactive web journeys and many more inviting activities. Already in use in Austria, the national versions of the Danube Box for Germany, Hungary, Serbia and Romania will be presented to teachers during upcoming weeks.

Three thousand Donau Boxes were produced for distribution in all German provinces by 2008, in time to support teachers planning water education lessons for

the 'Year of Water' within the UN Decade 'Education for Sustainable Development'.

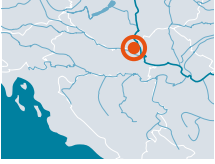
Bringing lessons to life. In Hungary, the first round of a nationwide online competition began in March. Students are invited to test their Danube knowledge and their skills in river-related topics in the online group quiz.

"The 'Duna ismerettár' offers us a wide range of activities to bring the school curriculum to life," explains Monika Jetzin from the GWP Hungary, which is working together with the Hungarian Ministry of Environment and Water, the Ministry of Culture and Education and Coca-Cola Hungary on the implementation of the 'Duna ismerettár'. "With this tool kit teachers

will have the right material for Danube-related lessons or programmes. And students will have fun and exciting lessons," says Jetzin.

Ongoing teacher resources. Introducing the comprehensive materials is a long-term initiative. Teacher training sessions took place last year in Serbia, and teachers in Romania are engaged in a two-year programme to introduce the Danube Box materials. Teachers there are working on local aspects of river ecology and on three additional workshops - the first in the mountainous region of Dobreta Turnu Severin - teachers from 22 ecologically based schools will be trained in methods of education for sustainability, interactive teaching methods as well as the ecological topics of the Danube Box. "The teachers are working intensively on the implementation of the Danube as a regular topic in their schools," says Miruna Ralea, project coordinator in Romania. **For more information, please visit www.danubebox.org, www.machnewelle.de or www.danubebox.hu.**

Doris Gfrerer is an environmental education consultant and works on the implementation of the Danube Box in the ICPDR Secretariat.



Kopački rit is one of the biggest floodplains of the Danube and Drava rivers and more than 400 registered plant species demonstrate the great diversity of this region.
Credit: Mikuska



Kopački rit also boasts a wide diversity of life, and provides habitats for many species which are found nowhere else. Yet un-mapped mine-fields, inappropriate management of natural resources, and a planned river regulation scheme all threaten the important region.



Kopački rit – wetland paradise in limbo between ongoing threats and future protection

One of the most important wetlands in Europe, the Kopački rit Nature Park preserves floodplain ecosystems, hosts a wide diversity of life and earns its place as one of the treasures of the Danube River Basin.

Located in the Baranya region of north-eastern Croatia at the confluence of the Danube and the Drava, the Kopački rit Nature Park is one of the most important intact wetlands in Europe. The beauty of the intact nature, and the multitude of waters, flora and fauna, attract not only excursionists and visitors but also many experts and scientists from all over Europe.

Fluctuating water levels in the area create a wide variety of habitats and generate high biological diversity. Within the park there are over 460 species of vascular plants, 294 bird, 56 mammal, 55 fish, 11 amphibian and 10 reptile species. Kopački rit has served as a shelter for many species in the past and is therefore a ‘gene pool’ for many healthy species as well as a refuge for endangered ones.

Kopački rit is an inner delta wetland with distinct morphological and sedimentological characteristics. It was formed during Pleistocene and Holocene epochs by tectonic subsidence that turned Danube and Drava rivers into their present stream directions. The hydro-geological and meandering processes of the two rivers turned the whole floodplain into a mosaic of lakes, marshes, wet grasslands, reed beds and riverine forests.

The area is flooded annually – one month on the higher parts and up to three months on the lower parts, usually from March to May. Water starts to enter the floodplain when the Danube’s water level at Apatin gauging station reaches 300 cm. During the year the water level fluctuates 5–7 m on average, while the maximum-recorded fluctuations are 9.40 metres.

Remarkable biodiversity. Kopački rit supports 20,000 water birds during breeding, spring and fall migration, as well as wintering. These wetlands support over 1% of biogeographical or flyway populations of Great Cormorant, Grey Heron, Great Egret, Black-crowned Night-heron, Eurasian Spoonbill, Greylag Goose, White-fronted Goose and Whiskered Tern.

This is the most significant spawning ground, nursery and food source in the central and upper Danube for all the fish species of the area, including species that are listed on IUCN red lists such as Sterlet, Weather-

THE KOPAČKI RIT NATURE PARK

Date of foundation:

1967; protection confirmed and protected area enlarged in 1999

Area: 23,126,28 hectares (including Special Zoological Reserve)

Rivers: Danube, Drava

Altitude: 78–83 metres above sea level

Number of observed bird species:

294 (including 140 breeding species)

International importance:

Kopački rit Ramsar site, Important Bird Area (IBA)

Areas of high importance:

Kopački rit special zoological reserve (7,143.21 hectares, IUCN category I), Podunavlje fishponds (650 hectares), Buda-Petres-Mentes floodplain (approx. 7000 hectares)

Visitor centre:

Near Kopačevo village

Nature trails:

Mali Sakadas nature trail, Veliki Sakadas nature trail, Sakadas-Podunavlje nature trail, Tikves castle complex trail

Website: www.kopacki-rit.com

fish, Asp, Crucian carp, European carp, Danube Roach, Striped Ruffe, Streber and Zingel. Mammals include Eurasian otters, European wildcats and 12 species of bats. The area supports important populations of IUCN red list species such as the European pond turtle, European fire-bellied toad and European tree frog.

Kopački rit also boasts some of the most breathtaking flora. Scientists have found and registered around 460 species in Kopački rit, many of which are very rare and can be found nowhere else. The Siberian iris is found only in a few places in Central Europe and usually has only a few blossoms. However, at the beginning of June several hectares of Kopački rit are covered by the showy blue flowers of this beautiful type of iris.

Wetlands in danger. Threats to these natural values caused the area to be listed on the ‘Montreux record’



The Kopački rit Nature Park is especially renowned for its rich bird life. Many of the bird species that breed in the park are considered endangered at both European and global levels. The park supports the breeding of 40 pairs of White-tailed Eagles *Haliaeetus albicilla* – the largest raptor in the area.
Credit: Mikuska

– a record of Ramsar sites where “changes in ecological character have occurred, are occurring or are likely to occur” – due to the cessation of all protection activities during the recent war that took place from 1991–1997. The consequences of the war included termination of all conservation measures during that period, destruction of most of the infrastructure and some deforestation. The area has been fragmented and scattered with un-mapped minefields along the dikes and floodplain with nearly 3000 hectares of mine-susceptible area.

In addition to war-related problems, the area earns its place on the Montreux record for the unsustainable use of natural resources – old stands of alluvial oak forests are under particular threat due to over logging and inappropriate management. Another significant threat to the area is the planned river regulation scheme for the Danube as part of the TEN-T project. River regulation for navigation purposes, including fixing the riverbanks with stone barriers, is already taking place on a smaller scale near the town of Apatin.

Solutions & transboundary cooperation. The ongoing threats triggered broad action for the efficient protection of the site. Kopački rit is part of a wider 80,000 hectare floodplain area that extends through Hungary, Croatia and Serbia. Based on this shared responsibility, a transboundary protection plan is under development to ensure that areas with similar natural values have identical protection status; the same threats are dealt with urgency and stopped in the

same way; similar natural values are managed and used in an equal and sustainable way.

Several important steps recently carried out are moving in that direction. The Croatian Ministry of Culture declared the preliminary protection of the still unprotected floodplain areas along the Drava and Danube rivers that would fit the existing protected areas. The Danube/Drava floodplain area has been recognised for its natural values and included in the Croatian National Ecological Network and it will be proposed to be designated as a NATURA 2000 site.

Joint and long-lasting cooperation between the Kopački rit Management Office and the Danube-Drava National Park Directorate has already resulted in a number of transboundary projects for habitat restoration, data exchange and outreach. The next step, supported



Threats to these natural values caused the area to be listed on the ‘Montreux record’ – a record of Ramsar sites where “changes in ecological character have occurred, are occurring or are likely to occur”.
Credit: Mikuska

by the Hungarian and Croatian governments, is to establish the transboundary biosphere reserve ‘Mura-Drava-Danube’. Last year, the presidents of Croatia, Hungary and Serbia signed a joint declaration aiming to protect and ensure the natural values of this area.

Hopefully, these activities will soon result in a large transboundary site protected and managed for the benefits of nature and coming generations.

Tibor Mikuska, conservation biologist, is the Head of the Conservation Department of the Kopački rit Nature Park Management Office.



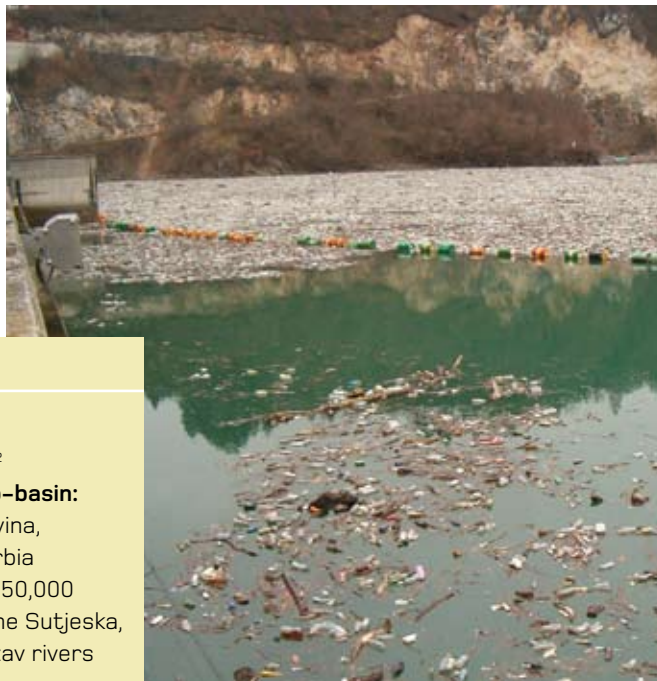
The Drina River's floating problem

Cigarette butts, old tyres, plastic bottles, fast food containers, raw sewage and vast amounts of waste from communities, livestock, hospitals and industry, threaten to spoil the ecological health of a unique natural resource.

The Drina River is the biggest tributary of the Sava River, and the last tributary before the Sava meets the Danube in Belgrade. The Drina River Basin covers 80 km² in Bosnia and Herzegovina, Montenegro and Serbia – an area home to 650,000 people.

The Drina in jeopardy. Unfortunately, this important area has come under threat of many unregulated dumps of untreated or inadequately treated waste, and wastewaters are discharged into the river and its tributaries. Towns downstream do not have regulated dumping sites and approximately 30% of all flooding waste ends up in the riverbed.

Flooding waste backs up behind the dam of the Višegrad power plant on the Drina River. Credit: Sorajić



According to a study of the Lim River, every year more than 100,000 m³ of organic and PVC waste ends up in the river without any treatment. The disposal of waste from communities, livestock, hospitals and industry – as well as hazardous waste from town dumps – presents everyday risks for all of the river's ecosystems.

More than an aesthetic problem. In addition, floating debris disrupts the work of motors and machines in the river causing significant costs for repairs and cleaning. Accumulation of debris blocks hydropower dams reducing energy production. The influence of discharged waste is significant when looking at the total pollution of the Drina River, and this problem must be solved urgently taking the economic, social and cultural situations into consideration.

THE DRINA RIVER

- Length:** 346 km
- Size of basin:** 80 km²
- Countries in the sub-basin:** Bosnia and Herzegovina, Montenegro and Serbia
- Inhabitants:** about 650,000
- Major tributaries:** the Sutjeska, Čehotina, Lim and Rzav rivers

“Members of our society try to improve our environment by working with people in schools and organising campaigns to clean surrounding waterways, but it is not enough. We should make a big effort with all stakeholders in all municipalities to solve this problem.”
– Marica Jovanović, DRIN-tim Specialist for Water Management

The area is a unique natural resource. The Drina crosses three national parks: the Durmitor National Park in Montenegro, Sutjeska National Park in Bosnia and the Tara National Park in Serbia. The Drina River Basin is home to the second deepest canyon in the world, the Tara River Canyon. At nearly 100 km long and about 1800 km deep, the canyon is protected as a UNESCO World Heritage site and is a popular river rafting route.

To solve the Drina's waste problem sustainably, it is necessary to synchronise efforts at national and international level because transboundary water resources and their preservation, protection and sustainable uses are of great importance for all countries.

Dragan Glogovac works for the DRIN-tim Ecological Society in Višegrad.

THE ANNUAL PRODUCTION OF MUNICIPAL WASTE INTO THE DRINA RIVER BASIN

Country	Number of towns in basin	Inhabitants	Produced waste*	Treated waste*	Released into the river*
Bosnia and Herzegovina	10	310,000	90,000	0	20,000
Montenegro	7	146,000	35,000	0	12,000
Serbia	8	210,000	60,000	0	23,000

* in tonnes per year



Recovery is on the horizon for the Black Sea

For a sea almost completely cut off from the world's oceans, the Black Sea is proving that cooperation and joint efforts are the key to reversing ecological damage and to promoting change.

The Black Sea is the most isolated sea in the world; its only connection to other marine water bodies is through the winding Bosphorus Straits. For this reason, the Black Sea is very vulnerable to pressure from land-based human activity and its health is dependent on cooperation in the region.

Recently there have been positive signs of Black Sea recovery. Phytoplankton blooms tend to be less severe than during the 1980s and include a wider variety of species, and biodiversity is continuing to improve close to where the Danube enters the sea. *Credit: DRP/Mello*

The Black Sea covers 423,000 km² and is over 2 km deep at its deepest point. Every year, 350 km³ of river water pour into the Black Sea draining a 2 million km² basin – almost a third of continental Europe. The area influences significant areas of 17 countries containing over 160 million inhabitants. Bulgaria, Georgia, Romania, Russia, Turkey and Ukraine all border the Black Sea.

ring and scientific institutions within the six countries through development of standardised regional monitoring methodologies, pilot monitoring exercises, research cruises, river and point source load assessments, modelling and atmospheric deposition studies.

“We have seen many UN organisations involved in cooperation on the Black Sea,” says Ulrika Richardson-Golinsky, UNDP Deputy Resident Representative in Turkey, “which cuts across boundaries and brings people together.”

The BSERP has promoted closer cooperation between the ICPDR and the BSC. On a formal level, staff from both the BSERP and the Danube Regional Project (DRP), as well as the ICPDR and BSC Secretariats, have been members of the Danube-Black Sea Joint Technical Working Group. This cooperation created the first report on ‘Danube Impact on the Black Sea’, and a recent brochure on nutrient management within the Danube/Black Sea Basin.

However, it is the informal links between the BSERP unit in Istanbul, the DRP in Vienna and the staff of the two commissions that have created the greatest benefits in terms of the flow of information. “Success in the Black Sea shows the importance of co-

operation between regional actors, countries and the governments,” says Jose Rizo Martin, European Commission, DG Environment.

Guiding policy and action. The BSERP’s work has brought changes in legislation and policy, including the draft of an updated Land-Based Sources and Activities Protocol, development of a regional stock assess-



Success through cooperation. Now in its final stage, The Black Sea Ecosystem Recovery Project (BSERP) has broad aims concerning most aspects of marine environmental management. The project has worked in close cooperation with the Black Sea Commission (BSC) to provide technical and financial support for policy and legislation development. The project has supported capacity building of environmental moni-

assessment methodology for turbot populations, technical annexes to the existing Protocol on Conservation of Biological Diversity and the Contingency Plan annexed to the Protocol on Cooperation in Combating Pollution by Oil and other Harmful Substances in Emergency Situations.

Legal and institutional reviews of the Black Sea Commission and a Project Exit Strategy have also been completed, as well as a Feasibility Study on Integrated Coastal Zone Management, to recommend options for the future regional development of this policy. A further document on cost-benefit analysis of nutrient emission control options was recently delivered to the BSC, with the intention that this could influence policy development in future years.

Updating the 1996 'Black Sea Transboundary Diagnostic, led to a technical draft of an update of the Black Sea Strategic Action Programme. Once completed, this document will be signed by all six countries at a Ministerial Conference in Ukraine later this year.

Status of the Black Sea – past and present. Beginning in the 1970s and continuing through to the early 1990s, excessive nutrient pollution led to the development of intense phytoplankton blooms dominated by a single species. Large-scale eutrophication and the depletion of oxygen caused mass mortalities of animal life within huge areas of the northwest shelf. This reached a peak in 1990 when some 40,000 km² – or 80% – of the northwest shelf bed was considered to be effectively dead.

There is no doubt that the Danube has a significant impact on the ecology of the Black Sea. The ecological effects of the Danube can most clearly be seen on bottom-living fauna, with immediate impacts closest to where the Danube enters the sea, and the severity of those impacts reducing with increasing distance from the Danube Delta. Of course, this is also due to impacts from the northern Dniester Liman.

Recently there have been positive signs of Black Sea recovery. Phytoplankton blooms tend to be less severe than during the 1980s and include a wider variety of species, and biodiversity is continuing to improve close to where the Danube enters the sea.

So the impact, while still serious, is decreasing. Earlier reductions in wastewater pollution from the upstream countries and the economic slowdown in the former communist countries were major contributors.

However, the BSERP and the Danube countries can also take credit for their numerous joint efforts. “The ultimate criterion of success of the project”, says Violeta Velikova, Pollution Monitoring and Assessment Officer at the Secretariat of the Black Sea Commission “is the Sea itself.”



Future steps. With the phase-out of funding from the project, the BSC must review its funding sources, increase in-country contributions and reassess its priorities. The BSC now has a robust technical and legislative basis from which to work, but there is still a considerable effort required. Negotiations on the Black Sea Strategic Action Plan (SAP) need to focus on the main outstanding issues and causes, and prioritise them.

Mobilised concerted efforts of UN organisations, European Union, other donors and the Black Sea countries have been critical for the restoration of the Black Sea ecosystem. There has been a substantial boost to promote good environmental monitoring, with large amounts of money spent to assess environmental status. This has provided the BSC and the six coastal countries with a good start, but this momentum needs to be maintained through the SAP.

As a result of the work of the last five years, the BSC is in an excellent position to take up the challenges ahead. As the BSERP comes to a close, there are many achievements to celebrate and much has been improved. Perhaps the greatest achievement is in proving that the most isolated sea geographically is not isolated in spirit as cooperation continues to bloom. **For more information, please visit: www.bserp.org, www.undp-drp.org or www.blacksea-commission.org.**

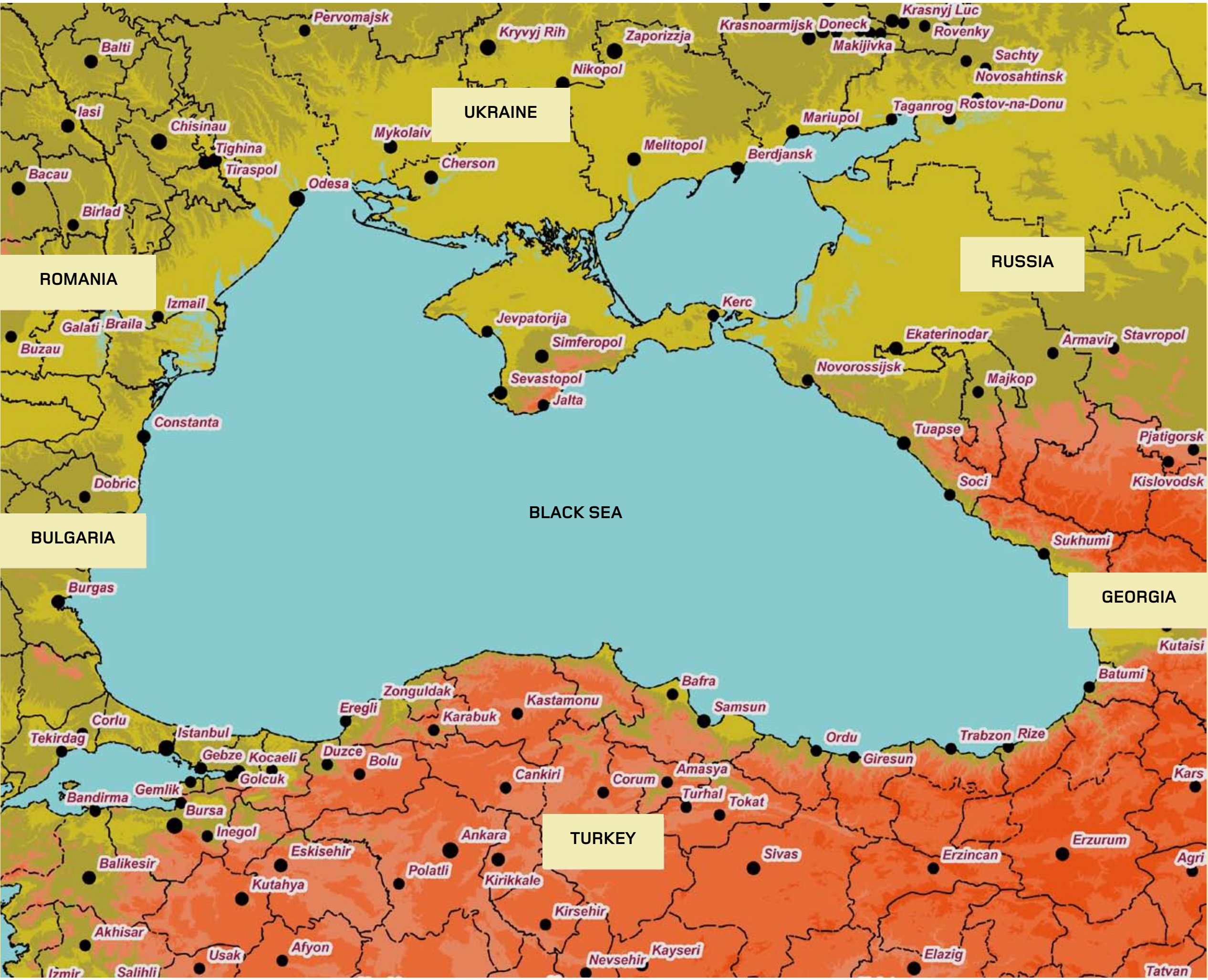
Yegor Volovik is the PIU Manager/Monitoring and Evaluation and Information Management Specialist at the Black Sea Ecosystem Recovery Project.

There has been a substantial boost to promote good environmental monitoring in the Black Sea, with large amounts of money spent to assess environmental status. *Credit: DRP/Mello*

“Success in the Black Sea shows the importance of cooperation between regional actors, countries and the governments”, says Jose Rizo Martin, European Commission, DG Environment.

Cooperation and joint efforts in the region have proven to be the key to success for the Black Sea Ecosystem Recovery Project. Fold out to see a map of the Black Sea highlighting some of the achievements of the programme.





THE BLACK SEA ECO-SYSTEM RECOVERY PROJECT

The Black Sea Ecosystem Recovery Project (BSERP) – as well as the Danube Regional Project – was developed under the Global Environmental Facility (GEF) and was implemented by the United Nations Development Programme (UNDP). The project, with a budget of \$10.5 million, builds on a series of GEF International Waters (IW) projects for the Black Sea that together represent one of the most extensive and consistent interventions in the GEF IW portfolio.

PUBLIC PARTICIPATION

An important feature of the BSERP has been its encouragement of broad stakeholder participation, through small grant programmes as well as the organisation and funding of national and regional programmes for the celebration of Black Sea Day. Further work spread the message of the region’s problems through the production of a documentary, ‘The Sea that Nearly Died’, shown on BBC World as part of the Earth Report Series.

RESEARCH AND INFORMATION EXCHANGE

Four research cruises have been organised on the northwest shelf where the Danube enters the Black Sea. Data gathered from these cruises, combined with long-term routine monitoring results, provide an excellent overview of the ecological changes that have occurred and the current status of this fundamentally important area of the sea..

AGRICULTURE

Agriculture is the most important sector to tackle to prevent a return to the ‘bad old days’ of lifeless seabeds, with particular attention focused on livestock waste disposal and recycling as organic fertiliser. Considerable investments and improvements have occurred in some Black Sea countries, but there is a need to persuade other countries to follow suit. However, this is very difficult for politicians to grasp, bearing in mind the regional decline in agriculture. On average over a ten year period, the contribution of agriculture to Black Sea country gross domestic product (GDP) fell by about a half.

Credit map: BSERP

ICPDR MEETINGS

For final dates, please consult the ICPDR calendar, available at www.icpdr.org.

15–16/5/2008

BUDAPEST, HUNGARY

**MONITORING AND ASSESSMENT
EXPERT GROUP**

12–13/6/2008

BELGRADE, SERBIA

STANDING WORKING GROUP

19–20/6/2008

BRATISLAVA, SLOVAKIA

PROGRAMMES AND MEASURES EXPERT GROUP

29/6/2008

THROUGHOUT THE DANUBE RIVER BASIN

INTERNATIONAL DANUBE DAY

DW 02/08

UPCOMING ISSUE

Tourism on the Danube

Update on Bystroe Canal

GEF Tisza Project Launches