

2013 is the first year that a **European RiverPrize**

will be awarded ...



... by the International River Foundation (IRF) partnering with the International Commission for the Protection of the Danube River (ICPDR), the European Centre for River Restoration (ECRR) and Coca-Cola Europe.



**UNI
VER
SUM**
MAGAZIN

2013

ORF

SPECIAL **EUROPE'S RIVERS**



DANUBE
Europe's Green
Corridor



RHONE
Coping with
Climate Change



THAMES
Renaturation
Front-and-Center



DNIEPER
Coming Back
to Life

Editorial

Dear Readers,

Rivers resemble a bloodstream. They pervade our continent, they characterize landscapes, they provide habitats for animals and plants, and they ensure the supply of water. They are focal points of social, economic and cultural development. It is no coincidence that the history of Europe's colonization runs along the great rivers: They provided cities with water and served as transportation routes. They have been praised in stories, myths, legends and songs. But rivers have also been used as sewers, and seen as hindrances, nuisances, or imminent floods. The relationship between humans and rivers is ambivalent.



Franziskus von Kerksenbrock

Yet much has changed for the better in recent years and decades. The river itself is seen again as a living space in the original sense of the word. Clogged streams have become flowing channels, and sewers have become healthy water sources. Throughout Europe, international, public, and private organizations are taking care of the rivers – working on them, with them and for them.

The International Commission for the Protection of the Danube River (ICPDR), for example, with its headquarters in Vienna, has coordinated initiatives, projects and programs to benefit the second-longest river in Europe. In 2007, the ICPDR won the competition organized by the International River Foundation's International RiverPrize. On September 12th, ICPDR and IRF will be awarding the European RiverPrize. Four river organizations are in the finale:

Rio Orbigo, Spain

Mur / Drau / Danube, Austria, Croatia, Hungary, Serbia, Slovenia

Rhine, with all of its neighboring countries

Upper Drau, Austria.

Soon one of the world's major environmental awards will be given for exceptional, visionary and sustainable work. In this special edition of UNIVERSUM, you can learn more about current approaches to ensuring a sustainable future for four European rivers and two inland seas – and thus for the people who live with them, as well.

FRANZISKUS VON KERSENBROCK
Editor-in-Chief

Liebe Leserinnen, liebe Leser!

Seit dem diesjährigen „Jahrhunderthochwasser“ stehen Flüsse wieder im Fokus der Öffentlichkeit. In dieser UNIVERSUM Spezialausgabe erfahren Sie mehr zu den Ansätzen, Programmen und Projekten, die alle zum Ziel haben, vier europäischen Flüssen und zwei Binnenmeeren eine nachhaltige Zukunft zu sichern – und damit auch den Menschen, die mit ihnen leben.

Die „International Commission for the Protection of the Danube River“ (ICPDR), mit Sitz in Wien, lädt am 12. September zur Verleihung des „European RiverPrize“. Vier Flüsse sind im Finale: Rio Orbigo (Spanien), Mur/Drau/Donau (Österreich, Kroatien, Ungarn, Serbien, Slowenien), Rhein (mit allen Anrainerstaaten), Obere Drau (Österreich). UNIVERSUM Magazin ist Medienpartner der internationalen Veranstaltung. Daher erscheint diese Ausgabe in englischer Sprache mit deutscher Zusammenfassung.

Six species of sturgeons were once native to rivers throughout the Danube River Basin, including the beluga sturgeons, which can reach lengths of up to six metres. The ICPDR sees sturgeons as a flagship species indicating high ecological water quality: they only flourish in healthy rivers with diverse habitats, which touches directly on several areas in which the ICPDR is active. These include wetland and floodplain restoration, the development of fish migration aids, the reconstruction of natural river beds or measures against water pollution. Three issues are of particular concern for sturgeons in the Danube Basin today: (1) the protection of habitats, for example for spawning; (2) illegal fisheries and caviar trade; (3) longitudinal connectivity – the possibility for them to pass dams mostly of hydropower plants to reach spawning grounds in upstream areas. An important partner of the ICPDR in working for sturgeon conservation is the Danube Sturgeon Task Force, which aligns the efforts of the ICPDR with other major players in the field, such as the World Sturgeon Conservation Society or WWF, which recently launched a project on sturgeon conservation.

More information:

<http://danube-sturgeons.org/>

<http://www.dstf.eu/>



The Sturgeon

Making Way for Migration

FLAGSHIP SPECIES:
The sturgeon has become a symbol indicating high ecological water quality.



Einst waren sechs verschiedene Stör-Arten in der Donau und ihren Nebenflüssen heimisch. Darunter der Beluga-Stör, mit einer Länge von bis zu sechs Metern. Die Internationale Kommission zum Schutz der Donau (IKSD) betrachtet den Stör nun als „Flaggschiff-Spezies“. Gelingt es, den Fisch wieder in den Gewässern des Donaubeckens heimisch werden zu lassen, dann ist dies auch ein Indikator für hohe Wasserqualität und Biodiversität. Denn die Fische brauchen gesunde Habitate, Auen und Überschwemmungsgebiete; die Möglichkeit, frei und ungehindert stromauf- und -abwärts zu ziehen; sowie sauberes Wasser. Alles Bereiche, die die IKSD als zentrale Aufgabengebiete ihrer Arbeit sieht. Ein wichtiger Partner der Kommission ist in diesem Zusammenhang die Danube Sturgeon Task, die die Arbeiten der IKSD und ihrer Partner wie dem WWF koordiniert.

Weitere Informationen:

<http://www.dstf.eu>

<http://danube-sturgeons.org>

The Danube,” Italian writer Claudio Magris once said, “is a river that connects - unlike the Rhine, which was long perceived as the feud-causing border between Germany and France.” Magris argues from a cultural and social point of view, and the facts alone speak for his thesis: The Danube is approximately 2,800 kilometers long, and 19 countries with around 81 million people are part of its watershed, with an area of approximately 800,000 square kilometers. In short, the Danube is an international river – the most international river in the world.

The Danube’s source is the subject of much debate – particularly in Germany. Yet all agree that it lies somewhere in the Black Forest. Its delta is located on the border between Romania and the Ukraine and is one of the largest and most important wetlands on the planet. Home of countless animals, it is a habitat of international standing.

At the same time, the Danube is a major European waterway. It is essential for the production of renewable energy from hydro-power; it supplies agriculture with water, and factories, industries, and cities are concentrated on its banks.

STEPS FORWARD

The European Union recognises the importance of the Danube, initiating its own Danube Region strategy. This region should spark action in business, society, science and culture.

That’s a big task for a river, even if it is the second-largest on the continent after the Volga. And this task has been expanded by an additional aspect: the environment. Therefore, ICPDR President Ermina Salkicevic-Dizdarevic emphasizes: “The ICPDR is a positive, internationally recognised example of cooperation in a transboundary river system. Implementation of agreements such as the Danube Protection Convention, the EU Water Framework Directive or the EU Floods Directive are the reason why the ICPDR is a bright example for all water organisations. We are all working to achieve international cooperation in the conservation of our planet’s natural heritage – which we have only borrowed from future generations.”

Rivers are habitats. This is true for the Danube as well as for all other European rivers. They not only serve the people, but they are

Europe’s Green Corridor

How the Danube river fosters international co-operation



equally indispensable for flora and fauna; the importance of their floodplains is vital due to increasing floods; they are nesting and breeding areas for mammals, birds, amphibians and fish. In fact, one particular fish has become a symbol for the many tasks that the Danube has to deal with as an international, regional and local cooperation: the sturgeon.

THE STURGEON’S JOURNEY

Most fish species migrate between different habitats during their life cycle. In the case of sturgeons, this migration could range from the Black Sea to Germany. At least until hydropower plants and dams started to block the route in the 20th century. But now, habitats are protected and reconnected, for example through fish ladders. These fish migration aids should allow the sturgeons – as well as other fish – to circumvent the obstacles and penetrate again into the heart of Europe.

Take, for example, the Iron Gate. Here in the 1970s and ‘80s the largest hydroelectric power stations were built along the Danube, putting the sturgeons’ 800-kilometer journey to an abrupt end. A feasibility study is currently examining the possible erection of fish ladders that, for the project “Iron Gate 1” alone, bridge an altitude difference of 35 meters, providing the fish with another 800 kilometers of “open road”. Meanwhile, former floodplains and wetlands are being reactivated in the lower reaches of the Danube so that the river can widen and provide better living conditions for fish.

The special thing about it, though, is that these steps are not adopted and implemented “top-down,” but rather by all of the involved stakeholders. Thus the Danube is not only a green corridor in the middle of Europe, it is simultaneously a forum for dialogue and common development – a sustainable process in every sense of the word.

This process has aroused interest from afar – for example in Southern Africa, where the Orange Senqu River Commission is located. The commission has been in intensive contact with the ICPDR since 2007, in order to adapt the experiences of the Danube’s residents to southern African conditions and to implement new strategies. Claudio Magris is right: the Danube River is a river that connects.

AT THE EDGE:

The Danube delta is one of the world’s most stunning wetland areas.



Die Donau ist ein Strom, der verbindet. In jeder Hinsicht: Rund 2.800 Kilometer lang ist die Donau, 19 Länder mit rund 81 Millionen Menschen sind Teil ihres Einzugsgebietes mit einer Fläche von etwa 800.000 Quadratkilometern. Kurz, die Donau ist ein internationaler Fluss. Sie ist der internationalste Strom weltweit und unverzichtbar, wenn es um die Gewinnung erneuerbarer Energie durch Wasserkraft geht; sie sichert die Versorgung der Landwirtschaft mit Wasser; an ihren Ufern konzentrieren sich Fabriken, Industrien, Metropolen. Immer wichtiger aber wird ihre ökologische Dimension. Sie ist ein „grüner Korridor“, der sich quer durch den Kontinent spannt. Und damit hat sie das Potenzial, zum Vorzeigeprojekt zu werden. Etwa wenn es darum geht, grenzüberschreitende Flussraumbewirtschaftung erfolgreich zu implementieren. Oder in Belangen des Umweltschutzes – kaum sonstwo noch gibt es mehr und so große Auegebiete wie an ihrem Lauf. Zudem versorgt sie ihre Anrainer mit Wasser – weswegen ihrem Schutz und ihrer Reinheit größtes Augenmerk geschenkt werden muss.

The Comeback Kid

Once heavily polluted, the River Thames has recovered.



This is the mark of the industrialized world: In the year 1858, the extremely polluted River Thames in London stank so much that the meetings of the House of Commons in Westminster had to be suspended. Shortly thereafter, construction of a sewage system began in the British metropolis. The problem of the extreme odor was curbed to some extent, but the river itself was not preserved.

By the 18th century the Thames had become the most heavily frequented waterway in Europe. During industrialization, it was not only the city's sewage that flowed unfiltered into the river, but also all the wastewater from the industrial plants. In 1950, 92 years after the "great stink," Great Britain's second-longest river (294 kilometers from the source to the mouth) was declared biologically dead.

Another 63 years later, everything has changed. The Thames is alive. It is healthy. And it is one of the cleanest rivers in a major city worldwide. River otters frolic on its shores, sea trout swim upstream. Even a whale once strayed up the Thames in 2006. The Thames can truly be described as a "comeback kid". Yet the river still faces more or less the same



CITYLIFE:

About 13 million people live within the Thames's catchment area.

challenges as before. To be sure, the old industries are now closed, and London is no longer a port city. But on its short journey from the middle of the country to the North Sea, the Thames passes idyllic spots such as the Cotswolds and Oxford, as well as the bustling capital of London. Its watershed covers an area of about 16,000 square kilometers, populated by 13 million people. Plus, it ebbs and flows, rising and falling up to seven meters.

The comeback of the Thames can be attributed to a series of carefully planned and interweaving measures of the Environment Agency: In the area of agriculture, a cooperation with farmers significantly reduced pollution through pesticides. The Jubilee River was rehabilitated so that it can meander along a distance of eleven kilometers again. This not only creates habitats for plants and animals, but also results in better flood protection for 5,500 houses.

URBAN INITIATIVES

Within the "London Rivers Action Plan," the urban rivers of London are also being renaturated. More than 60 projects have been initiated since 2009.

Tide protection has been improved, which is especially important when storms push water inland from the sea. The Lee Tunnel and the Thames Tunnel should relieve this situation. Sustainable management for the reduction of flood surges at the mouth of the Thames has been initiated – a plan that spans 100 years and will protect 1.2 million people.

"In the last 150 years, the Thames has been to hell and back, but now it really is back. This recovery didn't just happen, it took thousands of people and billions of pounds over many decades to reach this point – and it's important that rivers around the world hear about the highs and lows that we and our many partners have had along the way," says Alistair Driver, National Conservation Manager.

And yet, there is no time to rest on our laurels. The challenges are not disappearing: They're simply changing. London is one of the fastest-growing cities in Europe, but its infrastructure is not entirely up to date. The fragmentation of habitats and the imminent effects of global warming all have consequences for the Thames. Consequences that we can get under control.



Im 18. Jahrhundert war die Themse zu der am dichtesten befahrenen Wasserstraße Europas geworden. Im Zuge der Industrialisierung ergossen sich nicht nur die Abwässer Londons weitgehend ungefiltert in den Fluss, sondern auch jene der Industriebetriebe. 1950 galt Großbritanniens zweitlängster Fluss (294 Kilometer vom Ursprung bis zur Mündung) als biologisch tot. Nochmals 63 Jahre später ist alles anders. Die Themse lebt. Sie ist gesund. Sie zählt zu den saubersten Flüssen in einer Millionenmetropole weltweit. An ihren Ufern tummeln sich Fischotter; Meeresforellen schwimmen stromaufwärts. Selbst ein Wal hat sich 2006 in die Themse verirrt. Unter Menschen, vor allem unter Politikern, gibt es die sogenannten „Comeback Kids“, unter den Flüssen wäre der Themse diese Bezeichnung als erstem zuzuschreiben. Das Comeback der Themse beruht auf einer Reihe sorgfältig aufeinander abgestimmter greifender Maßnahmen der Environment Agency – von Renaturierungsprojekten, über besseren Tidenschutz bis hin zu Überflutungsräumen.



Feel the Heat

*How France and Switzerland
cope with the challenge of
global warming*

FAMOUS:
Along the Rhone river one can find
iconic cities like Avignon or the
wetlands of the Camargue

Was für eine Reise! Von den höchsten Gipfeln der Alpen windet sich die Rhone durch eine der ältesten Kulturlandschaften Europas, vorbei an Städten wie Avignon und Arles, bis sie sich nach einer Reise von gerade einmal 812 Kilometern durch die Deltalandschaft der Camargue in das Mittelmeer ergießt. 95.500 Quadratkilometer umfasst ihr Einzugsgebiet mit Teilen der Schweiz und des französischen Jura und der Provence. Seit jeher ein wichtiger Fluss. Und einer, der vor einer großen Herausforderung steht: Angesichts der globalen Erwärmung breitet sich das trockene mediterrane Klima zusehends nach Norden aus. Das bedeutet längere, heißere und trockenere Sommer, aber auch höhere Niederschlagsmengen im Winter. Seit dem Jahr 2000 wird am Lauf der Rhone daher an neuen Strategien zum Wassermanagement gearbeitet. Strategien, die allein im französischen Einzugsgebiet rund 15 Millionen Menschen betreffen, und eine Region, die 50 Prozent der französischen Einnahmen aus dem Tourismus erwirtschaftet. Dabei zielen die Pläne und Maßnahmen in erster Linie auf Prävention und eine enge Einbindung der Bevölkerung ab.



PHOTOS: OKAPIA

What a journey: Starting from the highest peaks of the Alps, the Rhone winds through one of the oldest culture landscapes of Europe, past cities like Avignon and Arles and then, after 812 kilometers, flowing through the Camargue delta into the Mediterranean Sea. Its watershed covers 95,500 square kilometers, including parts of Switzerland, the French Jura and Provence. Due to its north-south orientation, the wide Rhone valley makes way for the mild Mediterranean climate to reach deep into the continent, providing optimal conditions for planting fruit and wine. Thus the Rhone has always been an important river.

Yet its importance has also led to interference over the years. The first Rhone correction took place in the 19th century, during which land was seized for cultivation. During the second correction from 1930 to 1960, levees were raised, creating a double profile with a main channel and floodplains.

Flooding is one challenge that is always associated with the Rhone, and the situation threatens to worsen due to global warming and its consequences. The dry Mediterranean climate is expanding noticeably to the north. That means longer, hotter and dryer summers, but also more precipitation in the winter.

The effects include lower water levels, increased water temperatures, a greater risk of flooding and – due to rising sea levels – consequences for the Camargue delta region.

NEW STRATEGIES

Thus since the year 2000, new water management strategies for the Rhone have been in the works. These strategies affect 15 million people in the French watershed area alone – a region that generates 50 percent of French tourism revenues.

The plans are aimed primarily at prevention, i.e. decreasing water consumption by the population, agriculture and industry. Meanwhile, the water quality will be improved, and new water resources for the river will be gained; the renaturation of the course of the river will play a significant role in these efforts. The Rhone will finally be given more space again. Space to spread out.

What is essential, according to Jacky Cottet, president of the Management Board of the Rhone-Mediterranean and Corsica Water

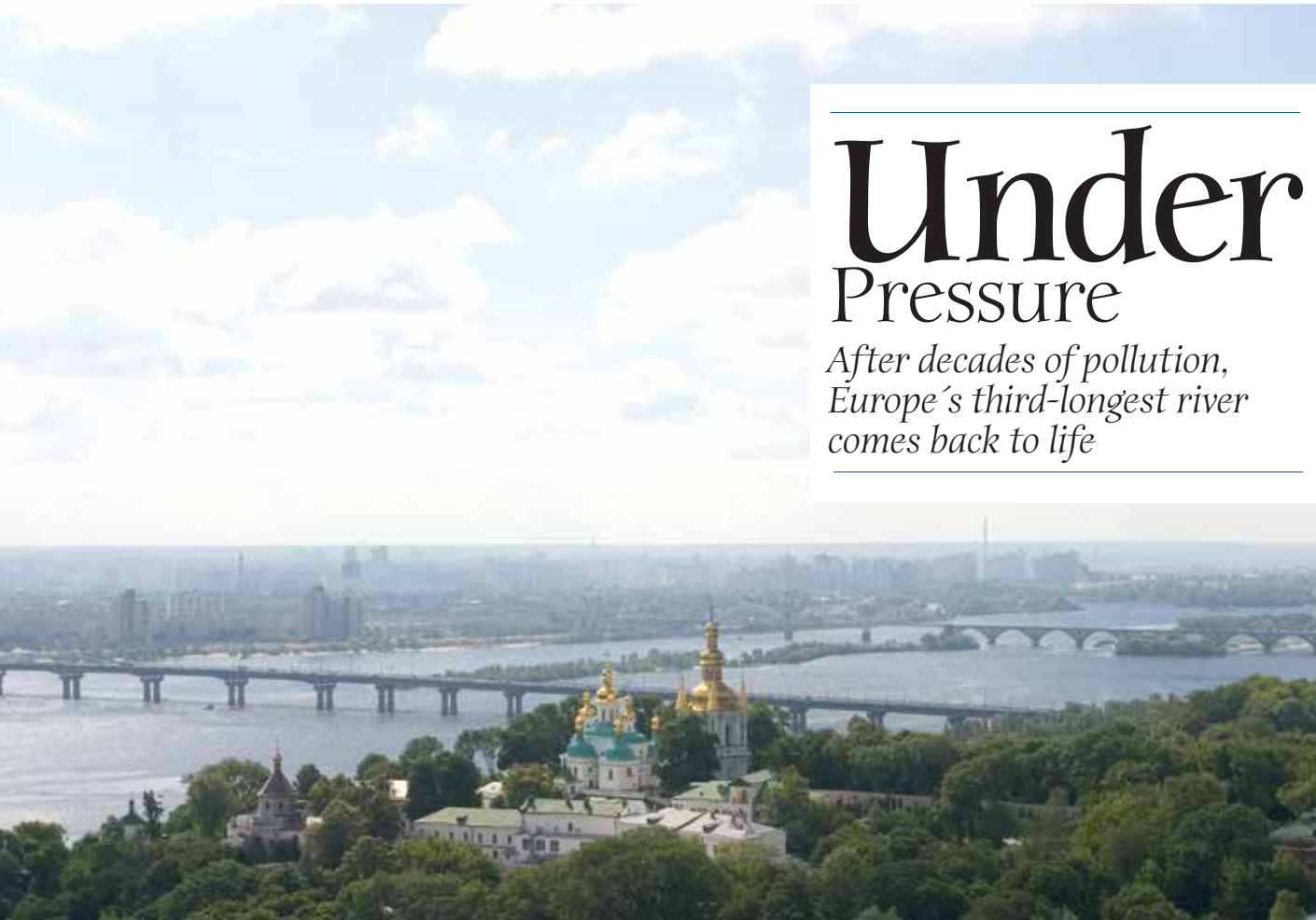
Agency, is that the people are involved in this process. The River Basin Committee plays an important role, “a kind of ‘water parliament’, which votes on policies as well as the fees for water withdrawal,” says Cottet. From 2007 to 2012 alone, more than three billion euros were invested in measures against pollution, for resource management, studies and distributing information. Roughly 10,000 hectares around the river will be renaturated or better protected, 60 water-treatment plants will be set up to treat water polluted with toxins, and strategic drinking water reserves will be secured.

But the French are not alone in this project: The measures are supported by the United Nations Economic Commission for Europe (UNECE) and coordinated bilaterally with Switzerland. Cooperation is a prerequisite for successful work, as Nicholas Bonvoisin of the UNECE Water Convention demonstrates: “The cross-border collaboration creates a broad knowledge base, provides more room for joint planning and implementation as well as the possibility to share the costs and the benefits.”



Under Pressure

After decades of pollution, Europe's third-longest river comes back to life



PHOTOS: PHOTO.ITAR-TASS/ITAR-TASS PHOTO/CORBIS, OKAPIA

Ungeklärte Abwässer, Verschmutzung, hohe toxische Belastungen, Verschlammungen, extreme Beanspruchung durch die angesiedelten Industrien und deswegen teils ausgetrocknete Zuflüsse – wenn ein Fluss in Europa schwer an Umweltproblemen zu tragen hat, dann der Dnjepr. 2.200 Kilometer ist er lang und umfasst ein Einzugsgebiet von rund 532.000 Quadratkilometern. Seit dem Jahr 2000 existiert das von Belarus und der Ukraine gemeinsam ins Leben gerufene, von United Nations Development Programme (UNDP) und United Nations Office for Project Services (UNOPS) unterstützte und von der Global Environment Facility (GEF) finanzierte „Dnjepr Programm“. Dabei geht es zuvörderst um schnelle, intensive Maßnahmen. Um die Reduktion der toxischen Belastung des Flusswassers; den Einsatz moderner, leistungsfähiger Filteranlagen; das Umsetzen von Demonstrationsprojekten, die andere Industriebetriebe und Kommunen mit Know-how und Technologie versorgen und zur Nachahmung animieren.



Untreated sewage, pollution, highly toxic waste, sludge, extreme demands placed by resident industries and the resulting, partially dried-out tributaries – if any European river is feeling the weight of environmental issues, it is the Dnieper. At 2,200 kilometers long, its watershed spans approximately 532,000 square kilometers in Russia, Belarus, and the Ukraine, where it flows into the Black Sea. The ancient Greeks named it “Borysthenes” (the river flowing from the North), and it is also known as “Slavutich” (Slavic river). It is the third-longest river on the continent.

And still, it is a stepchild, hardly known or noticed beyond these three countries. It was also subject to abuse in the 20th century, as the agrarian society turned into an industrial one, taking its toll. In the 1990s, the effects were hard to ignore. Especially at the middle and lower reaches of the Dnieper, which, though heavy and chemical industries and the exploitation of all resources, were – and still are – marked by the absence of any environmental considerations or principles.

However, that changed, and continues to change. In 2000, the “Dnieper Program” was

launched jointly by Belarus and the Ukraine, supported by the United Nations Development Programme (UNDP) and the United Nations Office for Project Services (UNOPS) and funded by the Global Environment Facility (GEF). It is first and foremost dedicated to fast, decisive actions, such as reducing the toxic pollution of the river water; implementing modern, efficient filtration systems and implementing actions that other industrial companies and municipalities support with know-how and technology while encouraging others to follow suit.

ATTRACTING INVESTMENTS

Even more so, the program partners will also ensure that their joint efforts to clean up the Dnieper will attract international attention – and thus long-term investments by institutions such as the European Bank for Reconstruction and Development and the World Bank. It's no coincidence that the program focuses on medium-sized industrial enterprises supported in the use of new technologies in the field of waste management. Sustainable funding models and local regulatory and monitoring processes will be developed accordingly. The goal is easily outlined: By providing low-cost but sustainable technologies and the use of precise information and support, companies should be able to operate both economically and ecologically. In a first step, more than 20 companies from Ukraine and Belarus were invited to participate in the program. For 15 of them, customized and cost-effective recommendations were developed. Five companies were selected as pilot projects for the use of new technologies.

Simultaneously, for the first time the current ecological status was applied to allow for optimization of the existing natural resources. Scientists from Belarus and Ukraine have now been singled out and described in 14 high-quality ecological sources.

A drop in the ocean? On the contrary. When local companies show that economic benefits can be gained by implementing new technologies and complying with environmental standards, they serve as role models, especially for medium-sized enterprises in search of new business. Some things keep quietly to themselves, without much fuss. That's good for the Dnieper.

MAJESTIC:
Before passing Kiev, the Dnieper river travels through Russia and Belarus.



Flüsse streben zum Meer. Letztendlich und von wenigen Ausnahmen abgesehen. Und dort, im Mündungsgebiet, entfalten sich bisweilen grandiose Welten. Zwischenwelten, die sich aus dem Zusammenspiel von Süß- und Salzwasser ergeben. Das ist die eine Seite. Die andere aber ist geprägt von dem, was die Ströme mit sich bringen. Als da sind Sedimente, Ablagerungen, Abwässer, Nährstoffe, Toxine. Vor allem letztere sind problematisch. Zumal, wenn sie in Binnenmeere gelangen. In Meere wie die Ostsee oder das Schwarze Meer. Gerade diese beiden, geprägt durch geringe Wassertiefen, durch einen geringen Wasseraustausch mit anderen Meeren, durch relativ hohe Wassertemperaturen und eine jeweils einzigartige Meeresfauna und -flora, reagieren höchst empfindlich auf Belastungen. Damit kommt gerade den Flüssen besonderes Augenmerk zu. Zum Beispiel im Fall des Schwarzen Meeres: Mit dem Projekt MONERIS (Modelling Of Nutrient Emissions in River Systems) wurden zwischen 2001 und 2005 die Quellen sowie die Transportwege der Emissionen identifiziert und Maßnahmen zu ihrer Reduktion erarbeitet.

Europe's Inland Seas

Why rivers matter when it comes to saving our seas.



PHOTOS: NASA/CORBIS, OKAPIA

With few exceptions, rivers ultimately strive towards the sea. And there, in their estuaries, grandiose worlds unfold: worlds between land and sea, created by the interplay of salt and fresh water. That is one side. The other side is characterized by all that the rivers carry with them: sediments, debris, sewage, nutrients, and toxins. Toxins are especially problematic, particularly when they reach inland seas. For example, seas like the Baltic or the Black Sea. Due to the fact that they have low water levels, little exchange with other seas, relatively high temperatures and unique sea life, these two seas react especially sensitively to pollution. And pollution is not the only burden that these seas have to deal with. Both are considered to be core areas of economic development within the European Union. They are intended to be the starting points for economic recovery stimuli for the entire continent, and new markets are to be established around them – bringing all the consequences resulting from an increase in transport to an increase in the population, industry and development.

TRACING EMISSIONS

That is why their rivers are now receiving special attention – such as the Danube, whose nutrient emissions flow into the Black Sea. Sources of phosphate and nitrate pollution found in the sea include sewage and agriculture. The project MONERIS (Modelling Of Nutrient Emissions in River Systems) identified the sources and transport paths of these emissions between 2001 and 2005 and has been developing measures to reduce them. The GIS-based model will be used to calculate nutrient emissions. In combination with the Danube Water Quality Model and the Danube Delta Model, this project will yield accurate results regarding the current level of pollution and its sources.

The project EnviroGRIDS, on the other hand, covers all Black Sea tributaries, from the Danube to the Dnieper to the Kizilirmak River in Turkey. EnviroGRIDS serves as an observation system, acting as an early warning system by connecting all available data, while also helping to formulate long-term policies. It's a pilot project of global significance, since it has been adopted as an integral component of the Global Earth Observation System of Systems (GEOSS).



UNIQUE:
The Black and the Baltic Seas can not be compared with others like the Mediterranean or the Atlantic Ocean. They need special attention.

And what does that mean for the Black Sea? The chance to reduce pollution from the tributaries and allow the sea to recover.

That is also one of the clearly defined goals of the EU Baltic Sea Strategy. Similarly to the Black Sea, the Baltic suffers from the effects of sewage, transportation and global warming. In the action plan for 2009-2013, the reduction of the use of phosphates in cleaning products as well as the promotion of measures to decrease wasteful activities on ships and in ports have been defined and successfully implemented as "flagship projects". The new action plan seeks to strengthen collaboration on the local, regional and national levels. A simple system of implementation should be established, which makes better use of the available structures, existing institutions, financing and legislation. In the future, a monitoring system will ensure the successful implementation of the strategies using set targets.

With the strategies for the Baltic Sea and for the Danube Region, the European Union has focused twice on large inland seas in Europe – not only on their profitability, but also on saving and preserving these bodies of water. And that usually starts somewhere upstream. Deep in the heart of the continent.

The Finalists of the European RiverPrize

The Órbigo River Spain

The Órbigo River is located within the Duero Basin. Here, water management strategies have evolved historically from a view of the hydrologic cycle as a resource to a more integrated and focused approach encompassing ecological functioning. This approach fits under the EU legislation on water, particularly the Water Framework Directive and Floods Directive. Subsequently, Spain promoted a change in the management of river systems and the integration with land use following sustainability criteria, while encouraging engagement and civil participation, and technical training in this new approach. The Órbigo River Restoration Project was designed for this purpose: it is an example of integration of both water management and land use policies. It

covers a variety of actions including recovering "room for the river", improving lateral connectivity and the recovery of secondary channels and other para-river structures which reduced ecological functioning because of channelization. The approach also includes public participation, education and training and a volunteering program.

Der Rio Órbigo ist Teil des Flusssystemes des Duero und das "Rio Órbigo Renaturierungsprojekt" ein erfolgreiches Beispiel dafür, wie Gewässerbewirtschaftung und Landnutzungspolitiken miteinander verbunden werden können. Es umfasst mehrere Aktionen, z.B. die Rückgewinnung von Flussraum.

Upper Drau Austria

With the building of the rail road line through the Upper Drau Valley in about 1870, regulatory procedures set the river's course in order to reduce flood danger, intensive agricultural use and to expand settlement areas. The wetlands valley floor shrank. In spite of these developments, the Upper Drau still accommodated numerous natural resources. In the early 1990ies, the water management section of the regional government, hydraulic engineers and environmentalists recognised their common interests about the Upper Drau. This led to an intensive collaboration, where both water management as well as nature conservation experts worked together. The first rehabilitation measures began in the form of river widening. Now, about 25 per cent of the 68 kilometre long river section from Oberdrauburg to Paternion in the district of Spittal (Carinthia, Austria) has been restored. This collaboration and on-ground works have culminated in the River Drau, together with its riparian zone being declared a European Protected Area in 2011.

Um 1870 wurde mit dem Eisenbahnbau durch das Tal der Oberen Drau der Fluss stark reguliert; es schrumpften die Auengebiete. In den frühen 1990ern arbeiteten dann Experten der Gewässerbewirtschaftung und des Naturschutzes für eine Flussrehabilitierung zusammen. Heute sind 25 Prozent des 68 Kilometer langen Flussabschnittes von Oberdrauburg bis Paternion naturnah wiederhergestellt.

Mura-Drava-Danube

Austria, Croatia, Hungary, Serbia and Slovenia

The Mura-Drava-Danube River corridor hosts highly valuable natural and cultural landscapes in all five countries. Despite numerous, unsustainable human practices, this stunning river landscape has kept an amazing biological diversity. For many local people, the intact river and floodplains are vital for their livelihoods, sustaining, forestry, agriculture, recreation and tourism as well as clean water for drinking. Still, the corridor's distinctive natural values are at risk. Since 1993, NGOs have been campaigning to protect the unique landscape in a Transboundary Biosphere Reserve or TBR. Gradually, public administrations and NGOs cooperated to achieve jointly the implementation of the TBR. Conflicting management practices such as regulating the natural river courses, extracting sediments and building new hydro-dams are threatening the TBR's ecological integrity. Continued public information provided by NGOs and the European Union accession requirements motivated all five countries along the river to set up various protected areas. This conservation commitment reduced and then stopped river-deteriorating interests.

In der Flusslandschaft von Mur, Drau und Donau finden sich in allen fünf Ländern wertvolle natürliche und kulturelle Landschaften. Auch wenn die Region noch eine hohe biologische Vielfalt aufweist: Ihre charakteristische naturräumliche Ausstattung ist gefährdet. Durch die Arbeit von NGOs und die Vorgaben bei der EU-Erweiterung haben alle fünf Staaten Schutzgebiete im Flussgebiet eingerichtet.



RIVER RHINE:
The Rhine is the twelfth, longest river in Europe and a landmark in Düsseldorf – one of the many cities by the river.

River Rhine

Germany, France, Luxembourg, Netherlands, Switzerland, EU

Following half a century of river degradation and a chemical accident near Basel in 1986 resulting in hundreds of kilometres of river being polluted and the mass death of fish, eels and other aquatic organisms, the countries of the River Rhine realised that a fundamental shift in thinking was required for the management of this major transnational river. Following investments by the states, municipalities and industry, more than ninety-six per cent of the fifty-eight million inhabitants of the Rhine catchment are today connected to urban wastewater treatment plants and many industrial sites now dispose of waste via modern treatment plants. As a result, water quality has improved considerably and oxygen levels are back to normal. The chemical status of most groundwater bodies is good; and inventories show that fish species composition in the Rhine is

almost complete, with sixty-seven fish species being detected. All historically identified species except for one have returned. In addition to key river health improvements, the main aims of the International Commission for the Protection of the Rhine include harmony in water use and environmental objectives under the European Union Water Framework, flood prevention, adaption to climate change, sustainable development, human health and cultural heritage.

Nach einem halben Jahrhundert starker Degradierung des Rheins und einem Chemieunfall mit schwerwiegenden Folgen 1986 fand ein Umdenken statt: Staatliche, kommunale und industrielle Investitionen verbesserten den Umgang mit Abwässern – die Wasserqualität nahm wieder zu. Heute ist der Sauerstoffgehalt des grenzüberschreitenden Flusses wieder auf dem Normalstand.

