

## The Volga River: Russia's strained lifeline

By **Oleg Kashchenko** and **Michelle French**

The Volga basin is many things to many people. It is a breadbasket and fisheries centre, a navigational artery for transport and industry, and a source of clean energy helping to meet the demands of a consuming public. It is home to about half of Russia's population, carries 70 percent of inland waterway traffic, accounts for half of inland fish stocks, and supports half its agriculture. No small feat for the largest river in Europe. But the Volga basin, comprising 1.36 million square kilometers, shows signs of distress from domestic and industrial pressures.

As with major European rivers, wastewater and resource depletion continuously challenge the Volga's ability to cleanse itself and provide a source of potable water. On the whole, these pressures have been increasing.

Take the relationship between population and water quality, for example. About 70 percent of the river's pollutants — including oil, nutrients, and heavy metals — come from residential and agricultural sources, with 444 towns and 57 million rural and urban inhabitants in the basin. Combined with industrial sources, about 20 km<sup>3</sup> of wastewater flows into the ecosystem every year. While industry has become cleaner since 1992, only 15 percent of treated wastewater meets national standards. Yet, 85 percent of drinking water in the Volga basin is taken from surface water sources, including the Volga itself.

Fish stocks in the Lower Volga (which flows into the Northern Caspian basin) have responded unevenly to the pressures of poaching, over-fishing, and hydropower. During the last 30 years, the sturgeon catch plummeted due to losses of spawning grounds, food base disturbances, and over-fishing and poaching. In 2002 poaching exceeded legal catches by 15 times. Official fish catches are one quarter of their 1970 level. The Volga and Kama dams — constructed during the Soviet era — have also impacted fish reserves. Only two of 11 dams have fish ladders, and flooding has destroyed spawning grounds.

Nevertheless, the Lower Volga and Northern Caspian basins still account for half of Russia's inland fish catch every year. Fortunately, no species of fish has disappeared completely, thanks to riverine havens in remote tributaries. What is more, during the 1980s, some species from the White and Baltic Seas, as well as from the Black and Caspian Seas have appeared in the Upper Volga.



Fabrice Renaud

**Hydropower has turned Europe's longest river into a chain of man-made seas.**

Today some 88 fish species can be found in the Volga basin, a rise from 74 before dam construction.

Dams have brought mixed results for human health and community vitality. On the one hand, they have improved and strengthened the economy by providing energy reserves at a time when world energy costs are rising. On the other, settlements have been disrupted, causing acute social problems associated with resettlement. Flood mitigation has been essential to preserve the more than 80,000 archeological monuments, 96 historical cities and rural settlements, and UNESCO World Heritage sites within the basin.

The Volga basin is a bountiful resource but it is also under pressure. With President Vladimir Putin's May 16, 2003 address to the Federal Assembly declaring his intention to double Russia's GDP over the next decade (i.e. by 2010), basin experts are faced with the ultimate balancing act: how to promote needed economic growth while ensuring social and environmental integrity.

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# River managers must work together

International group of experts calls for strengthened water management, better coordination

By Jerome Simpson

Water experts from Russia and the EU this fall proposed stronger water management and coordination among different administrative levels in the Volga basin. The proposal was made during an expert group meeting held September 28-29 in Nizhny Novgorod, Russia, and organised as part of the CABRI-Volga project.

While diverse opinions were debated, there was a wide consensus that stronger policy and institutional integration needs to be achieved. This will require greater involvement of non-governmental stakeholders, transfer of experiences from other rivers in Europe as well as the establishment of structures successfully implemented in other large river basins. The extent to which a Volga agency or basin council could better coordinate the activities of different administrative levels and develop water management standards in the Russian Federation will be discussed in subsequent expert group meetings during 2006.

During the meeting, hosted by Nizhny Novgorod State University of Architecture and Civil Engineering, more than 60 water experts discussed challenges and exchanged experiences related to Volga River basin management within five distinct groups. Each expert group consisted of about 12 representatives from civil society, business, the scientific community and decision making bodies, with resident Volga basin specialists typically constituting two-thirds of the participants. Overall, the meeting sought to foster institutional cooperation and multi-stakeholder networking within the basin and with EU counterparts.

- The River and Environmental Rehabilitation group worked on standards for water quality; wastewater; integrated water resource management (while referring to the Volga Revival Programme and the Dnepr Global Environment Facility project); monitoring; data exchange; management; and communication to the public. The group called for better information exchange and public access. The participants pleaded for the restart of the Volga Revival Programme, and issued a call for performance targets and goals for river basin authorities.
- The Human Security and Vulnerability group looked at vulnerabilities of rural communities and small and medium-sized cities. The experts evaluated risk assessment and communication and information exchange in the Volga basin. They reviewed land-use and hydro-morphological change; dangers of flood protection and extreme weather; monitoring practices; disaster prevention and management responsibility.
- A group focused on Natural Resources and their Sustainable Use focused on existing and foreseen laws in water management; institutional frameworks; multi-stakeholder partnerships; reforms in property rights; and integration of economic growth with environmental concerns.
- The Connecting Goods and People group discussed transport aspects of the river. The group analysed the urban mobility situation; and conceptualised a potential Volga Mobility Master Plan to 2010. Members proposed



a coordination mechanism for passenger and freight transport and discussed ways to reduce water pollution.

- The Institutional Coordination and Cooperation group discussed the design and implementation of environmental programmes for the river basin. The group proposed better coordination of



Siegfried Rupprecht

Shipping at the port of Nizhny Novgorod is one of the pressures on the Volga River.

Scale 1 : 15 000 000



resource allocation and suggested various basin management approaches to boost interaction between business, civil society and authorities.

The first expert group meeting, part of a series of three within the project, focused on sharing state-of-the-art expert assessments and good practices from across Europe, the United States and South America. These included the integrated catchment area concept of the Neckar River in Germany (IKoNE); integrated flood management and flood risk reduction in the City of Curitiba in Brazil, and the Watershed Education for Communities and Local Officials (WECO) initiative in the US. Summaries of the discussions are at: [www.cabri-volga.org/FirstExpertGroupMeeting.html](http://www.cabri-volga.org/FirstExpertGroupMeeting.html).

The second expert group meeting will take place in early April 2006 (see back page for more details) and will be hosted in the context of "scenario development." The third and final expert group meeting, scheduled for September 2006, will develop specific recommendations and future activities.

## A visionary confluence

EU and Russia cooperate to help the Volga basin

By Michelle French

It's an example of "twinning" — a process in which two partners share the responsibilities of a project. In the case of the CABRI-Volga project, this means that an equal number of water experts and stakeholders from the Russian Federation and the European Union (EU) jointly explore Volga basin development as it responds to human pressures.

On the Russian side, CABRI-Volga succeeds Volga Vision, an interdisciplinary, sustainable development project of the United Nations Educational, Scientific and Cultural Organisation (UNESCO).

Beginning in the late 1990s, UNESCO began bringing together Russian scientists and politicians to establish a vision. They created a document describing environmental and human risk in the Volga-Caspian basin, providing a summary of potential environmental goals for basin inhabitants and serving as a reference for follow-up activities and research.

"The Volga Vision is a summary of what scientists believe can be achieved in one generation. It is a desirable, but realistic imagination of the future," explains Janos Bogardi, who helped spearhead the UNESCO project before becoming director of the United Nations University Institute for Environment and Human Security (UNU-EHS) in 2003. Research into the Caspian and coastal zones continues as part of the second phase of the vision's implementation.

CABRI-Volga emerged in 2004 as an EU-funded project to facilitate cooperation and coordinate research in environmental risk management in large river basins in the EU, Russia and the Newly Independent States (NIS). Within this, UNU-EHS, UNESCO-Moscow and other Russian stakeholders together with EU policy makers and scientists sought to focus the vision with multi-disciplinary research from a broad base of European water specialists.

Ultimately, Bogardi sees CABRI-Volga as an intermediate step to one of the vision's objectives — the implementation of scientifically informed policy making. From an EU perspective, CABRI-Volga is an opportunity to enhance relations with Russia through environmental protection assistance. The European Commission contributes approximately EUR 1 million. "It's about the wisdom of crowds. The many are smarter than the few," said Cornelia Nauen, principal scientific officer at the EC. "Many different people and perspectives need to be involved."

Serguei Smirnov, who worked with UNESCO-Moscow during CABRI-Volga's genesis, said, "Hopefully this partnership can develop into something more," adding that the project already involves more than 300 organisations. The challenge, Smirnov says, involves accommodating diverse groups with different needs and objectives. It helps that the Russian political community has shown interest, particularly through the State Duma's Committee on Ecology. Smirnov says the committee is interested in finding ways to further implement Russia's water code. "Eventually, the recommendations need to be applied at the political level," he says.

CABRI-Volga has 18 project partners from Russia and the EU. The two-year project is managed by Rupprecht Consult in Cologne and scientifically coordinated by EcoPolicy in Moscow.

## IN PRINT

## Gaps identified in Danube analysis

In late October, the International Commission for the Protection of the Danube River (ICPDR) released a final report on the first stakeholders' conference on the Danube River basin held last June in Budapest.

The report outlines responses of some 100 stakeholders regarding 2005's ICPDR activities. The feedback identified missing data in the Danube Analysis Report, a comprehensive review of basin characteristics and human pressures.

Jasmine Bachmann of the ICPDR Secretariat welcomed comments on the report. "It lays the foundations for the activities that will be carried out in the next few years," she said.

Stakeholders also stressed the need for a stakeholder network and more meetings. The ICPDR will respond to participants' concerns by December, and will also address gaps in the report's research.

The ICPDR is a partnership of 13 countries sharing the Danube basin.

## Project partner Professor Naidenko dies



NNSUACE

Partners of the CABRI-Volga project have been saddened to learn of the sudden death of Professor Valentin V. Naidenko, rector of Nizhny Novgorod State University of Architecture and Civil Engineering (NNSUACE) on October 20, 2005 at the age of 67.

Naidenko was a doctor of technical sciences, an honorary freeman of Nizhny Novgorod, a member of the Russian Academy of Architecture and Construction Sciences and State Prize winner of the Russian Federation in Science and Engineering.

He was described by Siegfried Rupprecht, CABRI-Volga project manager, as "an excellent scientist and one of the great personalities of our time." Rupprecht added, "We have lost a great supporter and friend."

As one of the leading partners of the CABRI-Volga endeavour, Nizhny Novgorod State University of Architecture and Civil Engineering last month hosted the first expert group meeting of the project, where water experts from across the European Union and Russia discussed and exchanged views and experiences on river basin management.

Professor Naidenko's further distinctions include: prize winner of the USSR Council of Ministers, merited worker of Science and Engineering of the Russian Federation, honorary constructor of Russia, honorary worker of Higher Education of Russia, and UNESCO chairholder of the initiative "Ecologically Safe Development of a Large Region — the Volga basin." In addition, Naidenko was a Knight of Order of Honour, a Knight of Order "For Contribution to the Motherland" and a Knight of Order "Vernadsky's Star".

The project team would like to extend its deepest sorrows and sympathies to Professor Naidenko's family and friends.

## CABRI VOLGA BRIEF

CABRI-Volga supports information and know-how exchange between Russian and European stakeholders in the water management domain. Its overall aim is to engender effective river basin management, foster cooperation and networking, and European integration. It is EC/UN financed and runs until February 2007. More information on goals, partners and forthcoming events is online, in both English and Russian, at: [www.cabri-volga.org](http://www.cabri-volga.org).

The CABRI VOLGA BRIEF seeks to raise awareness to the Volga region based on the views of a variety of stakeholders, disseminate the results and achievements of the Cabri-Volga project, and share policy news and best practices from related initiatives.

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## EVENTS

### MARCH 16-22

#### Fourth World Water Forum

Mexico City  
Web: <[www.worldwaterforum4.org.mx](http://www.worldwaterforum4.org.mx)>

The World Water Forum aims to influence water policy making at the global level by promoting the integration of multi-stakeholder participation and dialogue into policy-making processes. The event is organised by the World Water Council, an international body constituted to encourage debates and promote the exchange of experience.

### APRIL 3-7

#### Second CABRI-Volga Expert Group Meeting

Location was not decided at press deadline — please visit <[www.cabri-volga.org](http://www.cabri-volga.org)>

The CABRI-Volga expert group meeting series will continue with discussions of challenges and the exchanging of experiences related to river basin management. More than 60 experts from across Russia and the EU will focus on various scenarios for the sustainable management of the Volga River basin.

### MAY

#### Great Rivers Forum 2006

Nizhny Novgorod  
Exact date and location to be decided in early 2006 — please visit <[www.cabri-volga.org](http://www.cabri-volga.org)>

This eighth international annual forum will continue exploring issues related to the sustainable development of great river basins in the world. The CABRI-Volga project will be among the key stakeholders participating.