



## **Meeting Report**

**First CABRI-Volga Expert Group Meeting  
Nizhny Novgorod, Russia  
28-30 September 2005**



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**Foreword**

The CABRI-Volga project ([www.cabri-volga.org](http://www.cabri-volga.org)) held the first of three Expert Group Meetings in Nizhny Novgorod, Russia, on 28-30 September 2005.

Forty-six project-external experts from various institutional, scientific and geographical backgrounds joined about twenty-five CABRI-Volga project partners to kick off discussions and to share expert assessments on coordination and cooperation between stakeholders in environmental risk management in large river basins in Europe, with a particular emphasis on the Volga basin.

The main goals of the meeting were:

- To strengthen links between the scientific community and policy-making processes
- To develop a dialogue on mutual demands and practical needs of various stakeholders in order to build stable partnerships and networks between them
- To exchange expert insights on mechanisms how to incorporate human-induced environmental risk assessments into integrated river basin management and to strengthen institutional coordination
- To share expert assessments on long-term cooperation and coordination in enhancing environmental and human security both within national contexts and within the European dimension

The Expert Group Meeting took place in the framework of the CABRI-Volga initial phase “State-of-the-Art and Good Practices” in environmental risk management in large river basins. Objectives of this phase have been:

- To overview the state-of-the-art in environmental risk management in large river basins, including evidence from relevant projects and research results
- To explore the status of coordination between institutions and other multiple stakeholders, including civil society, business, decision-makers and scientists
- To identify good and bad practices in coordination and cooperation between stakeholders in large river basins
- To explore major lessons learned from practices and case-studies within the Expert Groups’ thematic areas

The present Meeting Report provides a summary of the “discussion results” obtained in the five thematically structured CABRI-Volga Expert Groups:



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The "List of Participants" is provided on page 36. It includes the affiliation and contact information of the experts from Russia (30), the EU countries of Austria (2), Germany (5), Hungary (1), the Netherlands (3), Poland (1) and Slovenia (1) as well as from Switzerland (1), the United States (1) and the European Commission (1).

The CABRI-Volga project would like to thank the forty-six experts for their active and constructive participation at the First CABRI-Volga Expert Group Meeting in Nizhny Novgorod!



## Expert Group 1

### **”River and Environmental Rehabilitation”**

#### **Introduction**

The first CABRI-Volga Expert Group Meeting in Nizhny Novgorod fell into the project's initial phase during which the state-of-the-art and good practices were being identified and analysed. Expert Group 1 (EG1) focused on environmental rehabilitation of large river basins with a special emphasis on improvement of water quality in the Volga River basin. It explores major problems in water quality management and coordination of policies, tools and activities between multiple stakeholders. The major themes for discussion included:

- Water quality management: standards and setting priorities
- Environmental monitoring and data dissemination to stakeholders
- Integrated water basin management
- Lessons from the Volga Revival Programme
- Multi stakeholder approach as a tool to improve water quality and basin management

#### **Methodology**

At the EG1 meeting in Nizhny Novgorod, experts from Russia and the EU had an opportunity for in-depth and moderated discussion. Due to the limited time available for discussion experts concentrated on concrete topics that are most pressing for assessment of the state-of-the-art and good practices for the Volga Basin and other large river basins in Europe. They included:

- 1) Standards for Water Quality
- 2) Sewage Discharges
- 3) Integrated Water Management
  - a. Volga Revival Programme
  - b. Dneper GEF Project
- 4) Monitoring
- 5) Data exchange
- 6) Communication to the public

Experiences of Russia, the Netherlands, France, Germany and Brazil were presented and thoroughly discussed. Comparisons of experiences and lessons learned from domestic practices in these countries indicated useful and interesting results. Recommendations for enhancing coordination in river and environmental



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rehabilitation within each discussion topic were made based on good practices and approaches applied by these countries.

## **Results of Discussion**

### Standards (quality objectives) for Water Quality

During the discussion it became clear that Russian water quality standards are very high. As a result, they are difficult to comply with. It was indicated that standards which are too demanding might appear ineffective in practice as they may be ignored because of being unrealistic. The practices and experiences in the EU and in Brazil in coordination of standard setting were summarized as: 1) design a system of standards which 'fit into particular purpose'; 2) differentiate standards according to functional use of a water body (for example, for recreation or fisheries, etc.) 3) ensure coherence between standards applied to different water segments (e.g. surface water, or waste water) and 4) have a vision of a target to be reached in the future, but set realistic and attainable intermediate goals: build upon success as success motivates! It is important to move step-by-step from non-strict standards to more stringent ones. Furthermore, it is essential to design a system of standards according to functional purposes of water use (drinking water supply, fishing, recreation, etc).

It was indicated that there are institutional uncertainties in Russia regarding division of responsibilities and competences between various government bodies to set standards and to control their enforcement.<sup>1</sup> In most EU countries, one organization has the task to develop and set standards, while water management organs are responsible for meeting and compliance with targets set by a standard.

It was emphasized that standards, legislation and enforcement are to be treated in an integral manner. At the plenary, Prof Naidenko noted that the Russian system for standards is presently being reformed along lines similar to those outlined above. The question is how to ensure compliance with legislation and standards in a more effective way? What tools and mechanisms should be used? How to motivate users to meet the standards?

It was concluded by the EG1 experts that water management should be improved and requirements should be harmonized between water quality and environmental issues. There may be contradicting requirements, e.g. environmental norms which are very strict and water quality standards which are very high and may lead to closure of some industries. There is a need to set objectives one wants to achieve relating to water quality, identify priorities and tasks for water quality standardization based on such objectives. To implement this, there is a need for a step by step approach.

It was emphasized by the Russian experts that though in Russia there are approved standards and norms of water quality, in water industry and among other water users different methods are applied for measuring water quality which leads to incompatible results. Hence, it is essential to set up a unified set of standards. They might vary across water basins and water-users, but meet the requirements of generic water quality standards.

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<sup>1</sup> In Russia, there is an organ responsible for setting standards, i.e. Gosstandart. Bodies of Sanepidnadzor and the Ministry for Natural Resources (MNR) are responsible for controlling standards implementation.



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It was also indicated that in Russia organisations which are in charge of water supply to the population and other water-users should be responsible for meeting the water quality norms.

#### Sewage Discharge

Problems of sewage discharge were an important topic of the discussion. It was recognized as a sector of high priority in order to improve or safeguard water quality. Comparisons between practices in Russia and the Netherlands were made.

In Russia, the system of payments for sewage discharge (within and above the set limits) by particular polluters is fixed by the existing environmental legislation. However, implementation of this system is not efficient enough to provide incentives for polluters to make investments to modernize their technologies and reduce the pollution level.

In the Netherlands, licenses are given for sewage discharge. Fees are paid depending on pollution level; a fine has to be paid when limits are exceeded, and in severe cases court action is taken. In the latter case, it is possible that an industry has to close down. The taxes go into a fund which is used a) to give subsidies to enterprises to develop/implement improved technologies resulting in lower pollution levels and b) to fund enforcement and monitoring. In the Netherlands a long term perspective is taken: polluters know in advance that taxes will be increased in a period of for example 10 years. This means that actors can calculate whether investments in clean technology will pay off. Responsibilities for enforcement are clearly allocated. The Ministry has an Inspection body which assesses the functioning of the agencies responsible for enforcement. The Dutch system has thus a stepwise approach with incentives to invest in the reduction of pollution.

EG1 concluded that the Dutch case-study has elements which can be important to consider in the context of the Volga: the principles on which the system taxes are based, the combination of a long term perspective with the stepwise approach, the formation of a fund, the incentives to reduce pollution and improved institutional aspects.

#### Integrated Water Management

Two Russian projects based on the principles of integrated water management were presented and discussed: the Volga Revival Programme and the GEF Dneper Project. It was concluded that their approaches were grounded upon a strong scientific basis and some of their experiences can be regarded as interesting lessons for the Western Europe. However, it was indicated that the implementation phase of these initiatives had been rather weak. This was caused by a mixture of financial and institutional problems.

Improvement of water management in the Volga basin is essential: an organization, i.e. a special agency, or basin council with a clear mandate and clear responsibilities in water management (in all aspects of water use) and providing coordination between various stakeholders and different administrative levels is needed. Such an organ might bring together representatives from government authorities from various levels, including existing basin management administrations, from local communities, private stakeholders, water users and water polluters. It might be also responsible for coordination and development of water quality standards based on a basin approach.



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Some participants expressed their concern about suspension of the federal Volga Revival Programme, although a number of its sub-programmes had been very challenging. Participants suggested that the programme should be revived. It had been a big success in developing interaction and establishing links between the scientific community and industrial groups in the basin; it had contributed to creating common perceptions of existing problems and to finding ways to solve them.

### Monitoring

Monitoring programs in the Volga basin were briefly discussed. In the past, monitoring had been well organized and coordinated. For example, all laboratories and monitoring sites applied uniform procedures, protocols and reporting standards which were established and coordinated by a central body. As a result, high comparability of data was achieved. This strong institutional framework has gone and been dismantled during the last decade. EG1 experts consider it to be very important to revitalize the former infrastructure and adjust it to contemporary monitoring requirements.

The Dutch experts were asked to share their experiences in the design and functioning of monitoring programmes. In the Netherlands, a gap and disconnection exist between policy/decision makers and scientists who design and implement monitoring programmes. Monitoring programs are essential, but often they are considered as too expensive. Usually, they deal with different elements (water quality, ecology, chemistry), and different bodies are responsible for them. Each decision-maker considers that an amount of information generated and supplied to him is too excessive compared to what he needs. As a result, the impression is created that considerable resources are wasted (so called, "data rich - information poor" syndrome). It is therefore essential that (representatives of) decision-making bodies are involved in defining what particular data sets are required. This problem seems to be less present in Russia.

It was emphasized that there is a need for restoration and maintenance of the monitoring infrastructure in the Volga basin. It is important to develop multi-level monitoring system (state, regional, industrial, etc.). Nowadays many private enterprises conduct their own environmental monitoring: often they are turning to be the main owners of updated environmental information, which is not made widely available to the general public and experts; there are also doubts concerning its quality and reliability.

Producers of monitoring results are sometimes charging for access to data because of limited funding they have from the government. Introduction of special fees for monitoring, as it is done, for example, in Canada can contribute to problem solving: the fees are collected by the environmental agency and funds are used for support of monitoring activities. A similar scheme is applied by the Dutch system mentioned above. Tighter links and coordination should be established between monitoring and decision-making, and monitoring data should be broadly used within decision-making processes in Russia.

### Data Exchange

Problems of data exchange and cooperation received considerable attention in the discussion. In many cases data exchange between various bodies in Russia is hampered by a variety of problems (including the requirement to pay for data). It was



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agreed that integrated water management can be effective only if it is based on profound information, while bodies involved in water management have to have unrestricted access to data. In addition, provisions have to be made to ensure an easy data exchange among all actors involved (e.g. glossaries with definition of terms applied in water management, data formats including names, abbreviations, units for reporting, etc.). The infrastructure required for reliable data processing seems to have been weakened over the past years, and renovation of data centers and laboratories in a modern setting is recommended.

Though Hydromet is identified as a leading agency responsible for hydrological data compilation, only a fraction of all data collected in the Volga basin reach the Hydromet Data Centers. One of the reasons is introduction of data charges for its consumers, while the data sources prefer to deal directly with consumers. As a result, the information from different regions of the Volga basin is fragmented and it is difficult to get a complete picture.

The situation may not improve as long as the system of data charges exists. This is the problem not only in Russia, but in many other countries as well. It is being discussed at the international level but without much success. The data is available and ready to be shared but not everyone can afford buying data. The quality of data collected by various enterprises and agencies is low as the methods of data collection and formats of their presentation differ and give incompatible results.

### Communication to the Public

Communication of information to the public is essential for proper water management. Very interesting examples from both Russia and Western Europe were given. All emphasized that there is a need to communicate in a way which laymen can understand.<sup>2</sup> In practice, this is very difficult. A Dutch study was presented as an example. In this study, public and experts were brought together. Both parties were asked to explain how they view water quality. It appeared that public and experts had a completely different perception of water quality terminology (public: focus on visual aspects as e.g. plastic bags floating in the water; experts: emphasize non-visible issues such as chemicals) and therefore did not understand each other. The debate was lively and interesting; both parties strived to communicate with each other.

In general there is lack of awareness of the public in the Volga basin related to water quality and management problems as well as to the risk of disaster. Problems emerge because of a limited number of available mechanisms promoting access to the required information. Information presented is often biased reflecting only approaches of a particular interest group. According to a survey executed by NGOs in the Volga basin, only a minor portion of society has an interest in getting ecological information, although in general the public is not satisfied with the environmental situation. People are still rather inert and heavily rely on government action and protectionism.

The need was stressed to establish close links with mass media and make all water quality information easily accessible. This information should be presented in a form easily understood by the general public.

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<sup>2</sup> NGOs could play an important role in the interpretation of technical indicators and experts' opinions in a way understandable for the general public.





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Provisions for special support by NGOs should be incorporated into domestic legislation. At present, NGOs in the Volga basin are primarily financed through foreign grants.



## Expert Group 2 “Human Security and Vulnerability”

### Introduction

The first CABRI-Volga Expert Group Meeting in Nizhny Novgorod fell into the project’s initial phase during which the state-of-the-art and good practices were being identified and analysed. **Expert** Group 2 (EG2) focused on human and environmental security in large river basins with a special emphasis on reducing risks from floods, forest fires and technological accidents associated with water quality deterioration (accidents at sewage systems and accidental discharges with resulting water pollution of the river) and potential accidents at dams and power plants in the Volga river basin.

The major themes for discussion included:

- Flood management: Technical issues and planning
- Institutional considerations
- Public participation and socio-economic issues

### Methodology

At the EG1 meeting in Nizhny Novgorod, experts from Russia and the EU had an opportunity for in-depth and moderated discussion. At the beginning of EG1 session the basic approaches and definitions were addressed.

Nowadays the concept of human security may be extended from its traditional meaning of worldwide political and military security to also embrace the idea that every citizen should be able to benefit from sustainable socio-economic development. From amongst different natural resources, water has been recognized as the key environmental resource for social security, economic growth and prosperity. Human security can therefore be seen to be related to environmental preservation (water, ecosystems and biodiversity) and to socio-economic stability and sustainable development.

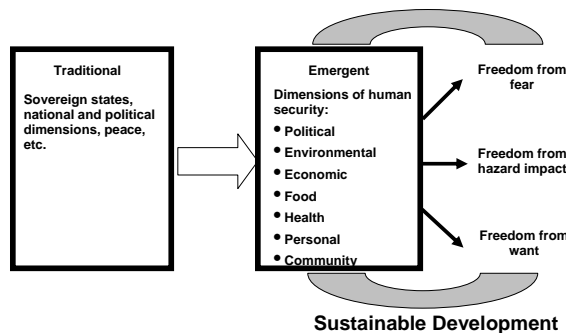


Fig.1: The paradigm shift for the concept of Human Security.



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Floods are essentially natural hazards that occur regularly, but become disasters when they interact with human society. Natural factors, in most cases, are the main cause of catastrophic floods. However, anthropogenic factors, such as human occupation of floodplains, extensive urbanisation, basin-wide land use changes, and structural measures to mitigate floods (flood levees and walls, cutting of the river meanders, river training) have modified the natural characteristics of extreme floods. Recent catastrophic flood events both in Europe and the USA (Rhine River, Mississippi River) have shown that human activities and traditional river engineering works may result in an increase in the frequency of extreme floods and, most importantly, in negative economic consequences such as loss of property, destruction of livelihoods and loss of human life. Possible climate change might increase both the intensity and the frequency of catastrophic floods.

To reduce the risk of floods and alleviate the consequences, two different attitudes can prevail. The first is to consider the flood as a random natural disaster and to only respond on an ad hoc basis through emergency programmes. The alternative, favored within the CABRI-Volga project, is to recognize that floods are recurring phenomena and to adopt a proactive and strategic approach including combination of mitigation measures with emergency response and rehabilitation along with incorporation of disaster risk reduction into sustainable development strategies. In this way, the hazard is “internalised” whereby vulnerabilities can be reduced and coping capacities enhanced.

***Basic definitions used during discussion:***

*Human Security:* The ability to benefit physically, economically and culturally from sustainable socio-economic development

*Vulnerability:* The possible degree of damage due to an incident such as a flood.

*Integrated flood management:* could mean very different things, according to different approaches such as engineering, social or institutional. It is recommended that integrated flood management be defined as a multi-dimensional and multi-disciplinary activity, which takes into account institutional, economic, social and environmental aspects of flood prevention, mitigation and land use, as well as promotes a more holistic view on the whole spectrum of human security, vulnerability, risk and floods.

## **Results of Discussion**

### Flood Management: Technical Issues and Planning

- Flood management and protection of people and property should take into account the fact that major cities are often better protected than small settlements and rural communities. Therefore special emphasis should be given to the problems and vulnerabilities of rural communities and small and medium sized cities.
- Awareness rising is an important issue, particularly for those people living in areas prone to floods.



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- Floods cannot be avoided, however human intervention, especially land use patterns and engineering works, is a key factor affecting the impact and magnitude of medium and small scale flood events. Specific attention should be given to deforestation, change of hydro-morphological situation of a river, the conversion of open space in a settlement area and the construction of infrastructures, such as roads and highways.
- A key element for integrated river basin management and the reduction of potential damages and losses is the strategy based on allocating more space to the river bed through effective national and local planning
- It is recommended that structural and non-structural measures be integrated and considered at the same time, instead of one after the other.
- Furthermore, it was mentioned that a recent study in Switzerland came to the conclusion that increasing investments in systems of flood protection lead to higher economic losses after catastrophic floods. There will always be a risk element when catastrophic floods occur, and a wrong perception of this kind of risk and reliability may create problems, especially for people living in floodplains, who are highly exposed to such hazardous events.
- Increasingly extreme weather events and rapid temperature changes resulting from climate change, which could result in snow melting, can be dangerous for dams, dykes and engineering structures used for flood control. The possibility of dam failure cannot be neglected.
- Improved monitoring of flood events, impacts and vulnerabilities is important to increase human security. It has been shown that poor people generally face a higher risk of mortality and relatively higher economic losses from hazards of nature.
- The quality of data and reconstruction of the monitoring systems should be focused on, particularly after the decline in the 90s due to the general economic crisis in the post-communist countries.
- Additionally, building codes, guidelines for flood proofing constructions<sup>3</sup> and structural measures (e.g. giant levees) are also important elements that can increase human security in terms of natural hazards, such as floods.
- In the Volga basin it is also important to focus on droughts, water scarcity and technical hazards.

**Institutional considerations**

- A commission for emergency management should exist for the institutional setting of emergency response and disaster risk reduction. This commission should encompass local and regional authorities of the respective river basin. It should be linked to important agencies and enterprises. Together with engineers and emergency response agencies, the commission should prepare a planning document every year for the spring floods in the region. A

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<sup>3</sup> Engineering Principles and Practices for Refitting Flood Prone Residential Buildings, FEMA US, 1995



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special safety brigade should be responsible for rescue operations and emergency management during the event. The emergency plan for flooding should focus on aspects of evacuation, potential coping capacities and places of evacuation. Specific plans should also be formulated regarding the dissemination of information to radio and TV stations. (The above recommendations resulted from existing experience in the Volga River basin.)

- Information exchange and an in-depth cooperation between institutions as well as the active participation of the public in developing strategies for integrated flood management are essential.
- A lack of appropriate cooperation is also a major problem of human security, such as the lack of information sharing between national states along the same transboundary river.
- One should also consider the different steps in the disaster phase (prevention and coping) and level of regulation, such as normal regulation and emergency regulation. That leads to a crucial question: who is able to act appropriately in the different phases of disaster? The coordination of different functions and institutions is essential. One has to acknowledge the fact that institutional solutions cannot be generalized.
- Moreover, it is recommended that the historical dimension should be included in risk assessment, certain processes or events of the past should be included. In the Netherlands for example, water management and water related risks have been key issues for several decades.

A serious problem regarding human security and vulnerability reduction is also false alarms that delay services giving out early warning information. No or late warnings may cause fatalities and increase damage. Local information services (radio, newspapers or TV) with which people are familiar are most important methods of spreading information about flood warnings.

- A crucial issue is the organization and promotion of quick and effective response.
- The case of New Orleans highlighted the need to also take into account the multi-ethnic aspect of different social groups and their social structure. This leads to the recommendation that cultural, social and linguistic aspects should be paid more attention to.

Elderly people are very vulnerable (e.g. casualties in old people's homes in New Orleans). The protection of societies where elderly citizens are in the majority is a challenge today (see experience from Slovenian – US research mission).

**Public Participation and Socio-economic Issues**

- Public participation is especially well developed in the Netherlands, where the way of life and the perception of risk have also been addressed in integrated flood risk and flood vulnerability reduction approaches.



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- Besides early warning and the awareness of people, the general status of maintenance of infrastructures is also a key element of vulnerability. Therefore one can conclude that disasters are often a combination of different causes leading to disaster.
- More attention has to be given to secondary damage and secondary effects. Often only the primary effects and damages are considered.
- Holistic and integrative risk and vulnerability assessment also has to be based on ex-ante and ex-post analysis. The limitation of the analysis of past events is not adequate for the estimation of present and future vulnerabilities. In this context, scenario-based assessment strategies are important.
- It seems to be impossible to generalize good practices, especially with regard to institutional structures in terms of flood management, since many aspects have to be taken into account, including the specific local and regional context.

Several examples of good practices have been discussed. They include Integrated Flood Management: City of Curitiba (Brazil)

Good examples of public participation in water management can be studied in the Netherlands.



## **Expert Group 3**

### **”Natural Resources and their Sustainable Use”**

#### **Introduction**

The first CABRI-Volga Expert Group Meeting in Nizhny Novgorod fell into the project's initial phase during which the state-of-the-art and good practices were being identified and analysed. Expert Group 3 (EG3) focused on exploring state-of-the-art and good practices in management of natural resources and their sustainable use in large river basins with a special emphasis on sustainable water use in the Volga Basin.

The abundance of various natural resources makes Russia a very rich country and is one of the main reasons for the rapid economic growth in the last years. To support and sustain economic growth, a sustainable use of natural resources through management is required as well as consequent implementation and enforcement of relevant rules, guidelines and action programmes. The Volga Basin, the backbone of the Russian economy, represents the largest river basin in Western Europe. The Volga River has a significant impact on the overall national development comparable to the Rhine, the Po, the Seine or the Vistula rivers in Europe. All involved parties and stakeholders of the basin area are challenged by an enormous responsibility for its sustainable development. They are committed to maintain good practice in their specific fields of work and good standards of cooperation in order to achieve specific and community goals.

#### **Methodology**

At the EG3 meeting in Nizhny Novgorod, experts from Russia and the EU had an opportunity for in-depth and moderated discussion. Due to the limited time available for discussion experts concentrated on concrete topics that are most pressing for assessment of the state-of-the-art and good practices for the Volga Basin and other large river basins in Europe. They included:

- 1) State-of-the-Art and Good Practices in water management
- 2) State-of-the-Art and problems of existing institutional frameworks
- 3) Sustainable multi-stakeholder partnerships
- 4) Good practices in establishing partnerships
- 5) Integrating economic values with environmental concerns



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## **Results of Discussion**

### 1. State-of-the-Art and Good Practices in Water Management

A number of pressing questions were raised during the discussion. They included:

#### **There were many floods in the EU countries. Why weren't the Europeans prepared for them (in spite of the good legislation)?**

The floods simply exceeded the set protection levels and the extent of technical preparation. Engineering facilities for flood protection only prevent damages up to the flood level they were designed for. The protection levels normally provide for technical flood safety up to a statistical 100-year return period. Furthermore some flood protection dykes were not efficient enough during the extended high-water periods because they were in poor maintenance status.

Besides technical flood protection there is an effective communication system for all German states, hosted by the 'High Water Alert Centre'. It deals with advance warning & modelling given weather and forecast conditions. Each of the federal states in Germany implements a flood warning service, with its Flood Warning Ordinance for the most important Class I surface waters and federal waterways. In addition, all the states employ a Flood Alarm and Forecast Service (f.e. HVZ in Baden-Württemberg) providing information about a current flood situation and flood forecasts for chosen gauge stations. This information is accessible online or is sent by fax to all key players in order for them to be timely prepared.

#### **What is the level of environmental data availability in Russia?**

Data are handled by the Federal Service for Hydrometeorology and Environmental Monitoring (Roshydromet) and are specifically collected by the Hydrometeorological Center of Russia, relying on a huge number of gauges (see [www.meteorf.ru/txt/eng\\_about.shtml](http://www.meteorf.ru/txt/eng_about.shtml)). The quantity and quality of waste water in all rivers are controlled by the Ministry of Natural Resources; they are analysing water quality and the content of some chemical substances, too. But both the Ministry of Natural Resources and Roshydromet do not investigate the biological impact of water pollution, e.g. on fish.

State bodies are often not willing to share information for free, in spite of the fact that much responsibility lies at the municipal level. Indeed, in some cases they wish to charge for access to that information.

Many countries (excluding Russia) have ratified the UNECE Aarhus Convention and that means all public bodies have the right to access and publish environmental information. Circulating information is critical to engendering public support. Furthermore there is the UN Millennium Ecosystem Assessment report which helps to identify an environmental baseline from which to develop goals and measure progress.

In Germany it is essential to rely on time-series and spatial (every 100 m along a river) hydrometeorological, hydrogeological and morphological data for the effective management of rivers. In the eastern part of Germany, data problems similar to those in Russia occurred after reunification.





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## 2. State-of-the-Art and Problems in Existing Institutional Frameworks

Talking about existing institutional frameworks in Europe, the role of the EU Water Framework Directive (WFD) was outlined. The WFD is supposed to be the legal framework to achieve the environmental objectives in all river systems in Europe prescribing a river basin related approach and giving a comprehensive approach to protect all water in Europe on a common level. The first step is a large part of legislation that must be realised right down to the local level on the territory of the EU. The key features include good surface water and ground water, transitional water and coastal water and the reduction of selected chemical substances. These water bodies are required not only to minimize chemical pollution but must also achieve and maintain a “good ecological standard” (for surface water bodies) and a “good quantitative standard” (for groundwater). All states are responsible for protecting, enhancing and restoring their water bodies in accordance with these principles. There are as well quality criteria and a time goal (2015) to be observed. Water protection should occur at a public level. Only one report and one management plan should be compiled per river basin. There is a clear timetable for action and implementation. Non-compliance results in European Countries entailing legal action and offending states will have to be fined.

Actual implementation problems result from the following management problems:

At present ecological problems have low priority compared to economic issues. There are limited financial resources which entails a ‘suffering’ environment. If ecological issues are not discussed in the media people lose interest, and politicians prioritize other issues. Therefore all stakeholders should be involved in ensuring that the environment is on the political agenda.

Many stakeholders have to be involved in the regulatory actions and measures, each of them with specific own interests and specific objectives – some of which are contrary to the ecological aims: public and private stakeholders, NGOs, private companies, municipalities, administrative departments. First of all, many of them are not used to working together, or even worse, they don’t know that they have to work together and don’t know how to cooperate. This turns out to be a really complicated system of cooperation partners, many of which need to be forced by law to comply and cooperate. It is obvious that a situation where a wide range of government bodies and departments have to cooperate is not a simple one. They are used to keeping tight to their specific priorities and financial resources. Very often they aren’t willing to share power and funds. So it is really difficult to coordinate all actions which are necessary to achieve the objectives. Furthermore there is a lack of financial and personal resources for environmental protection in administration and in the communities.

Regarding the institutional framework in Russia, there will be innovations and changes in a new RF Water Code. The new RF Water Code is in the Duma for reading. There are difficulties to speak about the Draft Russian water code and property laws because there are constant changes to the draft law due to impacts and lobbying by various groups of stakeholders, both public and private.

There was an expert opinion that official management of overall water resources is largely based in Moscow. It was indicated that the Volga river is within the scope of responsibility of the federal authority, which creates additional problems and difficulties for local authorities to be involved in its management. For instance, it was



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mentioned that citizens can't reach top authorities when they face a local problem. At the same time, it is important that decentralisation in Russia during the nineties has brought in additional competences and authority to the regions.

Now a new system foresees inventories of water resources and objects (water bodies) so that certain elements (e.g. small rivers) will come to the jurisdiction of the local authorities. The monitoring of compliance with the legislation and other elements of institutional framework will be a huge challenge for the authorities.

In Russia, there is a diversified system of environmental management involving federal, regional and municipal authorities, and it is based on diversity of new legislation. Furthermore, it is intended to strengthen the role of the municipalities. There will be an enforcement system at the local level too. A unified system for environmental management and law enforcement is needed.

The situation relating to existing hierarchical levels in Russia is much the same as in the Rhine region. But in the EU countries, a greater responsibility is given to the municipalities than in Russia. A central government support exists and municipalities have a chance to represent public opinion and to address their concerns.

### 3. How to achieve stable Multi-Stakeholder Partnerships

How to share information with the public was discussed on the basis of the example of Astrakhan, which is located at the Volga Delta at the Caspian Sea.

Local TV programmes are used to disseminate information on water resources related activities and other environmental issues among the public. Flood prevention is ensured by liaison with weather forecasters and the prognoses are shared with local media. Astrakhan has been successfully managing floods for a long time. Lessons learned are also shared with the public.

The main environmental problems of Astrakhan were described. It was mentioned that the so-called "Russian Venice" with more than 200 bridges has numerous older constructions that are in a poor state. The municipal markets of this city with 500,000 residents are also a source of environmental contamination. Regional inspectorates are typically powerless to enforce federal and municipal environmental rules. Fines and ordinances are ignored by polluters and court cases are futile. Municipal inspectors will start operating from this year. Business is crucial to the local municipal (and environmental) budget. The local environment monitoring reveals damage to watercourses from solid municipal waste. This seems to be markedly caused by immigrants from the Caucasus who clean everything in the local watercourses and dump their waste along and into the rivers. One ton of cleaning chemical substances that enter rivers contains 50-60 kg of toxic substances.

In the opinion of the European experts, the normative and regulatory approaches don't seem to be very effective. The importance of environmental education and the importance of encouraging society to appreciate the value of good water management were mentioned. For example, there should be programmes to raise environmental awareness amongst school children. There are several examples in Europe (summer schools, green pack for school teachers) and in Russia (competition related to water resources management and municipal institutional coordination). There are needs to have a universal curriculum that underscores the professional development related to environmental sciences and water resources management.



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Measures for strengthening the relevance of environmental issues among public and in institutions should be taken into consideration; this principle should be applied across various time scales of the impact horizon. It means that measures with long-term impacts which affect all stages of the education system have to be complemented by measures with middle- and short-term impacts like awareness raising campaigns and the publication of acute environmental threats (e.g. the occurrence of pollution incidents) by the media.

The effectiveness of existing norms should be regularly checked and when they don't work it is advised to change them.

#### 4. Good Practices Examples in Establishing Partnerships

Good practice examples were discussed. An example for successful multi stakeholder partnership was given by the EU expert who described IkoNE – “Integrating Conception of the Catchment Area of the Neckar River”. IkoNE is an example of the activity of the water management administration of the federal state of Baden-Württemberg integrating other partners in order to achieve goals in water resources management. The Neckar is the biggest river flowing within the State from its source to its mouth. Its catchment area of almost 14,000 km<sup>2</sup> is also located almost entirely in the State of Baden-Württemberg, 50% of the population of this State live in this catchment area. The Minister for Environment of Baden-Württemberg has given the go-ahead for IkoNE in 1999 which consists in a river-basin-related action framework concerning water resources management for the entire catchment area of the Neckar river including its affluents. Thereby development and implementation of water resources management schemes in the catchment area of the Neckar river are provided in a synoptic way, taking into account the WFD requirements.

Basic idea: As an action framework related to water resources management, IkoNE coordinates river-related measures - flood protection, structure and quality of the river - with other local and supra-local plans and integrates other sectoral strategies. The objective is to preserve and improve the rivers as living spaces and lifelines of the landscape as well as important natural factors for business locations. IkoNE addresses citizens, industry and business, associations and authorities, thus all parties living at the Neckar river and its affluents and feeling responsible for this region. As a joint responsibility for today's and future generations, preservation of nature and its use by the humans have to be consolidated.

In order to achieve a broad participation and acceptance of the action, the objectives of the water management administration must be anchored into the awareness of the general public. This requires to know about and to understand the complexity of water resources management. IkoNE aims at achieving its objectives based on the following principles:

- action based on synoptic view
- orientation by joint objectives
- partnership of all interested parties

*Action programmes:* IkoNE defines and bundles the multiple tasks of river management into action programs. This includes measure-related action programs



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and action programs which are set up in order to compile basic data (to collect and make accessible water resources management data). Within the action programs, the following specialised **objectives** are formulated:

Flood management:

- Management of Flood endangered areas and Catchment areas
- Technical flood protection
- Flood damage prevention

Quality of the waterway:

- Target Quality Class II – slightly polluted
- State-of-the-art sewage installations

Structure of the waterway:

- Eco-morphology
- Ecologically needed minimum water flow
- Possibility for upstream and downstream migration of fish species and other aquatic organisms

*Working methodology of IkoNE:* The entire catchment area is included.

- All targets of water resources management are incorporated in a synoptic way
- Interdisciplinary approach ensures that also other actors are integrated
- Values of the public concerning the living space along the river with its recreation and leisure function
- All partners from within the administration and from outside as well as the task promoters are involved.

In addition to conventional administrative tasks, communication is of special importance within IkoNE:

- Present the water resources management with its tasks and objectives in a convincing way
- Create confidence
- Influence behaviour
- Win co-operation partners



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### 5. Integrating Economic Values with Environmental Concerns

Currently, there is a drive in Russia to double the gross domestic product (GDP). This raises the question: What does/can the Volga River contribute to the national GDP and are there any methodologies or guidelines to assess its natural assets?

In European countries the economic values of natural resources are assessed, for instance with the help of guidelines. There are the European Union's Cardiff Environmental Policy Integration strategy and the Strategic Environmental Assessment (SEA) directive. A new initiative for "integrated impact assessments" (IIAs) for major (EU) policy proposals, strategies, plans and programmes that aims to assess economic, social and environmental effectiveness may offer certain frameworks for cost-benefit analysis.

In the EU, there is (as far as we know) no standard method to assess environmental or biological damage from an economic standpoint. Instead, scientific monitoring programmes for the biological status use e.g. indicator organisms and estimate the biological water quality by calculation of different indices out of the abundances (absolute frequencies of occurrence) of these organisms. In contrast, a cost-oriented approach which is adopted by the Environmental Liability Directive refers to the polluter pays principle and means that environmental damage has to be repaired at the expense of the polluter. Insurance companies are quite effective in assessing the values of commodities which do not have a ready-made market. Their methodologies could be utilised in our quest for sustainability.

Methods are also needed to assess damage to water resources in Russia. For example, there is a need to assess water resources in the context of ecosystems, particularly for fish stocks, and the potential contribution to GDP. Typically ecosystems and their resources are undervalued and their importance is not adequately emphasized. For example most 'fish lifts' don't work properly. Since the late 1950s sturgeon stocks have suffered but now there is a large international support to help to restore their levels. Sturgeon stock problems are not only the consequence of rivers and fish lifts which are not continuous, but also of water quality.

An important issue for a sustainable river management in the EU and in Russia is the potential of self purification effected by river organisms. Data suitable for estimating this potential are of particular interest for authorities and insurance companies.

### 6. Final Observations

During the EG3 session together with already mentioned problems a number of other issues were indicated in the context of environmental problems of the Volga basin. They included:

- 1) State bodies are often not too open to share information and data
- 2) There is a need to increase the role of municipalities in environmental management in general, and in water management in particular
- 3) Legislation is to be developed to regulate coordination and partnerships between municipal and regional authorities and to avoid possible conflicts between them



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- 4) There is not enough of local public awareness and participation in environmental problem solving. There needs to be a universal curriculum that underscores the professional development related to environmental sciences and water resources management.
- 5) There is a lack of methods to assess natural capital value, damage to water resources/biological damage and to assess water resources in the context of ecosystems.
- 6) Importance of surface waters must not be underestimated. Authorities rely on filtering systems to be used for surface water supply out of the rivers; local authorities and water works are not sufficiently funded to afford good quality filter and other technical equipment. One of the reasons is the ridiculously low price of drinking water.
- 7) Organisation of sustainable use of natural resources as well as pollution control in the Volga basin could be partially funded by income derived from water power generation.



## **Expert Group 4**

### **“Connecting Goods and People”**

#### **Introduction**

The first CABRI-Volga Expert Group Meeting in Nizhny Novgorod fell into the project's initial phase during which the state-of-the-art and good practices were being identified and analysed. Within Expert Group 4 (EG4) “Connecting Goods and People”, CABRI-Volga aims to explore state-of-the-art and good practices in the thematic areas of:

- Intermodal freight transport<sup>4</sup>,
- Intermodal public transport networks and services<sup>5</sup>,
- Leisure mobility<sup>6</sup>, and
- Clean water-and land-transport in the EU and Russia<sup>7</sup>.

EG4 thereby considered all the interrelated roles a river such as the Volga (and its river basin) takes on when it comes to the transport of goods and people, i.e. the infrastructure for water-borne traffic and transport, a separating barrier between transport origins and destinations, the origin or destination of trips itself, and an ecological system affected by transport emissions and infrastructures.

#### **Methodology**

At the EG4 meeting in Nizhny Novgorod, experts from Russia and the EU had the opportunity for in-depth and moderated discussions. Due to the limited time available for discussion (two times four hours), it was decided prior to the EG4 meeting to focus primarily on intermodal freight transport and intermodal public transport

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<sup>4</sup> Intermodal freight transport: Aiming at sustainable transport development, water-borne transport represents an important alternative mode. Its competitiveness depends to a large extent on the availability of appropriate interchange facilities at strategic locations. The planning, financing and operating of such facilities and the corresponding transport services need to be discussed in the light of (inter)regional and local logistic patterns.

<sup>5</sup> Intermodal public transport networks and services: Ferry services could establish missing links in public transport networks within cities (across the river) and between cities (along the river). To this end, they need to be fully integrated with the land public transport system (train, bus). This leads to coordination requirements regarding financing, modal combinations (carriage of vehicles or bicycles), interchange locations, scheduling, tariffs and ticketing, marketing as well as information services.

<sup>6</sup> Leisure mobility: The Volga basin (especially upper Volga to Volgograd) as a leisure and recreation area attracts growing numbers of tourists. Against the backdrop of the rapidly increasing motorisation and extending leisure-mobility patterns in Russia, the impacts of such a development need to be anticipated, and targeted measures for a sustainable management of leisure-related transport flows into the river basin have to be designed and implemented.

<sup>7</sup> Clean water- and land-transport: Transport and traffic in the river basin strongly affect the quality of air, water and soil through infrastructure construction and the emission of pollutants and noise. To reduce transport-related environmental impacts, a broad package of policies and measures needs to be discussed, ensuring integrated infrastructure and land-use planning, promoting alternative fuels and propulsions, enhancing modal shift, fostering the use of filter and mitigation technologies, as well as access restrictions or speed limits and corresponding enforcement.



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networks and services while being flexible to include other topics of relevance in the experts' opinions. Following an exchange of initial thoughts and expectations, it became quickly evident that there was no uniform opinion about the most pressing issues to tackle in terms of transport and mobility in the Volga Basin. Therefore, in order to streamline discussions and to identify problems, each expert was asked to state the main (transport & mobility) issues and problems to be solved.

The moderator summarised the experts' input to four key issues and each expert was asked to allocate money from an imaginary 100 million € budget to tackle these four issues. In order of importance according to the EG4 experts, the main (transport & mobility) issues in the Volga Basin are:

- 1) To improve the urban mobility situation
- 2) To develop a unified Volga Mobility Master Plan "2010"
- 3) To establish a coordination mechanism for passenger and freight transport
- 4) To reduce water pollution

Apparently, the prioritisation lacks any statistical significance. However, it was interesting to observe that the EU experts present at the EG4 meeting would spend 70 to 95% of their available budget on improving the urban mobility situation while the Russian experts would almost evenly distribute their budget across the identified issues.

## Results of the Discussion

### Improve Urban Mobility Situation

The most apparent signs for an urban mobility situation in need of improvement include air pollution in city centres (due to low engine standards) and congested public transport of low quality. Nevertheless, Russian experts identified a low level of awareness of the problem among the citizens. Further identified problems concerning the urban mobility situation included the update of transport layout vs. mobility needs (separation of cars and heavy vehicles; parking spaces, etc.) and a low innovation level of the transport development.

The Volga and other rivers in the Volga Basin are natural barriers to urban mobility, but also have the potential for being integrated as transport ways in the Public Transport system of a city. The water-taxi scheme currently implemented within the EU's CIVITAS Initiative<sup>8</sup> in Rotterdam serves as an innovative example. However, it needs to be considered that the rivers in the Volga Basin are frozen and hardly usable for transportation during several months of the year.

Further measures suggested and discussed during the meeting were:

- Modernisation of PT vehicles
- Subsidising policy-compliant operators
- Integration of coordination and management of PT services

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<sup>8</sup> The European Commission's CIVITAS Initiative helps cities to achieve a more sustainable, clean and energy efficient urban transport system by implementing and evaluating an ambitious, integrated set of technology and policy based measures. See [www.civitas-initiative.org](http://www.civitas-initiative.org).





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- Uniform tariff & ticketing system
- Reintroduction of hydrofoils (METEOR)
- Priority lanes for buses
- Real-time control of all transport arteries

Develop a unified Volga Mobility Master Plan 2010

The moderator sought answers to the question why there is no integrated Mobility Master Plan in place for the Volga Basin. According to the Russian experts, no single organisation exists which would be able to develop such a plan, since each ministry that could be responsible for the Master Plan development and each territorial unit (which also enjoys some degree of independence) has its own interests.

In order to develop a unified Mobility Master Plan, coordination between policy fields and between territorial units has to be achieved. First steps in this regard were successful, including the Volga Revival Programme and the establishment of a basin-wide industrial council. The establishment of one coordinating organisation was discussed as well while the question concerning the effective perimeter (operational area of the master plan) of such an organisation remained unanswered.

Additional measures to facilitate the development of a unified Volga Mobility Master Plan include:

Overcome segmentation of power (regional, national, sectorial)

- Set clear targets
- Lobby at the national level
- “Matryoshka“ master plans
- Increase political weight

Establish Coordination Mechanism for Passenger & Freight Transport

Russian experts stated that there are several councils in the Volga Basin, but that they do not cooperate with each other, thereby leading to a de facto weak basin management. Any kind of conflict resolution is therefore deemed to be ineffective.

The participation of all stakeholders (public, private, business, industry, etc.) in order to improve the coordination of transport was highly encouraged by the experts.

It was suggested to establish a coordination mechanism for passenger and freight transport or to go even further by considering a coordination authority beyond transport, including for example flood control, water use, water quality control, etc.

Reduce Water Pollution

Some experts voiced the opinion that water pollution from vessels, for example due to spillages or caused by transporting hazardous goods was a main problem for the



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Volga and other rivers in the Volga Basin. The high priority of this problem – at least compared to the other high-priority issues/problems identified – was not shared by the experts from the EU.

Causes for water pollution include wastewater from streets (in particular in the spring) and reservoir snow melting, but also pollution from small boats (spillage and engine fuel) and other vessels due to, again, spillages and the transport of hazardous goods. As also identified during parallel EG meetings in Nizhny Novgorod for other economic sectors and life situations (industrial pollution, sewage system failures, etc.), non-compliance with existing strict rules and the lack of an efficient monitoring system were identified as problems.

The measures to solve the identified problems covered a broad range, e.g. awareness raising and training (including the police, to enable a better enforcement of rules and regulations), improvement of hazardous goods transports on the waterway, stimulation programmes for fleet modernization. In this context, the importance of inland navigation on the river Volga was briefly discussed and considered as low by the Russian experts. Nevertheless, beside the interest in experience with hazardous goods transport and fleet modernization, further similarities with inland navigation problems and solutions between the rivers Volga and Danube are obvious. A more detailed elaboration on Volga navigation would be promising based on further information on Volga vessel traffic with Russian experts directly involved in inland navigation (waterway management, shipping authority, fleet and port operators).

#### Lessons Learned from the First EG4 Meeting

For future EG4 meetings<sup>9</sup> within CABRI-Volga, it should be ensured to have some basic socio-economic data and trends concerning the transport sector in the Volga Basin available for the participating experts.

Furthermore, the participation of Russian transport experts and possibly decision makers from all governance levels (local, regional and federal) is intended while keeping up the mixture of institutional and organisational representation.

Finally, the range of transport and mobility issues is wide – too wide to be addressed in the required depth during the EG meetings. Therefore, future meetings should concentrate on one (or two) key issues such as inland navigation/intermodal freight transport or urban mobility solutions.

#### **“Visions 2020”**

Transport and mobility issues have not been adequately included in previous projects and initiatives. For example, UNESCO's Interdisciplinary Initiative for the Sustainable Development of the Volga-Caspian Basin – the so-called Volga Vision – does not provide a vision for transport and mobility in the Basin. Therefore, at the end of the EG4 meeting, experts were asked to formulate, from the perspective of transport and mobility, their vision for the Volga River and its Basin for the year 2020:

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<sup>9</sup> It is currently planned to hold the second CABRI-Volga Expert Group Meeting in the first week of April 2006 in Kazan and the third in September or October of 2006 (venue to be decided).



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*“The Volga should be an international waterway” ----- “There should be an emerging leisure industry” ----- “A water-taxi transport system should be implemented” ----- “The Volga Basin should have good attention from Moscow” ----- “Cooperation should be well-coordinated” ----- - “Tourism should be developed” ----- “Sustainable transport modes should be implemented in the Volga Basin” ----- “An appropriate use of the waterway and a modern management should be achieved” ----- “Clean energy sources should be used” ----- “There should be an efficient management and coordination mechanism in place based on international experience” ----- “The Volga Basin should be an attractive region meeting its citizens’ mobility needs” ----- “Bicycles, water taxis, etc. should create a “natural experience” for visitors and residents” ----- “The Volga River should be open to its people and be part of the city’s mobility system”*



## **Expert Group 5**

### **”Institutional Cooperation and Coordination”**

#### **Introduction**

The first CABRI-Volga Expert Group Meeting in Nizhny Novgorod fell into the project's initial phase during which the state-of-the-art, status of coordination and good practices were being identified and analysed. Expert Group 5 (EG5) focused on how to enhance *institutional* coordination, including design and performance of institutions, and how to strengthen *partnerships of multiple stakeholders* (including civil society, business and water services providers, decision-makers and scientists) in environmental risk management in large river basins in the EU and in the Volga river basin. EG5 provides aggregation and comparisons of insights and lessons learned on coordination/cooperation issues from thematic areas covered by the other four expert groups.

EG5 assessed major existing problems and gaps between ‘design and action’. For this purpose it concentrated on exploring the following framing questions that are cross-cutting to all CABRI thematic areas:

- How to improve institutional designs for administrative coordination (vertical and horizontal) between authorities at various levels responsible for environmental risk management in large river basins
- How to develop stable partnerships and promote coordination of interests and cooperation between stakeholders within integrated river basin management
- How to strengthen public participation and awareness on environmental risk reduction, particularly of the local communities
- What are the common and specific coordination problems for large river basins in the EU and in the Volga Basin and how to enhance cooperation in their sustainable development in the European context

#### **Methodology**

At the EG5 meeting in Nizhny Novgorod, experts from Russia, the EU and USA had an opportunity for in-depth and moderated discussion. Due to the limited time available for discussion experts concentrated on concrete topics that are most pressing for assessment of the state-of-the-art and good practices for the Volga Basin and other large river basins in Europe. During this session EG5 focused on environmental rehabilitation and floods risk reduction. The major discussion topics included:



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- 1) Coordination mechanisms within integrated river basin management
- 2) Partnerships and cooperation between stakeholders in large river basins
- 3) Insights from EU-Russia cooperation in environmental risk management in large river basins

## **Results of Discussion**

### **1. Coordination Mechanisms within Integrated River Basin Management**

#### Environmental Programmes: Design and Implementation

The expert discussion was opened by referring back to the plenary and posing the question why the well-structured federal “Volga Revival” programme, which was very important for the Volga Basin, has been closed recently. Why are there significant gaps between its ambitious and progressive goals on the one hand, and their implementation in practice on the other? Why do implementation failures occur? Why has coordination and cooperation between multiple partners in performing this important programme not been successful? How to enhance local partnerships and dialogue between stakeholders within initiatives of this kind? It was indicated that not only Volga Revival (closed in 2004), but many other important federal environmental programs have been suspended in Russia during the last decade. Most of them had progressive goals, but performance has been poor. Many of their failures were rooted in the implementation stage. There is an opinion that the core reason for shortcomings is usually not in the programmes’ design, but is associated with programme management and coordination mechanisms applied. Loopholes in mechanisms for resource allocations are equally important. Although the design of the Volga Revival programme was based on an integrated river basin management principle it did not produce the expected results. Vertical coordination between various levels also indicated significant problems. It was noted that many shortcomings in performance of environmental programmes in Russia were the result of serious economic and social problems during the last decade in a course of the societal transition period. Recent development and advances in legal framework for environmental risk management in Russia were indicated as significantly contributing to solving implementation and coordination problems.

#### Coordination of Resource Allocation.

Insufficient allocation of funding for implementation of the Volga Revival programme has been among the core issues. Shortages in financing when only one-tenth of the targeted funds had been allocated to implementation were indicated as major causes for failures. It was also the reason for the recent closure of many ecological programmes in Russia. Controversies in coordination of resource allocations between the federal level and regions in the Volga Basin were indicated. Often regions complained that the federal center is not meeting its financial obligations for transfer of funds, while the representatives of the federal center indicate that regions



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do not use funds apportioned according to envisaged priorities. Combination with mobilization of internal resources is essential. Control of resource flows is important as well as transparency and accountability of all actors involved in the implementation of environmental programmes. Financing and resource allocation problems are common to many countries in Europe. In many cases resource allocations are accompanied by strong lobbying by various interest groups. In many cases financial allocation appears to be not just a technical problem, but a political one. One of the opinions was that it's better to have a single governmental programme which is adequately funded, rather than having a couple of dozens of severely underfinanced and poorly performing programmes in the Volga area; similar refers to the national level: it is better to coordinate activities under a single framing programme such as "Ecology and natural resources", rather than to disperse insufficient funds among a variety of poorly performing programmes.

### Basin Management Approaches

Basin management approaches are not effectively applied in the Volga. *Hydrology regimes* and *technical* problems within river basin management (RBM) are compounded by *governance* issues. Moreover, the RBM application needs to be coordinated within broader socio-economic regional and national frameworks, including sustainable development issues. Existing 'situational' economic, political and social factors significantly affect RBM performance turning it into a complex multidisciplinary problem. It is also a difficult *multilayered institutional* problem, which is deeply rooted in the national institutional context. The existing structure of government authority and dissemination/coordination of functions vertically and horizontally between bodies involved in environmental risk reduction in the Volga Basin (including federal bodies with their territorial affiliations responsible for environmental risk reduction, administrations of federal districts, regional and local authorities) overlaps with RBM application. There is an expert opinion that the RBM approach in the Volga Basin (three Basin Management Administrations under the RF Ministry for Natural Resources) 'contradicts' with the existing administrative system, and particularly with the system of federal districts (Volga, Central, South, North-West): in each federal district there are representatives responsible for environmental management coordination. It also overlaps with another 'layer' of administration, i.e. with the 39 federation subjects in the Volga Basin with respective environmental and disaster risk reduction authorities responsible for management of respective segments of the Volga Basin. The lack of effective vertical coordination between local-regional-federal levels was indicated as negatively affecting the RBM application. Existing uncertainties in division of responsibilities between authorities of various scales are perfect means to avoid responsibilities in practice. Experiences and problems in coordination through the Interagency Group for Volga-Kama Cascade were discussed, as well as challenges posed before the Volga Basin Council.

### Basin Management: Good Institutional Practices in Stakeholder Coordination

Practices in institutional mechanisms which promote stakeholder participation in decision-making in river basin management in Europe were discussed. One of the interesting examples is the River Po Basin Management Administration (PBMA) which is a typical mechanism for river basin management in Italy. It was established in 1990 and since then has been promoting constructive dialogue and coordination between multiple stakeholders in the Po river basin and enhancing public participation in decision-making. Among the first important initiatives undertaken by



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the PBMA has been the creation of the consultative body, i.e. Advisory Committee with the goal to establish dialogue and build consensus among various stakeholders - prior to adopting respective decisions by the PBMA. Its members include representatives of local authority associations, agricultural and industrial producers' groups, trade unions, conservation organizations and natural parks, cooperatives, etc. Recently the PBMA has been involved in the development of a Strategic Plan aimed at shared strategies to enhance human security and livelihoods in the basin, and it is planning to introducing the Pact for the River Po which defines common aims and actions of major interest groups at various levels, including regions, provinces, mountain communities, councils and council associations, and others. Although the Po river basin is much smaller (71,000 sq. km) than the Volga Basin, some common problems and responses to them might be taken into account while developing coordination mechanisms in the Volga Basin management.

## **2. Partnerships and Cooperation between Stakeholders**

### General Problems of Interaction between Stakeholders

A variety of issues related to coordination and interaction between the government and various stakeholders were discussed in detail. Experiences, good practices, failures and lessons learned both from practices in Russia and in the Volga Basin as well as in the EU and the US have been explored. Experts discussed existing frameworks and possible involvement of the government authorities at various levels in Russia in construction of interaction and building stable partnerships with stakeholders, including the local public, businesses, NGOs, and the scientific community. Special attention was paid to main problems and challenges of how to establish effective interaction between the authorities of various levels on the one hand, and with business and civil society on the other hand. It was noted that this domain is a *terra incognita* for Russia and a lot should be urgently accomplished as existing coordination mechanisms are really weak. It relates to developing institutional settings, including legislation, incentive mechanisms, coordination of resource allocations, tools and methods for support of formation of partnerships between stakeholders, etc.

### Interaction and Coordination with Business

Recently in Russia a growing attention of the government is paid to constructing new frames for interaction with the business community which is a new societal challenge. It is of a particular importance for the Volga Basin. Among the important goals is how to modify existing environmental mechanisms in order to overcome the problem that only modern and rapidly developing enterprises (many of which have an export orientation) are interested in compliance with existing environmental regulations and in adherence to the polluter-pays- principle (PPP). During recent years they started to install new environment benign technologies; large companies are engaged in their products' standardization; the 'green image' is becoming increasingly important for them; today they are likely to be important drivers towards environmental problem-solving. At the same time many small firm polluters prefer to pay fines (or not to pay at all) and meet sanctions because externalities associated with obedient following of the PPP norms are too high for them; they are not able to invest in environmental reconstruction. Significant problems are also associated with municipal enterprises and water service providers. Another problem is that in Russia, in contrast to many other countries, business does not get tax breaks or privileges from the government either for environmental activities or for developing interaction with the environmental



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NGOs. As a result, the aggressive image of business is a benchmark in current interaction between business and civil society, and this situation will prevail until new institutional frameworks are introduced by the state.

Business - Civil Society Interaction

Various aspects of interaction between civil society and business in environmental risk management were discussed, and possible mechanisms for building dialogue, identifying common interests and problems in the Volga Basin were assessed. Today, growing attention is paid to establishing partnerships between civil society and business. Experts noted the 'social functions' performed by some, especially, large companies in the basin; they are involved in partial coverage of costs for dwellings for their staff, healthcare, education; Ammophos, for example, besides other social responsibilities supports the center "Drozd: Russian children are healthy". At the same time the EU experts indicated that such practice of social support is widely spread in the West. Unfortunately, special 'charity' funds recently established in Russia by some large companies tend not to include 'environment' in their agenda (exception – Fund of Vernadsky supported by Gazprom) and some of them are directly involved in political issues. Building regular and stable partnerships between civil society groups with business is believed to be a promising avenue for the Volga Basin. Some environmental NGOs that are active in the Volga area (for example, "Dront" from N.Novgorod) are seeking their niches to establish cooperation and identify common interests with the business community in the basin; such approaches are based on the perception that "business is able to ameliorate the environment" and develop its environmentally responsible image while environmental NGOs are able to help businesses to change their behavior to become environment friendly.

Interaction and Coordination with the Public

Although increase in public awareness has been among the priority directions of environmental reforms initiated in Russia during the last decade, the public environmental consciousness is still weak, and ecology has been receding to the bottom in priorities of the local public agenda. Insufficient recognition of environmental NGOs both from the public and private sector is characteristic. Environmental NGOs are much less developed than in the EU; however, a number of them are active in the Volga Basin. Mobilization of the public and problem pressure groups is regarded as a promising tool for the nearest future. New patterns of interactions between environmental NGOs and authorities are being developed. Particularly important is establishing the dialogue between the public and authorities in the Volga regions. For example, although Dront is sometimes regarded as oppositional to the government (due to its campaigns in civil rights protection), it develops cooperation with authorities, and particularly with the regional environmental agency in performing a number of joint projects. As interaction with the civil society in Russia in general, and in the Volga Basin in particular is far from desired - constructive actions are needed. Among the burning problems is establishing the accountability and transparency of local authorities before the local public in environmental problem solving.

Coordination for Local Involvement in Riverside Regeneration in Europe

A number of common environmental problems for river basins in the European countries have been discussed. Lessons and possible tools for cooperative





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responses were outlined. For example, in some riverside areas, including Ruhr, Rhine-Neckar, Stuttgart-Neckar, Hollandsche-IJssel, Mersey Basin, former intensive industrial development, mistakes in regional planning and development have resulted in a range of social, environmental and economic challenges including derelict land and loss of employment. Recently, cooperative pilot projects and actions of stakeholders have been initiated in several river basins to remediate contaminated river banks, transform the riverside and open new leisure opportunities. Interesting practices in coordination of actions of various stakeholders in the Mersey Basin, UK were described (“Artery Project: Mersey Basin Campaign”<sup>10</sup>). The Mersey Basin campaign has a major goal to facilitate and develop partnerships, while building public and private volunteer networks is an important coordination tool applied by this project. Involvement of local communities into “River Basin Initiative” to clean the riverside is growing, while the active participation of business is defined by economic and PR advantages (Shell); common trust between stakeholders is widely supported. These regional development problems are still common to some areas of Europe and concrete cooperative practical steps of planners and developers are especially important for implementing the European Spatial Development Perspective (ESDP) and the EU Water Framework Directive (WFD). These experiences and lessons learned from them are really interesting and useful for the Volga Basin.

### USA: Experiences on How to Enhance Stakeholder Partnerships in Watershed Management

The interesting WECO initiative of the American North Carolina State University has been discussed. WECO stands for “Watershed Education for Communities and Local Officials”<sup>11</sup> and considers how to develop local participation and build stable partnerships among stakeholders. The US government policy encourages development of local partnerships; while the federal regulations provide the general legal framework, the states are introducing their laws taking into account regional and local specifics, and most importantly the interests of the local stakeholders. Within a vertical interaction chain federal – state - local level authorities, the participation of local stakeholders is always secured (for example, through establishing local committees with participation of representatives of the local public, NGOs, business, scientists, practitioners who are involved in collective discussions and who can influence the decision-making process). Federal government allocates grants for the development of local partnerships. WECO’s mission is to help local stakeholders to learn how to negotiate and participate in the dialogue for better watershed management as public and business sectors are not always ready and properly trained to participate in the joint dialogue. For this purpose WECO develops special training programmes at the local level targeting various stakeholders on how to establish and maintain contacts with each other and act jointly. Experiences and tools of the WECO initiative can be applied by the Volga regions in developing the local awareness and education programmes.

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<sup>10</sup> <http://www.merseybasin.org.uk> and <http://www.artery.eu.com>

<sup>11</sup> <http://www.cs.ncsu.edu/WECO>



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### **3. EU-Russia Environmental Cooperation**

#### Road Maps in EU-Russia Cooperation

It is believed that the EU can be considered among important stakeholders having an impact on the decision-making process in environmental risk reduction in the Volga Basin. The role of cooperation between the Volga regions with their counterparts in Europe and of building twinning partnerships is of a growing importance. Interesting experience of cooperation has already been accumulated between the EU and the Volga regions, including, for example, the Volga Vision and the Volga-Rhine project. The latter one contributed to particular aspects of problem solving during the freshet floods on the Volga and its tributaries, to Volga hydraulic modeling, assessing bottom sediments.

Starting from Spring 2005, the Road Maps in cooperation between EU and Russia were initiated. There is an opinion that *common environmental space* should be at the focus of a special Road Map. It should not be diffused (as it is at the moment) within *common economic space*, although there are close and integral links between them within sustainable development pathways. It should be a separate priority along with other common spaces, including economy, international security, external defense and education-research-culture. Currently, environmental space and respective strategies in building partnerships between the EU and Russia look like nothing more than a set of 'wishful declarations' instead of concrete proposals. Insights from building other successful cooperative environmental initiatives between the EU and Russia, as for example, the Northern Dimension with concrete partnership programmes might be useful. Specific project proposals for building common environmental space and development of international twinning might be a backbone for common environmental space formation.

#### Transfer of Good Practices, Mechanisms and Tools

Good practices and tools for coordination between stakeholders in environmental risk management in river basins should be exchanged and transferred across borders. However, in some cases direct transfer and introduction of 'standard' mechanisms of environmental management from the EU countries to Russia without their prior adaptation to domestic contexts might produce unexpected results. Possible deformations in these mechanisms might occur. During the session there was an active discussion regarding outcomes in application of PPP in Russia which have been borrowed from the West in a course of environmental reform of the nineties. Experts noted that there were a number of failures to coordinate interactions between authorities and industrial polluters. Existing environmental standards in Russia are several times more stringent than in Europe, many polluters are not able to comply with them because they are not realistic, and thus delinquents choose just not to pay environmental taxes (experts indicated that environmental taxes are relatively milder in Europe than in Russia). Also, the weakness of environmental authorities in Russia allows for means to avoid payments. Local authorities provide tax exemption for municipal or state enterprises although they discharge heavily polluted sewage into the river. Thus, application of the PPP borrowed by Russia appears to be deformed under domestic specifics.



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Examples of Good Practices: Exchange of Experiences and Lessons Learned

Experts from EU and Russia exchanged lessons learned from good practices in coordination and cooperation between stakeholders in river basin management, and during the session the following examples were discussed:

- River Po Basin Management Administration, Italy
- Mersey Basin Campaign, UK
- Watershed Education for Communities and Local Officials (WECO), USA
- Ammophos, Cherepovets, Russia
- Environmental NGO Dront, Nizhny Novgorod, Russia
- RAO UES Volga-Kama Cascade, Russia
- Center for Civil Defense and Natural Emergencies of Nizhny Novgorod Oblast, Russia
- Research Center on Biodiversity "Fortes", Astrakhan, Russia



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