

CABRI-Volga

Cooperation Along a Big River:
Institutional coordination among stakeholders for
environmental risk management in the Volga basin

Expert Group Meeting
Nizhny Novgorod, Russia
28-29 September 2005

Briefing Note

Expert Group 2 " Human Security and Vulnerability"

Objectives of the CABRI-Volga Project Phase "State-of-the-Art and Good Practices"

- To provide the state-of-the-art in environmental risk management in large river basins
- To explore the status of coordination between institutions and multiple stakeholders, including civil society, business and water services providers, decision-makers, scientists
- To identify good and bad practices and lessons learned in coordination and cooperation between stakeholders

1. Introduction

The first CABRI-Volga Expert Group Meeting in Nizhny Novgorod falls into the project's initial phase during which the state-of-the-art and good practices are being identified and analysed. The focus of EG2 is 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; Ganoulis 1994) and potential accidents at dams and power plants in the Volga river basin.

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, Renaud, 2005). The concept of sustainable management of water resources was first mentioned in Stockholm in 1972, during the United Nations World Conference, and then at the Rio summit in 1992 with Agenda 21.

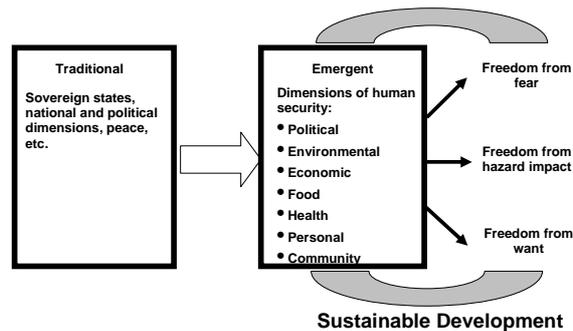


Fig.1: The paradigm shift for the concept of Human Security.

Floods are essentially natural hazards that occur regularly, but become disasters when they interact with the 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 (Rossi et al.,(eds.), 1994; Gardiner et al.(eds.), 1995). 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. (Ganoulis, 2001; 2004; 2005).

2. Workshop Discussion Topics

Some of the questions and topics that need to be addressed during the EG2 Meeting are:

2.1 Flood Management: Technical issues and planning

- Why many programs/strategies in disaster risk reduction are not effective?
- How effective flood management plans could be developed?
- How to incorporate disaster mitigation into integrated water resources management plans?
- How flood monitoring systems work?
- Which anthropogenic factors influence floods in the region and what activities are put in place to address this issue?
- How is vulnerability of communities to floods and water contamination addressed?
- Warning systems for floods: research needs, opportunities and trends.

2.2 Institutional considerations

- What is the appropriate institutional design for disaster management?
- What are the major problems relating to institutional design for floods risk reduction in Russia and in the EU countries?
- How can better coordination between responsible organizations be achieved?

2.3 Public participation and socio-economic issues

- How to increase public participation and build partnerships between stakeholders in natural disasters risk reduction?
- How to enhance public participation and awareness in disasters risk reduction?
- Human security and social implications.

Please feel free to suggest additional questions for the EG2 session. If possible, send them to iganouli@civil.auth.gr before 21 September. Thank you!

3. Relevant Bibliography

Bogardi, I. and H.P. Nachtnebel (1994). *Multicriteria Decision Analysis in Water Resources Management*, IHP, UNESCO, Paris, 469 pp.

Gardiner, J., O. Strarosolszky and V. Yevjevich (eds.) (1995). *Defence from Floods and Floodplain Management*. NATO ASI Series E, Vol. 299, Kluwer Academic, Dordrecht.

Ganoulis, J. (1994). *Risk Analysis of Water Pollution: Probabilities and Fuzzy Sets*. WILEY-VCH, Weinheim, Oxford, NY, 306 pp.

Ganoulis J. (2003). *Risk-Based Floodplain Management: a Case Study from Greece*. *Int. J. River Basin Management*, Vol. 1, No1, pp.1-7

Ganoulis J. (2004). Integrated Risk Analysis for Sustainable Water Resources Management In: I. Linkov and A.B. Ramadan (eds.) *Comparative Risk Assessment and Environmental Decision Making*, NATO Science Series pp. 275-286, Kluwer Academic

Ganoulis J. (2005). Water Resources Management and Environmental Security in Mediterranean Transboundary River Basins, In: Morel, B. and Linkov, I (eds). "Environmental Security and Environmental Management: The Role of Risk Assessment", pp. 49-58, Springer (in press)

Kotov V., Nikitina E. 2001. New dimensions of environmental insecurity in Russia. AVISO, An Information Bulletin on Global Environmental Change and Human Security, N 9, Special ENRICH Issue (in Russian, in English)

Kotov V. Nikitina E. Environmental Security in Russia: crisis of protective mechanisms. 1998, Pro et Contra, N4 Autumn, Carnegie Foundation, Moscow (in Russian)

Renaud, F. (2005). *Human and environmental security in the context of the CABRI-Volga project*, Proc. Great Rivers Forum, Nizhny Novgorod, Russia (to appear)

Rossi, G., N. Harmoncioglu and V. Yevjevich (1994). *Coping With Floods*. NATO ASI Series E, Vol. 257, Kluwer Academic, Dordrecht.