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IWRM in a transnational setting – three case studies from the eastern periphery of the European Union

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Transboundary rivers are natural connections between different countries. The Ukraine, Russia and the European Union share various river basins that cross one or more international borders. The availability and quality of these water resources is the subject of constantly ongoing transnational negotiations of the riparian states. A joint management is only possible when all factors which influence water availability and quality are known. Sufficient and reliable data are indispensable for the understanding of characteristics of hydrological systems. Ideally, information would be collected and analyzed in a consistent manner. But, different national regulations (regarding for example monitoring or water quality standards) and data scarcity can seriously impede a consistent system analysis. Furthermore, the implementation of measures (e.g. conservation, technical and non-technical problem solutions) can be hindered by institutional or political constraints. Besides an assessment of the current situation, changing boundary conditions such as climate, land use or demographic changes can have enormous impacts on water resources and have to be considered.

Within a project funded by the German Volkswagen Stiftung three basins are instigated: Western Bug (Ukraine, Belarus and Poland), Western Dvina (Russian, Belarus, Latvia) and Desna (Russia, Ukraine). The region is characterized by enormous societal changes in the nineties, which caused strong economical, ecological and political alterations. Recently, severe political disputes and even militant actions occur in some countries. All three basins face severe water quality problems, which have to be analyzed from a historical, natural and economic perspective.
To meet the manifold water demands of riparian states and to manage transboundary water resources sustainably, there is no way around a transnational system analysis and dialogue. International experience shows that the reasoning of riparian countries is not always rational but driven by political considerations or emotions. In such situations, water management concepts for which there is a scientific basis have the advantage of being acceptable to all involved sides because of their generally neutral and unbiased character.

This contribution presents a comparative study of the three mentioned basins. In a first step, the status quo was assessed, which include a systematic investigation of challenges in the basins shared by the Ukraine, Russia and the European Union, with a differentiation between perceived problems, political disputes and a science-based assessment. It was followed by a comparison of data and methods needed to investigate the scientific basis of an IWRM (standards of measurement, data acquisition, storage and treatment, harmonization of data, gap filling etc.). In a final step, strategies towards a sustainable water management, including scientific assessments, technical solutions, conservation measures, capacity development and the promotion of transboundary cooperation will be worked out.