

Flood Risk Management as a Societal Process – A European Approach

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Abstract

The transition from "flood protection" to "flood risk management" leads to a much more comprehensive and complex understanding of flood disasters. On the one hand, the whole 'flood risk system' has to be considered reaching from the hydrometeorological 'sources' over the hydrodynamic 'pathways' and physical elements at risk as 'receptors' to social, economic and ecological 'consequences'. On the other hand, the term management needs the consideration of societal processes of strategy formulation, implementation and controlling based on the analysis, assessment and reduction of risks.

It, therefore, becomes obvious that research on flood risk management requires the integration of multidisciplinary approaches. Against this background, the European Commission launched the Integrated Project FLOODsite as its largest flood research project ever since. Overall objective is the development of an integrated methodology for risk analysis, risk assessment and risk reduction with a consistent approach for management process.

The contribution presents the theoretical and methodological framework of integration of FLOODsite. Firstly, it provides a brief introduction of main terms and components of flood risk management. Secondly, it specifies the relation of the components in a coherent concept of societal decision-making. Thirdly, methodological issues of an operationalisation of a comprehensive risk management are explained.

The first item focussed on the relation between (i) risk analysis through the determination of hazard, vulnerability and risk, (ii) risk assessment covering risk perception and risk weighing and (iii) risk reduction comprising pre-flood, event management and post-flood interventions by physical measures and policy instruments. The second item refers to the integration of these components in a strategic process concept of risk management borne by independent actors from various sectoral fields, administrative areas and policy levels. The third item, finally, deals with specific methodological issues which appear when the comprehensive understanding of risk management is aimed at for real-world application. Thereto, challenges of complex model systems, their integration in DSS tools and the use of such tools in cooperative management processes are shown.