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Coordination of short-term and long-term mitigation measures of hydro-meteorological risks: the importance of establishing a link between emergency management and spatial planning

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The management of natural hazards involves, as generally known, the four stages of the risk management cycle: Prevention, preparedness, response and recovery. Accordingly, the mitigation of disasters can be performed in terms of short-term and long-term purposes. Whereas emergency management or civil protection helps to strengthen a community's capacity to be better prepared for natural hazards and to better respond in case a disaster strikes, thus addressing the short-term perspective, spatial planning serves long-term planning goals and can therefore implement long-term prevention measures.

A purposefully applied risk mitigation strategy requires coordination of short-term and long-term mitigation measures and thus an effective coordination of emergency management and spatial planning. Several actors are involved in risk management and should consequently be linked throughout the whole risk management cycle. However, these actors, partly because of a historically fragmented administrative system, are hardly connected to each other, with spatial planning only having a negligible role compared to other actors[1], a problem to which Young (2002) referred to as the "problem of interplay". In contrast, information transfer and decision-taking happen at the same time and are not coordinated among different actors. This applies to the prevention and preparedness phase as well as to the recovery phase, which basically constitutes the prevention phase for the next disaster[2]. Since investments in both risk prevention and emergency preparedness and response are considered necessary, a better coordination of the two approaches is required. In this regard, Decision Support Systems (DSS) can be useful in order to provide support in the decision-making aspect of risk management.

The research work currently undertaken examines the problem of interplay in the four case study areas of the Marie Curie ITN, CHANGES[3]. The link between different risk management actors will be explored by means of exploratory questionnaires and interviews with government agencies, local administrations, community and research organizations on each study site. First results provided will address the general role of spatial planning in risk management. Additionally, preliminary observations are made in regard to the coordination of emergency preparedness and long-term spatial planning activities. The observations consider that integration facilitates proactive strategies that aim at preventing disaster occurrence and promote interaction between involved parties. Finally, consideration is given to the potential use of a DSS tool to cover both aspects of spatial planning and emergency management in the risk management cycle.

[1]Sapountzaki et al. 2011. Disconnected policies and actors and the missing role of spatial planning throughout the risk management cycle. In: Natural Hazards 59 (3), pp. 1445-1474.

[2]Greiving et al. 2012. Linking the actors and policies throughout the disaster management cycle by „Agreement on Objectives" – a new output-oriented management approach. In: Natural Hazards Earth System Sciences 12, pp. 1085-1107.

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