



Improving Flood Risk Maps as a Capacity Building Activity: Fostering Public Participation and Raising Flood Risk Awareness in the German Mulde Region (project RISK MAP)

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The EU Floods Directive requires the establishment of flood risk maps for high risk areas in all EU Member States by 2013. However, if existing at all, the current practice of risk mapping still shows some deficits: Risk maps are often seen as an information tool rather than a communication tool. This means that e.g. important local knowledge is not incorporated and forms a contrast to the understanding of capacity building which calls for engaging individuals in the process of learning and adapting to change and for the establishment of a more interactive public administration that learns equally from its actions and from the feedback it receives. Furthermore, the contents of risk maps often do not match the requirements of the end users, so that risk maps are often designed and visualised in a way which cannot be easily understood by laypersons and/or which is not suitable for the respective needs of public authorities in risk and flood event management.

The project RISK MAP aimed at improving flood risk maps as a means to foster public participation and raising flood risk awareness. For achieving this aim, RISK MAP (1) developed rules for appropriate stakeholder participation enabling the incorporation of local knowledge and preferences; (2) improved the content of risk maps by considering different risk criteria through the use of a deliberative multicriteria risk mapping tool; and (3) improved the visualisation of risk maps in order to produce user-friendly risk maps by applying the experimental graphic semiology (EGS) method that uses the eye tracking approach.

The research was carried out in five European case studies where the status quo of risk mapping and the legal framework was analysed, several stakeholder interviews and workshops were conducted, the visual perception of risk maps was tested and – based on this empirical work – exemplary improved risk maps were produced. The presentation and paper will outline the main findings of the project which ended in September 2011, focussing on the participatory aspects in one of the German case studies (the Mulde River in Saxony).

In short, different map users such as strategic planners, emergency managers or the (affected) public require different maps, with varying information density and complexity. The purpose of participation may therefore have a substantive rationale (i.e. improving the content, including local knowledge) or a more instrumental rationale (i.e. building trust, raising awareness, increasing legitimacy). The degree to which both rationales are accommodated depends on the project objectives and determines the participants and process type. In the Mulde case study, both the process of collaborating with each other and considering the (local) knowledge and different experiences as well as the results were highly appreciated. Hazard and risk maps are thus not an end-product that could be complemented e.g. by emergency management information on existing or planned defences, evacuation routes, assembly points, but they should be embedded into a participatory maintenance/updating framework. Map visualisation could be enhanced by using more common and/or self-explanatory symbols, text and a limited number of colour grades for hazard and risk information.

Keywords: Flood mapping, hazard and risk maps, participation, risk communication, flood risk awareness, emergency management

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