



Evaluation of information tools in flood risk communication: part of the EU-project FloodScan

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The project FloodScan is supported by the Life Program of the European Union and aims to improve and simplify two-dimensional flood simulation. As a first step of FloodScan, laser scanning data are processed in the work package Data Preparation and Classification which provide the basis for the elaboration of hydraulic two-dimensional models for the identification of flood plains and creation of flood hazard maps in the task Hydraulic Modelling. The focus of the third work package Information and Communication is on information activities for the general public, especially for the population in areas at risk. It is one basic objective of FloodScan to evaluate existing information tools used in flood risk communication and to further develop or newly create them. Therefore existing information tools about floods and flood risks such as web-mapping-services, flood hazard maps and visualisations of flood risks in landscapes and settlements are analysed and assessed regarding design and usability for the public.

As WAGNER (2004) has shown, permanent information tools like tables or nature trails are perceived more intensively by the public than information leaflets distributed to all households. Therefore, the so-called flood information tables or flood steles should be an ideal visualization tool for flood risks in landscapes or settlements. These information tables were developed and installed in flood-prone areas of the Bavarian cities Regensburg, Miltenberg and Rosenheim in the course of technical flood protection measures. At several places in the flood plains they inform the public about the water levels which would occur during the 100-year flood. In Regensburg and Miltenberg, the 100-year flood is compared to previous flood events, showing that the

100-year flood can be higher than past events. Concept, design and character of information were realised differently in the respective communities. However, initiators' efforts in all cases aim at strengthening people's risk awareness, indicating the local flood plain and possible flood extents and enhancing people's acceptance for technical flood protection measures. The research questions of our study are:

- Are these goals of the initiators fulfilled?
- Who are the tables recognized?
- Which cognitive and affective effects have the flood information tables on recipients?

For a formative evaluation of flood risk information tools, an interdisciplinary creative workshop with experts from different disciplines and laymen living in areas at risk of flooding was already realised in July 2007. In general, the participants stated that these flood information tables are suitable to increase peoples' risk awareness. According to workshop attendees, the gauge board on a noticeable background colour linked with specific flood information like historical flood marks or the flooding level in the stated flood plain would be an appropriate design for such information tables. Moreover, when realising such tables, it is important to create emotional empathy and to refer to the local risk situation, e. g. using photos of previous local floods.

In January and February 2008, additional data collection was carried out in the mentioned communities via a semi-standardized questionnaire, predominantly applying open questions. Moreover, mental maps were used to analyse people's spatial perception of the flood plain in their community. Inhabitants and visitors of the research cities were interviewed in the surroundings of the flood information tables.

Our contribution will present the final results of the evaluation of the flood information tables and compares them to other flood risk communication tools. Moreover, recipients' requirements and recommendations for future implementation will be formulated.

Wagner, K. (2004): Naturgefahrenbewusstsein und –kommunikation am Beispiel von Sturzfluten und Rutschungen in vier Gemeinden des bayerischen Alpenraums. Dissertation at the Technische Universität München. http://tumb1.biblio.tu-muenchen.de/publ/diss/ww/2004/wagner_k.html (15.12.07).