



Mobiles sensor data, collection, analysis for floods events

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Floods affect yearly at least 20M people worldwide and claim around 20000 lives. The damages from flood hazards are likely to increase in the coming years as revealed from recent studies, due to the predictable effect of climate changes. Flood hazards cause negative impacts on citizens and economy in Europe, triggering a progressive shift of responsibilities from central authorities to local communities. This variation has led to searching solutions within government, concerning the suitable division of roles among the state and its citizens. As background of research on flood risk, people experience in the last decades of flood events directly influence their behaviour. The risk communication should be a bidirectional exchange of information based on specific people needs, influencing attitudes and behaviour during emergency or crisis and aiding decision makers. Basically, people should evaluate their own risk situation and their decisions according to preparedness and personal safety measures. The effectiveness of communication may have a major bearing on how people are prepared on risk. During the last decades, risk communication process evolved from an engagement of learning process to a widely active role of people and the public value was included in risk management. In more recent years, crowdsourcing has become an innovative ICT-based approach to solve problems, involving active participants to obtain necessary information through distributed open calls in a people network. The method is commonly adopted for active models in which information is sought directly from affected communities and for other models in which real-time procedures (like mapping, measuring, photos) are outsourced to users that are randomly distributed in the territory (UN Office for the Coordination of Humanitarian Affairs, OCHA, 2013). This illustrates the development and test of MAppERS (Mobile Application for Emergency Response and Support), which integrates an Android application and a dashboard to data storage with a cloud architecture, compared with future sensors. The aim is the application of a location-based system for on-site users offering abundant storage capacity of real-time data, as a helpful relevant tool to support rescue squads on field during a crisis and promote awareness of the local population towards inexpensive and distributed surveys.