

SIGNALERT app, a dedicated crowdmapping smartphone app to report for floods intensity and impact worldwide.

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Alternatively to classical social networks such as Twitter which is used to report for disasters damages, crowdmapping can be based on dedicated smartphone apps allow a more focused, precise, detailed and reliable information and do not require sophisticated filtering for exploitation.

SIGNALERT is a free crowdmapping smartphone app which feeds a set of webservice of exploitation. The description of a flood event or any type of phenomenon is based on a set of few questions depicting the intensity and the impact of what the user observes in which he has to choose the description the closest to his observation. Geolocation and picture are obviously included. Two types flood have been distinguished : flash floods and slow floods. The questions in the app are based on simplified intensity scales. The challenge has been to find indicators easy to identify and recognize on the field by anys citizen, for a range of weak to extreme intensities on one hand. On the other is was to find breaks or thresholds between classes or markers, which have a significance both in terms of change in class of intensity of the sources phenomenon but also on the impacts. Therefore questions are separated in two sets, one on “intensity” of the source, the other on “damage/impact” on exposed elements. An additionnal difficulty has been to choose generic field markers or type of exposed element valid worldwide. Geographical vulnerability dependance and variability of stakes and exposed elements to a given physical intensity is not an obstacle since what is expected is to depict the local level of impact not to compare to an absolute value. This is the reason why question to describe physical intensity and question on impact and damages have been separated. A tool included in the app allow the user to have a downward link with national flood early warning operators. In France the user can select a river segment, close to his preferred locations, monitored by the SCHAPI (Service Central d'Hydrométéorologie et d'Appui à la Prévision des Inondations) of the French Ministry of Environment and be informed automatically in real time of any changes in the level of vigilance or warning.

The user can also find on the behaviour advices for each type of natural phenomenon included in the app. Professional exploitation of data is proposed by SIGNALERT as a complement of field observation to monitoring networks and forecast model. A Similar approach is proposed for other hazards.

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Keywords:

Crowdmapping, smartphone app, social network, intensity scale, flash floods, floods,

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Abstract: