**Social Sensing of Floods**

“Social sensing” is a form of crowd-sourcing that involves systematic analysis of digital communications to detect real-world events. Here we consider the use of social sensing for observing natural hazards. The project uses data from a popular social media platform (Twitter) to detect and locate flood events in the UK. In order to improve data quality, we apply a number of filters (timezone, simple text filters and a naive Bayes ‘relevance’ filter) to the data. We then use place names in the user profile and message text to infer the location of the tweets. These two steps remove most of the irrelevant tweets and yield orders of magnitude more located tweets than we have by relying on geotagged data. Then demonstrate that high resolution social sensing of floods is feasible and we can produce high-quality historical and real-time maps of floods using Twitter.