

Leveraging social media for hydrogeological risk management: an experience in Campania region (southern Italy)

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Campania is the Italian region with the highest population density (419 inhabitants/km²). Almost 20% of its territory (13669 km²) is exposed to severe hydrogeological risk scenarios, triggered by extreme rainfall events with duration ranging from a few tens of minutes to several hours. Many of these risk scenarios can only be mitigated by non-structural measures, which are mainly designed to increase the resilience of the exposed communities. Several studies have evidenced that the effectiveness of civil protection actions can be enhanced by using social media for disseminating and collecting information relevant for crisis preparedness, response and recovery. However, the application of social media in the management of hydrogeological risks is still in its infancy. The civil protection of Campania Region, as part of a FP7 project called SUPER (Social sensors for security Assessments and Proactive Emergency management), has been validating an integrated framework enabling optimal blending of social media in the emergency management processes. This study presents the key outcomes of this validation activity undertaken at the municipal area of Sorrento, which was selected as pilot study area. An innovative tool was used for deploying a public survey within the social media networks. This survey was intended to assess the public awareness of hydrogeological risks, and the public knowledge and opinion about the emergency management plan. A civil protection exercise was also designed to explicitly include the social networks within the early-warning system as well as in the response and recovery actions. Strengths, weaknesses and opportunities of using social media for hydrogeological risk management are discussed.