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(Article begins on next page)



Moving from disaster reports to disaster tales to increase flood risk awareness

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The lack of basic information about the area where people live and about major hydrometeorological disasters that occurred in the past can lead the population to underestimate the flood risk. The flood risk perception is often related only to past direct experiences and to the memory of floods that took place in the same areas. However, this risk perception is high during the weeks that follow a flood event and then decreases rapidly.

In Italy, the regional agencies in charge of flood management widely use disaster reports (DRs) as the preferred way to collect and standardize information on past flooding events and on the meteorological conditions of that events. However, these DRs are often examined only by technicians, while the general audience is rarely aware about their availability or cannot fully understand what is reported in these documents.

In this work, we performed a systematic survey of the DRs drawn in the past years by the Italian regional agencies in charge of civil protection. We suggest that these DRs could be improved to provide more effective communication to citizens in view of increasing flood risk awareness, reinforcing the communication of civil protection planning and management, and improving the resilience of the population to extreme events. More specifically, we suggest that these disaster reports could be reframed into disaster tales (DTs) without losing the detail level required for the typical technical uses of the DRs. Moreover, these recompiled DTs can be used as tools that offer wider knowledge of the events to improve people's preparedness and self-protection behavior when a future major flood event will occur.

From a practical point of view, we suggest improving the structure of these reports with the integration of short videos and pictures taken by citizens during the event, maps and interactive tools able to present handier multimedia views of the events. By watching and listening to what has happened, the population can better understand the feelings of the people experiencing an emergency, learning how to act during future floods. We also suggest using a storyline approach to present the whole sequence of events and decisions taken during the flood, putting in chronological order the most significant episodes occurred during the event and the recovery phase.

Application to some case studies of flooding occurred in Italy illustrates how to implement the DRs to create more readily accessible DTs.