



## **Flooding scenarios, hazard mapping and damages estimation: what if the 2011 Cinque Terre event had happened in Genoa?**

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During the autumn of 2011 two catastrophic very intense rainfall events affected two different parts of the Liguria Region of Italy causing various flash floods, the first occurred in October and the second at the beginning of November. Various studies demonstrated that the two events had a similar genesis and similar triggering elements. In this work we did the exercise of putting the rainfall field of the first event (Cinque Terre area) on the main catchment, stroke by the second event, that has its mouth in correspondence of the biggest city of the Liguria Region: Genoa. A flood forecast framework and a hydraulic model were used as tools to quantitatively carry out a “what if” experiment, a proper methodology for damages estimation is then used to estimate the potential losses and the people affected.

The results are interesting, surprising and in such a way worrying: a peak flow with return period larger than 200 years would have occurred with an estimated damage between 120 and 220 million of euros for the city of Genoa, Italy.