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multi-Risk sciEnce for resilienT commUnities undeR a changiNgclimate

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1. Technical references

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Lead beneficiary	Giovanni Forte
Contributing beneficiary/ies	Giovanni Forte, Rosa Colacicco, Isabella Serena Liso, Letizia Pace

* PU = Public

PP = Restricted to other programme participants (including the Commission Services)

RE = Restricted to a group specified by the consortium (including the Commission Services)

CO = Confidential, only for members of the consortium (including the Commission Services)

Document history

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2. ABSTRACT

The present Deliverable shows the activities conducted under Task 2.4.3, with the objective of rationalizing trigger-based multiple geohazard severity mapping and zoning, in the context of large plains. The 13 Learning Examples identified were consistently implemented into worksheets, from which the necessary information was then extracted and turned into graphs. In order to build a common line with previous WPs, so-called 'tool chains' were created. These allow all factors to be understood, starting from predisposing, to preparatory, to triggering factors describing a particular process. The most represented process is subsidence, followed by sinkholes and finally liquefaction. In the analysis of the LE for subsidence, the geology and the geotechnical properties of the area represent the main predisposing factors in most of the cases, while the other predisposing factors observed in the LEs are the topography and the Land Use/Land Cover (LULC). On the other hand, the water pumping, and the water table fluctuations represent the main preparatory factors. In the sinkholes dataset, the main predisposing factors are geology structural elements, past events and geotechnical properties. The preparatory factors are represented by the water table fluctuations and rock strength degradation. In the liquefaction dataset, the predisposing factors are mainly represented by the geology, earthquakes with magnitude > 5, water table fluctuations, PGA, and geotechnical properties. In the case of liquefaction events, the collected LEs had no preparatory factors interacting with the process.