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Assessment of Earthquake-Induced Soil Liquefaction Risk in Europe

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Among natural hazards, earthquakes claim a large number of casualties and economical losses each year around the globe. Excessive deformations of ground surface caused by earthquakes are of great concern in civil engineering, human lives and the environment. Such ground deformations are often associated with a phenomenon of soil instability called earthquake-induced soil liquefaction. Earthquake induced liquefaction disasters at a continental scale are currently addressed within the European research project LIQUEFACT. The University of Pavia (UNIPV) and the European Centre for Training and Research in Earthquake Engineering (EUCENTRE) are currently in charge for the definition of a liquefaction risk map in the European territory (macrozonation). It is worth noting that liquefaction is a local phenomenon, thus the macrozonation of liquefaction risk at a continental scale is a challenge. This paper presents the preliminary deliverables of this activity, i.e. the maps for the European territory of liquefaction risk, computed by convolving soil susceptibility, expected seismic hazard

Biography:

Claudia Meisina received her PhD in Earth Sciences from the University of Pavia (Italy). Currently is associate professor in Engineering Geology at the Department of Earth and Environmental Sciences of University of Pavia, where she leads the Laboratory of Engineering Geology. She has been a post-doc at the BRGM in France. She is actually involved in Liquefact Horizon 2020 Project. Research interests concern methodologies for the geological interpretation of satellite radar interferometric data for landslide and subsidence identification and monitoring and the role of land use in shallow landslide triggering. She published 60+ peer-reviewed papers in the field of engineering geology.