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UPSTRAT-MAFA EUROPEAN PROJECT: DEVELOPMENTS AND ACHIEVEMENTS

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UPStrat-MAFA European project

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The European project UPStrat-MAFA (Urban Disaster Prevention Strategies using MACroseismic and Fault Sources) is a European Commission Project in the area of “Developing knowledge-based disaster prevention policies” whose primary aim is to produce seismic risk analyses for disaster prevention strategies. The European project has been co-financed by UE - Civil Protection Financial Instrument. The main goal of the project was to reach a harmonisation at the urban risk level, merging the best practices and available data in particular locations - Mt. Etna, Campi Flegrei areas (Italy), the Azores Islands and areas hit by offshore seismic activity (Portugal), Southeast Spain (i.e., Alicante-Murcia) and South Iceland including the metropolitan area of Reykjavik. Fruitful collaborations have been established among the members of this two years project, being the group well balanced between seismologists, engineers and statisticians.

The project has covered all the issues that need to be addressed for the development of the proposed research and the achievement of measurable progresses beyond the state-of-the-art for urban prevention strategies based on the level of risk and on the education information system. The project focuses on two main aspects:

a) Disaster prevention strategies based on the level of risk: A new concept of global disruption measures is introduced, with the objective to provide a systematic way to measure earthquake impact in urban areas. Then, a framework is provided where urbanised areas are seen as a complex network where nodal points have roles as sources and sinks, interacting together in an interdependent fashion. These properties are then used to identify which nodes are likely to introduce major disruptions in the whole urban system, and also which of these nodes are the most relevant, implying greater risk reduction if suitable actions are taken.

b) Disaster prevention strategies based on education information system. Effective disaster-risk reduction can be developed in particular through long-term activities, such as education. Often, people have the idea that natural hazards will strike others, but not themselves. In part, this is connected with education itself: textbooks often present “horrible” cases from places far away, compared to which local disasters appear trivial. Consequently, there is an absence of risk perception in people’s lives, which influences development and planning of the community and state, as well as the educational curriculum, and media priorities.

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The final beneficiaries will be the Civil Protection, Local Authority and civil society of the State Members participating in the project, and in general, the European Institutions acting in the field of urban disaster prevention strategies.

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