Geophysical Research Abstracts
Vol. 19, EGU2017-17960-1, 2017
EGU General Assembly 2017

Communicating seismic risk: tool and strategies of the KnowRISK project

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Expert knowledge on seismic protection needs to penetrate into communities' routines in order to become valuable in terms of disaster risk reduction.

The project KnowRISK (Know your city, Reduce seISmic risK through non-structural elements) financed by the European Commission, addresses prevention measures that may reduce non-structural damage, caused in urban areas by earthquakes. The project relies on a risk communication strategy and takes action on pilot areas chosen within the three participating European countries, namely Portugal, Iceland and Italy.

Besides threatening the load bearing structures, earthquakes cause significant damage of non-structural elements of buildings (i.e. partitions, ceilings, cladding, electrical and mechanical systems and furniture). Failure of non-structural elements may cause injuries, death and act on the resilience of communities.

The strategies for risk communication in the KnowRISK project stand on the understanding of local communities fragility, on their direct engagement and on a holistic approach to vulnerability. The level of relevance of seismic compared to other hazards, the understanding, the memory of past disasters are all indicators that can affect the way a risk is perceived and preventive measures are taken. The level of education, wealth, exposure to other, social, risks need to be taken into account as aggravation parameters in risk computation and in strategies for communication. To draw a general picture of the pilot areas and the target societal groups, which were chosen to be students and citizen living in historical downtowns, all these indicators have been addressed.

Strategies for risk communication implemented within the project includes (1) schools and citizen's engagement; (2) citizen's science activities; (4) tools for best practice dissemination and learning.
Schools have been a major target. Here a strategy based on flipped-up learning approach was applied. Middle-to-high schools Students have been engaged in citizen's science activities to map non-structural elements in students' daily live environments.

A Practical Guide and a Portfolio designed for citizens and building construction's stakeholders, to highlight which protective measures are important, easily and also low-cost actions to increase safety of households, and Augmented Reality techniques were used to disseminate and educate to best practice.