

Developing an Integrated Seismic Risk Model for Existing Buildings in Northern Algeria

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Abstract : Large scale seismic risk assessment has become increasingly popular to evaluate the physical vulnerability of a given region to seismic events, by putting together hazard, exposure and vulnerability components. This study, developed within the scope of the EU-funded project ITERATE (Improved Tools for Disaster Risk Mitigation in Algeria), explains the steps and expected results for the development of an integrated seismic risk model for assessment of the vulnerability of residential buildings in Northern Algeria. For this purpose, the model foresees the consideration of an updated seismic hazard model, as well as ad-hoc exposure and physical vulnerability models for local residential buildings. The first results of this endeavor, such as the hazard model and a specific taxonomy to be used for the exposure and fragility components of the model are presented, using as starting point the province of Blida, in Algeria. Specific remarks and conclusions regarding the characteristics of the Northern Algerian in-built are then made based on these results.

Keywords : Northern Algeria, risk, seismic hazard, vulnerability

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