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Earthquake Shake Mapping and Loss Assessment Applications by ELER v2.0

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ELER (Earthquake Loss Estimation Routine) software package has been developed for the rapid estimation of earthquake shaking and losses in the Euro-Mediterranean region under the JRA3 component of in EC-FP6 NERIES project. It has two modules: EHA (Earthquake Hazard Assessment) and ELA (Earthquake Loss Assessment). The EHA module estimates ground motion intensity and parameters distribution. The ELA module uses ground motion intensity and parameters information from EHA module, and demography and building inventory data. The ELA module has three levels of analysis. Level0 analysis estimates casualties based on magnitude and intensity information. Level1 analysis estimates casualties and building damages based on intensity information, Level2 analysis estimates casualties and building damages based on ground motion and spectral parameters.
In this study, the past major earthquakes in Turkey with M>6.0 have been studied, and related loss assessments have been done by using ELER v2.0. Observed and estimated results have been compared. As a long-term objective it is aimed at compiling an archive of major earthquakes in Turkey not only for shake-maps but also damage and loss-maps.