



ShakeMap Implementation in Turkey

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Globally, there is a variety of strategies to generate near-real time maps of shaking. Oftentimes, these hazard inputs are coupled with systems that provide probable loss estimates. One such system is the RED (Rapid Earthquake Damage and Loss Estimation) developed by the AFAD (Disaster and Management Authority), which works under the auspices of the Turkish Prime Ministry. AFAD has funded an international collaboration to implement the ShakeMap v3.5 system (Worden and Wald, 2016) in Turkey for generating PGA parameters and instrumentally derived intensities in the minutes immediately after a domestic earthquake occurrence. Ongoing efforts focus on regional configurations of the ShakeMap system, customizing the software to accommodate local site conditions (via geology and topography), and the selection of ground motion prediction equations (GMPEs) and intensity prediction equations (IPEs). Initial results were obtained for scenario and real events by producing the appropriate XML input parametric data formats for PGA, PGV, PSA (for periods 0.3, 1.0 and 3.0 s), and the instrumental intensity values.

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References:

AFAD-RED (Rapid Earthquake Damage and Loss Estimation), 2010. Disaster and Management Authority (AFAD) of Turkish Prime Ministry, Ankara-Turkey <https://www.afad.gov.tr/IcerikDetay.aspx?ID=318&IcerikID=3098>

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