

Seismic hazard from natural and induced seismicity: a comparison for Italy

Marco Mucciarelli (1), Enrico Priolo (2), Marco Santulin (2), Alberto Tamaro (2,3)

(1) CRS-OGS, Udine, Italy, (2) CRS-OGS, Trieste, Italy, (3) Udine University, Italy

The seismic hazard resulting from seismicity induced by human activity is not yet regulated in Italy. The presence of a significant natural seismicity complicates the differentiation of events possibly induced by human activity from ordinary natural seismicity, while it stimulates a comparison between the ground motion that can be expected due to tectonic events and the shaking caused by man-induced events. The problem is complicated by the fact that it is not possible to compare homogeneous hazard estimates for the two classes of seismicity, since it is difficult to define the induced seismicity in terms of probabilities for a given return time. This paper provides an example of how the problem was first tackled in an Environmental Impact Assessment (EIA) procedure, and then attempts a nationwide extension of the results.