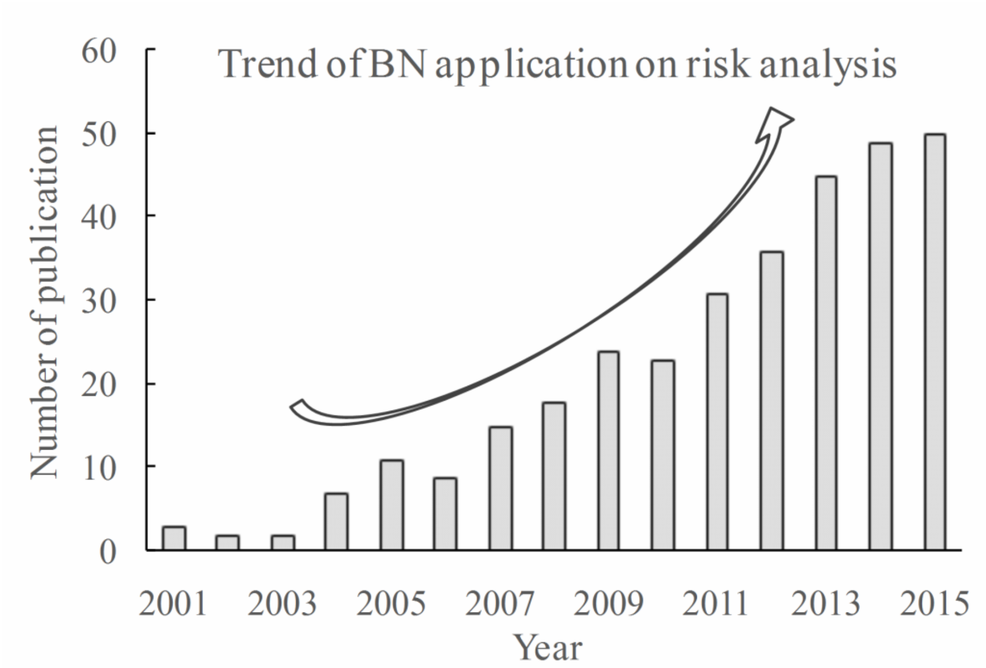


Figure 1. Increasing application of BN in risk analysis (update of Weber et al. 2012).

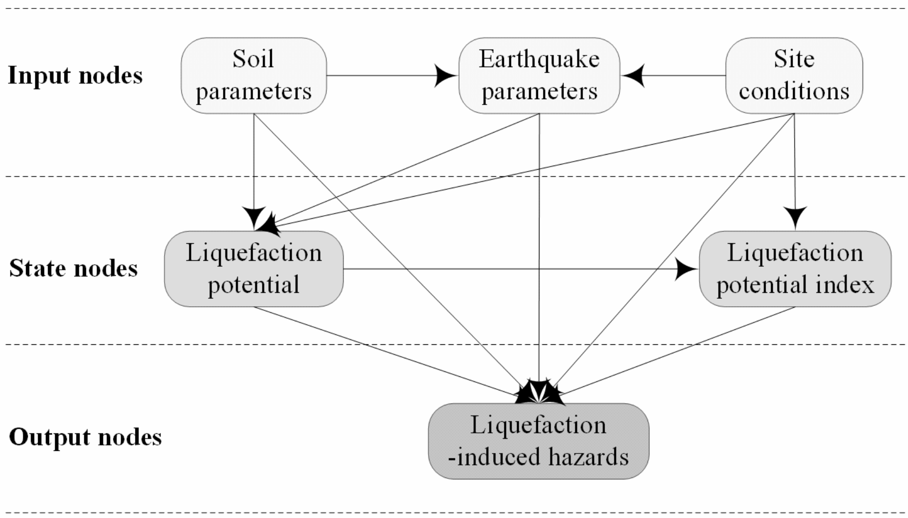


Figure 2. A generic BN for liquefaction-induced hazards.

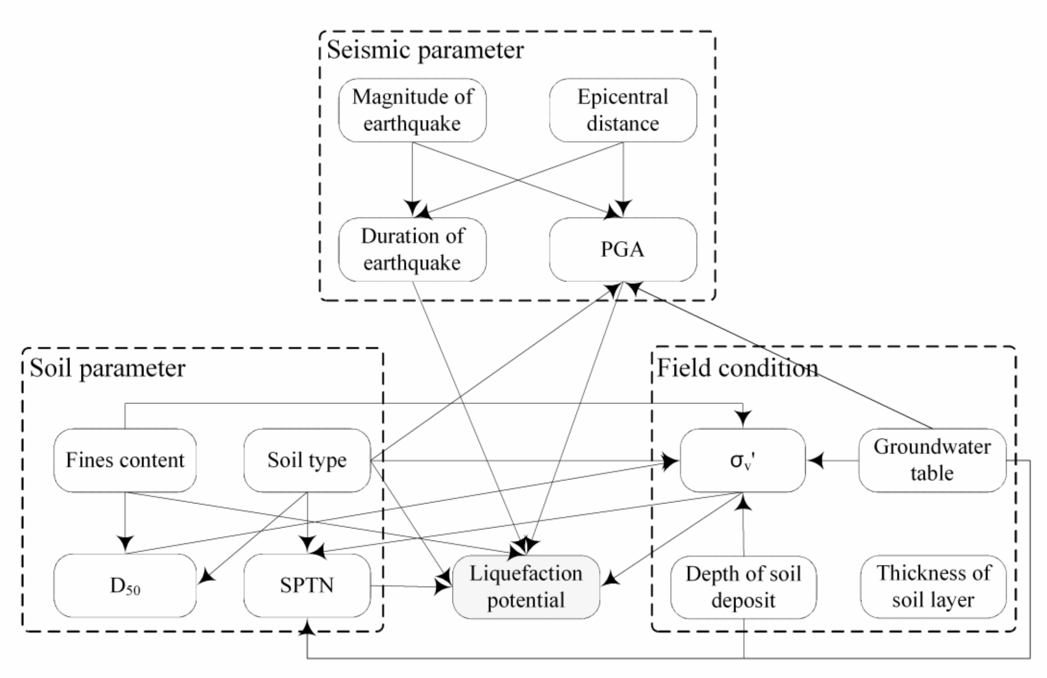


Figure 3. BN model of seismic liquefaction (Hu et al. 2016).

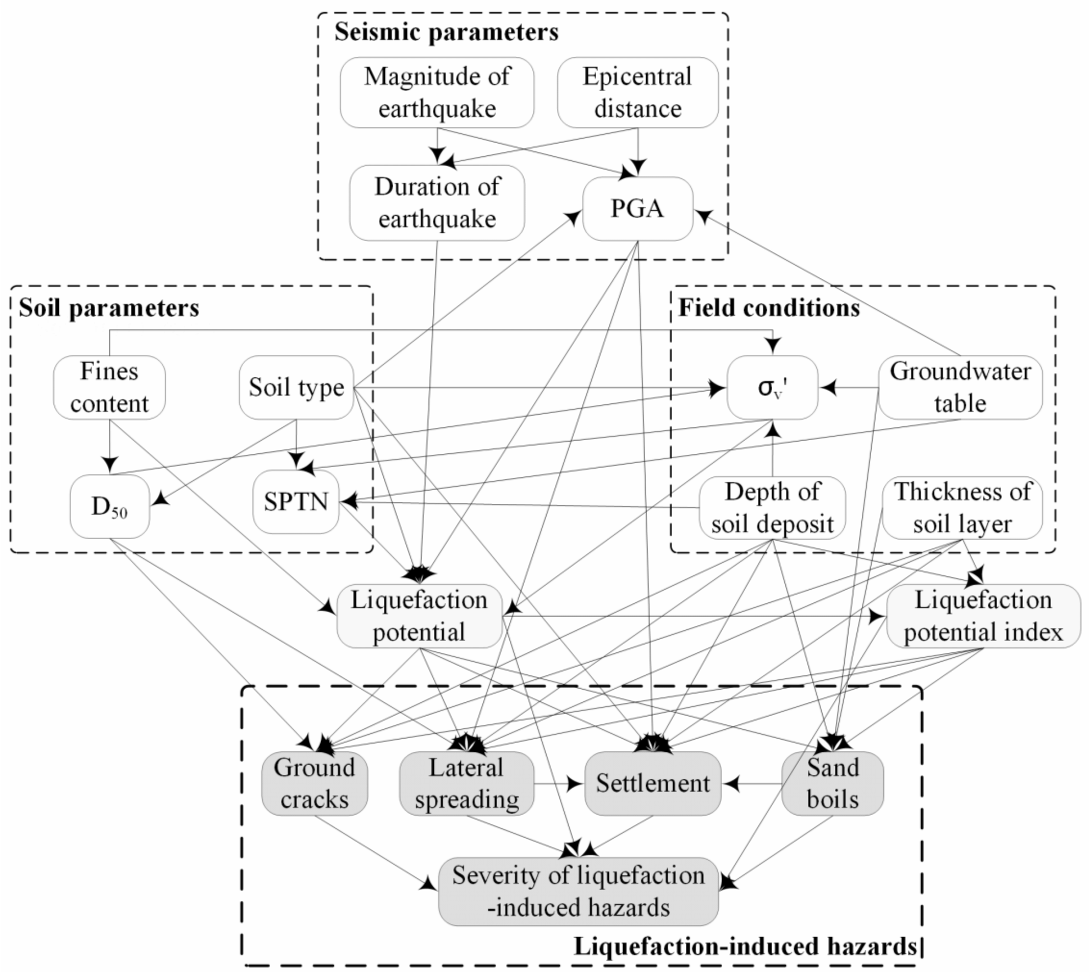
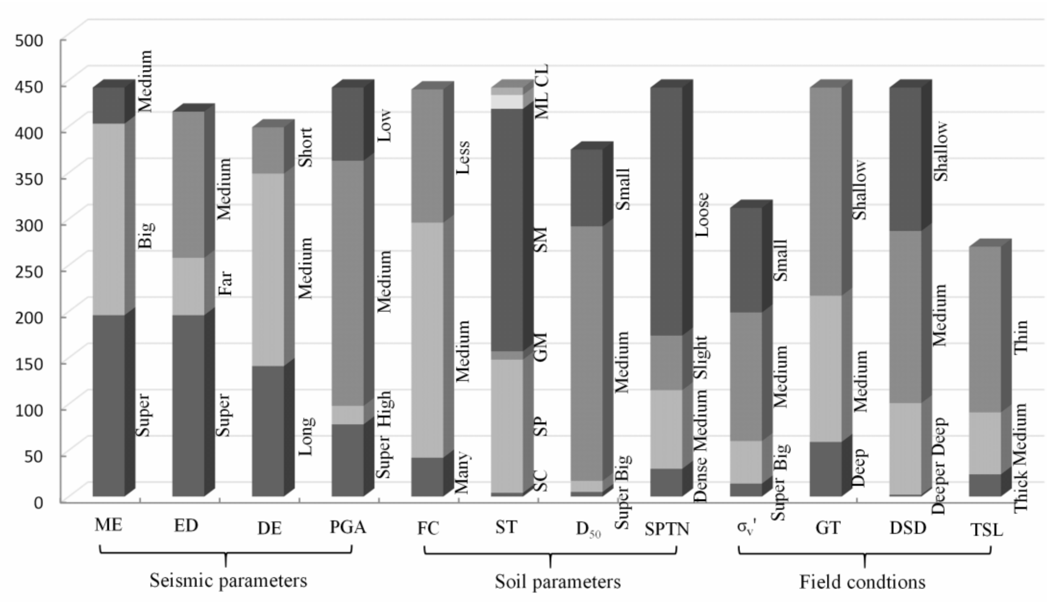
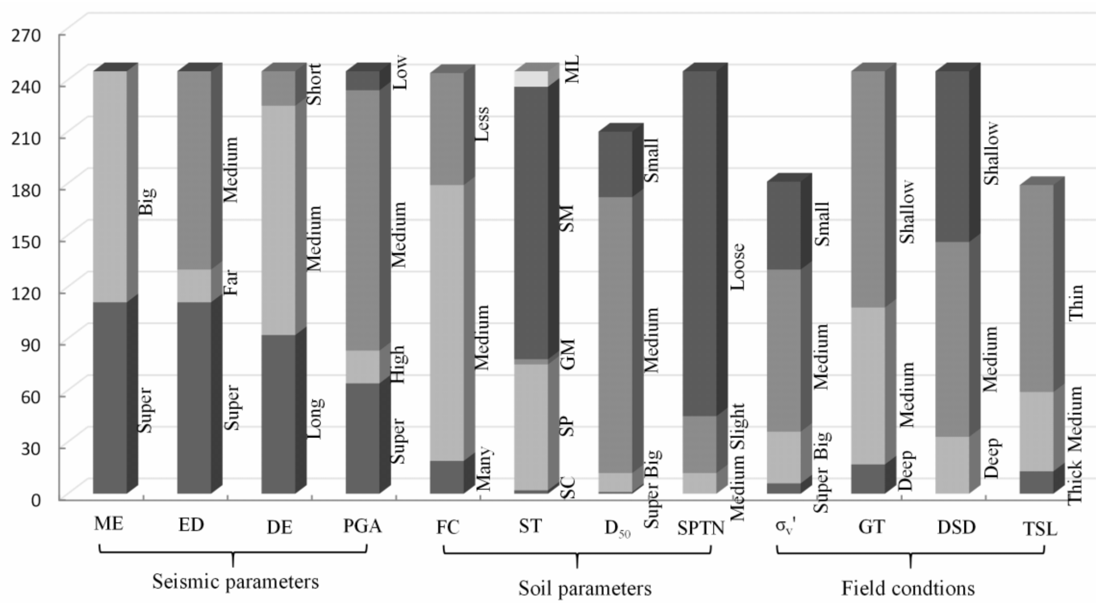


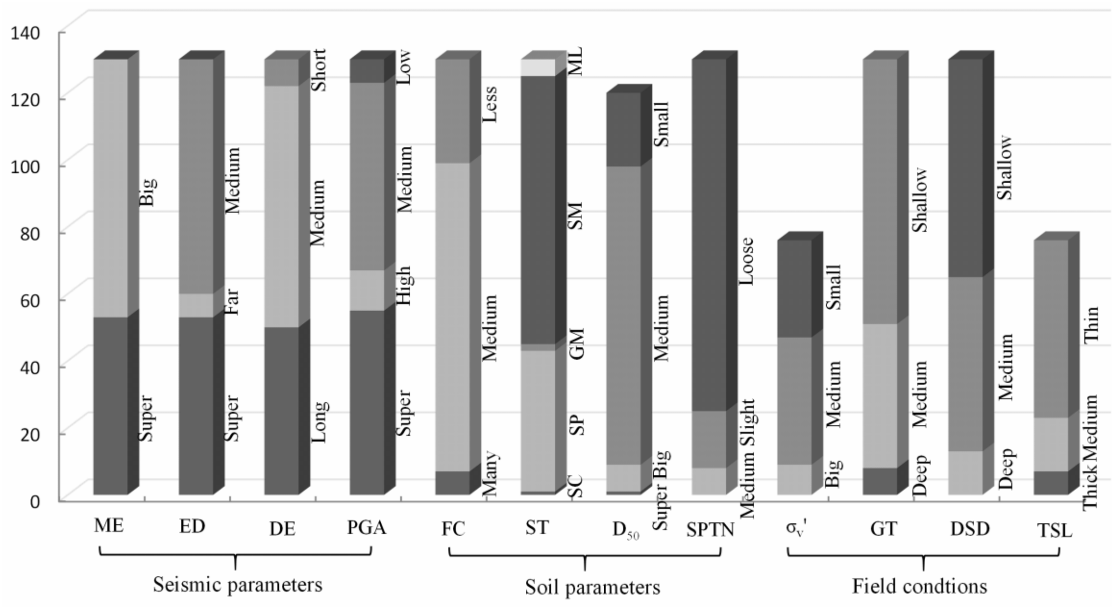
Figure 4. BN model of seismic liquefaction-induced hazards.



(1) Total datum



(2) Datum of liquefied sites

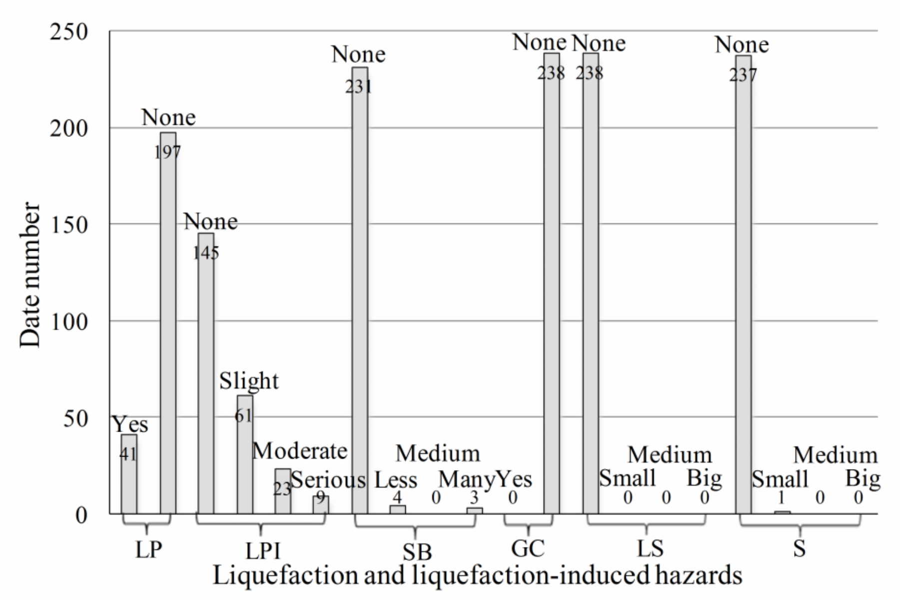


(3) Datum of severe SLH

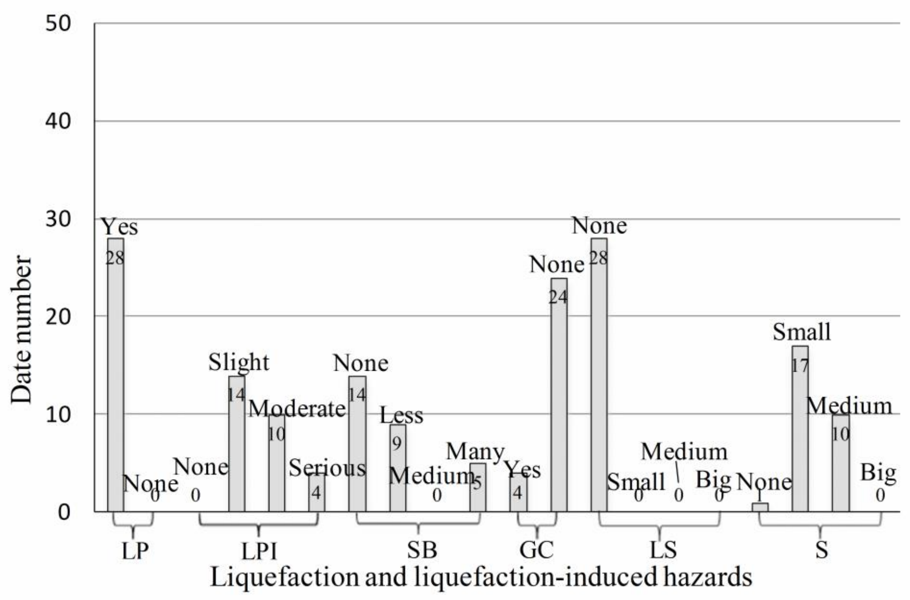
Figure 5. Proportions of data size of all influence factors.

Figure 6. Photos showing liquefaction-induced hazards during the Chi-Chi earthquake and the 2011 Tohoku earthquake: (1) Sand boils in Chikusei city; (2) Ground cracks at Arakawa River in Toda city; (3) Settlement at Taichung Port (http://www.ces.clemson.edu/chichi/TW-LIQ/Liq-Album/Settlement-7.htm); (4) Lateral spread induced failure of a dike in Nantou (http://www.ces.clemson.edu/chichi/TW-

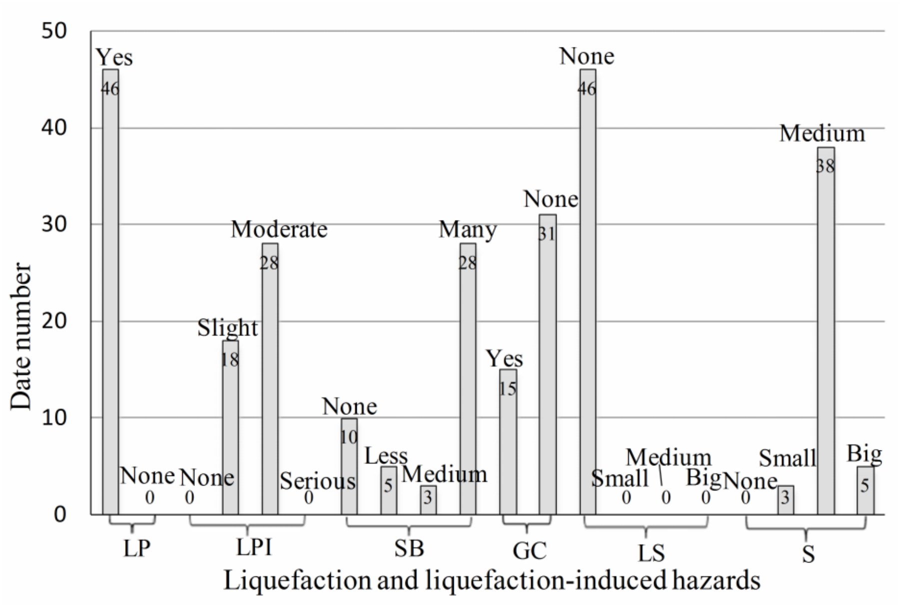
LIQ/Liq-Album/LatSpread-3.htm).



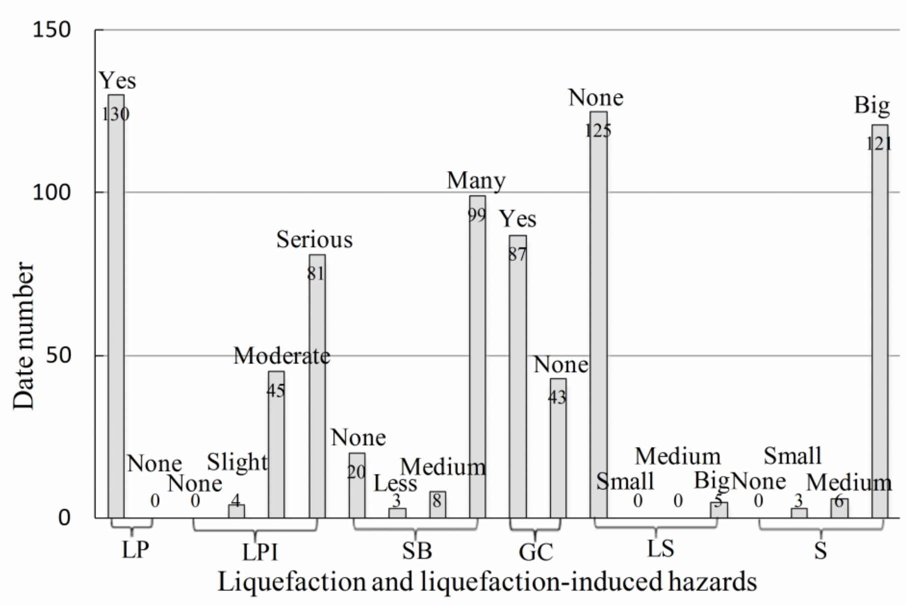
(1) Little to no SLH



(2) Minor SLH



(3) Medium SLH



(4) Severe SLH

Figure 7. Statistical summary of seismic liquefaction-induced hazard data.

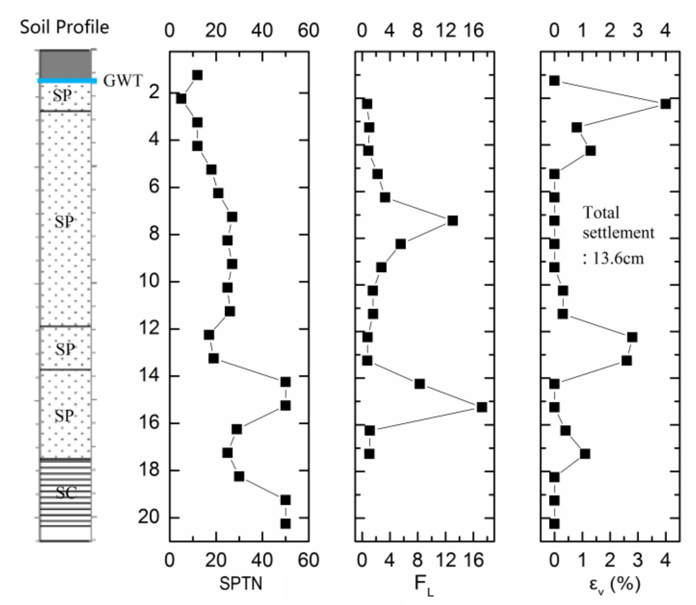


Figure 8. Soil profile and estimate of settlement.

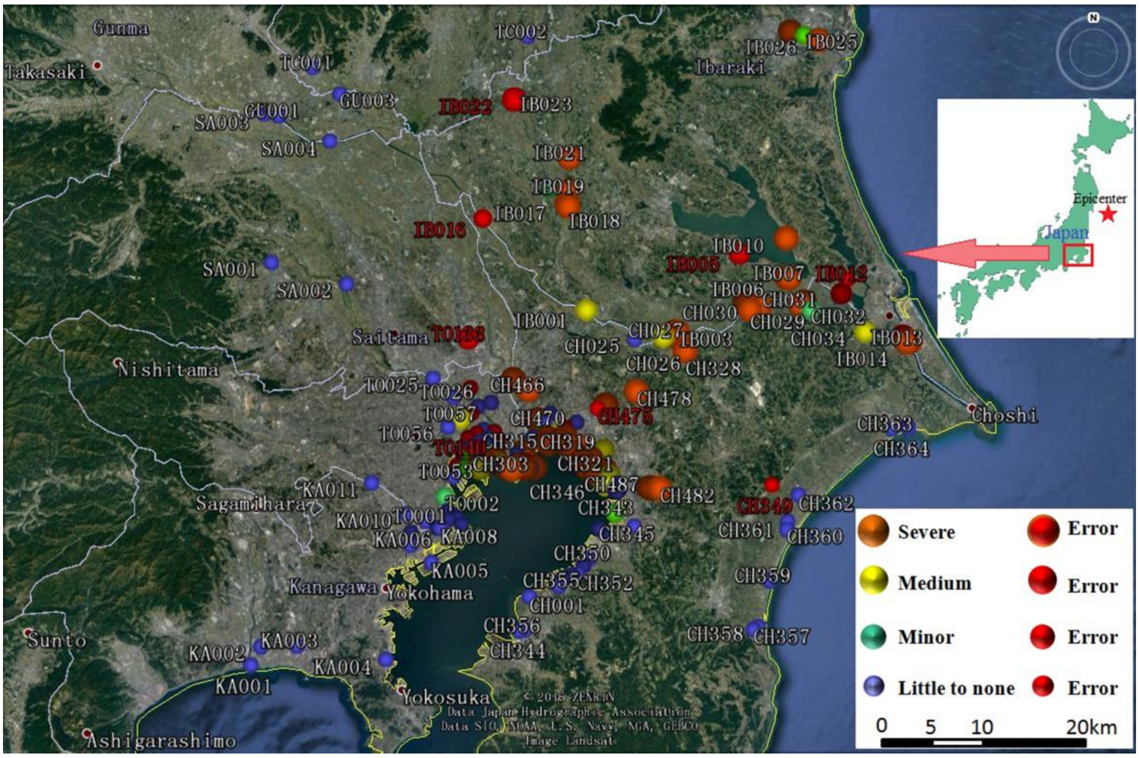


Figure 9. Assessment results of the severity of hazards induced by seismic liquefaction in the northeast area of Japan in the 2011 Tohoku earthquake.