

Characteristics

- Allows the rapid estimation of ground motion due to an earthquake, highlighting areas exposed to a specific hazard level.
- Results are generated automatically, in 3-4 minutes after the occurrence of an earthquake with magnitude ≥ 3 in Romania and nearby. As new data becomes available, maps are updated.
- The system relies on the last version (v4) developed by the United States Geological Survey (USGS), USA, adapted by INFP to intermediate-depth and crustal earthquake characteristics in Romania and local site conditions.
- It offers input for Seisdaro (The system for the rapid estimation of seismic damage in Romania).

Input and output data for ShakeMap

Earthquake parameters (magnitude, depth, coordinates)

Acceleration and velocity values recorded by stations of the Romanian Seismic Network (>155 on Romanian territory and > 30 in neighboring countries)

Ground motion prediction equations

Geological data

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SHAKEMAP

"Did you feel it?" data allowing for macroseismic intensity evaluation

Data (in grid, json and shapefile format) and **maps** (in PNG and PDF format) for **intensity**, **acceleration** (PGA, SA at 0.3, 1 and 3 seconds) and **velocity** (PGV). Maps can be visualized online for free, at www.infp.ro.

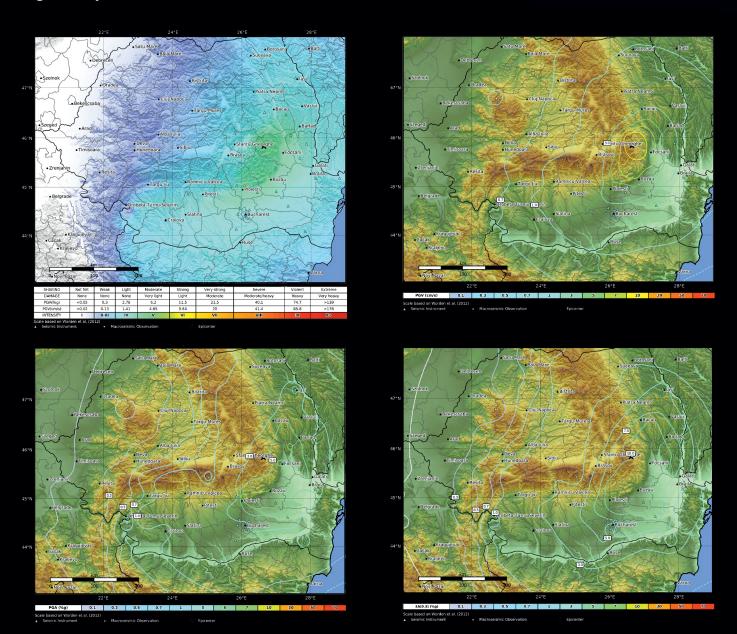


SHAKEMAP

Examples of applications

 ShakeMaps, generated immediately after a felt earthquake or for representative scenarios, are very important for:

- a prompt emergency response and better targeted emergency intervention;
- intervention planning, proper training and allocation of resources in case of an earthquake;
- **estimation of seismic damage and socio-economic losses**, with applications also in the insurance and reinsurance sector;
- seismological and earthquake engineering research;
- general public education and outreach.



ShakeMap output (replay with ShakeMap v4) for the 27 October 2004 earthquake (Mw 6.0, 96 km depth)

Part of ShakeMap results can be viewed at http://atlas2.infp.ro/~shake/shakemap (accesible also through the www.infp.ro website)