

Seismic microzoning: research in the town of L'Aquila

After the earthquake of April the 6th 2009 (1.32 AM-UTC; Magnitude 5.8) in the town of L'Aquila the Department of civil protection organized together with Abruzzo Region the study of seismic microzoning in the villages mostly damaged by the earthquake nearby L'Aquila.

The work has been realized with the cooperation of 150 researchers and technicals, 9 Italian Universities (L'Aquila, Chieti-Pescara, Genova, Politecnico di Torino, Firenze, Basilicata, Roma "La Sapienza", Roma Tre, Siena), 8 Institutes of research (CNR, INGV, AGI, RELUIS, ISPRA, ENEA, OGS, GFZ-Postdam), and the cooperation of Regions and independent Provinces (Abruzzo, Lazio, Emilia-Romagna, Toscana e Provincia di Trento).

The studies of seismic microzoning consents to identify the territory in a seismic aspect, identifying and delimiting the areas that have the same reaction, separating stable zones, local amplifying stable zones and unstable zones, such as landslips superficial fractures and soil liquefaction. So they are very important in the urban planning and in the step of restoration of the town after the earthquakes.

They are also very important in emergency planning as they consent a better and conscious individuation of strategic elements and resources of civil protection.

The study has been very important, for the first time we have, in Italy and abroad, this kind of assembled dates and in this quantity, and for the first time a such great number of researchers, Universities and also other Institutes of research were involved.

The dates obtained will allow the administrations to begin the buildings restoration considering the different seismic risk of the various territories under their authority, influencing urban choices and planning.

The results of studies is useful for technicals to understand the seismic amplification.

They will use the right instruments to know which are the necessary analysis to define exactly the state of the site.

For each zone, are available : geolithological map, surveys map, microzones map level 1, seismic microzone level 3, linking the website: <http://www.protezionecivile.it/>