

A METHODOLOGY FOR QUICK LOCAL AND REGIONAL ASSESSMENT OF DAMAGE TO TOWNS DURING EARTHQUAKES

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Because of the high intensity of the earthquake of January 25th 1999, that hit the main coffee crops area of Colombia, it was necessary to develop a methodology for qualifying in a rather short time the damages in the urban sectors of the villages around the epicentral area. For doing so, teams of engineering geologists and geotechnical engineers were spread up, evaluating landsliding susceptibility and damage to constructions. The individual maps were worked in scales ranging from 1:2000 to 1:5000, and they were jointed together in a regional 1:200000 scale by using a circular traffic light convention; in doing so, both scales were covered up: the local and the regional, and local mayors as well as national decision makers were benefited by the technical information, right after the earthquake. For slopes, the next zonation was produced: Red Zones, with cracks, active landsliding, high slopes, moisture and weak materials, areas without possible use. Yellow Zones, of conditional or not fully clear stability, only suitable for temporal activities during daylight; Green Zones, safest for mass movements, no cracks, strong materials, small slopes and away from flooding levels, the safest for man use. For constructions the categories were: Full collapse; Severe Damages; and Minor Damages. With the combination of the two elements, slopes and buildings, an overall assessment of the earthquake effects as well as the safest places for shelters and heliports were identified for each town. The summary regional map was of great use for assigning priorities during the recovery phases.