

EMERGENCY HAZARD ZONATION OF LANDSLIDING IN THE GUANACAS REGION, COLOMBIA

MORENO-ESPITIA, M. and FORERO-DUEÑAS, C.A. Ingeominas, Diagonal 53 # 34-53, Santafé de Bogotá, Colombia.

An example of a very quick assessment of landsliding susceptibility is shown. It includes the field data, tools and conclusions, with the limitations of doing it within few days in regions having limited information, and a big hurry for guidance and advice. The area is part of the Guanacas crick basin, part of Villarrica town, at 3°56 North and 74°36 West of Greenwich, in the Department of Tolima, SW of Bogotá, Colombia. It is a hilly region, having a variety of thermic levels, being the lanslides and flows located within 2400 masl and 1300 masl. On december 5th, 1998, complex-type landsliding and a debris avalanche of about 3 million m³ destroyed fields, bridges and houses. It travelled following the Ganacas and San Jorge creeks, deepening the levels of such drainages up to about 5m. It is a region of old deposits of similar kind and sedimentary rocks that includes interbedded sandstones and shales. The big landsliding was preceded by a small one, on november 27th 98, that produced cracks that became propagated afterwards. Rain analysis demonstrated a correlation between winter periods (april and november) and landsliding and flowing; the yearly rain was 2423mm well above the average 1922mm. 3 1:25000 scale maps were produced: surface geology, morphology and susceptibility. The susceptibility zonation was as follows: red zone, very high susceptibility, having very high possibilities of landsliding and flowing; pink zone, high susceptibility, having cracks and flows inside; orange zone, of medium susceptibility, placed in old flows; and green areas, of smallest susceptibility, in protected areas.