

Natural tendency to landslide in São Paulo's metropolitan area, Brazil

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São Paulo's metropolitan area is one of the biggest urban center in the world, with a concentrated population of around 17 million inhabitants in 8,051 km². Similarly to all major metropolitan areas around the world in this century, São Paulo undertakes an intense urbanization, spreading out from hilly areas to fragile stepped peripheral zones. The giddy growing of São Paulo metropolitan area came along with morphological man made changes such as drainage rectification and channeling, flood plain urbanization, enormous impervious areas, land fills, reservoirs, tunnels and many other constructions.

São Paulo metropolitan region was analyzed to identify how fragile is the soil to landslides processes, one of the larger natural disaster causes, with high social costs. The regional analysis of the lithology, morphology, relative relieve intensity, morphostructural lineaments and drainage density, accomplished by superimposed geoprocessing techniques are presented in 1:250,000 scale map and do reflect the natural tendency to landslide in potential areas.

The analysis of the potential landslide areas of São Paulo metropolitan region showed a good adjustment with the well known risky areas and past events. On this basis, it is possible to predict such events in other areas with similar physical characteristics, and, from that, to plan the land occupation.