

MORPHOGENESIS AND PEDOGENESIS IN HUMID TROPICAL ZONE (SERRA DO MAR, BRAZIL): INFLUENCE OF THE WEATHERING PROCESSES ON THE DYNAMICS OF THE LANDSLIDES.

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#### RESUMO

In south-eastern Brazil, the slopes of the “Serra do Mar”, at the edge of the Atlantic Plateau, are frequently subjected to mass movements. A continuous study of the distribution of soil over, from macro- to ultra-microscale was carried out in a small catchment of the area 3 (ha). The main features of the study site are gibbsitic regolith and the lateral and upwards development of kaolinite tongues. This study discriminates the slope deposit material from the material derived from in situ weathering of the crystalline bedrock. The physical properties of the main horizons suggest that, during heavy rainfall, lateral water flow can cause an important overload downslope which may well generate mass movements. A model of slope evolution is proposed taking into account both pedogenesis and mass movements. Risk criteria for land management are defined following this analysis.