Analysis of Landslides Susceptibility by Topographical Criteria, a Study in Southern Brazil

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SUMMARY
In November 2008, Santa Catarina was affected by another catastrophe, a heavy rain event triggered floods and mass movements, affecting several municipalities. The Vale do Itajaí region was the worst hit. Geotechnology has been developing and expanding it's areas of applicability. In the past twenty years mathematical models have been developed and applied in landslide mapping (CHI et al. 2002). This study applied a probability model proposed by Chung and Fabbri (1999) for landslide susceptibility mapping. Using GIS for processing indirect cartographic information in a mathematical model, variables were analyzed to see which had more or less likelihood to promote landslide susceptibility in the study area and the Translational Slides Susceptibility Map by Alto da Bacia do Ribeirão Belchior was drafted. An inventory of translational landslides by Alto da Bacia do Ribeirão Belchior was also done, complementing the inventory performed by Bauzys (2010). The model applied revealed a great potential for the landslides susceptibility analysis, however, it not achieved a great result with the variables used. According to the prediction rate of 10% and 30% of the increased susceptibility area were predicted approximately 20% and 40% of the landslides, respectively.

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