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# Shallow landslide prediction in the Serra do Mar Paulo, Brazil

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Abstract. Various methods are currently used in order to predict sl landslides within the catchment scale. Among them, physically bas models present advantages associated with the physical descripti processes by means of mathematical equations. The main objectiv research is the prediction of shallow landslides using TRIGRS mode pilot catchment located at Serra do Mar mountain range, São Paulo southeastern Brazil. Susceptibility scenarios have been simulated f into account different mechanical and hydrological values. These s were analysed based on a landslide scars map from the January 1 event, upon which two indexes were applied: Scars Concentration ratio between the number of cells with scars, in each class, and th number of cells with scars within the catchment) and Landslide Pot (LP – ratio between the number of cells with scars, in each class, a total number of cells in that same class). The results showed a sign agreement between the simulated scenarios and the scar's map. I unstable areas (SF≤1), the SC values exceeded 50% in all scenari Based on the results, the use of this model should be considered a important tool for shallow landslide prediction, especially in areas mechanical and hydrological properties of the materials are not we known.

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