



On the Spatial organization of mass wasting initiation and deposition and about some missing features in landscape evolution models

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This contribution reports on the influence of topography and other hydrologic features on the initiation of mass wasting processes. The discussion involves the analysis of physical and mathematical concepts currently applied in distributed models, and their drawbacks. Effects of the presence of snow, permafrost and seasonally frozen ground is also analyzed. Subsequently the meaning of equilibrium in geomorphic processes is briefly discussed. Eventually, the insight gained in the local physical processes is used to infer which could be the characteristics of new models of landscape evolution. Besides, these are framed in relation with geomorphic effects of long-term geological and geodynamic processes, such as tectonic uplift, crustal deformation and isostatic disequilibria