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Autore	CARDARILLI, MONICA
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Sommario	Natural materials, such as soils, are influenced by many factors acting during their formative and evolutionary process: atmospheric agents, erosion and transport phenomena, sedimentation conditions that give soil properties a non-reducible randomness by using sophisticated survey techniques and technologies. This character is reflected not only in the spatial variability of soil properties which differ punctually, but also in their multivariate correlation as function of reciprocal distance. Cognitive enrichment, offered by the response of soils associated with their spatial variability, implies an increase in the evaluative capacity of contributing causes and potential effects in the field of failure phenomena. Stability analysis of natural slopes is well suited to stochastic treatment of the uncertainty which characterized landslide risk. In particular, the research activity has been carried out in back-analysis to a slope located in Southern Italy that was subject to repeated phenomena of hydrogeological instability - extended for several kilometers and recently reactivated - applying spatial analysis to the controlling factors and quantifying the hydrogeological susceptibility through unbiased estimators and indicators. A natural phenomenon, defined as geo-stochastic process, is indeed characterized by interacting variables leading to identifying the most critical areas affected by instability. Through a

sensitivity analysis of the local variability as well as a reliability assessment of the time-based scenarios, an improvement of the forecasting content has been obtained. Moreover, the phenomenological characterization will allow to optimize the attribution of the levels of risk to the wide territory involved, supporting decision-making process for intervention priorities as well as the effective allocation of the available resources in social, environmental and economic contexts.

Localizzazioni e accesso

http://memoria.depositolegale.it/*/http://hdl.handle.net/11573/1251537
