Assessment of Rainfall-induced Landslides Susceptibility using Statistic Method

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Among the disasters facing Taiwan, rainfall incur the greatest monetary losses, and landslide disasters inflict the greatest damage in mountainous areas. The current landslide susceptibility map gives an indication of where landslides are likely to occur; however, there is no objective index indicating the location of landslide susceptibility during rainfall. Therefore, we have concerned seriously about the landslide hazards induced by rainfall and has engaged in doing some investigations and researches on induced-factors.

This study was re-evaluated the landslide susceptibility because the analysis process of landslide susceptibility was improved. The major scopes of work are building up the event-based landslides inventories, programming the computer code for dividing the slope unit automatically, landslides susceptibility factor selection and landslides susceptibility modeling finally. The most important issues are making landslides susceptibility maps and critical rainfall system for early warning the landslides based on the statistic model. The result of this study could serve as a follow-up to the practical application of the landslide warning references, so as to achieve the implementation of disaster prevention and early warning of landslide hazard purposes.

Keywords: rainfall, landslide disasters, landslide susceptibility, slope unit, statistic model