Application and Verification of Regression Model to Landslide Susceptibility Mapping

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Abstract : Identification of regions having potential for landslide occurrence is one of the basic measures in natural resources management. Different landslide hazard mapping models are proposed based on the environmental condition and goals. In this research landslide hazard map using multiple regression model were provided and applicability of this model is investigated in Baghdasht watershed. Dependent variable is landslide inventory map and independent variables consist of information layers as Geology, slope, aspect, distance from river, distance from road, fault and land use. For doing this, existing landslides have been identified and an inventory map made. The landslide hazard map is based on the multiple regression provided. The level of similarity potential hazard classes and figures of this model were compared with the landslide inventory map in the SPSS environments. Results of research showed that there is a significant correlation between the potential hazard classes and figures with area of the landslides. The multiple regression model is suitable for application in the Baghdasht Watershed.