

论文

四川泸定磨西台地第四纪冰水台地边坡地质灾害易发性研究

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摘要:

河流冲刷对第四纪软弱地层岸坡的地质灾害起到控制性作用。本文以磨西台地冰水堆积物岸坡为例,充分考虑河流与岸坡地质灾害之间的内在联系,基于对实测地质灾害的分析结果,采用Logistic监督分类方法,评价各环境因子(尤其是河流冲蚀特性因子)在河流岸坡稳定性评价中的作用,进而采用高相关的环境因子进行地质灾害易发性预测。研究表明,河流弯曲度、河流流量、岸坡坡度、河床宽度、岸坡宽度与地质灾害的发育相关性强,采用这些参数和Logistic模型预测的地质灾害易发性能很好的反映现状和未来地质灾害的发育特点,进而提出了磨西台地岸坡地质灾害防治的初步建议。

关键词: 岸坡地质灾害,磨西台地,冰水堆积物,致灾环境因子,Logistic监督分类

GEO-HAZARD SUSCEPTIBILITY OF QUATERNARY GLACIAL DEPOSIT SLOPE |AT MOXI PLATFORM IN LUDING COUNTY OF SICHUAN PROVINCE

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Abstract:

Erosion of river is the most important factor for occurrence of geo-hazards in Quaternary weak strata. This paper examines the bank slopes of Moxi Platform and carefully considers the internal relations between the river and the geo-hazards. It is based on the analysis of surveying geo-hazards in the bank slopes. It further evaluates the effect of environmental factors especially, the factors related with erosion of river, on stability of the bank slopes. Furthermore, the paper selects the highly related environmental factors to calculate the geo-hazard susceptibility map at the site. The results show that five factors including the curve of river, the river discharge, the grade of bank slope, the width of riverbed, and the width of bank slop are well contributed to the occurrence of geo-hazards. The geo-hazard susceptibility map predicted using a logistic model with the parameters can better illuminate the present and future features of the geo-hazards distribution. Based on the findings, the paper recommended preliminary suggestions for preventing geo-hazards at the Moxi platform.

Keywords: Ge-hazard, Slope, Moxi Platform, Glacial deposit, Disaster,environmental factor, Logistic classification

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