

Research on Sensitivity of Geological Disasters in Road Area Based on Analytic Hierarchy Process

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Abstract : In order to explore the distribution of geological disasters within the expressway area of Shaanxi Province, the Analytic Hierarchy Process theory is applied based on the geographic information system technology platform, and the ground elevation, rainfall, vegetation coverage and other indicators are selected for analysis, and the expressway area is sensitive Sexual evaluation. The results show that the highway area disasters in Shaanxi Province are mainly distributed in the southern mountainous areas and are dominated by landslides; the disaster area ratio basically increases with the increase in ground elevation, surface slope, surface undulation, rainfall, and vegetation coverage. The increase in the distance from the river shows a decreasing trend; after grading the disaster sensitivity within 5km of the expressway, the extremely sensitive area, the highly sensitive area, the medium sensitive area, the low sensitive area, and the extremely low sensitive area respectively account for 8.17%□15.80%□22.99%□26.22%□26.82%. Highly sensitive road areas are mainly distributed in southern Shaanxi.

Keywords : highway engineering, sensitivity, analytic hierarchy process, geological hazard, road area

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