

## 利用羅吉斯回歸法建立崩塌潛感圖-以陳有蘭溪為例

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**摘要** 由於氣候變遷導致極端降雨之頻率與強度逐年增加，更因陳有蘭溪集水區之地質、地文、水文自然環境敏感，人為活動不當，故常發生河道阻塞、地形變遷、土石流，甚至造成嚴重的土砂災害，危及產業與居民生命財產安全。

本研究之研究區域位於陳有蘭溪集水區，利用數值高程模型(DEM)中萃取地文因子，選定七項潛勢因子，分別為高程、坡向、坡度、道路距、水系距、地形起伏度、地形粗糙度等，將上述因子使用羅吉斯迴歸計算出研究區域之羅吉斯迴歸方程式，再依照各因子之羅吉斯迴歸係數，繪製山崩潛感圖，並利用分類誤差矩陣表檢驗羅吉斯迴歸之準確性。

**關鍵詞：**陳有蘭溪、羅吉斯迴歸、山崩潛勢因子。

### **Application of the Logistic Regression Method in Landslide Susceptibility Mapping-Using Chenyulan Stream Watershed as An example**

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**ABSTRACT** As pointed out in many previous studies, climate change due global warming will result in the increases of the frequencies and intensities of storm events : Due to fragile geology, soil and torrential rain leads to severe erosion. Furthermore, increasing population and overdevelopment brings even greater damage to the land.

The site of this study was selected at Chenyulan stream watershed.

Digital elevation model (DEM) was used to extract geomorphic landslide causative factors. This study analyzes 7 factors including elevation, aspect, slope, distance to roads, distance to rivers, relief and roughness. The method of this study is using the Logistic Regression Method to calculate the weight of potential instability factors for landslide and combine GIS technique to build the potential landslide map at Chenyulan stream watershed. Furthermore, error matrix was classified using of classification accuracy to evaluate the effects of causative factors on the landslides at watershed.

**Key Words:** Chenyulan Stream, Logistic Regression Method, Potential factors of landslide.

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