

土石流可能災害型態與影響範圍評估方法及案例探討

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摘 要 土石流為一具有強大破壞力之土砂運動型態，從發生至停止之過程中，頗受地形條件、水流狀況與土體組成等因子之影響，而呈現不同之機制。本研究根據土石流發生、運動與堆積特性，建議土石流災害影響範圍應分(a)扇狀地、(b)局部堆積淤埋區、以及(c)溢流區等三種型態分別加以劃設，結合理論分析、航照判釋與現地調查，提出土石流潛勢溪流之災害型態與影響範圍評估方法。經由新竹縣關西鎮三處土石流潛勢溪流之案例探討，結果顯示本研究建議之方法，可於不同水文、地文條件下，進行廣域、快速的土石流災害影響範圍評估。

關鍵詞：土石流、災害影響範圍、扇狀地、局部淤積、溢流、航照判釋、現地調查。

Evaluating Potential Hazardous Areas of Debris Flows - Case Study

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ABSTRACT Debris flow is a kind of mass movement with great destructive potential. During debris flow process, its mechanism is influenced by topography, flow condition and debris composition. This study is based on the characteristics of occurrence, flowing, and deposition of debris flow, which suggested that the potential hazardous areas for potential streams should be shown by three patterns: (a) the alluvial fans, (b) the local deposit areas, and (c) the areas influenced. By means of theoretical analysis, aero photo judgment and field investigation, the evaluation of the hazardous areas and patterns are revealed. The location of the case study is three creeks in Kuanshi, Hsinchu. As a result, the proposed methodology can clearly demarcate the potential hazardous areas of debris flow rapidly and rationally for different topographic and hydrographic characteristic of creek.

Key Words: debris flow, potential hazardous area, alluvial fan, local deposition, overflow, aero photo judgment, field investigation.

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