

## 莫拉克後旗山溪流域內聚落孤島效應評估

# Isolated Effect Induced by Typhoon Morakot in Cishan River Basin

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### 摘要

莫拉克颱風挾帶的豪雨造成南台灣及東台灣多處山崩及土石流，使得山區道路阻斷，原鄉聚落居民也因而與外界隔絕，形成孤島狀態，災民受困其中，救難物資運達不易。有鑑於此，本研究針對旗山溪流域內容易造成孤島之聚落進行劃定，評估聚落聯外道路受山崩、土石流及溪底便道沖毀阻斷之可能性。

本研究主要根據現地調查及 GIS 技術，將研究區內的聚落圖層套疊在土石流潛勢溪流圖層、崩塌地圖層、溪底便道圖層及道路路網圖層，以專家法建立聚落成為孤島的評估準則，據此將聚落分為高潛勢孤島地區、中潛勢孤島地區與低潛勢孤島地區三類。

**關鍵詞：**類神經網路、地下水位、山坡地

### Abstract

Landslides and debris flows induced by Typhoon Morakot easily result in the closure of the mountain road network. Tribes in mountain area are isolated due to road closure. People are besieged in the tribes and can not evacuate to safe places. On the other hand, saving goods can not also transport to the tribes. In this study, in Cishan River basin the tribes and villages easily isolated were marked out by landslides, debris flows and temporary roads GIS layers along mountain roads. Criteria used to evaluate tribes which are easily isolated or not due to road closure were developed by expert-based approach.

**Keywords:** Landslides, Debris flows, Typhoon Morakot, Road closure

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