

應用 IDRISI 遙測影像程式於地滑地變遷之研析

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摘要 本研究探討 IDRISI 遙測影像分析程式於地滑地變遷之應用，應用各種植生指標於地滑地判釋及植生復育監測之探討。本研究使用 SPOT 及 FORMOSA2 衛星影像，以 IDRISI 程式進行植生指標計算，比較各種植生指標於地滑地變遷判釋之優劣。應用各種植生指標對於地滑地判釋結果，顯示 Distance-based 植生指標雖優於 Slope-Based 植生指標，但因計算 Distance-based 分析中之參數需利用裸露地之光譜資料求得，對於應用於大範圍監測時，會因裸露地資訊不易取得而導致計算上資料缺乏之困難。

關鍵詞：IDRISI、遙測、地滑、植生指標。

Application of IDRISI Remote Sensing Image Program to Landslide Changes

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ABSTRACT This study applies the remote sensing images analysis program, IDRISI, to monitor and analyze the various vegetation indices of the landslide area. From this, topographic changes due to landslides and their suitability for vegetative restoration can be examined. Satellite images of SPOT and FORMOSA2 were input into the IDRISI program to calculate the vegetation indices to compare the effectiveness of the various vegetation indices in interpreting landslides. It is concluded distance-based indices are generally better than slope-based indices. However, distance-based index analysis requires parameters estimated from the spectra of barren surfaces. This spectra information may not be available in many areas and may cause calculation difficulties.

Key Words: IDRISI, remote sensing, landslide, vegetation index.

一、前言

利用衛星影像遙感探測技術進行地滑地變遷研究，不僅可針對崩塌之擴大進行監測，亦可得復育或整治績效評估。本研究應用 IDRISI 程式 (Eastman and Clark Lab, 2009) 分析衛星影像進行多種植生指標計算，因衛星可進行較大範圍且持續的影像蒐集

利於變遷監測，利用文獻中相關植生指標以及 IDRISI 程式之植生指標模組 VegIndex 所列舉之數項植生指標，經由本研究針對各植生指標進行分離度評估分析後，選擇分離度較佳之數個植生指標作為辨識地滑地的工具之一，並將各指標分析後之結果進行比較，以評估各植生指標應用於地滑地變遷之敏感度辨識。

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