空間資料挖掘應用於臺北市山坡地管理之研究

陳依婕[1] 張家豪[2] 陳子裕[3]* 邱亭瑋[4] 梁成兆[5] 簡錤彪[6]

摘　　要　有鑑於都會區為精緻型的開發，以福衛二號融合影像偵測像元可達 2 公尺的特性，如何有效地偵測違規區域，是衛星監測的挑戰。本研究除使用福衛二號影像資料進行臺北市山坡地違規偵測外，再引入空間資料探勘技術將歷史違規案件歸納出重點區域，並透過空間因子瞭解重點區域與空間特性的關係，使研究區域內可有不同的監測頻率及加權標的，將衛星變異成果過濾、聚焦可能違規的地區，並能規劃相關管理措施如：巡查路線、設定卡相等，使得監測更多元、更有效的管理山坡地。

關鍵詞：福爾摩沙衛星 2 號、多元尺度監測、空間資料挖掘。

A Study on the Spatial Data Mining of Hillside Management in Taipei City

Yi-Chieh Chen[1*] Chia-Hao Chang[2] Zi-Yu Chen[3]* Ting-Wei Chiu[4]
Cheng-Jaw Liang[5] Chi-Piao Chien[6]

ABSTRACT　This research is focus upon the change detection by Formosat-2 in hillside monitoring of Taipei City. With high intensity of land usage in Taipei City, it is a challenge by using Formosat-2 pansharpened 2m resolution images to monitoring illegal land-use. In this research, by using Formosat-2 image data to monitoring illegal land-use, spatial data mining with historical illegal cases to generalize potential illegal land-use hot spots and multi-scale remote sensing tools, such as aerial photos or UAV, to filtering or downsize the potential illegal land-use hot spots, we established a multi-scale monitoring mechanism (3M) to increase the efficiency of hillside management.

Key Words: Formosat-2, Multi-Scale Monitoring Mechanism, Spatial Data Mining.

〔1〕財團法人空間及環境科技文教基金會專案工程師
Account Engineer Spatial and Environmental Technology Foundation, 10F.-3,No.50, sec.4 Roosevelt Rd. Zhongzheng Dist., Taipei City 10090, Taiwan (R.O.C)
〔2〕財團法人空間及環境科技文教基金會資料加值組長
Section Manager, Spatial and Environmental Technology Foundation.
〔3〕臺北市政府工務局大地工程處幫工程司(*通訊作者 E-mail：ge-10749@mail.taipei.gov.tw)
Assistant Engineer, Slop Land Construction Management Section , Taipei City Geotechnical Engineering Office, Taiwan
〔4〕臺北市政府工務局大地工程處股長
Chief , Slop Land Construction Management Section , Taipei City Geotechnical Engineering Office, Taiwan
〔5〕臺北市政府工務局大地工程處科長
Section Chief, Slop Land Construction Management Section, Taipei City Geotechnical Engineering Office, Taiwan
〔6〕臺北市政府工務局大地工程處副處長
Deputy Director, Geotechnical Engineering Office, Public Works Department, Taipei City Government, Taiwan