

利用無人飛行載具可見光與近紅外光影像分析神木村漂流木潛勢

莊大賢^[1] 蕭宇伸^{[2]*}

摘 要 本研究利用無人飛行載具搭載可見光及近紅外光相機，於南投縣神木村約 200 公頃實驗區域進行空拍，分別取得該地之大量可見光與近紅外光高解析度影像。配合若干高精度之航測控制點，以航測軟體 Pix4Dmapper 建立該地區可見光與近紅外光正射鑲嵌影像與數值地表模型。正射鑲嵌影像將用於分析研究區域之土地利用情形，而數值地表模型將用於計算研究區域之坡度模型。本研究將從可見光與近紅外光所得到之土地分類、高程與坡度等結果，以邏輯斯回歸分別進行其漂流木潛勢分析，並針對此二種影像的優劣進行嚴密的評估。

關鍵詞：無人飛行載具、近紅外光、漂流木。

The Analysis of the Potential of Driftwoods in Shenmu by BGR and NIR Photographs Derived from UAV

Da-Xian Zhuang^[1] Yu-Shen Hsiao^{[2]*}

ABSTRACT We use Unmanned Aerial Vehicle (UAV) to obtain a number of RGB color and Near Infrared (NIR) high-resolution aerial photographs over an area of 200 ha in Shenmu, Nantou County. Pix4Dmapper is adopted to generate RGB and NIR orthomosaics and Digital Surface Models (DSMs) aided with high-accuracy control points. Orthomosaics are used for land classifications, and DSMs for deriving topographic slopes in study area. The purpose of the paper is focused on the analysis of the potential of driftwoods by logistic regression. The main data used for logistic regression are land classifications, elevations, and topographic slopes derived by RGB and NIR images, respectively. In addition, the advantages and disadvantages of RGB and NIR images are also precisely discussed.

Key Words : UAV, NIR, driftwoods.

[1] 國立中興大學水土保持學系研究生

Graduate Student, Dept. of Soil and Water Conservation, National Chung Hsing University, Taichung 402, Taiwan

[2] 國立中興大學水土保持學系助理教授 (* 通訊作者 E-mail: yshsiao@nchu.edu.tw)

Assistant Professor, Dept. of Soil and Water Conservation, National Chung Hsing University, Taichung 402, Taiwan