

因應氣候變遷新店溪集水區之保育策略研究

林郁媚^[1] 馮正一^[2*]

摘要 本研究以新店溪流域為研究區域，探討氣候變遷對集水區影響以及水土保持之保育策略。環境之變化與氣候因子息息相關，難以建構合理模式顯示；其中地表覆蓋狀態常作為有效指標，成評估方式之一。以集水區而言，集水區內的植物生長情形最為容易反映氣候變遷對於生態影響，因此採用植生指標(Normalized Difference Vegetation Index, NDVI)作為環境狀態之分析對象。蒐集從 1998 年至 2012 年植生指標 SPOT 4 衛星之合成影像，利用 Hilbert-Huang Transform(HHT; Huang, et al. 1998) 希爾伯特黃轉換法對氣候因素與植生指標 (NDVI) 等資料進行時序分析。研究植生指標之時序資料、氣候變遷之相關因素對集水區之影響、集水區之特殊性。探討新店溪三個次集水區 (山區、翡翠水庫區、都市區) 的水土保持策略，評估保育策略的成本與成功機率；以決策樹進行各策略風險評估。其研擬的策略結果可供集水區後續的治理、保育措施擬定以及執行水土保持策略之參考。

關鍵詞：氣候變遷、決策樹、新店溪、保育策略。

A Study of Conservation Strategies Responses to Climate Change of Xindian Watershed

Yu Mei Lin^[1] Zheng Yi Feng^[2*]

ABSTRACT The study for investigating shows impact of climate change on watersheds and adaptation strategies of soil and water conservation in Xindian watershed. We collected data of weather factors and satellite-derived normalized difference vegetation index (NDVI) to observed vegetation in Xindian watershed from 1998 to 2012. The Hilbert-Huang Transform (HHT), decision tree analysis and risk assessment method were adopted. According to the time series data of NDVI, influence factors of climate change and particularity of watersheds are recommend structure (hardware) measures and non-structure software) measures to improve the flood, drought, landslides and collapses. This paper presents several results of conservation strategies and provides references for authorities involved in policy-making of environmental preservation, hazard mitigation and watershed management.

Key Words: climate change, decision tree, Xindian river, Conservation Strategy. (needs 11 lists or over words 160)

[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教授 (* 通訊作者 E-mail: tonyfeng@nchu.edu.tw)

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