

集水區保育治理工程維管巡檢

Inspection of watershed soil and water conservation structures

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摘要

臺灣位處西太平洋上，每年平均會受到約 3-4 個颱風侵襲，對人們造成生命財產的威脅，特別是山區因強風豪雨，容易造成山崩土石流等坡地土砂災害。因此，相關權責單位透過保育治理工程，降低致災風險。然而，治理工程構造物施作後，遭遇颱風豪雨洪水衝擊，是否未受損且持續發揮其功能，或是受到損壞需要進行維護，甚至損毀需要重新治理或改行自然復育策略，為本文關注課題。

本文以臺南市及高雄市為研究範疇，透過數值地形分析篩選歷年農村水保署投入較多治理工程之集水區，從中選取施設大型防砂設施數量高於 10 座之 5 個集水區(東原、大內、南化水庫、達卡努瓦、新發)，辦理構造物巡查研究。從結果探討構造物現況功能表現(區分 A、B、C、D 四個等級)和受損型態特徵，期許研究成果有助於政府部門於集水區經營管理策略研擬有所助益。

關鍵詞：集水區經營，構造物巡查，工程延壽

Abstract

Taiwan is located in the western Pacific Ocean and is hit by an average of 3 to 4 typhoons each year, posing a threat to people's lives and property. In particular, mountainous areas are prone to landslides, mudslides and other slope landslide disasters due to strong winds and heavy rains. Therefore, the relevant authorities reduce the risk of disasters through conservation and management projects. However, after the construction of the management project structures, whether they are not damaged and continue to perform their functions when hit by typhoons, heavy rains and floods, or whether they are damaged and need maintenance, or even destroyed and need to be remanaged or switched to natural restoration strategies, is the subject of this article.

This study takes Tainan City and Kaohsiung City as the research scope, and selects the watersheds where the Agency of Rural Development and Soil and Water Conservation, MOA.

has invested more in governance projects over the years through numerical terrain analysis. From these, five watersheds with more than 10 large-scale sand control facilities (Dongyuan, Da Nei, Nanhua Reservoir, Dakanua, and Xinfu) are selected to conduct structural inspection research. The results are used to explore the current functional performance of the structures (distinguish between four levels: A, B, C, and D) and the characteristics of the damaged morphology. It is hoped that the research results will be helpful to government departments in formulating watershed management strategies..

Keywords: Watershed management, Structural inspection, Project life extension