

ABSTRACT

The main cause of the collapse of Pingding Village Linbeikeng is that surface water permeates pervious gravel layer to poor pervious mudstone layer, and the accumulated underground water raises the inter-layer water pressure, increases the mud gliding force; also, the mudstone layer is softened by underground water, thus, the anti-shear strength decreases, and collapse of side slope is resulted. After years of effect, the collapsed cliff receded. The reasons of failure in collapsed land management include: (1) The construction locations are usually on the upper collapsed area of the side slope, and the side slope instability is often neglected. (2) The construction increases the carrying load of the side slope without improving the instability of the side slope. (3) Lack of overall management concept, the existing installations may be damaged. The collapsed land management strategies include eliminating causes of surface water and underground water, improving the resistance of side slope foundation, protecting vegetation on the surface soil, correct application of construction methods, establishing overall management and disaster prevention concepts.

Keywords: Pingding village, collapse, disaster prevention

一、前言

台灣地狹人稠，越來越多聚落位處山坡地容易產生災害之地區，導致人類活動的範圍及生命財產，受到天然災害嚴重之威脅。(水土保持局,2006)

近年來全球氣候極端，暖化現象及氣候變遷更劇烈，異常的強風豪雨及降雨集中，山坡地發生重大崩塌、地滑或土石流災害的規模遠大於從前，除了趨向大規模化、高頻率化及複合化外，且變得更難以掌握及防範。雲林縣林內鄉坪頂村林北坑崩塌地位於坪頂溪源頭，平時每逢颱風豪雨或地震就容易發生坡面表土滑落或土石崩坍等災害，十幾年來雖經政府陸續投下防治經費，崩塌情況仍未減緩，且自921大地震後，發生崩塌的情況日趨頻繁且嚴重，顯示該地區十分不穩定(水土保持局,2005)。

以往本區治理方式，限於經費常以治標為目的，本研究經由詳細之整體調查與分析，來探討治本之治理對策。

二、材料及方法

(一)研究流程與步驟

藉由當地自然環境、歷史災害及社會人文等課題的調查，分析工程治理成功與失敗案例，及探討目前甫完工或正在進行中工程的施工方式，進而提出治理原則及對策，並嘗試導入防災管理觀念，讓社區民眾自主地有效防災，以降低災害發生之頻率及發生時之損失與傷亡。研究流程如圖 1 所示。