

Be-Ya Chungku & Ching-Yan Chang

Engineer & Senior Engineer and Section Chief, Taitung Branch, Soil and Water Conservation Bureau,
Council of Agriculture, Executive Yuan, Taitung, Taiwan 950, R.O.C.

Hong-Min Shu

Doctoral Graduate Student, Department of Civil Engineering, National Pingtung University of
Science and Technology, Pingtung, Taiwan 912, R.O.C.

ABSTRACT

Taitung County has yet to encounter a typhoon threat again after Typhoon Morakot. Even Typhoon Nanmadol landing from Dawu, the south of Taitung County, in August this year, the disasters caused by rainfall are also in the expected. But winter frontals bring abnormal rainfall in this year causing several disasters such as landslides, debris flow and flooding. The disaster prevention officers originally thought to pass this year's flood but now exhausted. In this study, we chose the Chungya Tribe in Luansan Village of Yanping Township at Taitung County as a research area to realize and judgment about the causes of slope collapse and scale of this disaster, and put forward the concept of emergency disaster handling and as a follow-up related reference of disaster prevention. The survey found that the region near the coast of Beinan River of eastern Taiwan, which were belong to Liji Formation and overlying the main material for the relatively loose alluvial strata. Surface vegetations conclude bamboo, grass and a small number of mainly hardwoods. Some slope traces of the past can visible in nearby terrain. This landslide is in the end of the major tribe drainage path. In particular, when encounter a major influence and a long period of heavy rainfall, runoff erosion edge convergence and make the slope loss its foot and balance. Thus the sliding disaster formation generated by gravity imbalance. In addition to emergency impermeable plastic canvas outer, the community safety guide runoff discharge is also important. The slope sliding and gullies erosion expansion has occurred, thus it is necessary to conduct a more detailed investigation, monitoring and evaluation, to explore the mechanism of collapse then the appropriate control works can be planning.

Key words: Frontal, Abnormal rainfall, Landslide, Runoff

一、前言

夏、秋兩季臺灣平均會遭到 3 個多的颱風侵襲，往往造成山坡地區重大災害。(盧孟明，2011) 臺東海岸山脈之地質特殊，形成的年代較輕，遇上連續的豪雨或颱風降雨，經常會發生邊坡崩塌與地層滑動的情況。(李三畏，1984；陳文山與王源，1996；潘大綱等，2004；許中立等，2006；中興工程顧問有限公司，2007) 莫拉克風災後臺東縣至今未再遇到有颱風直接侵襲威脅，就算是今年 8 月的南瑪都颱風由臺東南線大武鄉登陸，所造成的降雨及災害也都可以預期。但入冬以來的鋒面異常降雨，10 月與 11 月份的降雨均達 400mm 甚至於超過 500mm，與以往資料比較不亞於颱風侵