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論文名稱：南投縣力行產業道路及沿線坡地災害原因分析與復建措施
之探討

英文論文名稱：Investigations of Failures along Li-Shing Mountain
Road in Nantou County of Central Taiwan and Rehabilitation
Measures

【中文摘要】

南投縣力行產業道路係該縣仁愛鄉三村七部落住民對外聯繫之要道。然因位處偏遠山區間，每逢颱風、豪雨侵襲即頻傳坡地災害，使交通斷絕。坡地災害的原因為何？是山區雨量過大，使道路本身及沿線坡面不堪負荷所致；或因先天環境地質不佳；或是因道路本身施工設計不良所造成；抑或是其他原因？

本研究主要以相關調查資料和現場勘查分析來探討力行產業道路及沿線坡地災害發生的原因與其復建措施，找出癥結。進一步針對本省境內類此情況之山區部落及其聯外道路進行初步調查並嘗試提出一治理對策，以供各單位研提因應對策時，有所參酌。

就本省山區部落環境與聯外道路調查結果以及力行產業道路沿線之地文、水文、社經等因素經探討後，獲致如下結論：

- 一、本省山區部落，無論是立地環境堪虞或是聯外道路常易釀災而中斷造成不便，絕大部份之部落搬遷意願均低落，是以在保障人民生命財產及維持道路暢通的權利義務下，政府對民眾居住環境安全之維護與道路養護復建工作的持續辦理，是責無旁貸。
- 二、林務單位對保安林之經營管理、維護、解禁開放與否以及山胞保留地的輔導、限制使用政策等均與坡地災害發生之頻率有直接或間接之關係。
- 三、本道路容易發生崩塌等坡地災害之區位，經地形、地勢、地質、降雨量等自然因素之分析比較，以地質因素佔最重要原因。
- 四、雖每逢颱風豪雨侵襲，常易造成力行產業道路坡地及道路災害而使交通中斷，但由各項原因探討發現排水流量設計不當導致失敗之成份甚低。
- 五、道路沿線土地超限利用嚴重，私闢農路多，而且多未施設任何水土保持設施，也是易釀災害之重要原因，故落實水土保持法規乃極為重要之課題。
- 六、該道路雖常因發生災害而中斷，以致影響對外聯繫，但在鄉土情的執著下，住民搬遷意願不高，因此道路之改善、復建

措施乃屬絕對必需，且應重視工程品質的要求及進度的掌握，
握除須確保通行的安全無虞外，亦須將住民的不便減至最低
程度。

【英文摘要】

Li-Shing Road crosses the mountainous Ren-Ai Village in Nantou County, Central Taiwan. It is the main road for local seven tribes inhabitants. Situated in the mountainous region with steep slopes, this road is often interrupted by problems associated with slope failures and erosion after heavy rainstorms during typhoon period or earthquake.

The study is based on analysing available data and field inspections, to find out causes and solution to problems associated with Li-Shing Mountain Road.

The results are summarized as follows:

- 1.Weak geological is the important causes of the road failures.
- 2.The drainage capacity design appears to conform with the engineering standards for expected return period peak flows.
- 3.The illegal utilization of the slopelands along the road and the private road construction without any soil and water conservation measures are one of major causes for slope failures.
- 4.The policy of proper land utilization is essential for reducing the frequency of the slopeland diasters.
- 5.The inhabilitants are unwilling to relocate despite the frequent road access interruption. This is partly due to their strong emotional attachment to their old homes.
- 6.Proper road rehabilitation and poor quality of construction are also important for road transpotation maintenance.
- 7.Government have the obligations to ensure the safety of people for those people who live in the mountain areas far away from the city and prevent the mountain road from the natural disasters.