摘　要

本計畫名稱為「潛在大規模崩塌精進判釋暨補充調查」，利用空載雷射掃瞄(Light Detection And Ranging，LiDAR)產製之高精度數值高程模型(Digital Elevation Model，DEM)，與同步拍攝之正射影像，進行精進判釋及現地調查，自 106 至 110 年以分年分區方式完成相關判釋、調查、分析與評估等工作成果。工作項目為(1)既有區域面積 10 公頃以上潛在大規模崩塌之精進判釋、(2)既有區域面積 1 公頃以上至 10 公頃以下潛在中等規模崩塌之補充判釋及現地調查、(3)新增區域坡地聚落潛在大規模及中等規模崩塌判釋及現地調查、(4)新增重點區域的地質敏感特性評估。完成工作成果資料可提送相關防減災的權責機關，做為各單位進行規劃工程治理、監測預警、土地管理與居民遷移等相關作為之參考。

本年度(109 年)為第四年工作，完成圖幅數量為 121 幅比例尺 1/5,000 精進圖幅與 50 幅比例尺 1/5,000 新增圖幅，潛在大規模崩塌精進判釋結果總計為 273 處，其中 176 處為前計畫判釋成果，97 處為本計畫判釋成果，在 273 處潛在大規模崩塌之中，有 88 處可能影響 34 處聚落住戶安全；潛在中等規模崩塌精進判釋結果總計為 436 處，有 54 處可能影響 12 處聚落住戶安全。

於完成 50 幅新增圖幅重點區域的地質敏感特性評估，對於環境地質敏感因子資料進行檢查判釋，其結果為山崩 761 處，土石流 136 處，順向坡 1122 處，河岸侵蝕 55 處，向源侵蝕 121 處，潛在大規模崩塌 31 處與潛在中等規模崩塌 111 處。另完成 115 處聚落安全評估，其結果為 28 處聚落評估為安全，86 處聚落評估為有條件安全，僅 1 處聚落評估為不安全。

關鍵詞：空載雷射掃瞄、數值高程模型、潛在大規模崩塌

Abstract

The name of project is "Detail interpretation and supplementary field investigation for potential large scaled landslides". In this project, aerial photos and LiDAR (Light Detection And Ranging) derived high resolution DEM (Digital Elevation Model) were used to (1) identify geomorphic features of potential large-scale landslides (over 10 ha) in details; (2) identify geomorphic features of potential medium-scale landslides (over 1 ha to less than 10 ha) in details; (3) Site investigation for potential different-scale landslides, and (4) evaluate the geohazard risk level of selected villages. The above-mentioned interpretation results can not only be used to understand the mechanisms of geohazards within the study area, but also contribute to disaster prevention and reduction, including for reference to the engineering planning, monitoring warning, land management, and settlements migration.

This year 2020 is the fourth year works, the total study area plan is within 121 detailed sheets and 50 added sheets of 1:5,000 topographic maps. In the study area within 171 sheets of 1:5,000 topographic maps, where 273 potential large-scale landslide sites were identified according to their geomorphic features, and there were 88 can affect 34 villages with different households. In the same study area, where 436 potential medium-scale landslide sites were identified, and there were 54 can affect 34 villages with different households.

In the study area within 50 added map sheets, where 761 landslides, 136 debris flows, 1122 dip slopes, 55 river bank erosion, 121 river headward erosion, 31 potential large-scale landslides, and 111 potential medium-scale landslides were also identified. For the safety evaluation of 115 target villages, 28 villages were assessed as safe, 86 villages were assessed as conditionally safe, only one village was assessed as nonsafe.

Key word: LiDAR, DEM, potential large-scale landslide