摘　要

　　本計畫利用空載雷射掃瞄技術所產製之高精度數值高程模型與同步拍攝之正射影像判釋，配合現地調查，完成計畫工作區域之相關判釋、調查、分析與評估等工作。計畫具體完成(1)面積 10 公頃以上潛在大規模崩塌之精進判釋、(2)面積 1 公頃以上小於 10 公頃潛在中等規模崩塌之判釋、(3) 新增區域之坡地聚落不同規模潛在崩塌補充調查、(4) 重點區域的可能致災之環境敏感因子圈繪與地質敏感特性評估，工作數量為 55 幅比例尺 1/5,000 新增圖幅與 127 幅比例尺 1/5,000 精進圖幅。上述調查與判釋資料用以討論相關地質災害之成因、影響程度與未來可能之發展等，以供後續國土規劃、國土分級管理、國土保育等目的使用。

　　本計畫完成 182 幅比例尺 1/5,000 之圖幅範圍判釋，其結果為 454 處潛在大規模崩塌，其中 191 處直接影響住戶，52 處影響住戶大於 10 戶；298 處潛在中等規模崩塌，其中 48 處直接影響住戶，且 5 處影響住戶大於 10 戶。

　　已完成 55 幅 1:5,000 新增圖幅判釋聚落所在周遭重點區域地質敏感特性。圖幅範圍內得到山崩 1,208 處，總面積約 300 公頃。土石流潛勢區 82 處。順向坡 1,498 處，河岸侵蝕 256 處，向源侵蝕 65 處，潛在大規模崩塌 48 處與潛在中等規模崩塌 104 處。已完成 55 幅 1:5,000 新增圖幅的聚落安全評估，129 處聚落安全評估結果，10 處聚落評估為不安全，71 處聚落評估為有條件安全，其餘聚落評估為安全。

關鍵詞：地質災害、數值高程模型、潛在大規模崩塌

Abstract

In this project, aerial photos and LiDAR derived high resolution DEM 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 study results can not only be used to understand the mechanisms of geohazards within the study area, but also contribute to land planning and management.

The study area of the 2019 mid-term plan is within 182 sheets of 1:5,000 topographic maps, where 454 potential large-scale landslide sites were identified according to their geomorphic features and 191 there among have households. In these 191 sites, 52 can affect more than10 households. In the same study area, 298 potential medium-scale landslide sites were identified and 48 there among have households. In these 48 sites, 5 can affect more than 10 households.

Concerning the geohazard susceptibility and village safety evaluation, 55 sheets of 1:5,000 topographic maps were selected; and 1,208 landslides with a total area of 300 ha were identified therefrom. Additionally, 82 debris flows, 1,498 dip slopes, 256 river bank erosion, 65 river headward erosion, 48 potential large-scale landslides, and 104 potential medium-scale landslides were also identified. For the safety evaluation of 129 target villages, 48 villages were assessed as safe, 71 villages were assessed as conditionally safe and 10 villages were assessed as unsafe.

Key word : geohazards、Digital Elevation Model、potential large-scale

landslides