

臺北市山坡地防災資訊系統建立及應用

林柏維^{[1]*} 劉奇恩^[2] 藍士堯^[3] 黃立遠^[4]

摘要 臺北市地狹人稠，境內山坡地面積多達 1.5 萬公頃，佔全市面積 55%，且都市化發展快速、山坡地開發興盛。然而近年來全球氣候變遷異常，造成極端降雨的機率越趨頻繁，颱風侵襲頻率及強度逐年增加，致使坡地災害頻生。

為有效管理山坡地開發及落實坡地防、減災工作進行，臺北市政府於民國 88 年起展開長期山坡地安全管理計畫，辦理全市防災資訊系統建置，於民國 92 年開發「山坡地環境地質資訊系統」，可透過地籍、門牌及坐標等空間定位方式進行環境地質相關圖資查詢，並參照交通部中央氣象局「自動雨量站及氣象遙測系統」規格於民國 92 年~98 年陸續建置 26 座雨量站、3 座無線電中繼站及 1 座資料接收站，並於民國 96 年建置「山坡地防災資訊系統」，續於民國 100 年於大崙尾山頭建置 1 座綜合氣象儀，及介接交通部中央氣象局 QPESUMS 系統，進行降雨資料交換，並收集及儲存中央氣象局及市府相關單位等既有雨量站降雨即時觀測資料和降雨預報資料。

另外，為強化山坡地防災資訊即時流通，以行動手機結合防災資訊完成「坡地 E 指通」、「山坡地防災行動網」，提供民眾及坡地開發規劃單位瞭解本市及居家鄰近地區山坡地環境地質狀況及查詢即時氣象及相關防災資訊，有助落實山坡地減災，達到坡地環境安全及永續居住之目標。

關鍵詞：山坡地環境地質資訊系統、防災資訊系統、坡地 E 指通、山坡地防災行動網。

To Establish and Apply of Slopeland Disaster Prevention Information System in Taipei City

Po-Wei Lin^{[1]*} Po-Wei Lin^[2] Po-Wei Lin^[3] Po-Wei Lin^[4]

ABSTRACT Due to higher population density on limited land resources and fast urbanized of Taipei, the excavation of slope develops quickly. The slopeland in Taipei city is about 15,000 hectare, which occupy 55% area of this city. Because of the global climate change, the frequency of extreme rainfall and the strength of impacted typhoons increase gradually, and facilitate more slope-related hazards in Taiwan.

For efficient management of the slopeland development and slope-related disaster prevention, Taipei City Government carries out long-term slopeland security management project from 1999. We built Slopeland Environmental Geology Information System of Taiwan in 2003. The system provide user to search environmental geology map through cadaster, doorplate and coordinates etc. Specification of the slopeland raingauge refer to the 「automatic raingauge and weather telemetry system」 by Central Weather Bureau (CWB), and set 26 raingauges, 3 radio-relay sets and 1 data acquisition station between 2003 ~ 2009. And we built 「Slopeland Prevention Information System」 in 2007. It also set out one combined meteorological instrument on top of Mt. Dalunwei abd interface with QPESUMS system in CWB has been completed, for exchanging, collecting, storing rainfall and forecast data of all raingauges operated by CWB and other offices in Taipei City Government in 2011.

Besides, in order to enhance delivery of information, 「Slopeland Environmental Geology information APP」、「Slopeland disaster prevention mobile web」 has been set, which allows the public to search the environmental geology condition nearby residential area ,weather and disaster prevention information through smart phones. It improves preparation for disaster and level down the lose and reaches the target of slope land environmental safety

Key Words: Slopeland Environmental Geology Information System,Slopeland Prevention Information System,Slopeland Environmental Geology information APP,Slopeland disaster prevention mobile web.

[4] 臺北市政府工務局大地工程處幫工司(*通訊作者 E-mail : ge-10421@mail.taipei.gov.tw)

Assistant Engineer, Slop Land Construction Management Section , Taipei City Geotechnical Engineering Office, 3F., No.300, Songde Rd., Xinyi Dist., Taipei City 110, Taiwan (R.O.C.)

[5] 臺北市政府工務局大地工程處股長

Subsection Chief, Planning Section, Geotechnical Engineering Office, Public Works Department, Taipei City Government, Taiwan

[6] 臺北市政府工務局大地工程處科長

Section Chief, Slop Land Construction Management Section, Taipei City Geotechnical Engineering Office, Taiwan

[7] 臺北市政府工務局大地工程處處長

Director, Taipei City Geotechnical Engineering Office, Taiwan.