

莫拉克風災台灣土石流觀測實錄

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摘 要 臺灣本島土地資源極為有限且自然環境條件特殊，地形分佈以高山為主，平地面積少，致使河川短促且湍急，山勢陡峭、地質破碎以及地震頻繁，使得山區極易產生土石流災害危及民眾生命財產安全；因此，加強土石流各相關課題之研發，以提升土石流防範能力，有其急迫性。其中土石流觀測系統因具有即時掌握土石流發生時之流動動態，不僅有助於土石流各項學理之發展，在防災應變方面，尤能即時獲得現場變異資訊，可以大幅提升防災應變之減災避災能力。自民國九十一年起，全台透過多種尺度觀測儀器的佈設，完成十三處土石流觀測站建置工作。民國九十八年八月初莫拉克颱風侵襲台灣期間，同樣位置愛玉子溪土石流現地觀測系統亦觀測到兩場土石流發生的事件，其中八月六日至十日之五天累積雨量高達 1596.5 毫米，豪大雨並引發愛玉子溪上游大規模的崩塌，引發的土石流造成下游愛玉子橋損毀。本文特針對神木觀測站現地觀測系統所蒐集之各項觀測資訊進行分析，最後利用無人載具於災害發生後，前往多處災區進行空拍，提供即時的災情資訊。

關鍵詞：土石流、神木觀測站、莫拉克颱風、無人載具。

Debris Flow Monitoring Events in Taiwan during Typhoon MORAKOT

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ABSTRACT Land resources in Taiwan are extremely limited, and the condition of the natural environment condition is unique. The mountain multi-flats are few, the rivers are short and rapid, the average slope of hillsides is steep, the geology is broken, rain-storms are concentrated, and earthquakes occur frequently. All these cause the breakage of the environmental set-up and the occurrence of debris flow. Thus, the debris flow monitoring system was established in 2002. This system

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