

松鶴地區土石流災害歷史之探討

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摘 要 松鶴部落位於中部橫貫公路里程 28k 附近大甲溪的左岸，民國九十三年敏督利颱風挾帶大量豪雨過境，使研究區域遭受嚴重之土石流災害。本研究為了解此區域之災害歷史，利用早期之航空照片，和歷年災害之衛星影像及直升機空拍照片，判釋此地區之地形特徵及土砂遷移之過程。觀察到大甲溪兩岸有三階河階地存在，較高的兩階已有紅土化之現象，而大甲溪右岸於早期已有土石流沖積扇存在；松鶴部落所在之大甲溪左岸，早期只可觀察到下切階地之溪谷，集集地震時造成集水區上游大量崩塌，桃芝颱風時土石已向下游搬運，少量已搬運至谷口，敏督利颱風之大量豪雨觸發大量溪谷土石流動，則為此次土石流發生之主因。本研究針對現地調查之結果，建議未來之工程考量，並利用敏督利颱風災後之航空照片，判斷遭到潛在地質災害切割之群落分區，未來於整治工程未完成前，應於各分區內尋求合適之緊急避難處所，避免居民生命財產之損失。

關鍵詞：敏督利颱風、松鶴、土石流、災害歷史。

The History of Debris Hazard in the Songhe Area

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ABSTRACT The Songhe area is located beside the central cross-island highway and the Da-Jia river in central Taiwan. Typhoon Mindulli which had a heavy rainfall, struck this area with serious debris hazard in July 2004. In order to realize the history of geological disaster caused by debris flow or debris torrent in this area, early aerial photos, satellite images, and pictures taken from helicopter were assembled to recognize the geographical features and transportation of colluvium. Three steps in the terrace are observed along the Da-Jia River. It was observed that there are some alluvium fans which may be formed by debris flow in the left bank. The Songhe area is located at the left bank, where only stream ways can be seen in the early stages. The Chichi Earthquake had earlier caused several landslides upstream. Typhoon Toraji transported the deposits to the valley. Finally, the debris flow or debris torrent was triggered by the considerable rainfall brought about by Typhoon Mindulli. Field surveys were applied to help the engineering consider the future reconstruction. Refuges in regions divided by potential geological disasters must be set up as soon as possible before

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the restoration is carried out.

Key Words: Typhoon Mindulli, Songhe, debris flow, disasters.