



Sediment Movement after Chi-Chi Earthquake in Taiwan ~ Example for Wushihkeng Watershed

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On 21th September 1999, central Taiwan was suffered a severe raid from Chi-Chi earthquake, and plenty of geohazards, such as slope failures and landslides, were triggered by such an event. A large volume of unstable sediments were transported to downstream and deposited on riverbeds. This research applies fieldwork surveillance, remote sensing and numerical simulation in studying the process of sediment movement at Wushihkeng watershed. Mass conservation is the main conception to analyze the process of sediment movement. The spatial and temporal distribution of sediments in the watershed can be estimated. The rainfall criteria of debris flow occurring are also established by rainfall index in this paper, and compares with the sediment distribution in the upstream. The result demonstrates that the rainfall criteria of debris flow are gradually recovered after earthquake. In addition, the relationship between remnant sediments in the upstream and recovery of occurring criteria are tidily connected. This explains the phenomenon of variation of occurring criteria, and the different condition of mass movement at its branches.