



Establishment on the Real Time Disaster Information Transfer System for Remote Mountainous Communities in Southern Taiwan

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ABSTRACT

According to the report (1990) proposed by Intergovernmental Panel on Climate Change (IPCC) indicated that Extreme Climate Change caused by Global Warming has a detrimental effect on the environmental ecology, cultural system, industrial growth, human society and national economic development all over the world since 1950. Taiwan is located at Pacific-rim area and belongs to the sub-tropic to tropic weather characteristics. Recently, extreme rainfall resulted from climate change to induce serious sediment related disasters, such as large-scale landslide and debris flow, are critical in Taiwan. There are almost 24% of total 246 remoted mountainous communities in Taiwan were occupied by Chiayi, Tainan, Kaohsiung and Pingtung counties/cities with the amount of 50 remote communities in southern Taiwan. Most of these communities were frequently attacked by typhoons Morakot (2009), which brought the accumulated rainfall more than 2450 mm within continuous 72 hours. The accumulated rainfall record of Morakot typhoon was almost closed to the extreme rainfall amount of 2467 mm world recorded by France Weather Bureau. This extreme rainfall has triggered off a crisis of compound disasters to destroy the environment systems, agricultural productions, human lifes, properties and public facilities surrounded by remote mountainous communities. To decrease the risk of multi-sediment related disasters (MSD) and large scale landslides (LSL) attack these remoted mountainous areas, the adaption strategy of environmental conservation, new technology of field investigations, hazard mitigation system, environmental vulnerability analysis and disaster risk reduction (DRR) should be executed as soon as possible. According to the historical record (2007-2017) from Soil & Water Conservation Bureau indicated that most of the remote mountainous communities located at southern Taiwan attacked by these compound disasters are significant, which was seriously concerned by the government in Taiwan. The mechanism of sediment related disaster, disaster risk analysis, and the establishment of disaster information transfer systems would be positively concerned and recognized as an important issue by this research. Hopefully, This system can be expected to enhance the disaster prevention capability on real time disaster information transfer for the remoted mountainous communities in southern Taiwan.

Keywords [U+FF1A] climate change, extreme rainfall, sediment compound disasters, remote mountainous community