



Case study of severe debris flow hazard caused by typhoon Morakot, 2009

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Typhoon Morakot struck southern Taiwan on August, 8, 2009 with high rainfall intensity and accumulated rainfall as high as 2860 mm for 72 hours. The rainfall concentrated in the mountain area of southern Taiwan, especially at Alishan and affected downstream watersheds. Severe landslide and debris flow hazards were induced in watersheds described above. The debris flow causing severe impacts to local communities were selected for case study. Field investigation and analysis were conducted. The investigation shows that the debris flow located at Sanshia group formation in the west part of Central mountain and Lushan slate formation in the east part of Central mountain. The debris flow cases selected in this research are Nanshalu, Maya, and Dakanuwa villages of Namasha township, Shinkai and Shinfia areas of Liugui township, Kaohsiung county, and Chianghuangkern of Nanhua township, Tainan county. It was found that the locations of the severe debris flow were consistent with the aspect facing storm, and the triggering areas were located at the steeper up-slope areas. Moreover, the comparison of debris flows after Chi-Chi earthquake was conducted to discuss the trend and variation of debris flow hazard 10 years after the earthquake.