



Landslide Hazard Analysis and Mapping in a Wide Region

C.-T. Lee, C.-W. Chang, and S.-H. Lin

National Central University, Institute of Applied Geology, Jhongli, Taiwan (ct@ncu.edu.tw, 886-3-4223357)

In the past landslide susceptibility analysis, at home and abroad, generally limited to a small area and of research purpose. A susceptibility model established in a region cannot be applied to other areas for susceptibility mapping. This has led to the technology stagnated in research and testing phase. Based on actual demand, the Central Geological Survey, Taiwan, has started a research program since 2003 and put into execution for producing national wise landslide hazard maps since 2007. Up to now, about 60% areas of Taiwan have been mapped with good result. This paper discusses the success on landslide susceptibility/hazard analysis and mapping in a wide region and shares this experience with the world. The hazard analysis and mapping need to face the heterogeneous features in a wide area and the consistency of results from different regions. This challenge requires the following two methods to resolve: (1) division of homogeneous zones so that a reliable hazard model can be established for a zone, (2) a consistent hazard level must be chosen so that the result among regions will be consistent. Also, the use of an event-based landslide susceptibility/hazard analysis is an important selection to keep the consistency of the results from different analyses.