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The Debris-Flow Disaster Preparedness and Emergency Action Countermeasures in the Southwest Taiwan

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The effective disaster reduction is based on the correct debris-flow disaster preparedness and the real-time information communications between the disaster area and the rescue-control center in the typhoon or heavy rain attacked. This study first briefly proposed and designed a Real-Time Debris-Flow Disaster Network, which is composed of the emergency assessment system, the application servers, and the decision support server based on the disaster communications. Secondly, Unmanned Aerial Vehicle (UAV) are commonly used in disaster investigation and photographing in recent years for the first-line disaster investigation. In particular, aerial images are generated as 3D models or numerical surface models to represent the characteristics of large-scale disasters, which has the advantage of intuition. Finally, this study concludes the countermeasures against the disaster, the database has collected the pre-analyzed nearly 100 potential disaster potential maps during 2014∼2017 in the southwest area in Taiwan. According to the results, to achieve effective debris-flow prediction with high degrees of accuracy to protect human life and property.

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