

DISASTER MONITORING AND MANAGEMENT BY THE UNMANNED AERIAL VEHICLE TECHNOLOGY

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ABSTRACT:

In the local small densely populated Taiwan, the recent spates of serious natural disasters have caused loss of lives and property. In view of above, there is important to how to depend on a high flexibility remote sensing technology for disaster monitoring and management operations. According to the Unmanned Aerial Vehicle (UAV) technology advantages such as great mobility, real-time rapid and more flexible weather conditions, this study used the UAV technology to get the real-time aerial photos. These photos can record and analyze the overall environmental change caused by the MORAKOT typhoon. And also after the process of Image Rectification, we could get the estimated data of new collapsed lands to become the useful references of emergency rescue. On the other hand, digital photogrammetry can apply on the camera inside and outside position parameters to produce the Digital Elevation Model (DEM) data of 5m resolution. The DEM data can simulate the latest terrain environment and calculate the debris variation which can provide reference for disaster recovery in the future.

TOPIC: Remote sensing applications

ALTERNATIVE TOPIC: Change detection and process modelling