



Detection of Disasters using SAR Satellite Imageries in Korean Peninsular and the Development of Web Map Application that Displays the Analysis Result

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We present a GIS-based interactive web map application that shows the result of satellite-based disaster analysis in Korean Peninsula. The web application displays the maps of the area influenced by floods, landslides, and earthquakes based on the Google map mesh-up framework. The Sentinel-1 and KOMPSAT-5 SAR imageries were used as the source satellite data, and the techniques of threshold filter and interferometry were employed. For validation, the locations of the disaster sites observed from the field were compared with those identified from satellite data analysis. The validation results suggest that while the satellite interferometry analysis captures the landslide and earthquake sites very well, the detection of flooded area using either interferometry or threshold filter that is precise enough for flood damage assessment remains quite challenging. For more precise detection of flooded area, more frequent visit of satellites and the images with higher resolution are required.