

Research regarding grasping river basin earth environment by artificial satellite and development of hazard assessment method.

[Point]

In this research, as a ground environment grasping method regarding soil outflow, we examined applicability of artificial satellite remote sensing technology, which is making progress rapidly, such as high resolutionization and multi-spectralization. We examined synthetic aperture radar image, making observation of ground surface possible, even if cloudy, IKONOS image, which has high special resolution, and LANDSAT/TM image, which has high spectrum resolution. As a result, we verified as follows. As a result of examination of synthetic aperture radar image, by making contrast images of SAR strength before and after land hazard, we could extract natural dams and some large-scaled land collapse, however most land collapse couldn't be extracted. As the examination of IKONOS images, interpretation of detailed information, which is equal to a single 1/10,000 aerial photograph, is possible; however, interpretation of mud slide source and condition of the down flow area wasn't possible, because of shadows of trees around there. As a result of examination regarding high spectrum resolution satellite images, to extract collapse land, not only using optical wavelength and near-infrared band, but also including mid-infrared band and thermal infrared band, makes extract ability more effective, was clarified.

Keyword : artificial satellite remote sensing ,land hazard ,IKONOS , S A R ,LANDSAT