

Recovery Monitoring of Tsunami Damaged Area using Remote Sensing

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On March 11, 2011, Great East Japan Earthquake struck Tohoku Region of Japan. Huge area in the northeast coast of Japan was seriously damages by the magnitude 9.0 earthquake and subsequent tsunami. In late of the year, the author has set up a project for monitoring the recovery of the tsunami damaged area of Miyagi Prefecture by ground survey and satellite image data analysis. Environmental education is another important aspect of this project. The project was funded by Japan Society for the Promotion of Science(JSPS). The first term was from 2012 to 2016, and we are now in the second term which will last until 2021. In this project, we have been monitoring the recovery status of various damaged areas of Miyagi Prefecture by visiting the areas twice a year and comparing multi temporal satellite images. We are also involving students for environmental education. In my talk, various onsite photos and satellite images, which reflect the dramatically recovery of the areas, will be presented. The time series of various satellite images showed how the seriously destroyed paddy fields near the mouth of Kitakami River rapidly recovered by the landfilling. Multi temporal analysis of MODIS NDVI was also very useful for evaluating the recovery status of paddy fields. We cannot stop disasters. Disasters will come suddenly. However, by proper preparation, we may minimize the damages of disasters. Several ways to utilize remote sensing technology for quick disaster monitoring will also be proposed.

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