

# **Monitoring Land Deformation after Natural Disasters Using Radar Imagery**

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**Abstract** Natural disasters caused a huge damage and occurred in many countries. The countries were hit by natural disasters not only suffered in losing a large number of residents, environmental damage but also lead to the surface deformation.

ALOS as a satellite sensor that obtains global and high resolution land observation data can be used in this study to examine the land deformation before and after natural disaster happened. Time series of ALOS will then be employed to get the information of the Earth's surface changes, and then it is used to calculate the deformation rate. By taking the difference between the rate before and after the natural disasters impact, we will obtain the exact amount of the rate.

The main aim of this study is to know the rate of land subsidence and its location. The locations with higher rate of land subsidence obviously are not the save area as residential or a central of activity. The result can be treated as information for the government to do the urban planning in the future.

**Keywords** Natural disasters, ALOS imagery, land subsidence, deformation rate.