

EARTH OBSERVATION SYMPOSIUM (B1)  
Earth Observation Applications and Economic Benefits (5)

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EARTH OBSERVATION APPLICATION FOR TYPHOON YOLANDA RESPONSE IN THE ASIAN  
DEVELOPMENT BANK

**Abstract**

This paper introduces the result and lessons learned of the earth observation (EO) application for the Typhoon Yolanda response in the Asian Development Bank (ADB). It also proposes possible improvement in EO applications for future disasters based on the experience, especially for the initial damage assessment that governments and development organizations such as ADB have strong needs.

ADB is a regional development bank to facilitate economic development and poverty reduction in development member countries in Asia and the Pacific. Based on understanding that the earth observation is useful for the development of member countries in various sectors including disaster risk management, ADB has been using EO applications actively and became a member of Sentinel Asia in 2012.

In November 2013, the super typhoon Yolanda hit the central part of the Philippines and caused severe damages and losses by strong wind and storm surge. ADB supported the government of the Philippines by providing grants, loans and supporting the damage and loss assessment. Satellite based information was used for the part of the assessment and it showed the actual advantage compared with information collected in the field in the early stage when the field information couldn't be smoothly collected.

It was also identified that there are still many challenges to utilize EO applications for the initial damage assessment in the government and ADB such as the lack of Basic GIS data that tells the type of buildings and the lack of the coordination among organizations that conducted image analyses. This paper discusses possible solutions for these challenges such as preparation of basic GIS dataset for satellite data analyses in the collaboration with government mapping agencies and the Open Street Map community, and improvement of existing international cooperation mechanism to share satellite data for disaster.