

EARTH OBSERVATION SYMPOSIUM (B1)
Improving Earth Observation thru Data Sharing (6)

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FORMOSAT-2 SATELLITE TO SUPPORT THE GLOBAL RELIEF OPERATIONS

Abstract

In recent years, the anomalous global weather causes the natural disasters to occur frequently in the world. National Space Organization's FORMOSAT-2 satellite has the daily-revisit capability in the first-time and continuous monitoring for the disaster areas to support International Charter, UNOSAT, and GEO Disaster Management Working Group. Taiwan Buddhist Tzu Chi Foundation has more than 20 years of international disaster relief experience, providing relief more than 70 countries over five continents in the world. Recognizing the importance of satellite images in supports to the global relief operations, both organizations have cooperated to enhance the helps from Taiwan to the international communities.

Tzu Chi Foundation provided the affected countries not only food, clothing, and medicines for emergency assistance, but also housing reconstruction and development of water resources. To achieve the goals, Tzu Chi volunteers collect the location and the weather information of disaster areas, and NSPO engineers task the satellite accordingly and distribute the processed images through website to provide the information of the disaster scales, the transportation conditions, the potential secondary disasters, and the locations to set up first-aid stations. In this paper, we demonstrate the processes of the whole cycle and improvement of the performance in terms of notification, response, scheduling, processing, detection, and validation, especially for the events of the Sichuan earthquake in 2008, the typhoon Morakot over Taiwan in 2009, and the Australia flood and the New Zealand earthquake in 2011.