

Nepal Earthquake (25-04-2015)

(Brief technical note)

A massive 7.9 magnitude shallow focus earthquake hit Nepal on 25 April 2015 at 11.48 AM (IST) followed by number of aftershocks. The epicentre of this earthquake is approximately 80 km NW of Kathmandu, the capital city of Nepal. This earthquake also caused tremors in many parts of India, mainly in the states of Bihar, W.B & U.P.

ISRO has programmed all the available Indian satellite to acquire data for affected areas immediately after the disaster. Resourcesat-2 LISS-3 and LISS-4 Mx had covered the affected area around 10.35 AM (IST) but, the event has happened later i.e. 11.48 AM (IST). International charter was also activated for acquiring foreign satellite datasets for the affected area.

A preliminary geological assessment was carried out for this earthquake based on the available pre-event datasets. Major tectonic boundaries from the published geological map were superimposed over a coarse resolution IRS-AWiFS image to understand the area of influence of the earthquake with reference to the damage reported by Media. It is observed that epicentre of the earthquake is north of the MCT. Major towns such as Kathmandu, Pokhra in Nepal & Siliguri in West Bengal, India are in the vicinity of MCT.

A damage assessment study using pre- and post-earthquake high resolution data is under progress. For the Kathmandu city, media reported structural damages were plotted on the pre-earthquake Cartosat-2 image, which shows central part of the Kathmandu valley is more affected compared to other areas. For the towns such as Gangtok, Singtam and Rangpo (all in Sikkim, India), no significant damages are observed from satellite images. Further damage reports will be updated on regular basis as and when cloud free data is available for the affected areas.