सत्यमेव जयते

A Preliminary Earthquake Report of November 24, 2026, Eastern Nepal (M 5.3)

(Report No.: NCS-NSN-2026/17)

National Centre for Seismology
Ministry of Earth Sciences, Government of India
Mausam Bhavan Complex, Lodi Road, New Delhi - 110003

An earthquake of magnitude M 5.3 occurred at 07:02:47 IST in the Taplejung District of Koshi Province in eastern Nepal. The epicentre is at 27.86°N and 87.91°E with a shallow depth of 20 km. The mainshock epicentre was located approximately 254 km east of Kathmandu; 91 km West of Gangtok, Sikkim; 196 km North of Araria, Bihar; and 228 km NE of Madhubani, Bihar. The tremor was felt across the eastern Himalayan region, Bihar and a few places in Jharkhand. The M5.3 earthquake of 24 October 2026 occurred in eastern Nepal, immediately south of the seismically active region associated with the 2025 Tingri (Tibet) earthquake sequence. The event lies within the Higher Himalayan tectonic zone between the MCT and STD and is spatially separated from the main Tingri aftershock cluster.

The earthquake catalogue of NCS indicates that the region surrounding the epicenter has experienced numerous moderate to large earthquakes during the last decade (Fig. 1). The seismicity pattern is characterized by a dense concentration of events around the epicentral area, including earthquakes associated with the 7 January 2025 Mw 7.1 Tingri (Tibet) earthquake sequence, highlighting the persistent seismotectonic activity in the Nepal-Tibet border region. The occurrence of earthquakes in the region is attributed mainly to the tectonic setting of the Himalaya, comprising the Himalayan Frontal Thrust (HFT), Main Boundary Thrust (MBT), and Main Central Thrust (MCT), as well as several local faults and geologically demarcated lineaments. earthquake occurred within the MCT-STD corridor and cannot be directly attributed to any mapped surface fault. The causative structure is likely a blind fault at depth, most probably related to the Himalayan décollement system rather than the exposed MCT, MBT, MFT, or STD traces.

The epicentral region is tectonically controlled by the Main Himalayan Thrust (MHT), the basal décollement underlying the Himalaya. The moment tensor solution for the present event indicates a thrust mechanism with a minor strike-slip component, consistent with the compressional regime of the central Himalaya. The epicentral location corresponds to the active segment of the MCT and MBT, where stress accumulation frequently generates moderate earthquakes.

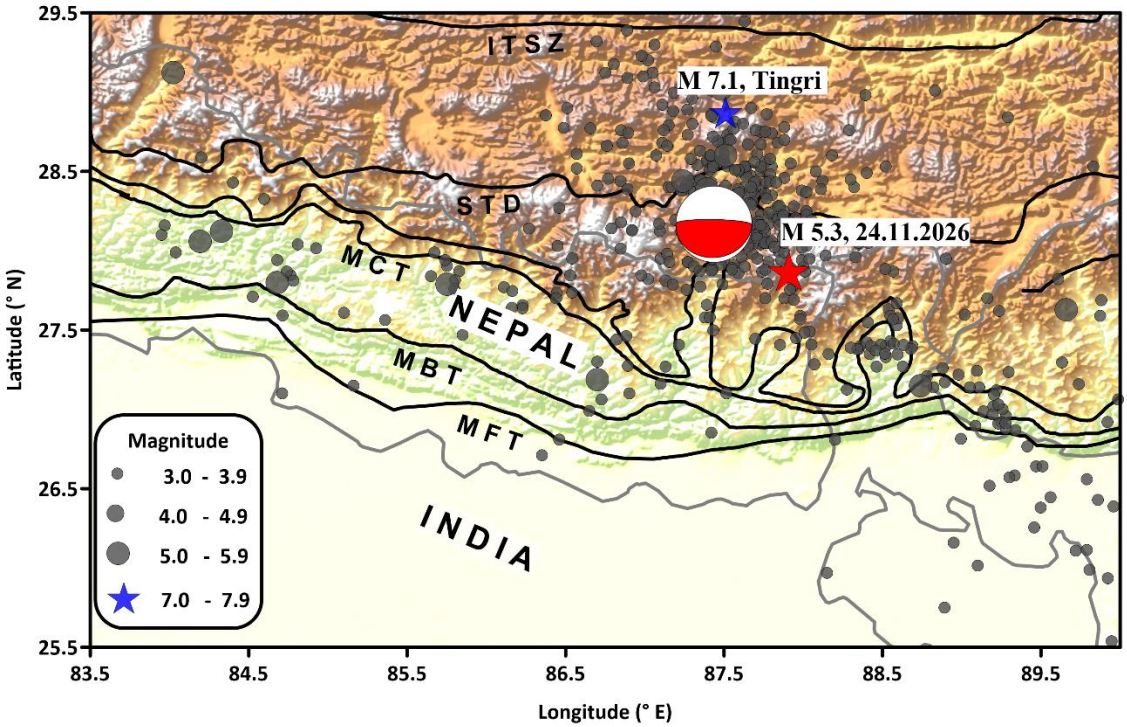

Figure 1: *The present earthquake (M 5.3) of 24th November 2026 (Star in Red colour) and seismicity in the epicentral and surrounding region, along with recent past earthquakes near the epicentral region (source:www.seismo.gov.in); The geological faults and lineament were obtained from Yin et al., 2006.*

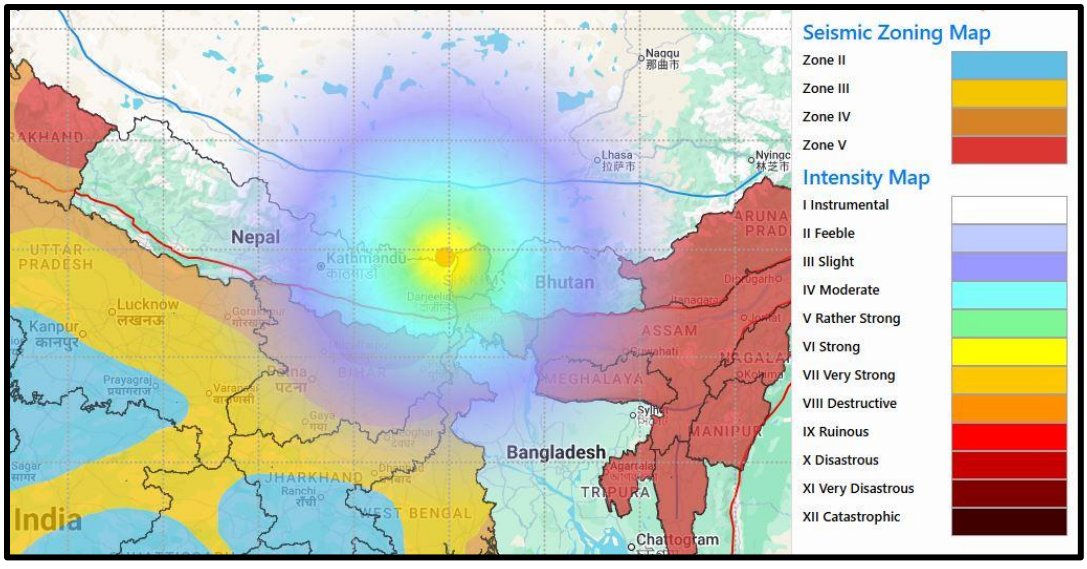

Figure 2: Estimated earthquake Intensity Map *of the earthquake of M:5.3 of 24th* November 2026.

Maximum Intensity VI (MMI scale) for the event is reported from within approximately 10 km of the epicentre, while minimum Intensity II (MMI scale) has been reported from as far as 600 km from the epicentre. (**Fig. 2**).

The details of the maximum peak ground motion (PGA) recorded are tabulated below

Site	**Distance from epicentre (km)**	**Maximum PGA (in g)**
Araria	196	0.0063
Madhubani	228	0.0089
Cooch Behar	232	0.0043
Valmikinagar	395	0.0023

The earthquake is widely felt in Sikkim, Bihar, Uttar Pradesh, West Bengal, Jharkhand and Nepal (**Fig. 2**). Within three hours more than 30 felt responses due to this earthquake, have been received from Bihar, Sikkim, Jharkhand and Assam through NCS website and Mobile App having intensity ranging from II to IV on Modified Mercalli Intensity (MMI) Scale (**Fig. 3)**.

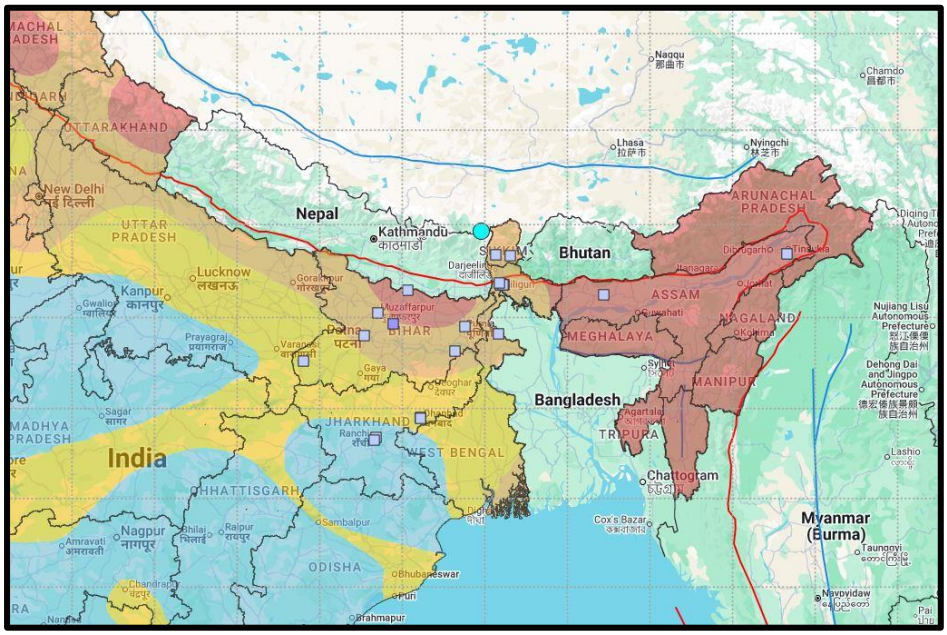

Figure 3: Felt responses (squares) of the 24th, November 2026 earthquake M:5.3 from different users reported on www.seismo.gov.in and BhooKamp mobile-app.