सत्यमेव जयते

A Preliminary Report of November 14, 2026 Khargone, Madhya Pradesh Earthquake (M 4.5)

(Report No.: NCS-NSN-17)

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

An earthquake of magnitude M 4.5 occurred at 09:15:28 IST (14th Nov 2026) located in Khargone, Madhya Pradesh, with its epicentre at 21.590°N, 75.552°E and a focal depth of 10 km. The epicenter was about 111 km SSW of Indore, 181 WNW of Akola, 260 km NE of Nashik, 266 km SW of Bhopal, and 365 km W of Nagpur. The epicentral region lies in Seismic Zone III as per seismic zoning map of India (IS 1893 (Part 1): 2016). The epicentre location (Figure 1), intensity distribution, and felt reports are shown in Figure 2 and Figure 3. The M 4.5 earthquake lies within the seismically active Tapti-Satpura tectonic zone along the Madhya Pradesh and Maharashtra border. The epicenter is situated between two prominent WNW-ESE trending mapped faults, with the southern fault trace appearing closest to the earthquake location. Several transverse NW-SE oriented lineaments and fault intersections are also present in the vicinity, indicating a structurally complex region where pre-existing basement faults may undergo reactivation under the present-day stress regime. The focal mechanism solution suggests predominantly strike-slip with a possible oblique-slip component, consistent with the kinematics commonly observed along reactivated rift-related faults of the Tapti-Satpura belt. The spatial association of the earthquake with major regional fault systems and fault intersections indicates that the event was likely controlled by movement along one of the mapped WNW-ESE-trending tectonic structures or an associated subsidiary fault.

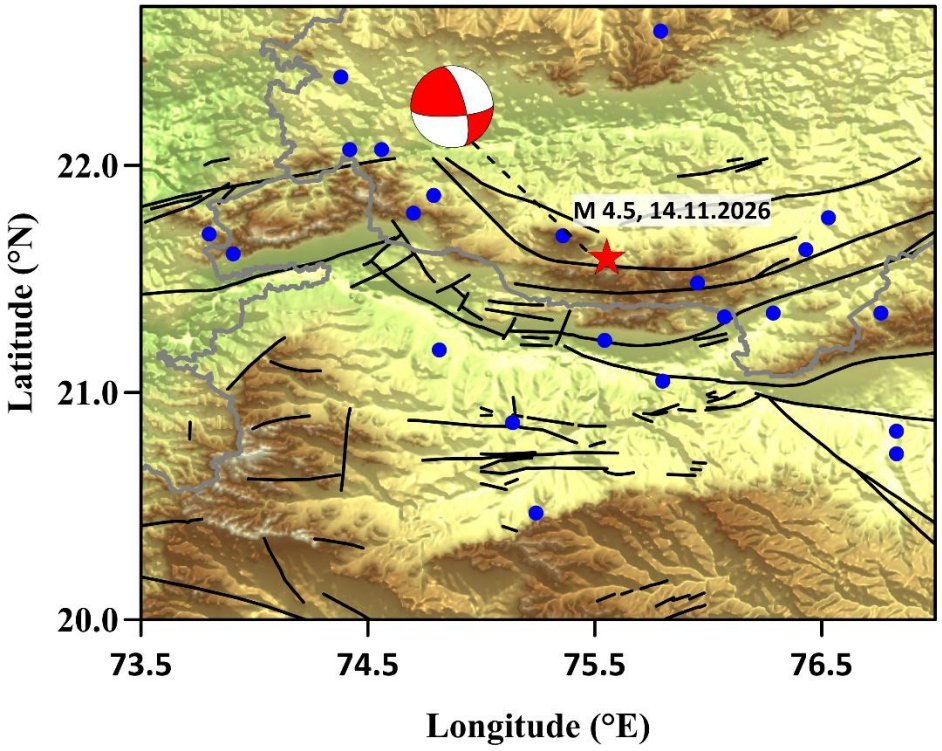


Figure 1: *The present earthquake (M 4.5) of 14th Nov 2026 (Red Star; source: www.seismo.gov.in; NCS-MoES). The geological faults and lineaments were obtained from Bhukosh, GSI. The blue*

circles represent the past 10 years seismicity (2017 to 2026) occurred surrounding region of epicenter (Source:www.seismo.gov.in; NCS-MoES).

Felt reports of maximum Intensity IV (MMI scale) have been received from within approximately 50 km of the epicentre, while minimum Intensity III (MMI scale) has been reported from as far as 300 km from the epicentre. (Figure 2). More than 50 felt reports were received through the NCS website and BhooKamp mobile app (Figure 3). Felt reports were received primarily from areas surrounding the epicentral region in northern Maharashtra and adjoining parts of Madhya Pradesh, indicating that the earthquake was perceived over a moderate area. The PGA values recorded at different stations are given in Table 1.

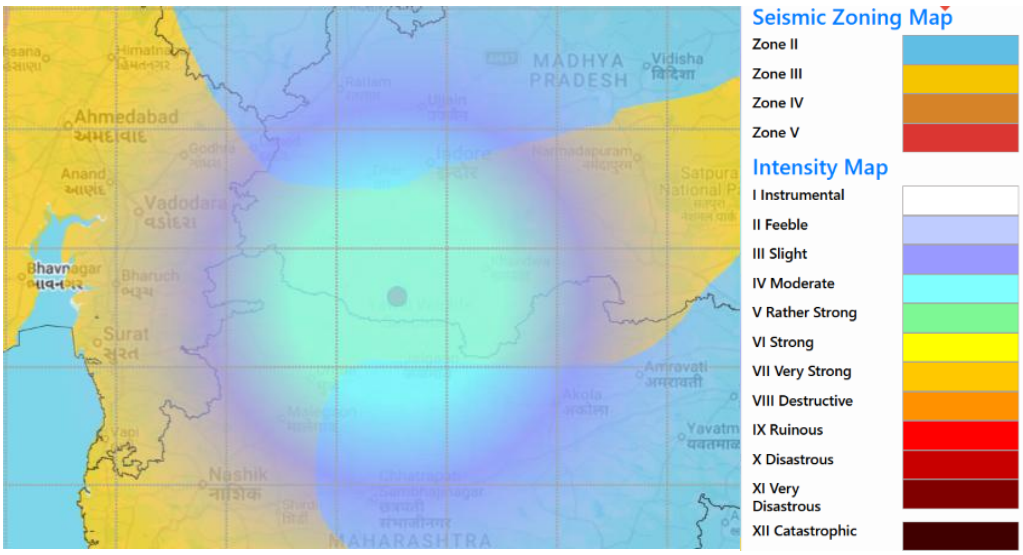


Figure 2: *Earthquake intensity map of the 14th Nov 2026, earthquake with M 4.5, located at Khargone, Madhya Pradesh.*

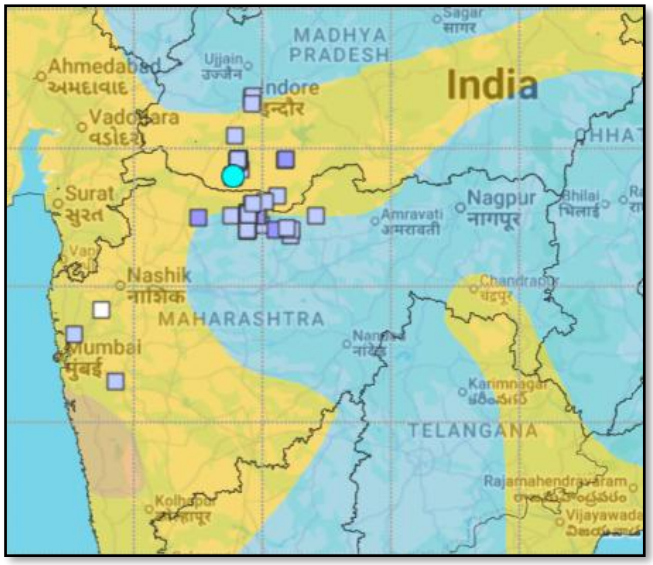


Figure 3: *Felt responses (squares) of the 14th Nov 2026, earthquake with M 4.5(blue circle), from different users reported on www.seismo.gov.in and BhooKamp mobile app.*

Table 1: PGA value of the 14th Nov 2026, earthquake with M 4.5 located at Khargone, Madhya Pradesh.

Station Name	Distance(km)	PGA (m/s²)
Narmada Nagar	121	0.0040
Akola	181	0.0026
Chhatrapati Sambhajinagar	238	0.0013
Nashik	253	0.0001
Hingoli	270	0.0002