Earthquake Report on M:5.5 in Ladakh on 13th August 2026

An earthquake of magnitude Mw 5.5 occurred on 13 August 2026 at 06:05:15 IST in the Leh region of Ladakh, with an epicentre at 36.881°N, 74.402°E, and a focal depth of 10 km. The epicentre lies approximately 389 km northwest of Alchi (Leh), 317 km north of Srinagar, 446 km north of Udhampur, and 457 km north of Jammu. The location of the epicentre, along with past earthquakes and major tectonic features, is depicted in **Figure 1.**

The epicentral region falls within the Tethys Himalayan Zone (THZ), a structurally complex corridor bounded by significant tectonic elements. To the northwest lies the Karakoram Fault (KF), a major strike-slip fault system trending NW–SE, while the Main Mantle Thrust (MMT), a fundamental suture zone, lies in close proximity. The epicentre's position, closer to the Karakoram Fault but also influenced by the MMT, highlights the dual tectonic control of strike-slip and thrust faulting in this sector. The fault plane solution, derived from waveform inversion, indicates a dominant thrust faulting mechanism, consistent with compressional tectonics. This suggests that the causative source of the earthquake is a north-verging thrust structure that accommodates crustal shortening in the Ladakh–Karakoram corridor. Historical seismicity in this region, with events in the M 5–6 range, indicates recurring moderate earthquakes, reaffirming the need for continuous monitoring and hazard assessment.

The expected ground shaking intensity, as shown in **Figure 2**, ranges from MMI III in distant regions to MMI VI in near-field areas around the epicentre.

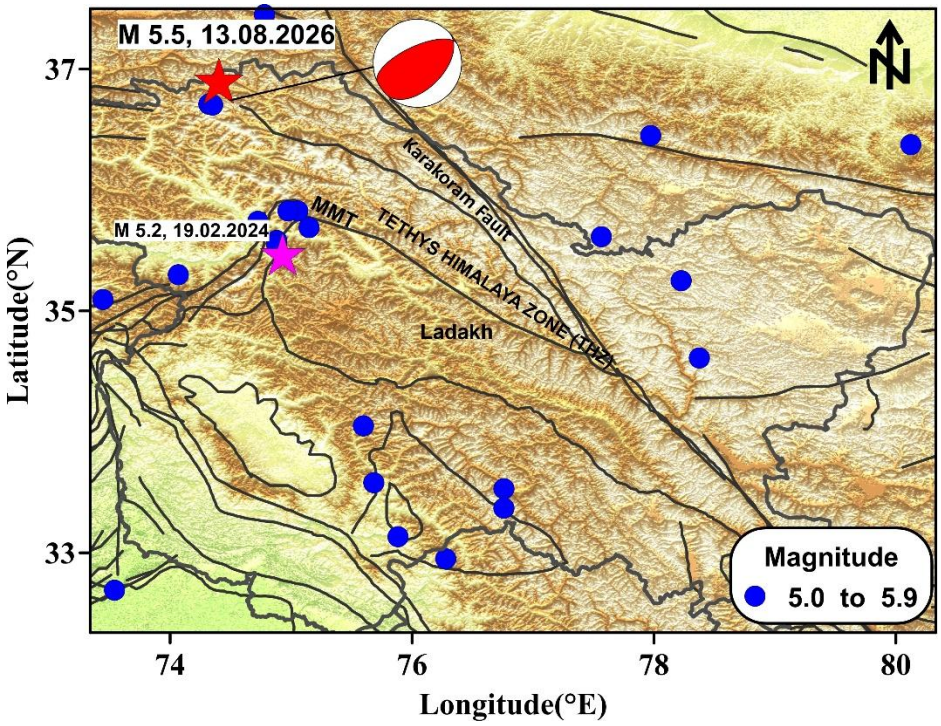

Figure 1. Map showing the epicentre of the 13 August 2026 Leh region of Ladakh earthquake (M 5.5), indicated by a red star. The major fault systems in the epicentral region are delineated with

continuous thick black lines. Seismicity of magnitude M ≥ 5.0 recorded in the epicentral and adjoining regions during the last ten years is also plotted.

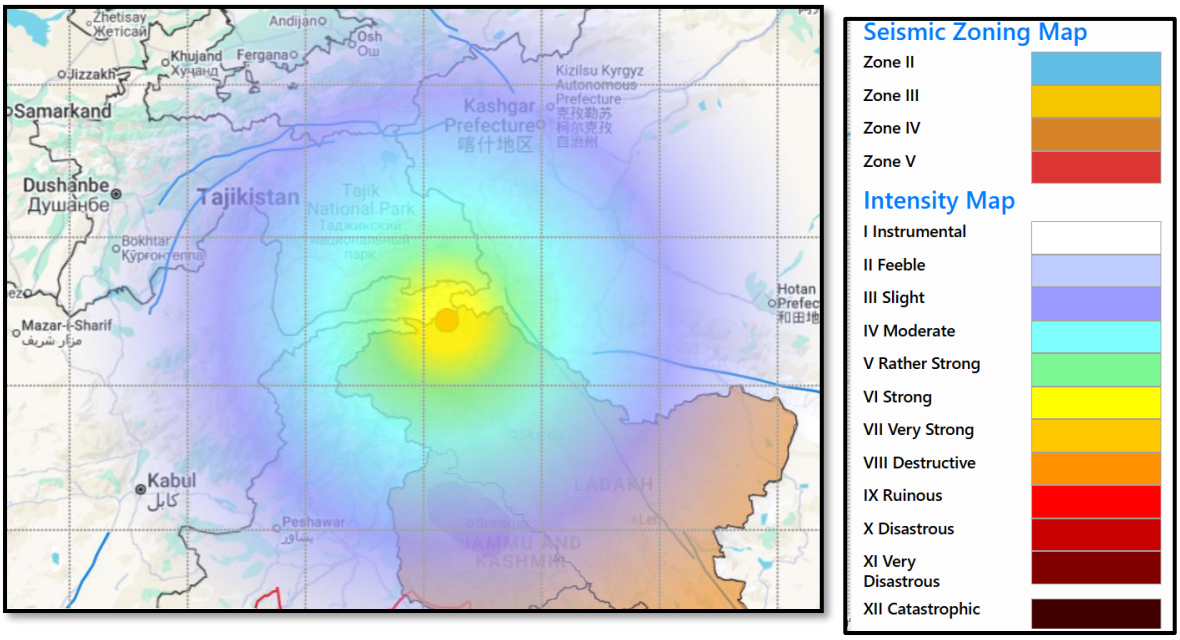

Figure 2. Map showing the intensity map of a magnitude (M: 5.5) earthquake that occurred on 13th Aug 2026.