

Report on Real Time Earthquake Location

**From: Earthquake Monitoring Center (EMC) of NCS
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Report of Earthquakes occurred in the month of December 2025

1) Introduction:

National Center for Seismology maintains a National Seismological Network of **169 stations** each having state of art equipment and spreading all across the country (**Figure:1**). Using these stations during the period 01st – 31st December 2025 a total number of 396 earthquakes have been located

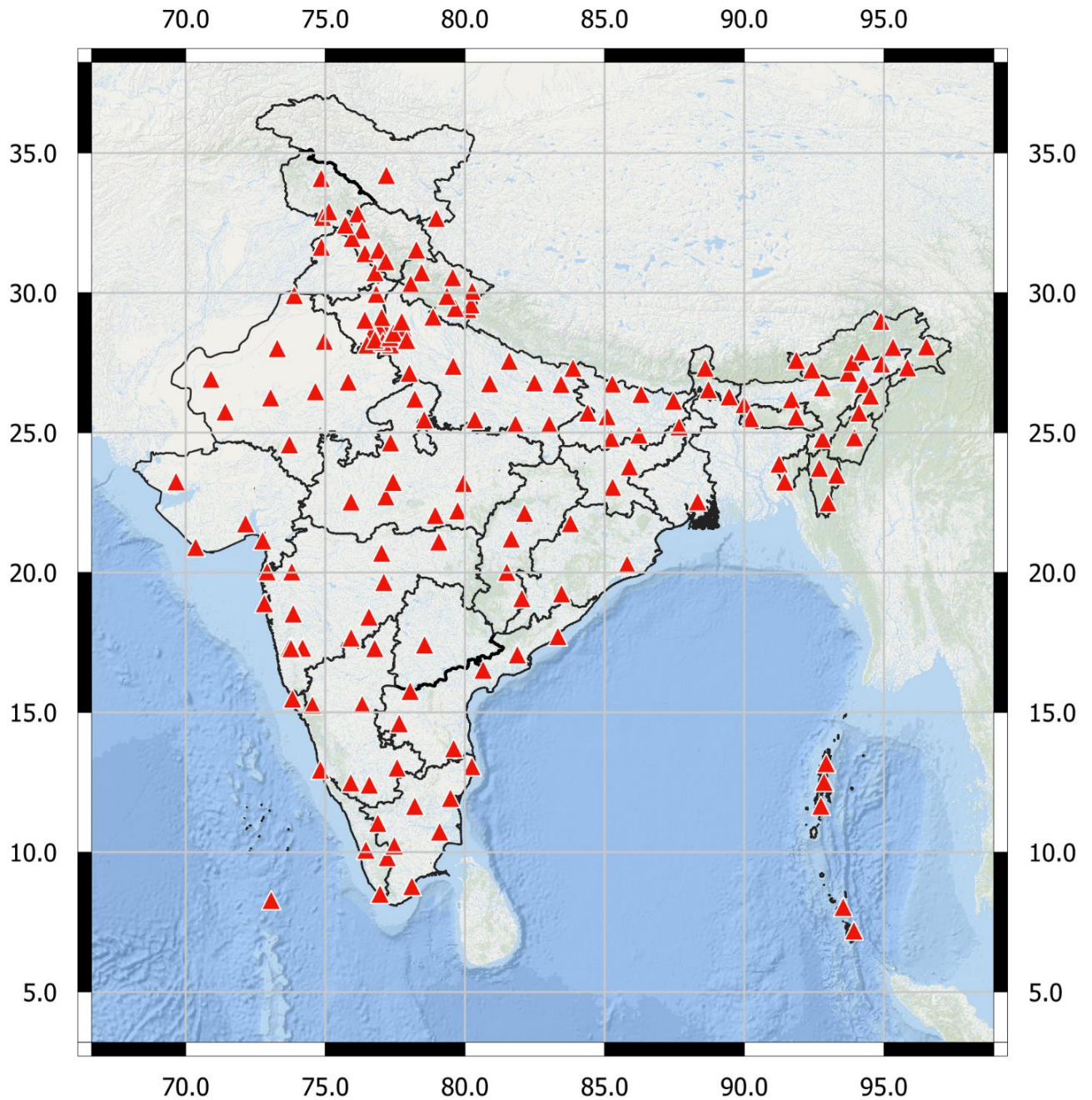


Figure 1: National Seismological Network (NSN) of 169 Stations

and disseminated from the center (**Figure:2**), out of which 179 earthquakes have occurred in India and its neighborhood region bounded by the coordinates 0°- 40°N & 60°-100°E (**Figure:3**).

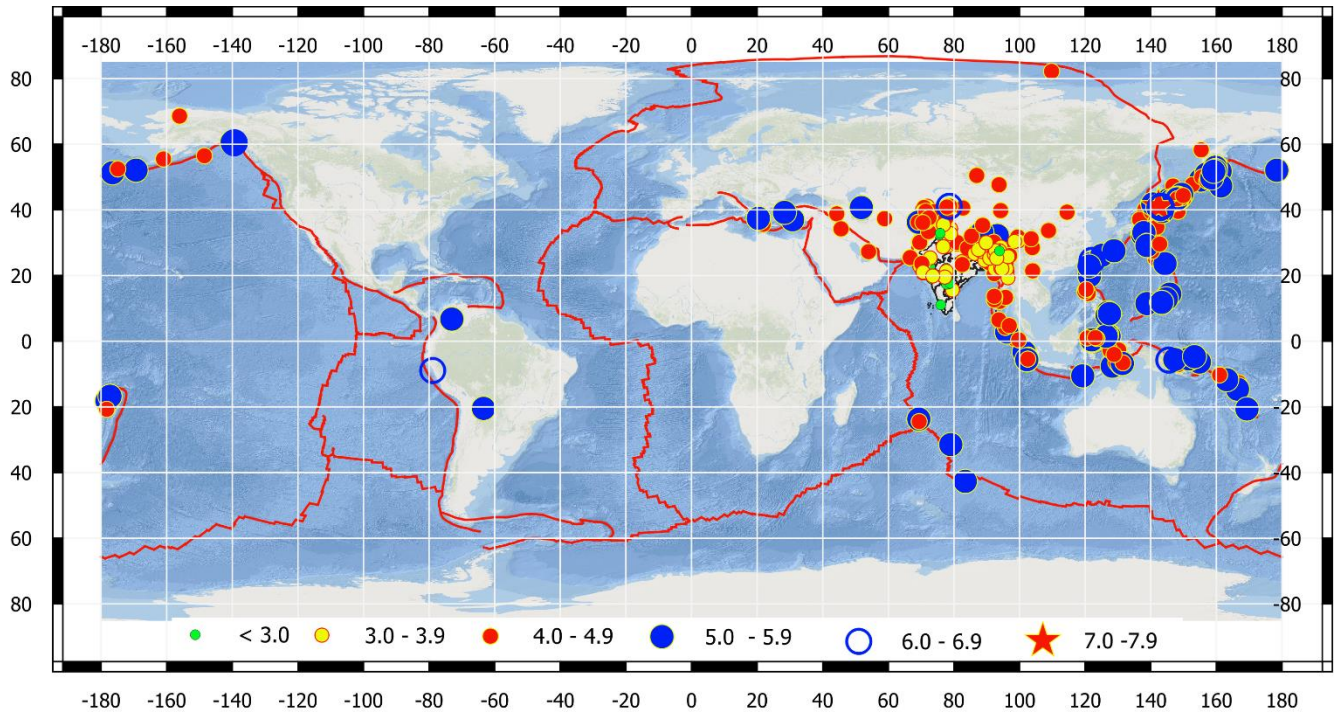


Figure 2: Earthquakes located and disseminated by NCS during 01st – 31st DEC 2025

2) Seismicity:

During the period, the majority of earthquakes within India and its neighbourhood region bounded by the coordinates 0-40°N & 60-100°E; were located in Hindu Kush region, North India (Ladakh, Jammu-Kashmir and Himachal Pradesh), North East India (Arunachal Pradesh, Assam, Manipur, Meghalaya, Tripura and Sikkim) as shown in **Figure 3**.

Few earthquakes of smaller magnitudes were also reported in northern (Bagpat and Meerut in Uttar Pradesh; Sonipat and Rohtak in Haryana); western (Jalore in Rajasthan; Kachchh, Gir Somnath and Kheda in Gujrat; Amravati, Nashik, Raigar, and Hingoli in Maharashtra); central (Betul and Singrauli in Madhya Pradesh and Korea and Chhindpani in Chhatisgarh) and southern (Rangareddy, Vikarabad and Yadadri Bhuvanagiri in Telangana; Prakasham in Andhra Pradesh and Malappuram in Kerala) part of country. **Twenty seven** earthquakes of smaller magnitude (**M < 3.0**) comprising **7%** of all earthquakes occurred during 01st to 31st December 2025. **Five** earthquakes of magnitude **M:5.0 and above** occurred during the month in the region; as detailed in **Table:1**.

Out of total 396 earthquakes **23%**, **43%** and **25%** earthquakes occurred in the magnitude range **3.0-3.9**, **4.0-4.9** and **5.0-5.9** respectively. **Nine** earthquakes in the magnitude range **6.0-6.9** and one

Table:1 Earthquakes of $M \geq 5.0$ occurred during December 2025 within India and its neighbourhood

SN	Date	Time (IST)	Lat($^{\circ}$ N)	Long($^{\circ}$ E)	D (KM)	M	Region
1	2025-12-02	00:25:15	22.86	94.34	110	5.1	Myanmar
2	2025-12-02	16:26:22	32.17	93.22	10	5.0	Tibet
3	2025-12-09	12:32:54	02.80	96.10	10	5.4	Indian Ocean/Northern Sumatra
4	2025-12-11	17:29:25	33.06	88.58	40	5.0	Tibet
5	2025-12-19	11:09:11	36.26	69.19	40	5.3	Afghanistan

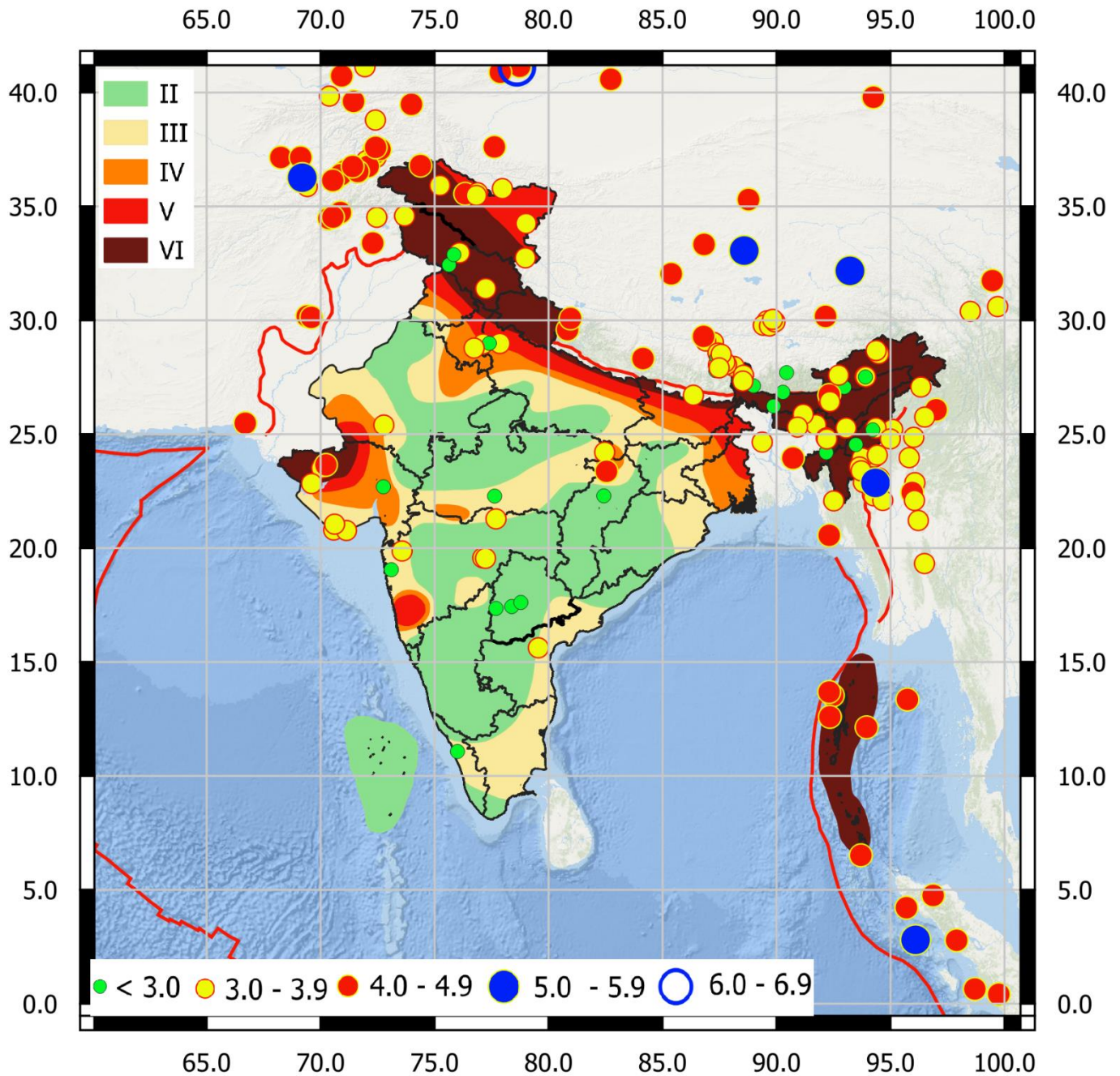


Figure 3: Map showing the seismicity during the period 01st – 31st DEC 2025 occurred in India and its neighbourhood region along with the seismic zone of India.

earthquake of **M:7.5** occurred during the period were outside the grid of 0- 40⁰N & 60-100⁰E as shown in **Figure 2** and **Figure 4(a)**. Details of earthquakes occurred during the month is available at www.seismo.gov.in

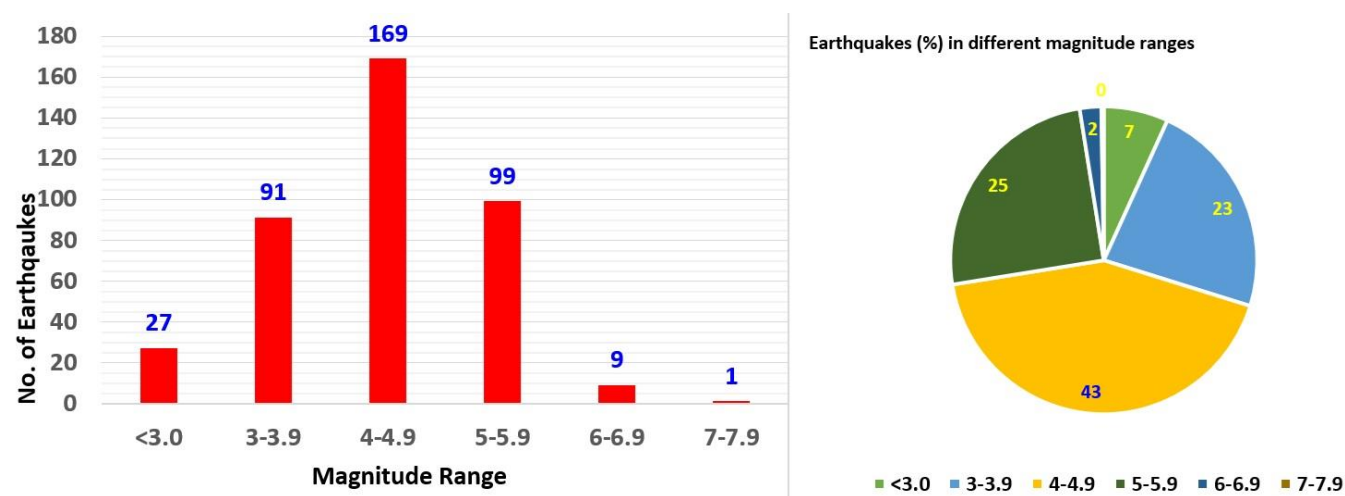


Figure 4 (a) : Distribution of earthquakes in the different magnitude range during 01st – 31st DEC 2025.

There is **positive change** in number of earthquakes in the magnitude ranges except of **3-3.9; 4 -4.9 and 7-7.9**. The change for different magnitude ranges with respect to previous month (November 2025) is shown in Figure 4 (b).

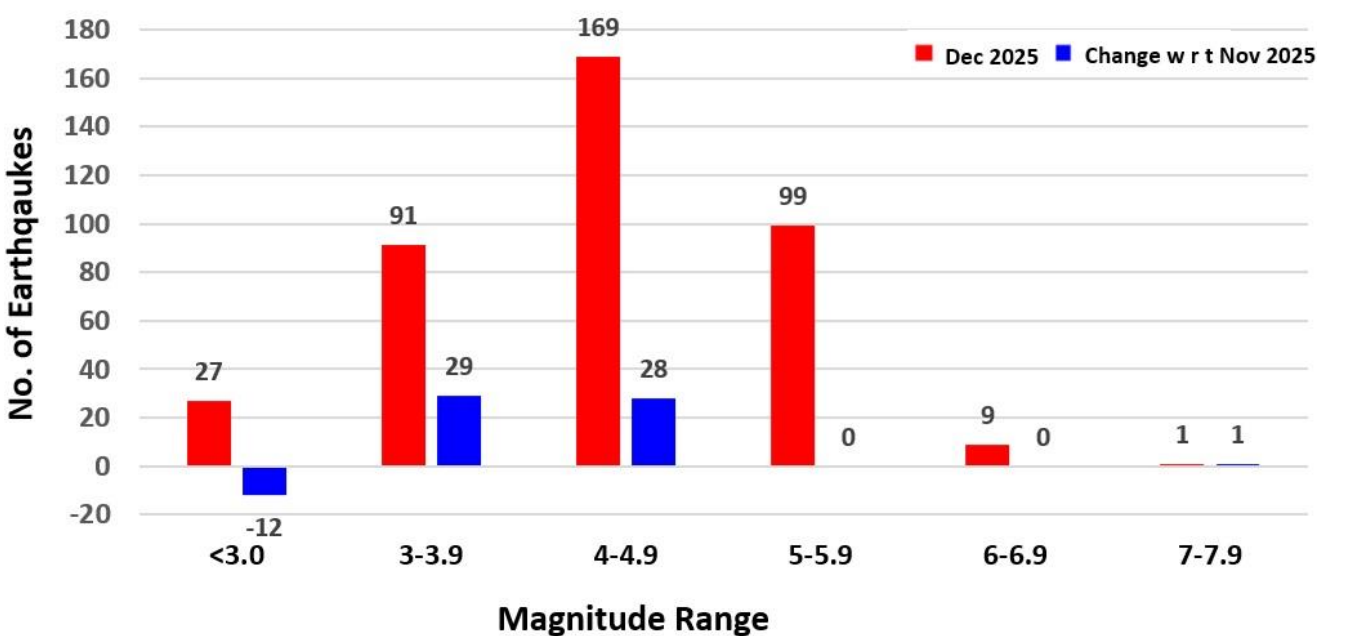


Figure 4 (b) : Change of occurrence of earthquakes in different magnitude ranges w r t previous month

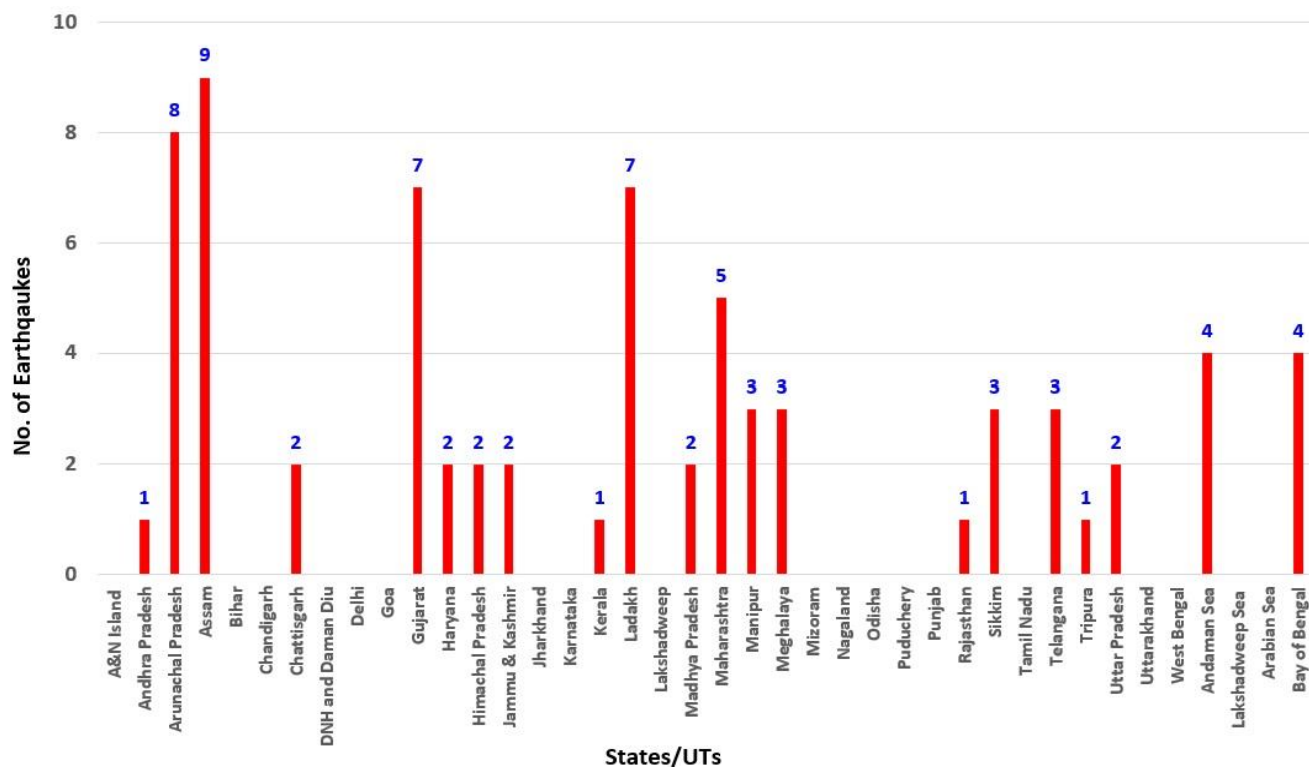


Figure 5: State wise distribution of earthquakes during the period 01st – 31st DEC 2025.

Total **72** earthquakes occurred within Indian territory; of which 9 earthquakes occurred in Assam, 8 in Arunachal Pradesh and 7 each in Gujrat and Ladakh during the period. Out of 72 earthquakes **15** and **27** earthquakes occurred in **North** and **North-East** region respectively. State/UT and region wise distribution of earthquakes occurred during 01st – 31st December 2025 is shown in **Figure 5** and **Figure 7** respectively. There was no activity in east part of the country during 01st – 31st December 2025 (**Figure 3** and **Figure 6**).

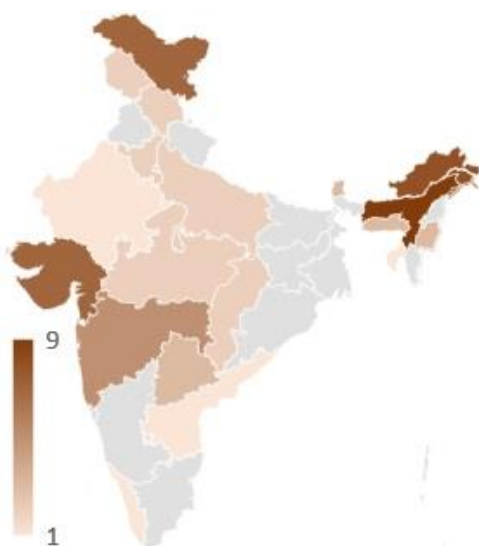


Figure: 6 Earthquake Density map

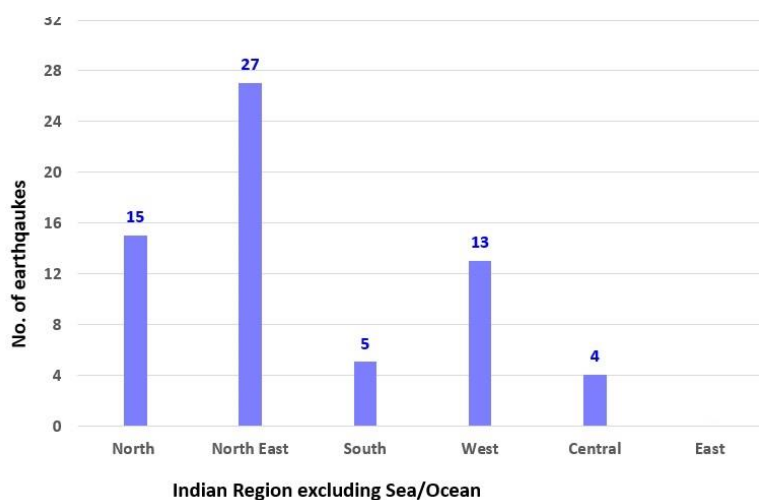


Figure: 7 Region wise distribution

3) Significant Activity:

- A. Afghanistan Earthquake:** An earthquake of **M:5.3** occurred at **11:09:11 IST** of **19th Dec 2025** in Afghanistan at **36.26° N** and **69.19° E** with focal depth of 40 km. The epicentre was approximately 185 Km ESE of Mazar-i-Sharif (Afghanistan); 190 Km N of Kabul (Afghanistan) and 250 Km S of Dushanbe(Tajikistan). The area is seismically very active associated with collisional tectonics where Indian plate subducts beneath the Eurasian Plate. The occurrence of earthquakes in the region is attributed mainly to the tectonic settings of the Himalaya comprising Herat Fault, Himalayan Frontal Thrust (HFT), Main Boundary Thrust (MBT) and Main Central Thrust (MCT) besides several local faults and geological demarcated lineaments. **Figure 8** depicts the expected intensity of this earthquake around the source zone. More details about the event are available at URL <https://riseq.seismo.gov.in/riseq/earthquake/event/TkY5MW9hWFUxbFpvMGJCSy9kZXNPZz09/Rviewed>

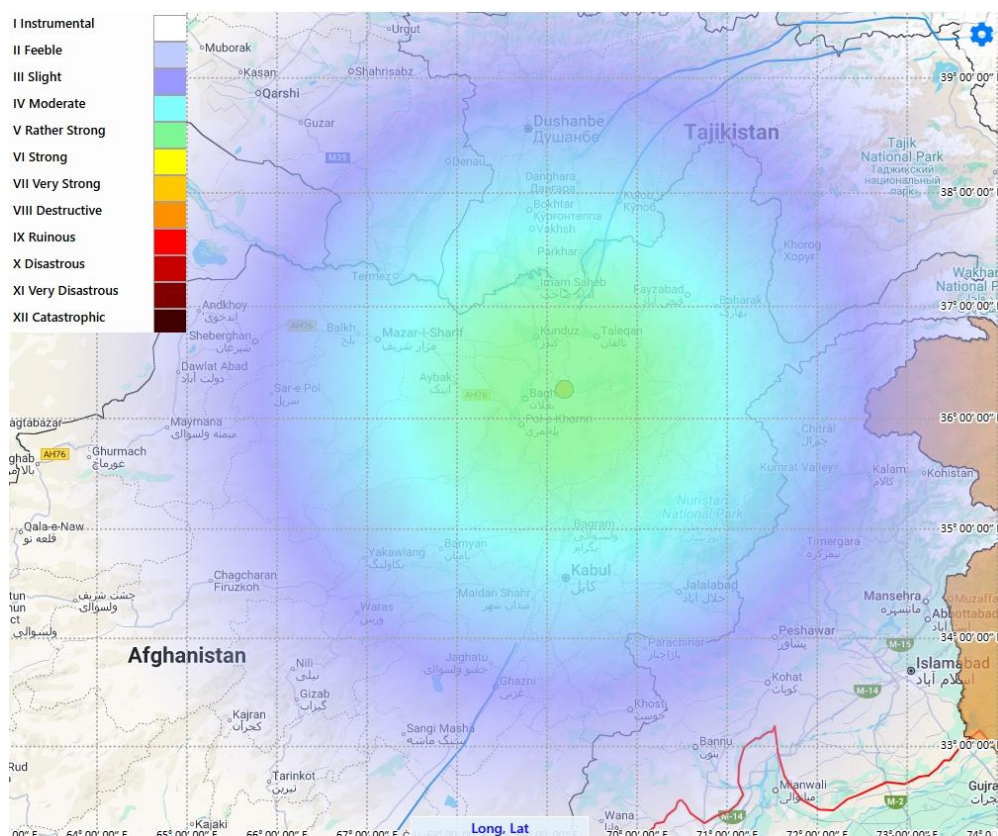


Figure 8: Intensity map of earthquake of M:5.3 occurred on 19th DEC 2025 in Afghanistan

- A. Kachchh Earthquake:** An earthquake of magnitude **M 4.4** occurred at **04:30:02 IST** of **26th Dec 2025** in Kachchh, Gujrat at **23.65°N** and **70.23°E** with a focal depth of 10 km. The epicentre is about 26 km S of Dholavira; 170 Km NE of Bhuj; 130 Km n of Jamnagar and 157

Km NW of Rajkot. This event occurred in the area which falls in Seismic Zone VI (Updated BIS map 2025) and is seismically active region. This earthquake was widely felt in Kachchh region of Gujrat. **Figure 9** depicts the expected intensity of this earthquake around the source zone. <https://riseq.seismo.gov.in/riseq/earthquake/event/aGttRG1uUld2eWRMZEQ0N2tla0JFdZ09/Reviewed> URL may be visited for more details.

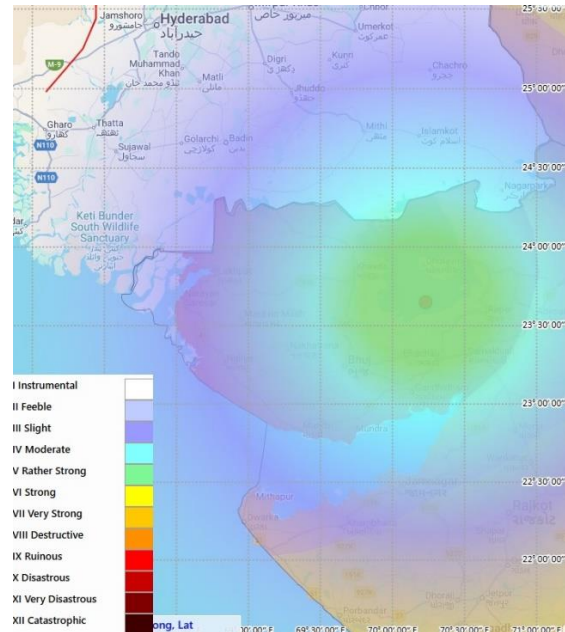
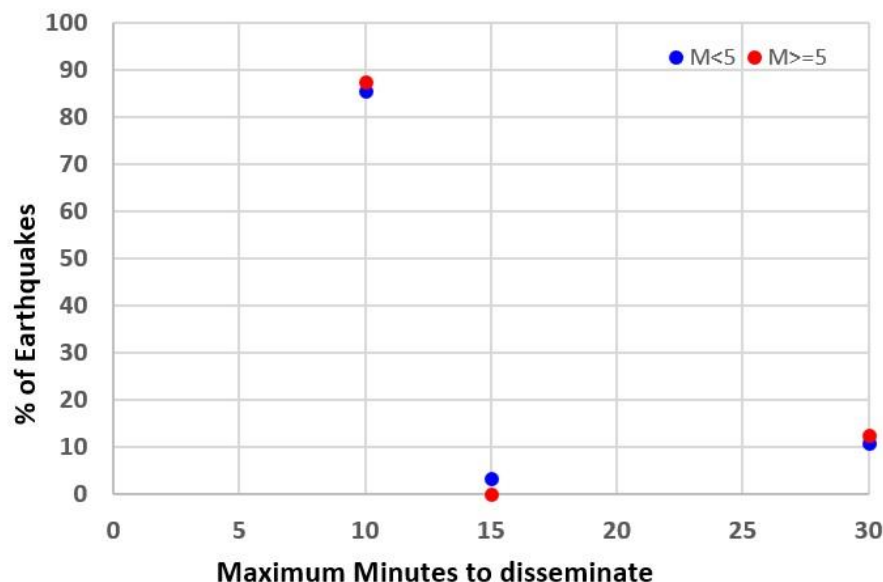


Figure 9: Intensity map of earthquake of M:4.4 occurred on 26th DEC 2025 in Kachchh, Gujrat

4) Dissemination Performance:



More than **80%** earthquakes of **M<5.0** and **M>5.0** occurred within India and its neighbourhood region bounded by the coordinates 0-40°N & 60-100°E were disseminated within 10 minutes as shown in **Figure 10**.

Figure 10: Dissemination of earthquakes within different time ranges during 01st – 31st DEC 2025.