Report on Real Time Earthquake Location

From: Earthquake Monitoring Center (EMC) of NCS
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National Center for Seismology
Ministry of Earth Sciences
Government of India

Month: June 2025
Technical Report No: NCS/2025/6

Report of Earthquakes occurred in the month of June 2025

1) Introduction:

National Center for Seismology maintains a National Seismological Network of **167 stations** each having state of art equipment and spreading all across the country **(Figure:1).** Using these stations during the period 01st – 30th June 2025 a total number of 111 earthquakes have been located and

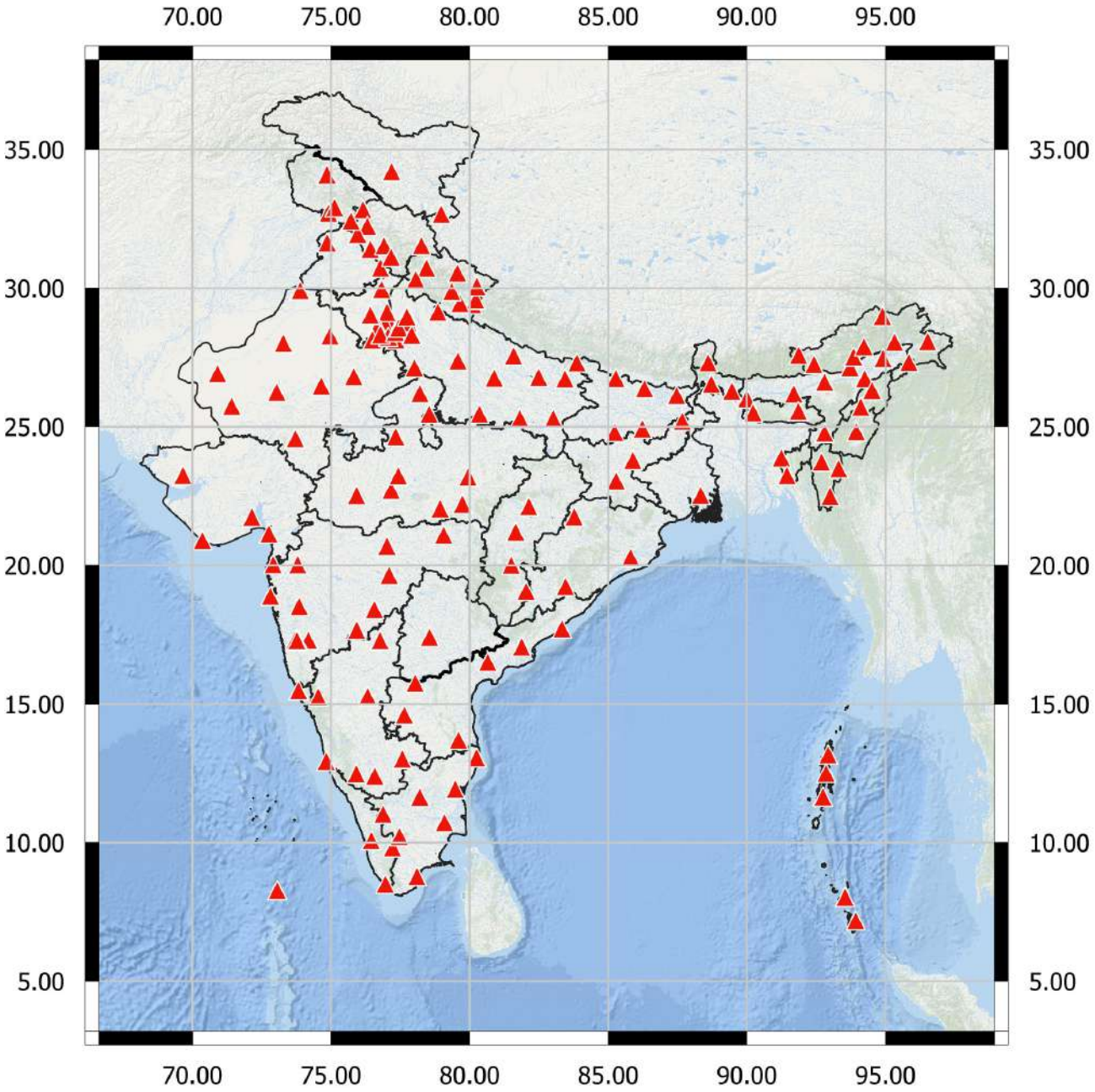


Figure 1: National Seismological Network (NSN) of 167 Stations

disseminated from the center **(Figure:2)**, out of which 102 earthquakes have occurred in India and its neighborhood region bounded by the coordinates 0° 40N & 60°100E **(Figure:3)**.

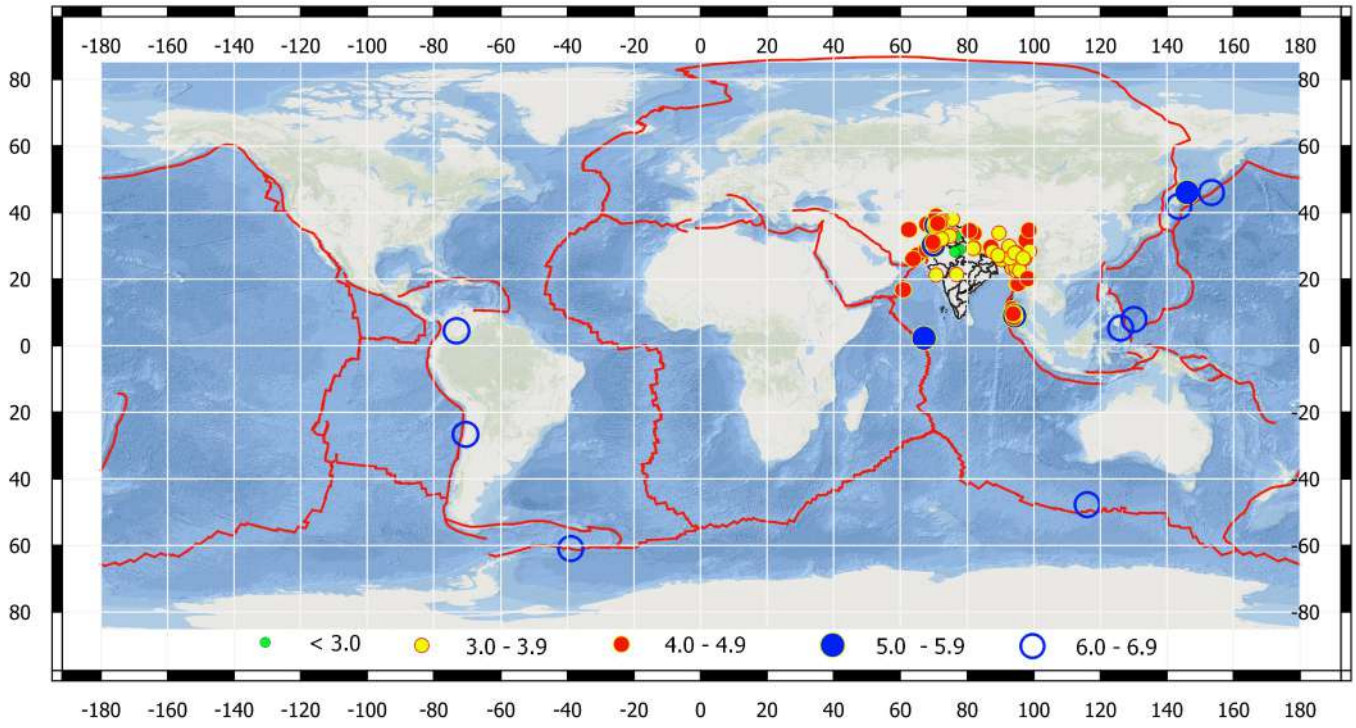


Figure 2: Earthquakes located and disseminated by NCS during 01st – 30th JUN 2025

2) Seismicity:

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

Few earthquakes of smaller magnitudes were also reported in northern (South East Delhi; Mahendragarh and Rewari in Haryana) and western (Gir Somanath in Gujrat; Amaravati in Maharashtra) part of country. **Seven** earthquakes of smaller magnitude (**M < 3.0)** comprising **6%** of all earthquakes occurred during 01st to 30th June 2025. **Four** earthquakes of magnitude **M:5.0 and above** occurred during the month in the region; as detailed in **Table:1**.

Out of total 111 earthquakes **39%** and **43%** earthquakes occurred in the magnitude range **3.0-3.9** and **4.0-4.9** respectively; whereas **five** earthquakes in the magnitude range 5.0-5.9 occurred during the period of which one was outside the grid of 0- 40^{0}N & 60-100^{0}E as shown in **Figure 2**

Table:1 Earthquakes of M≥5.0 occurred during June 2025 within India and its neighbourhood

SN	Date	Time (IST)	Lat(°N)	Long(°E)	D (KM)	M	Region
1	2025-06-11	10:15:22	36.20	70.60	155	5.0	Afghanistan
2	2025-06-14	17:02:07	02.27	67.00	10	5.0	Carlsberg
3	2025-06-24	15:47:00	08.97	94.25	61	5.2	Andaman Sea
4	2025-06-29	03:54:02	30.25	69.82	150	5.2	Pakistan

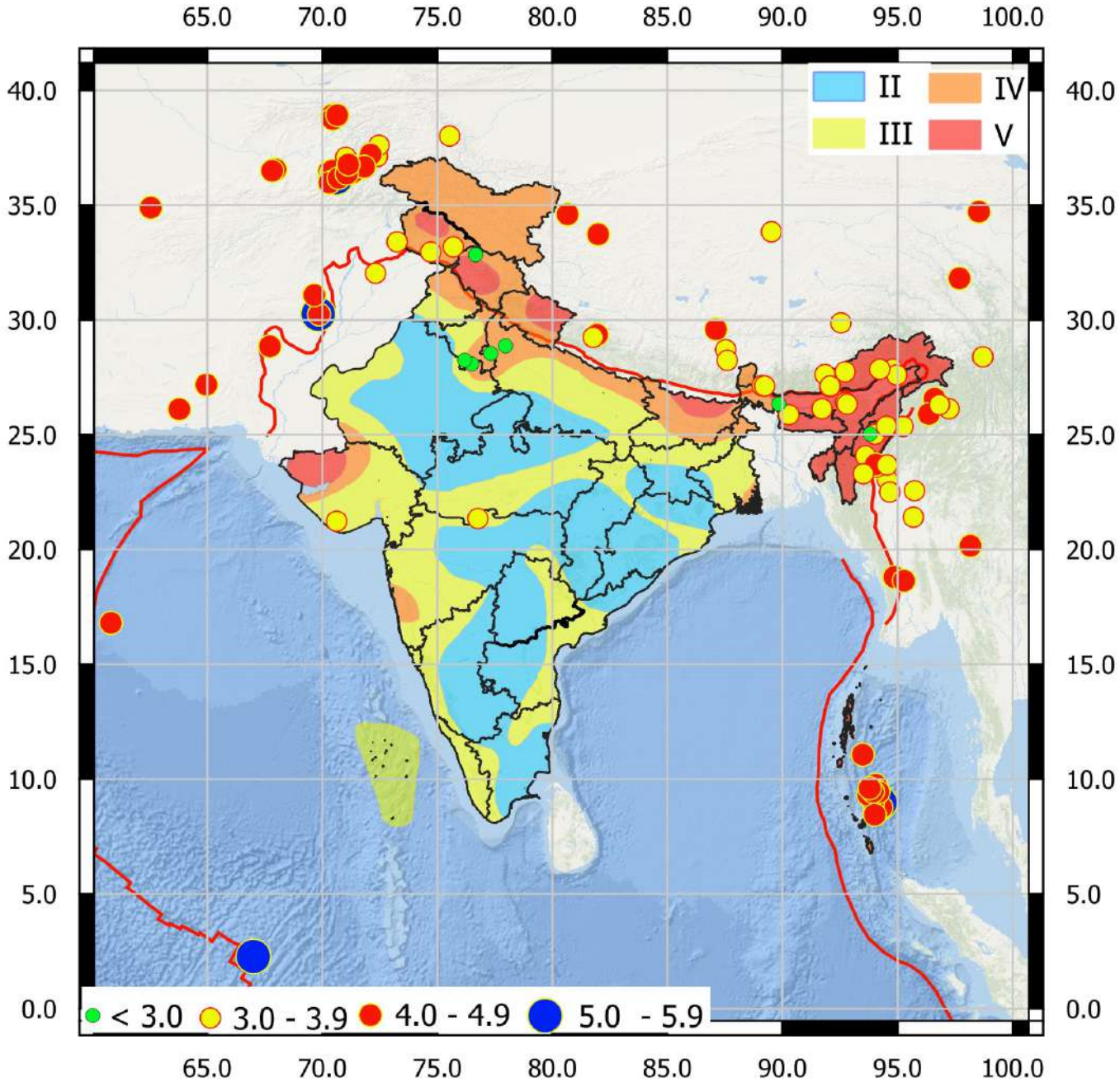


Figure 3: Map showing the seismicity during the period 01st – 30th JUN 2025 occurred in India and its neighbourhood region along with the seismic zone of India.

and Figure 3. Eight earthquakes in the magnitude range **6.0-6.9** occurred during the period of

were outside the grid of 0- 40^{0}N & 60-100^{0}E as shown in **Figure 2, Figure 3** and **Figure 4(a).** Detail list of earthquakes occurred during the month is available at www.seismo.gov.in

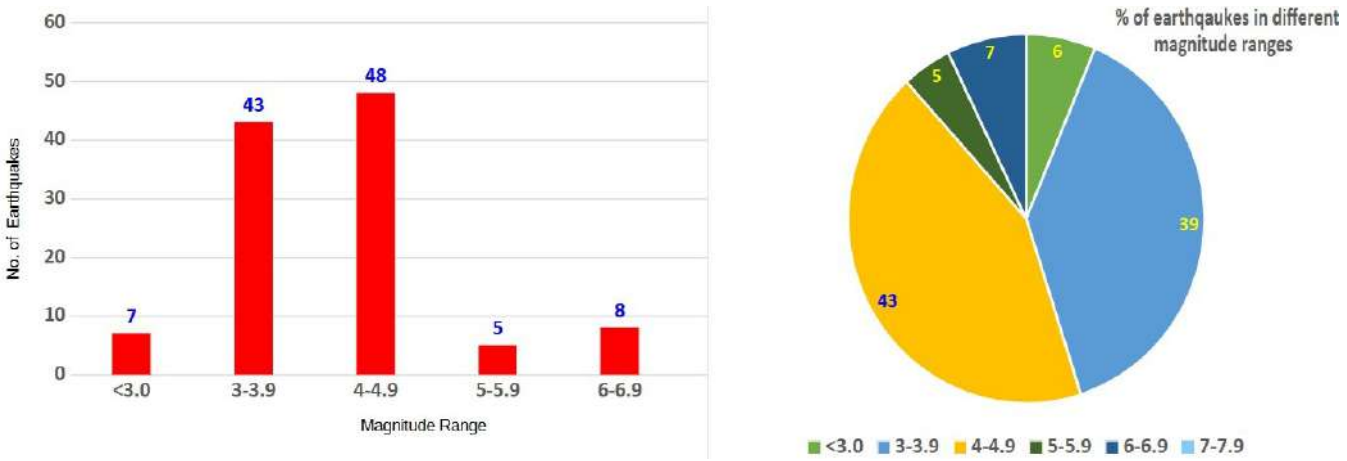


Figure 4 (a) : Distribution of earthquakes in the different magnitude range during 01st – 30th June 2025.

There is small positive change in number of earthquakes in the magnitude range of 6.0 -6.9 and no change in the magnitude range of 5.0 -5.9. There is negative change for other magnitude ranges with respect to previous month (June 2025) as shown in Figure 4 (b).

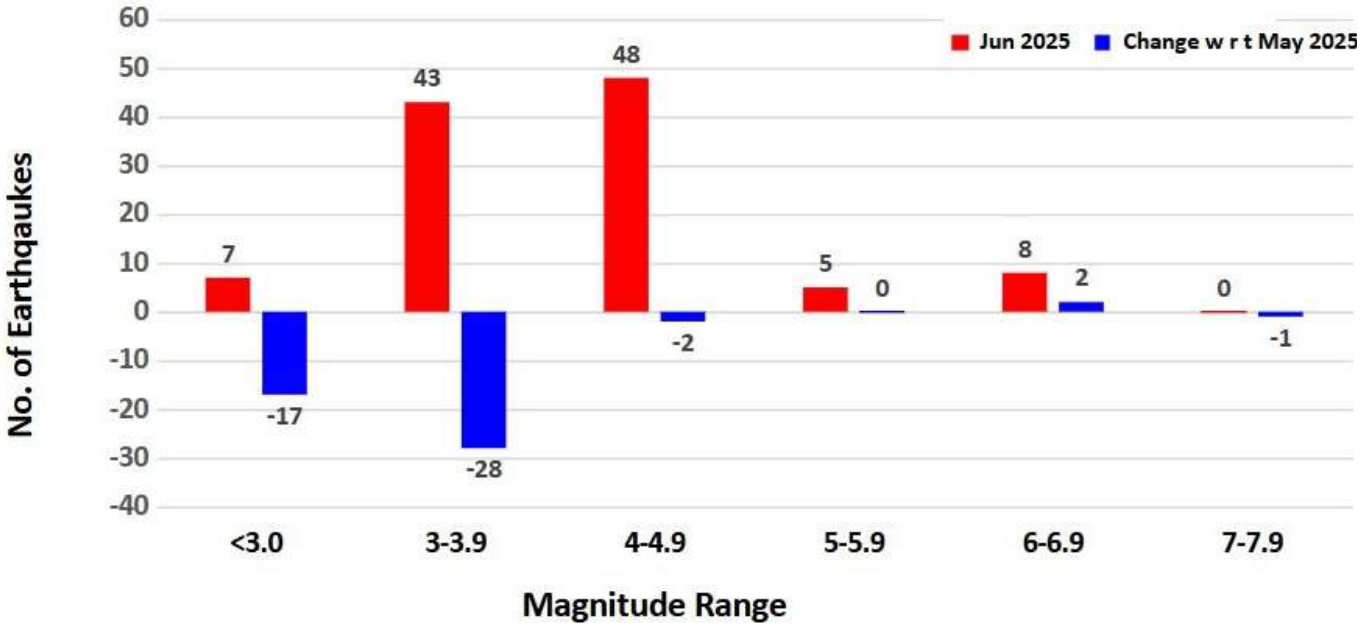


Figure 4 (b) : Change of occurrence of earthquakes in different magnitude ranges w r t previous month

Total **41** earthquakes occurred within Indian territory; of which 15 earthquakes were occurred in Andaman sea; 6 and 5 earthquakes in Arunachal Pradesh and Assam respectively during the period. Out of 41 earthquakes **7** and 1**6** earthquakes occurred in **North** and **North-East** region respectively. State/UT and region wise distribution of earthquakes occurred during 01st – 30th June 2025 is shown in **Figure**

5 and **Figure 6** respectively**.** There was spars activity reported in all regions except north and north-east part of the country during the 01st – 30th JUN 2025 **(Figure 3**).

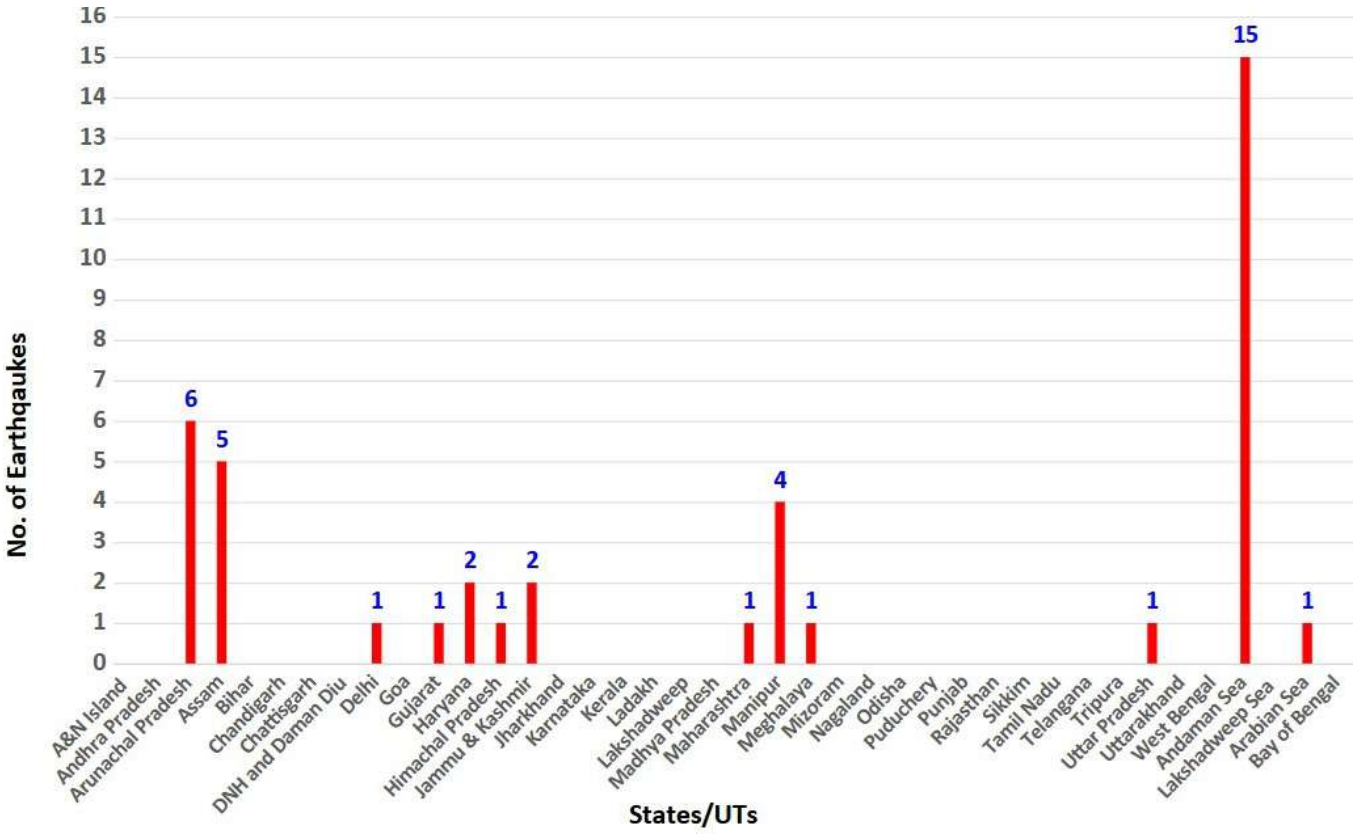


Figure 5: State wise distribution of earthquakes during the period 01st – 31st MAY2025.

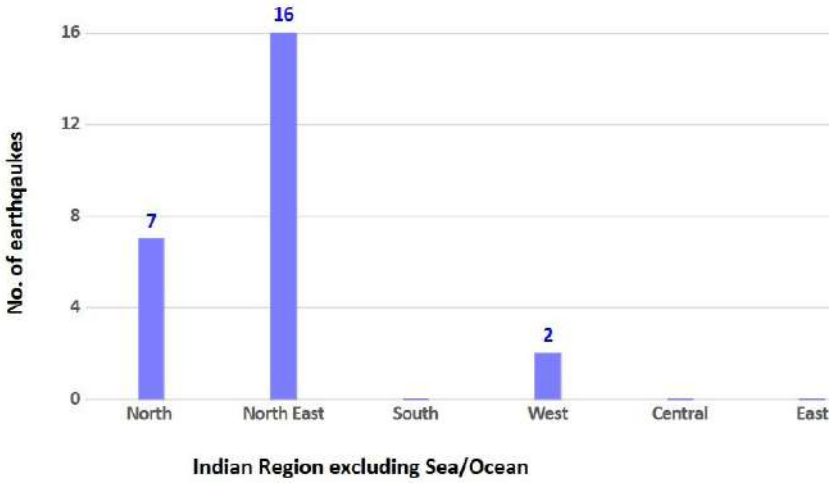


Figure: 6 Region wise distribution

3) Significant Activity:

Andaman Sea Earthquake: An earthquake of **M:5.2** occurred at **15:47:00 IST** of **24th June 2025** in Andaman Sea at 8.97° N and 94.24° E with focal depth of 61 km. The epicentre was

approximately 123 Km NE of Kamorta in Nicobar Island and 350 Km SE of Shri Vijayapuram, Adaman Island. The area is seismically very active and associated with subduction tectonics. **Figure 7** depicts the expected intensity of this earthquake around the source zone. Total 13 aftershocks were reported till 30th Jun 2025 as shown in **Figure 8**.More details are available at https://riseq.seismo.gov.in/riseq/earthquake/event/TVA0UzExeVM4cklYTHR2VDVxcFIzUT09/ Reviewed.

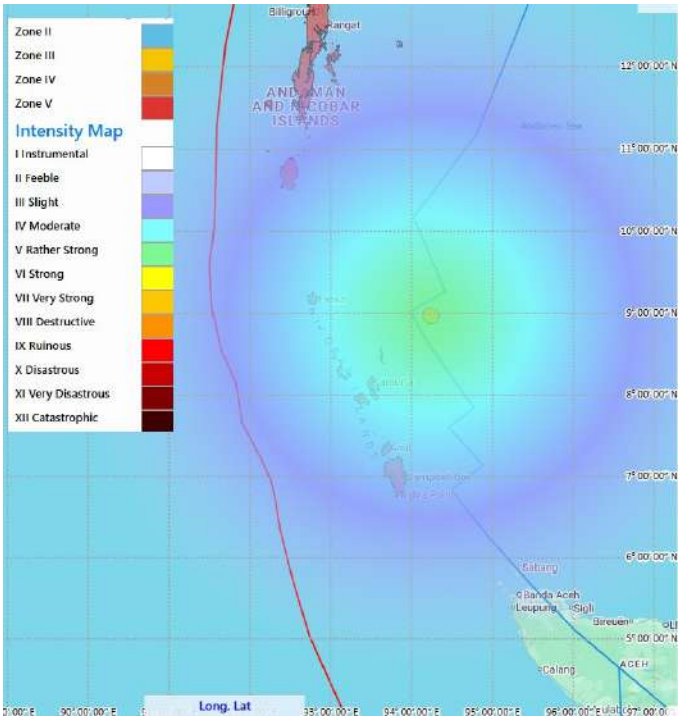


Figure 7: Intensity map of earthquake of M:5.2 occurred on 24th June 2025 in Andaman Sea

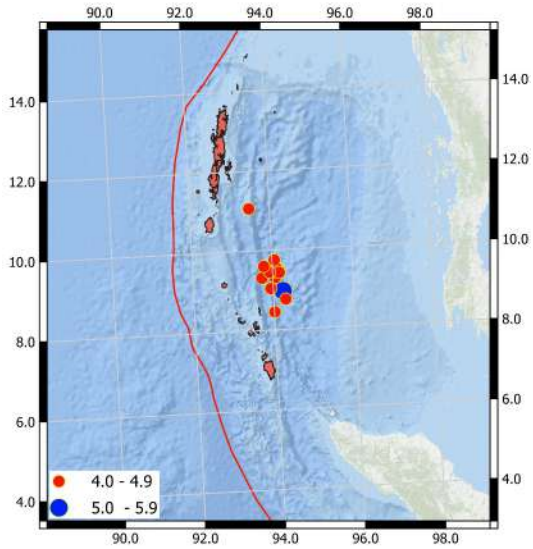
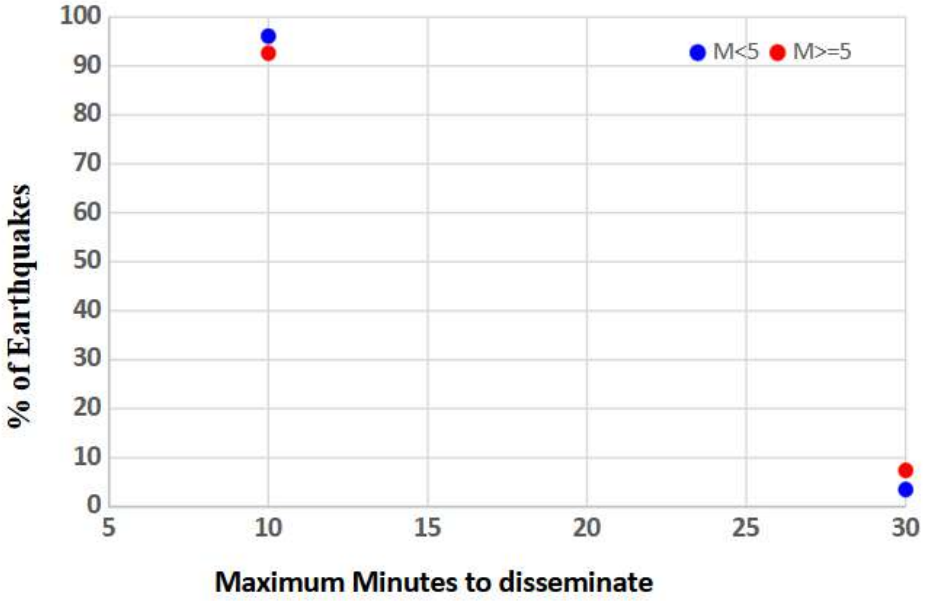


Figure 8: Spatial distribution of aftershocks of M:5.2 earthquake

4) Dissemination Performance:



More than **90%** 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 9.**

Figure 9: Dissemination of earthquakes within different time ranges during 01st –30th June 2025.