

## WEATHER REPORT PRE-MONSOON-2025 (JHARKHAND)

### HIGHLIGHTS

#### ➤ **Synoptic systems:**

- **In March-2025**, The lower tropospheric level trough, cyclonic circulation, wind discontinuity in the neighbourhood and to the west of Jharkhand state were the main synoptic features influencing the weather of Jharkhand. Sometimes middle and Upper tropospheric trough in westerlies were also observed over the state.

Above systems led to convective activity causing Rain/ Thundershower, gusty wind and also the hail over the state at different interval of time during the month of March, 2025.

- **In April-2025, Low-Pressure Area** over southwest & adjoining southeast Bay of Bengal on 08th, the cyclonic circulations, North-South & East-West trough in lower tropospheric level extending upto 1.5 KM above mean sea level and also trough in Westerly extending up to Mid tropospheric level were the main synoptic systems observed over and in neighbourhood of Jharkhand state during April-2025 influencing the weather of Jharkhand.

Above systems led to convective activity causing Rain/ Thundershower, gusty wind and also the hail over the state at different interval of time during the month of April, 2025.

- **In May-2025**, the **Cyclonic circulation**, East-West & North-South troughs over Jharkhand state and its neighbourhood extending mostly in lower levels (925-850) hpa were the main synoptic systems causing convective activity over the state. Besides these, Deep depression which laid centered over North-west Bay of Bengal on 29.05.2025, gradually moving nearly northwards and weakening into depression & well marked Low, were also the major systems influencing the weather of Jharkhand state. By 31.05.2025, above system further weakened and became less marked.

**Western Disturbances:** There were seven Western Disturbances (WDs) observed over Indian region and their periods were during 1-3, 3-9, 8-15, 9-11, 17-22, 25-27 and 28-31 May. Out of these 7 WDs, all were active (except one during 9-11 May), which caused frequent occurrences of rain and thunderstorm activities accompanied with gusty winds and hail storms across Western Himalayan region, plains of Northwest and central India. **But none of above WDs had significant contribution to convective activity over the state of Jharkhand.**

#### ➤ **Rainfall:**

- Rainfall occurred on 59 days in the season.
- The highest rainfall in Pre-Monsoon-2025 was recorded at **Chaibasa Sadar (West Singhbhum District) – 102.6 mm** on 22.05.2025.
- The observed monthly rainfall was 32.3 mm against the normal rainfall of 14.7 mm. Thus departure of Monthly observed rainfall for **March, 2025** was +119% from LPA monthly rainfall which is a **Large Excess (Departure: 60% or more) rainfall.**
- The observed monthly rainfall was 36.0 mm against the normal rainfall of 19.8 mm. Thus departure of Monthly observed rainfall for **April, 2025** was +82 % from normal monthly rainfall which is a **large excess ( above normal (Departure: > 59% or more) rainfall.**

### HIGHLIGHTS (CONTINUED)

#### ➤ **Rainfall:**

- The observed monthly rainfall was 100.6 mm against the normal rainfall of 48.7 mm. Thus departure of Monthly observed rainfall for May, 2025 was + 106 % from normal monthly rainfall which is a **Large Excess** (Departure: > +59% ) rainfall.
- The observed seasonal rainfall (from 01<sup>st</sup> March, 2025 to 31<sup>st</sup> May, 2025) over Jharkhand state as a whole was 168.9 mm against the normal (LPA) rainfall of 83.3 mm and the departure was + 103 %. Cumulatively it was also a **Large Excess** (Departure: > +59%) rainfall.
- Out of total 24 districts of the state, 01 district received **Deficient**, 01 districts **Normal**, 01 district **Excess** and remaining 22 districts received **large Excess** rainfall during **Pre-Monsoon season, 2025**.

#### ➤ **Maximum Temperature:**

- Overall monthly average maximum temperature over most parts of the state was normal to above normal during the month of **March, 2025**. Among five cities (Ranchi, Jamshedpur, Daltonganj, Bokaro, Chaibasa), the highest monthly average maximum of 36.4 °C was for Chaibasa.
- The **highest Maximum Temperature for the Month is 41.0 °C recorded at Chaibasa-PTO** on 15.03.2025.
- Overall monthly average maximum temperature over most parts of the state was below normal to normal during the month of **April, 2025**. Among five cities (Ranchi, Jamshedpur, Daltonganj, Bokaro, Chaibasa), the highest monthly average maximum of 39.3 °C was for Daltonganj.
- The **highest Maximum Temperature for the Month is 44.1 °C recorded at M.O.Daltonganj** on 27.04.2025.
- On most number of days in the month observed maximum temperature was below normal. Over all monthly average maximum temperature over most parts of the state was also below normal during the month of **May, 2025**. Among five cities (Ranchi, Jamshedpur, Daltonganj, Bokaro, Chaibasa), the highest monthly average maximum of 38.5 °C was for Daltonganj.
- The **highest Maximum Temperature for the Month is 43.8 °C recorded at M.O.Daltonganj** on 17.05.2025.
- Thus the **highest Maximum Temperature for the Pre-Monsoon Season-2025 is 44.1 °C recorded at M.O.Daltonganj** on 27.04.2025.

#### ➤ **Minimum Temperature:**

- Monthly average minimum temperature over North-Eastern part was above normal and over rest part it was normal over the state. Among five cities the lowest monthly average minimum temperature of 17.1 °C was for Daltonganj.
- The **lowest Minimum Temperature for the Month of March, 2025 is 08.5 °C recorded at Chatra-KVK** on 07.03.2025.
- Monthly average minimum temperature was Normal to above Normal over the state. Among five cities the lowest monthly average minimum temperature of 20.8 °C was for Ranchi.
- The **lowest Minimum Temperature for the Month of April, 2025 is 14.2 °C recorded at Gumla - AWS** on 02.04.2025.

### HIGHLIGHTS (CONTINUED)

- **Heat wave to severe heat wave conditions prevailed on 02 days on 16<sup>th</sup> & 17<sup>th</sup> during March, 2025 over Jharkhand.** No Heat wave was realized in the state in April & May, 2025.
- Gusty wind on 23 days was observed over Jharkhand in March-2025. The highest gusty wind reported was 38KT at Khunti (AWS) on 18.03.2025.
- Gusty wind on 18 days was observed over Jharkhand in April-2025. The highest gusty wind reported was 47KT at Bokaro (AWS) on 29.04.2025.
- Gusty wind > 20 Kts on 24 days was observed over Jharkhand in May-2025. The highest gusty wind reported was 46KT at Barhi (Hazaribag District) on 02.05.2025.
- **The highest gusty wind reported in Pre-monsoon season was 47KT at Bokaro (AWS) on 29.04.2025.**
- Thunderstorm was observed on 06 days (17,18,21,22,23 and 24) in the month of March-2025.
- Thunderstorm was observed on 13 days (09, 11-16,18-19,21,27-29) in Jharkhand in the month of April-2025.
- Thunderstorm was observed on 25 days in the month of May-2025.
- **Total 44 no of Thunderstorm days was reported in Pre-monsoon-2025.**
- Hail was observed on 04 days (18, 21, 22 & 19) at (Chakulia-East Singhbhum), (Ranchi, Latehar), (Ranchi, Lohardaga), (Ranchi, & Bokaro) districts respectively in the month of March-2025.
- Hail storm occurred on 05 days (11, 15, 19, 29, 30) IN April, 2025. In Ranchi (19,30), Daltonganj & Dhanbad(11), Hazaribag (11, 29), Koderma (15), Khunti(19) and Giridih (29) hail occurred.
- Hail was observed on 05 number of days (02, 03, 04, 05, 16) in the month of May-2025. In Ranchi(03,05,16), Daltonganj(02) and Bokaro(04) hail occurred.
- **Total 14 no of Hail days was reported in Pre-monsoon-2025.**
- 05 casualty/loss on 21<sup>st</sup> & 22<sup>nd</sup> due to severe weather was reported by media in the state during the month of March-2025.
- 10 casualty/loss and 17 injured due to lightning strike as reported by media during the month of April-2025.
- 50 casualty/loss and 32 injured due to lightning strike as reported by media during the month of May-2025.
- **Thus during whole Pre-Monsoon season-2025, 65 casualty/ deaths and 49 injured due to severe weather in Jharkhand state was reported by Media. More than 24 cattle death were also reported due to Lightning strike in (May-2025).**