



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT
Climate Research and Services (CRS)

Climate Summary for March 2025

1. Monthly Rainfall Scenario (01 to 31 March 2025)

Rainfall over the country as a whole for the month of March 2025 was 20.1 mm which is 33% less than its Long Period Average (LPA) of 29.9 mm. Daily variation of the rainfall over the country as a whole during the month of March 2025 with normal based on data of 1971-2020 is presented in Fig. 1(a). The all-India rainfall percentage departure from normal for March during 1901-2025 is presented in Fig 1(b). Rainfall over all-India (20.1 mm) was 30th lowest since 1901 and 10th lowest since 2001, presented in Fig. 1(c). Rainfall over homogeneous region of east & northeast India (36.7 mm) was 30th lowest since 1901 and 8th lowest since 2001 presented in Fig. 1(d). Rainfall over homogeneous region of south peninsular India (20.7 mm) was 23rd highest since 1901 and 8th highest since 2001 presented in Fig. 1(e).

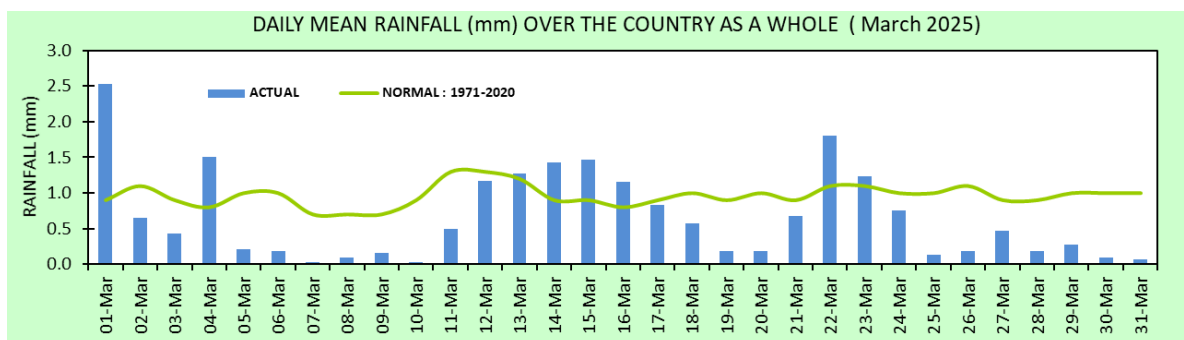


Fig. 1(a): Daily variation of rainfall over the country as a whole during March 2025

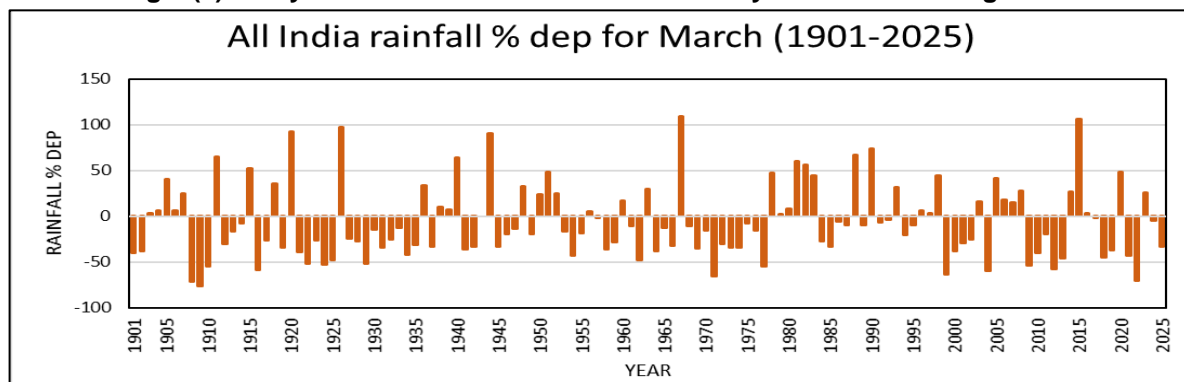


Fig. 1(b): All India monthly rainfall percentage departure from normal (1971-2020) for March from 1901-2025.

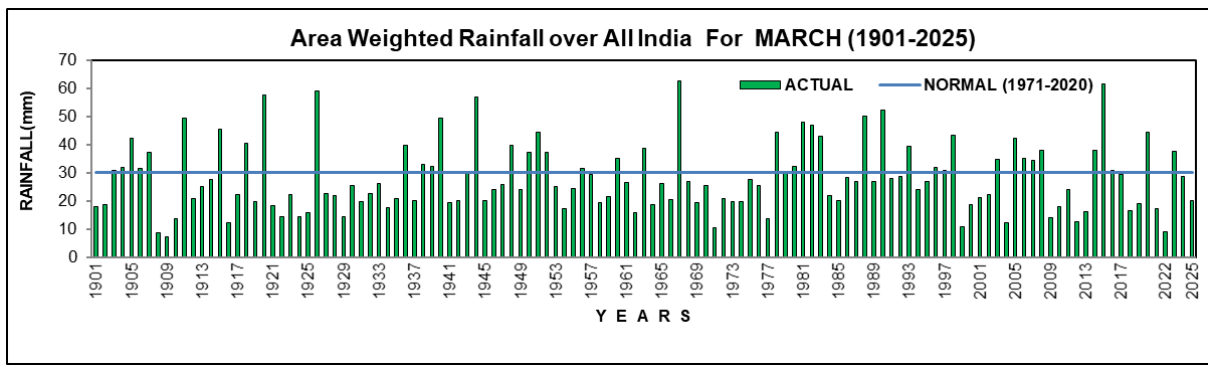


Fig. 1(c): Time series of area weighted rainfall over All India for March (1901 – 2025).

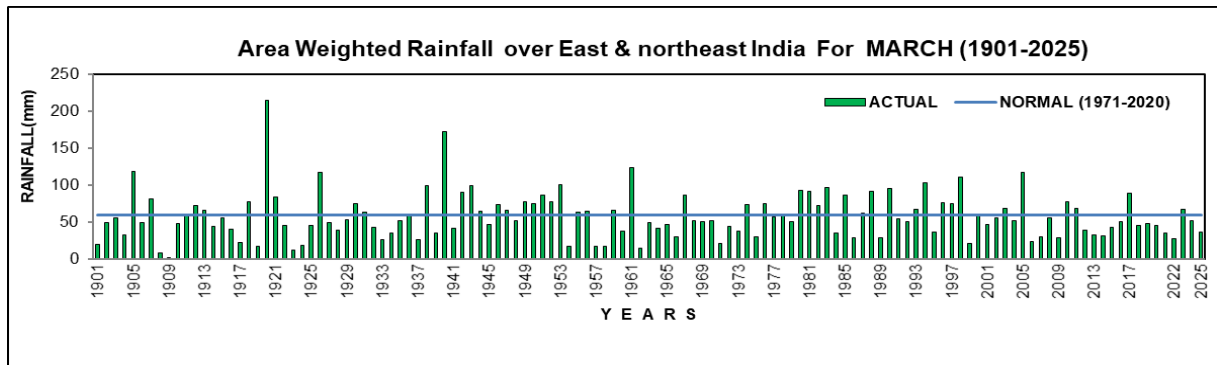


Fig. 1(d): Time series of area weighted rainfall over east & northeast India for March (1901 – 2025)

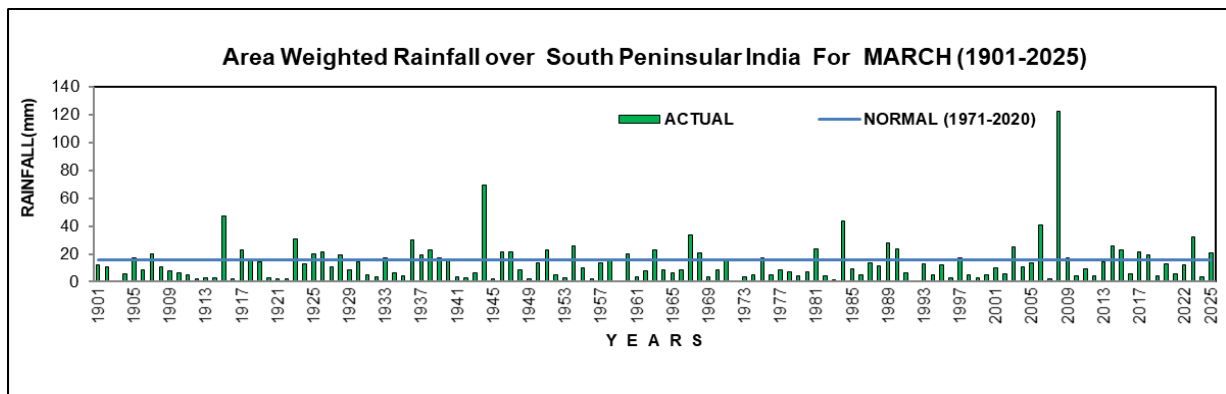


Fig. 1(e): Time series of area weighted rainfall over South peninsular India for March (1901 – 2025)

The monthly rainfall for March 2025 is given in the table below:

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	20.1	29.9	-32.6
Northwest India	28.1	47.9	-41.3
Central India	4.7	7.8	-39.3
South Peninsula	20.7	15.5	33.6
East & northeast India	36.7	59.7	-38.6

During this month, five meteorological sub-divisions received large excess rainfall, two sub-divisions received excess rainfall, two sub-division received normal rainfall, 11 received deficient rainfall, 14 sub-divisions received large deficient rainfall and two sub-divisions did not receive any rain (Fig. 2).

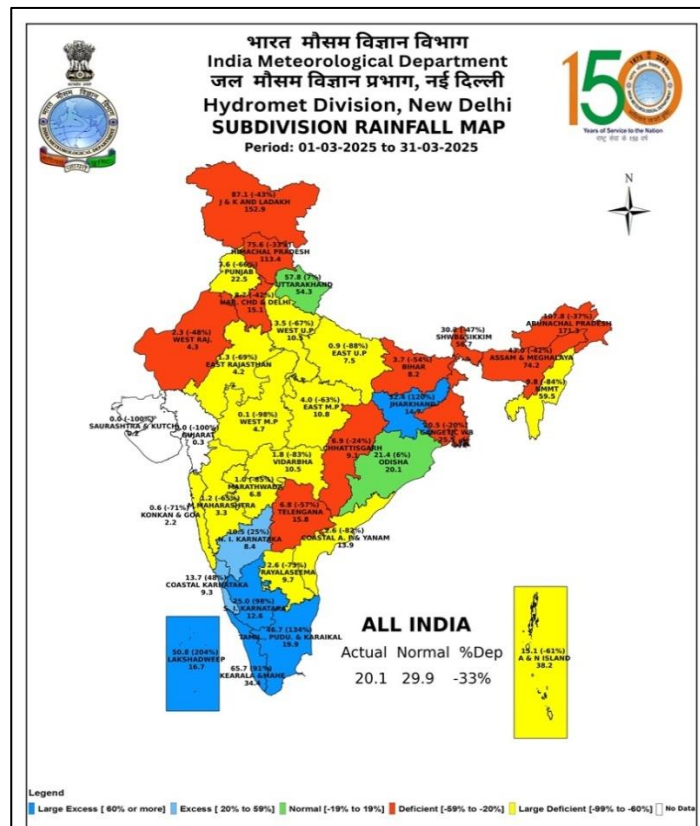


Fig. 2: Subdivision-wise rainfall distribution for March 2025

The observed spatial distribution of rainfall during March 2025, normal rainfall based on data of 1971 to 2020 and rainfall departures from normal during March 2025 are shown in Fig. 3.

RAINFALL OVER THE COUNTRY FOR MARCH 2025

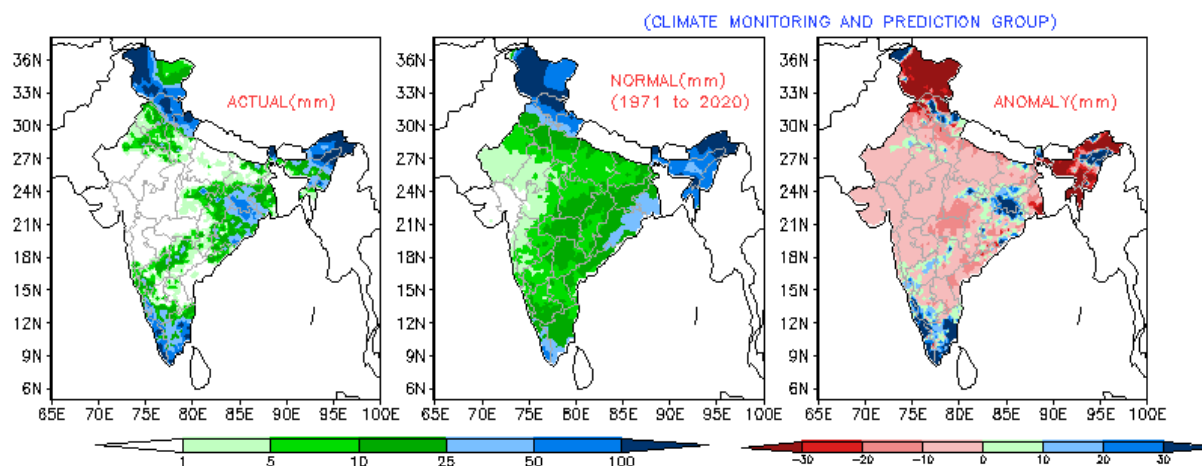


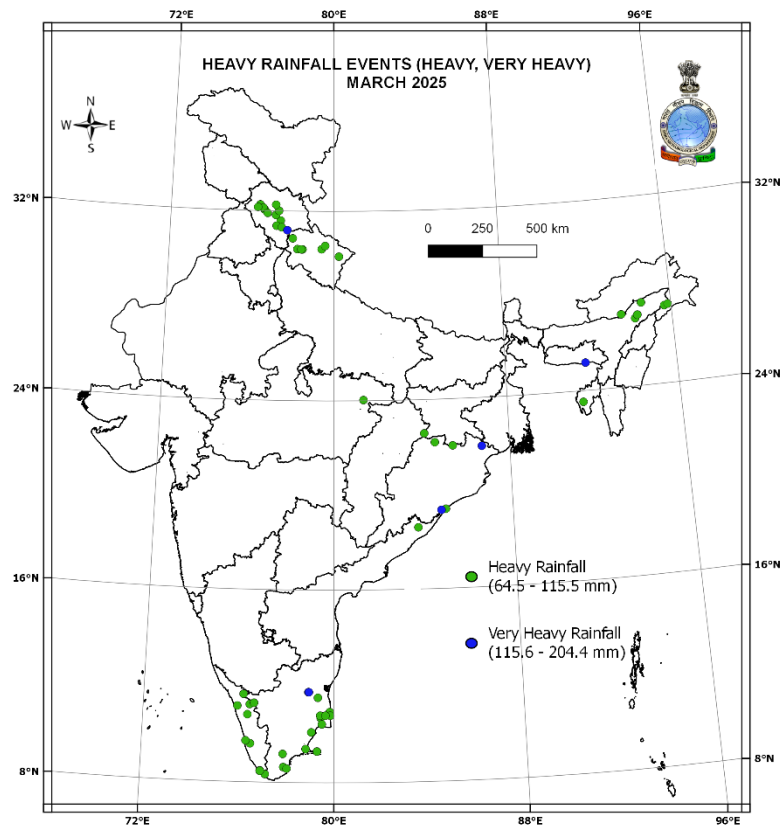
Fig. 3: Observed spatial Rainfall pattern for the month March 2025 over India and their departure from normal (1971 to 2020 period). Departure from normal is anomaly = actual rainfall - normal rainfall.

2. Frequency of Heavy Rainfall events

March 2025 witnessed very heavy (115.6 – 204.4 mm) and heavy rainfall events (64.5 – 115.5 mm) mainly over Uttarakhand, Himachal Pradesh, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Odisha and Assam & Meghalaya.

The location of occurrences of heavy and very heavy rainfall events is shown in the Figure 4.

Out of total 59 occasions, 6 were very heavy rainfall (115.6 to 204.4 mm) and 53 were heavy rainfall (64.5 to 115.5 mm) categories during this month.



(Only highest category of rainfall event considered for a station)

Fig. 4: The location of occurrences of heavy, very heavy rainfall events in the month of March 2025

3. Chief Synoptic weather features observed during March 2025

Western Disturbances (WDs) and associated severe weather events: There were four active Western Disturbances that impacted Northwest and Eastern India during 2-5, 12-17, 18-22 and 23-27 March. Each of these WDs caused longer wet spell of rainfall/snowfall lasting for about 3-5 days over the Western Himalayan Region.

Thunderstorm: Wet spell over east-central India happened during 18-23 March 2025 which was associated with thunder storms. Moderate to severe thunderstorm occurred over many places in Odisha, Gangetic West Bengal, Jharkhand and Chhattisgarh.

Hailstorm: Hailstorm also occurred along with these events over many areas during most of the days. The spell was mainly due to north-south lower level wind convergence over the region and westerly trough in middle and upper troposphere. An intense hailstorm event occurred in Mayurbhanj District, Odisha in Bisoi and Bangiriposhi blocks during 1920 and 2030 hrs. IST of 20 March 2025.

Heat wave: Heat wave occurred over Western India during 10-15 March and over east Central India during 15-18 March. Above normal heatwave days occurred over Gujarat and Odisha. However, Heat wave was not observed over Northern and adjoining central India and it was mainly due to stronger wind conditions and Active WDs impacted the region during the month. Sub-division wise heat wave days are shown in the Figure 5.

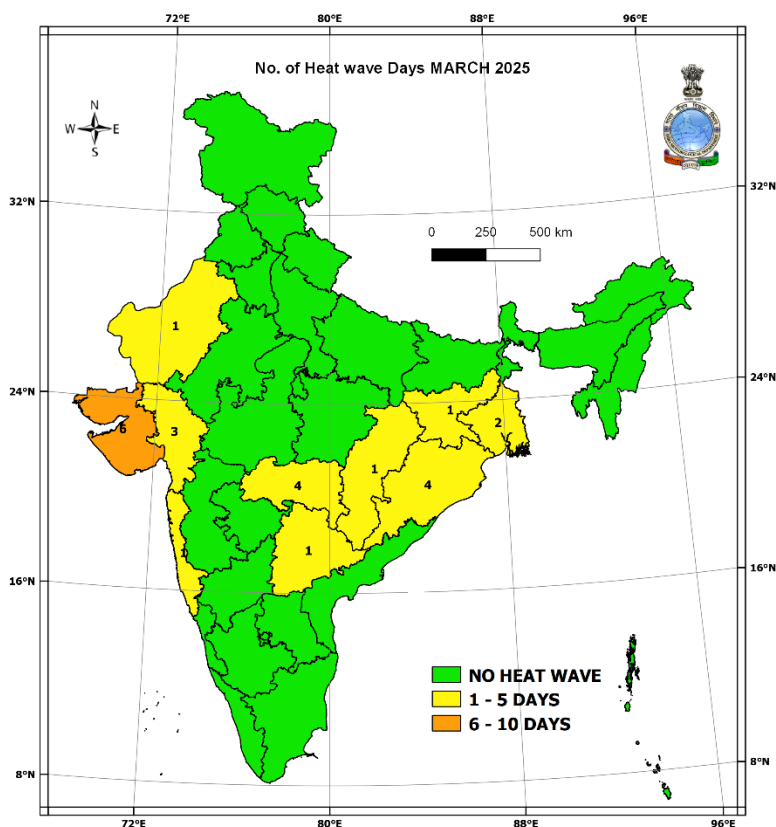


Fig. 5: Observed heat wave days during March 2025

4. Characteristics of Temperatures for the month of March 2025

The average maximum, average minimum and mean temperature for the country as a whole during March 2025 were 32.73°C, 18.32°C and 25.52°C respectively, against the normal of 31.70°C, 17.71°C and 24.71°C based on data of 1991-2020. Thus, the average maximum, average minimum and mean temperature were above normal with departure from normal of 1.02°C, 0.61°C and 0.82°C respectively for the country as a whole. The daily variation of maximum and minimum temperature departure from normal over the country as a whole for March 2025 is shown in Figures 6(a) and (b), respectively.

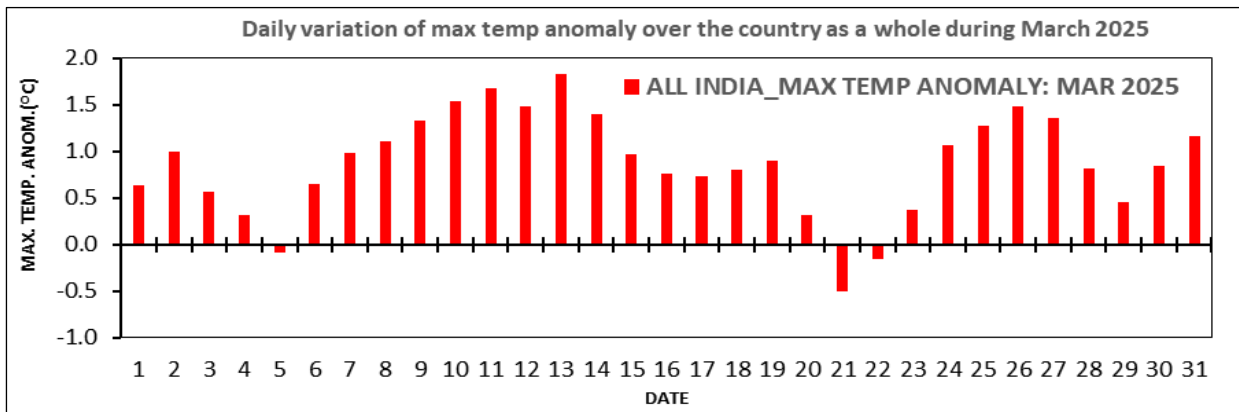


Fig. 6(a): Daily variation of maximum temperature anomaly (departure from normal) over the country as a whole for March 2025

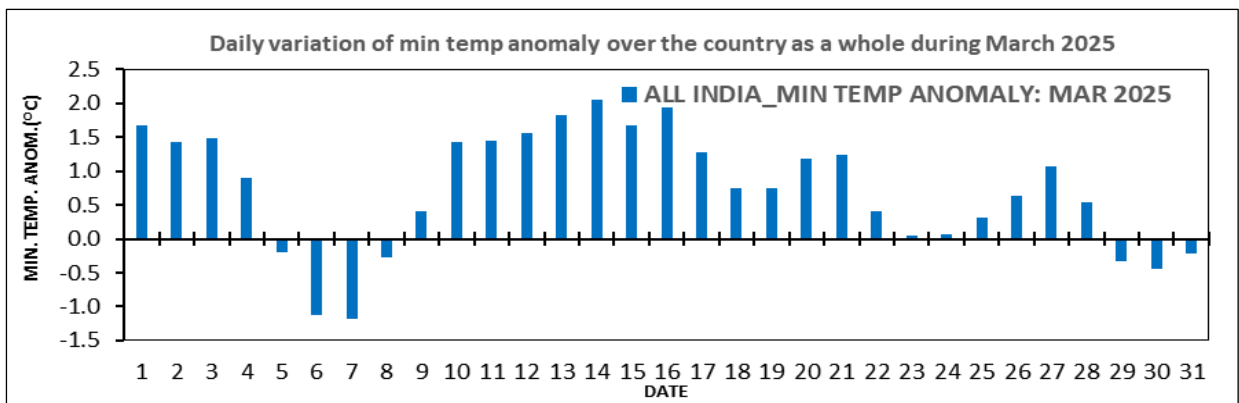


Fig. 6(b): Daily variation of minimum temperature anomaly (departure from normal) over the country as a whole for March 2025

Figure 7 shows the time series of monthly average maximum, average minimum and mean temperature over the country as a whole for the month of March 1901-2025. Over the country during March, the average maximum temperature was 11th highest since 1901. The average minimum temperature was 12th highest since 1901. The mean temperature was 11th highest since 1901.

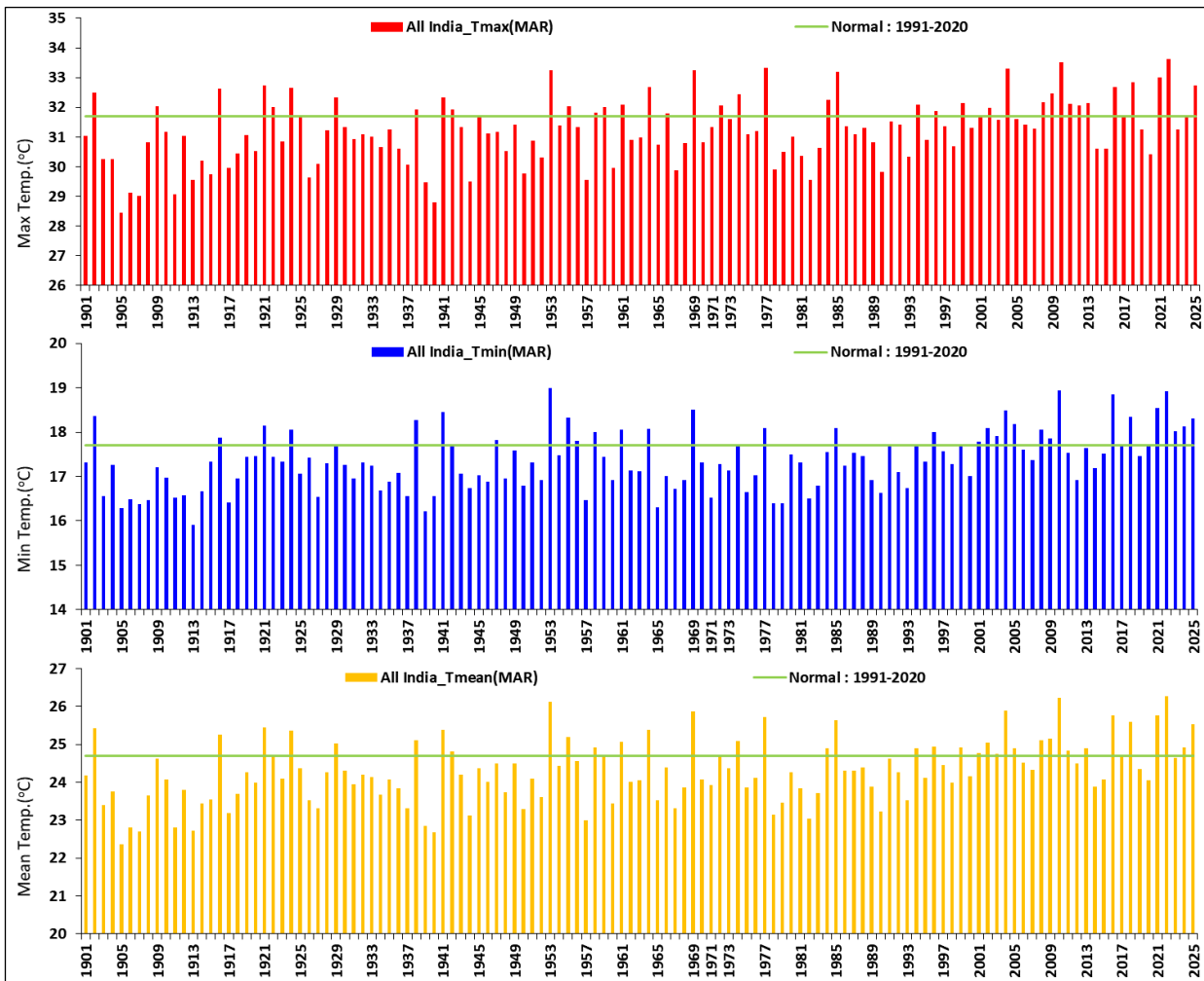


Fig. 7: Time series of monthly average maximum, average minimum and mean temperature over the country as a whole for the month of March 1901-2025

Figure 8 shows the time series of average maximum, average minimum and mean temperature over the Central India for the month of March 1901-2025. Over Central India during March, the average maximum temperature was 36.08°C with departure from normal of 1.34°C (10th highest since 1901). The average minimum temperature was 20.00°C with departure from normal of 0.89°C (8th highest since 1901). The mean temperature was 28.04°C with departure from normal of 1.12°C (8th highest since 1901).

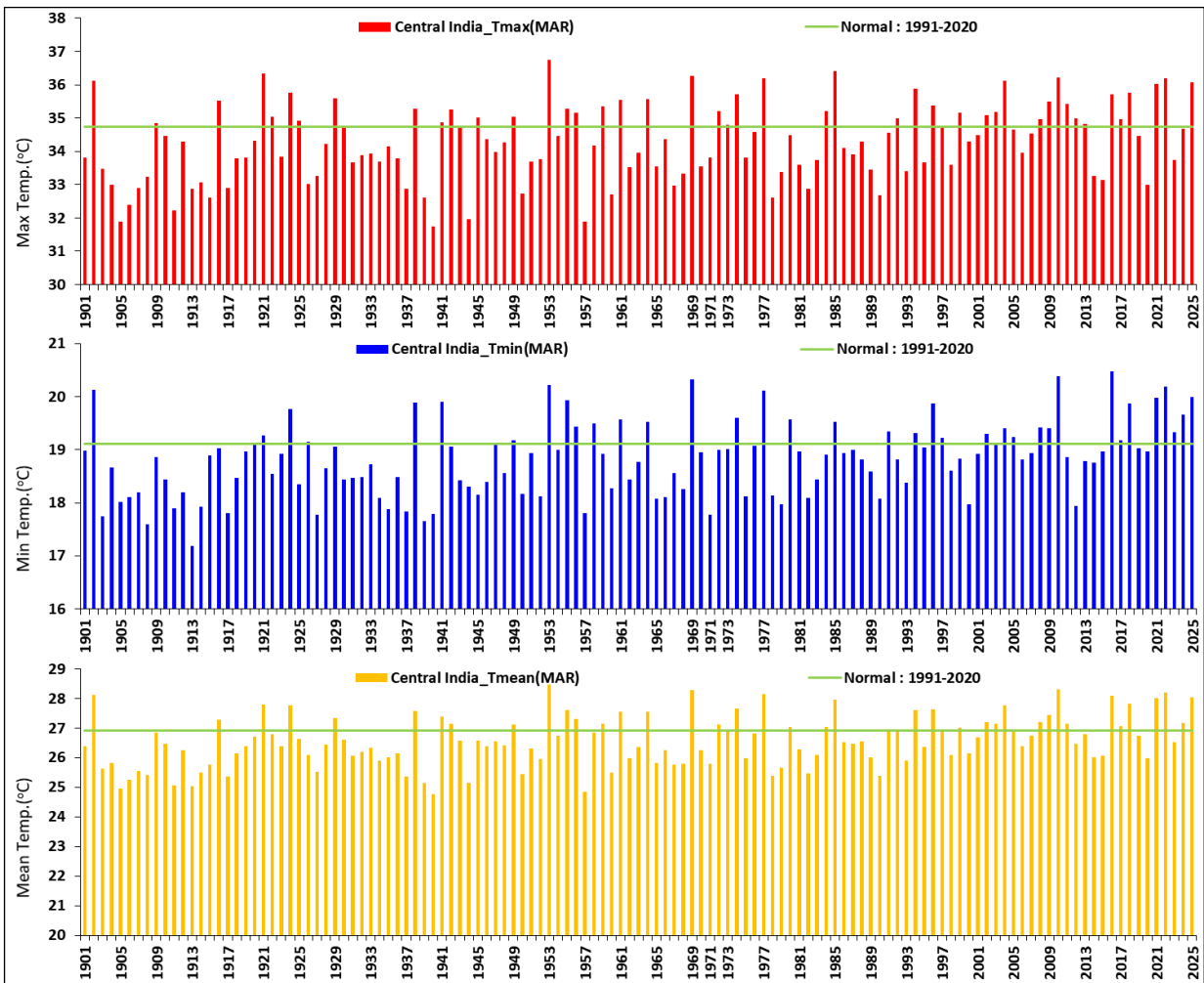


Fig. 8: Time series of monthly average maximum, average minimum and mean temperature over Central India for the month of March 1901-2025

Figure 9 shows the time series of average maximum and mean temperature over the South Peninsular India for the month of March 1901-2025. Over South Peninsular India during March, the average maximum temperature was 35.03°C with departure from normal of 0.43°C (10th highest since 1901). The average minimum temperature was 22.78°C with departure from normal of 0.51°C (9th highest since 1901). The mean temperature was 28.91°C with departure from normal of 0.47°C (6th highest since 1901).

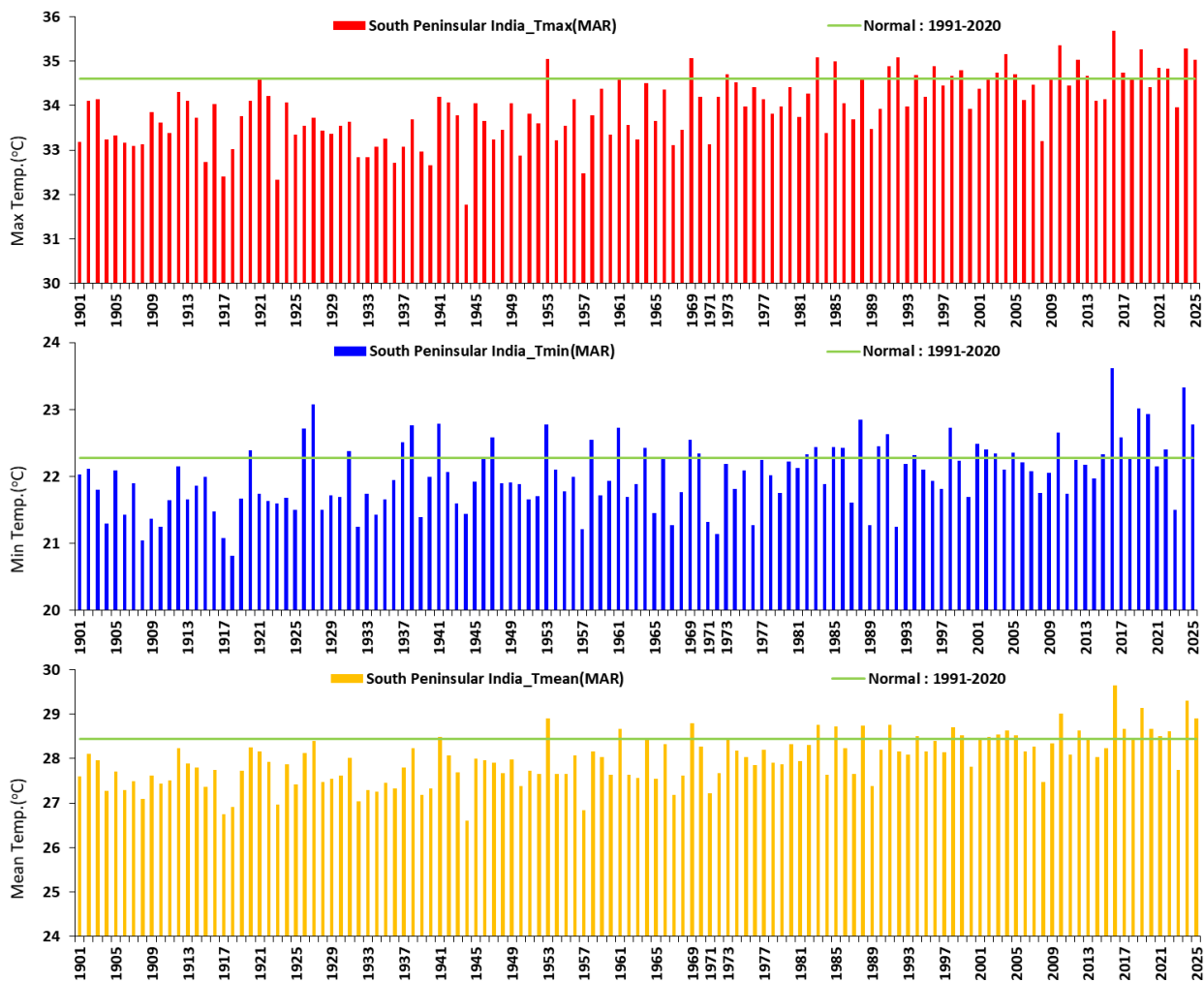


Fig. 9: Time series of monthly average maximum, average minimum and mean temperature over South Peninsular India for the month of March 1901-2025

The Temperatures during March 2025 for all India and homogeneous regions with its top ranks since 1901 are given below:

MAR 2025		Max Temp (°C)	Min Temp (°C)	Mean Temp (°C)
ALL INDIA	ACTUAL	32.73	18.32	25.52
	NORMAL	31.70	17.71	24.71
	ANOMALY	1.02	0.61	0.82
	Rank since 1901	11	12	11
NORTHWEST INDIA	ACTUAL	28.99	13.59	21.29
	NORMAL	27.64	13.37	20.51
	ANOMALY	1.35	0.22	0.78
	Rank since 1901	19	28	21
EAST & NORTHEAST INDIA	ACTUAL	30.52	17.79	24.15
	NORMAL	29.86	16.94	23.40
	ANOMALY	0.66	0.85	0.75
	Rank since 1901	30	7	15
CENTRAL INDIA	ACTUAL	36.08	20.00	28.04
	NORMAL	34.73	19.10	26.92
	ANOMALY	1.34	0.89	1.12
	Rank since 1901	10	8	8
SOUTH PENINSULAR INDIA	ACTUAL	35.03	22.78	28.91
	NORMAL	34.60	22.27	28.44
	ANOMALY	0.43	0.51	0.47
	Rank since 1901	10	9	6

Note: Values are rounded off to the nearest two decimals.

The observed spatial temperature pattern of monthly average maximum, average minimum and mean temperature over India and their departures from normal (1991 to 2020 period) for the month of March 2025 is given in Figure 10.

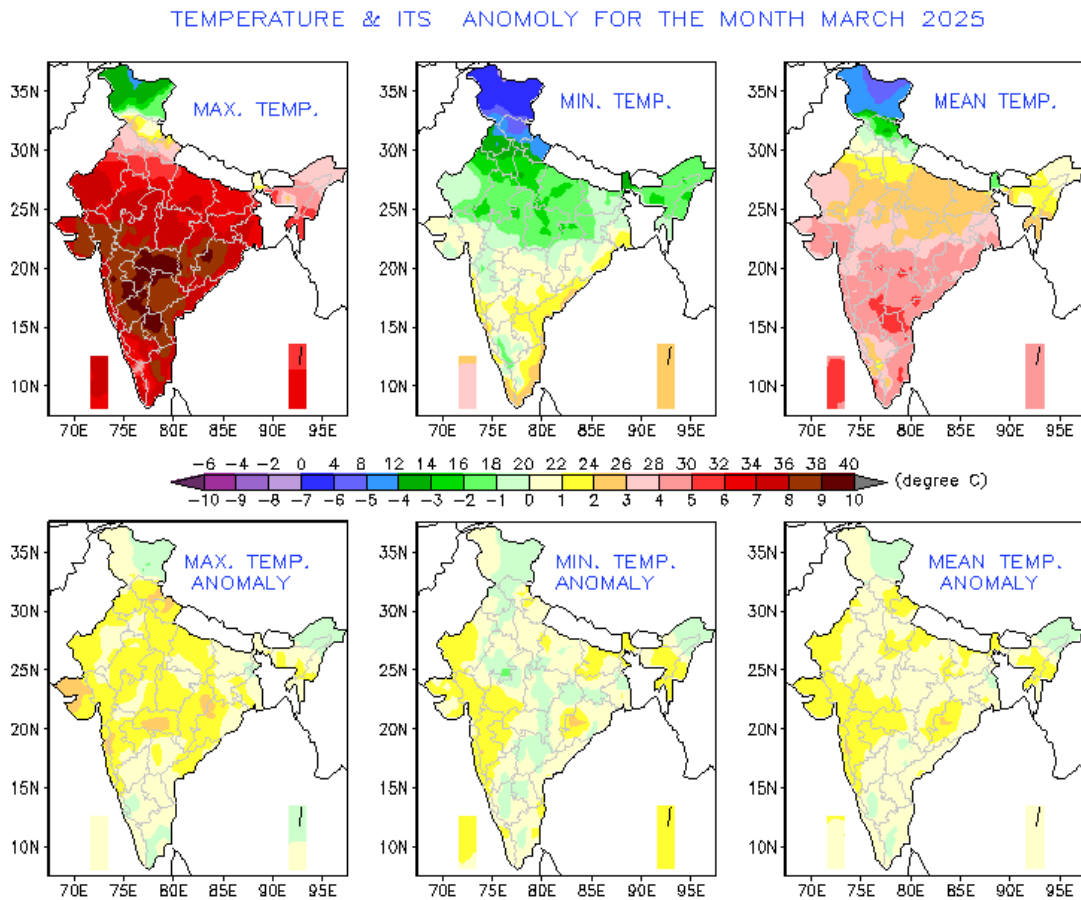


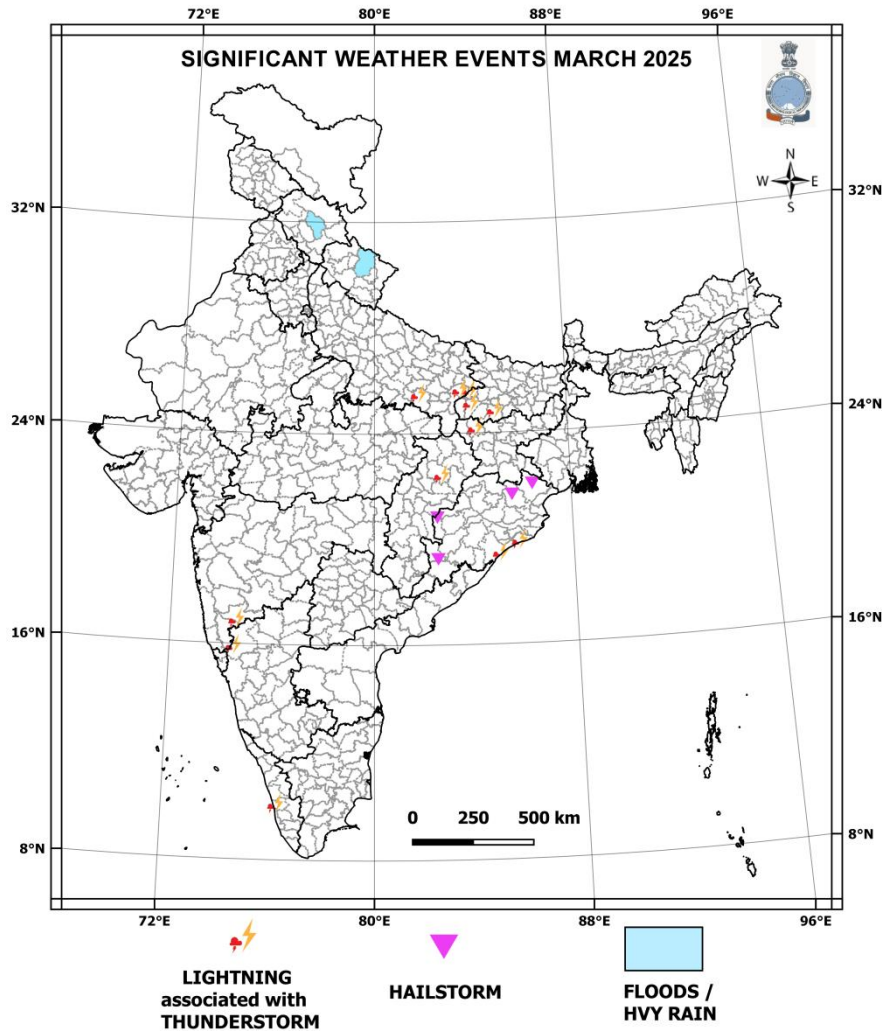
Fig. 10: Observed spatial temperature pattern of monthly average maximum, average minimum, and mean temperature over India (top three from left to right) and their departure from normal (1991 to 2020 period) for March 2025 (lower three from left to right)

4. Significant Weather Events:

During March 2025, about 22 people reportedly died, 78 persons got injured and damage were reported because of the various hazards, as per the media report. The details of event-wise casualties are given below. However, the actual data on casualties and damages may be available from the concerned state governments.

Event	Number of human deaths
Lightning:	15 (Uttar Pradesh, Bihar, Chhattisgarh, Odisha, Karnataka, Jharkhand, Kerala, Maharashtra)
Heavy Rains and Landslides:	7 (Mainly Himachal Pradesh, Uttarakhand)

Also, due to an intense hailstorm event on 20 March, 67 persons got injured in Mayurbhanj district of Odisha. 18 villages under Bisoi and 39 villages of Bangiriposi block were severely affected with widespread damage to crops, houses, etc. Keonjhar, Nabarangpur, Nuapada districts of Odisha also got affected due to hailstorm. The significant weather events during the month of March 2025 are given in Figure 10.



**Fig. 10: Deaths and damages due to significant weather events during March 2025
(Based on real time media reports)**