

भारत सरकार

Government of India

पृथ्वी विज्ञान मंत्रालय (एम. ओ. ई. एस.)

Ministry of Earth Sciences (MoES)

भारत मौसम विज्ञान विभाग

INDIA METEOROLOGICAL DEPARTMENT

Climate Research and Services (CRS)



Monthly Climate Summary for April 2025

1. Monthly Rainfall Scenario (01 to 30 April, 2025)

Rainfall over the country as a whole for the month of April 2025 was 38.7 mm which is 1% less than its Long Period Average (LPA) of 39.3 mm. Daily variation of the rainfall over the country as a whole during the month of April 2025 with normal based on data of 1971-2020 is presented in Fig. 1 (a). The all India rainfall percentage departure from normal for April during 1901-2025 is presented in Fig. 1(b). The monthly rainfall over All India (38.7 mm) was 47th highest since 1901 and 12th highest since 2001 (Fig. 1c). Rainfall over homogeneous region of Northwest India (23.1 mm) was 43rd lowest since 1901 and 7th lowest since 2001 (Fig. 1d). Rainfall over homogeneous region of central India (15.9 mm) was 21rd highest since 1901 and 5th highest since 2001 (Fig. 1e). Rainfall over homogeneous region of south peninsular India (54.4 mm) was 12th highest since 1901 and 5th highest since 2001 (Fig. 1f).

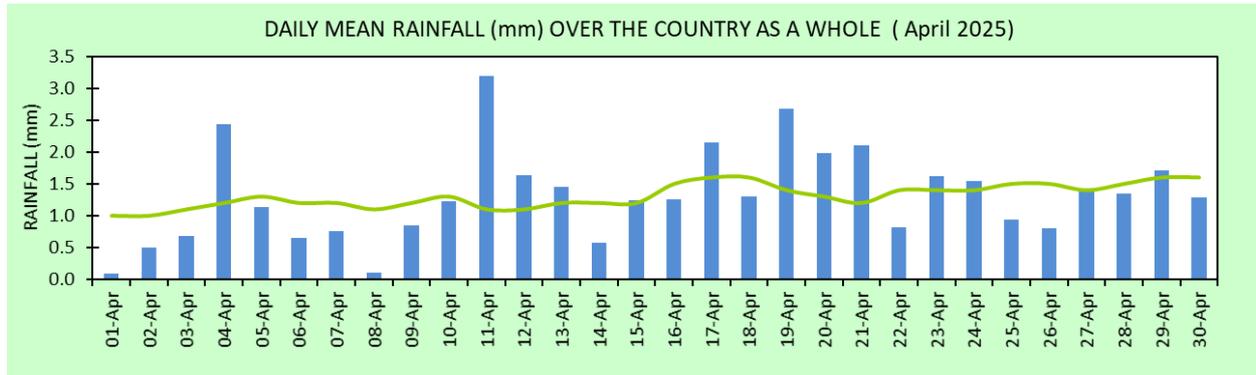


Fig. 1(a): Daily variation of rainfall over the country as a whole during April 2025.

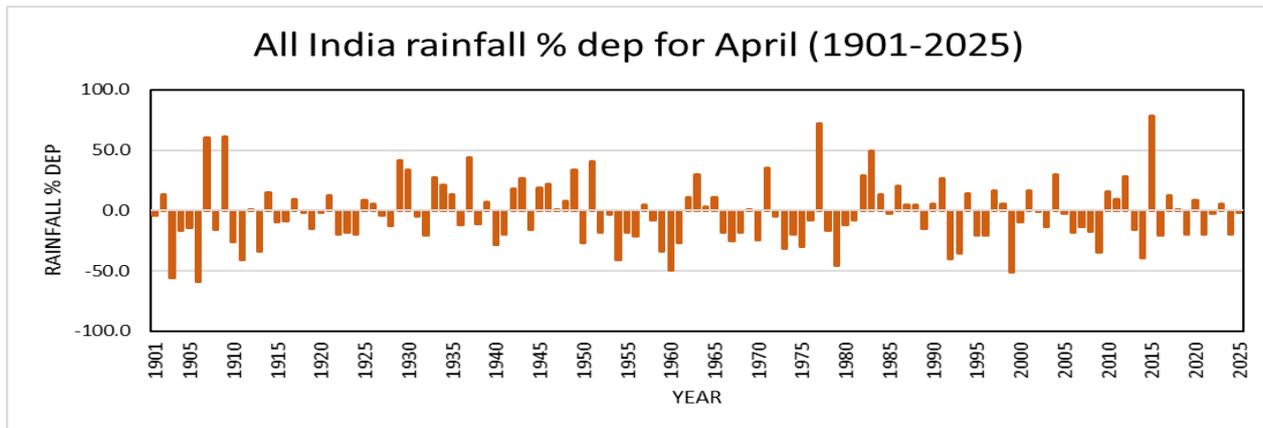


Fig. 1(b): All India monthly rainfall percentage departure from normal (1971-2020) for April from 1901-2025

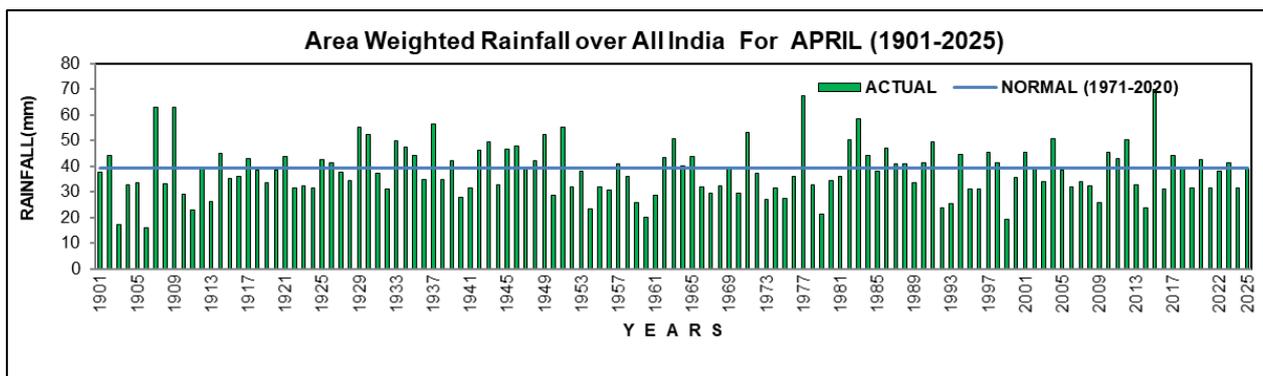


Fig. 1(c): Time series of area weighted rainfall over All India for April (1901 – 2025)

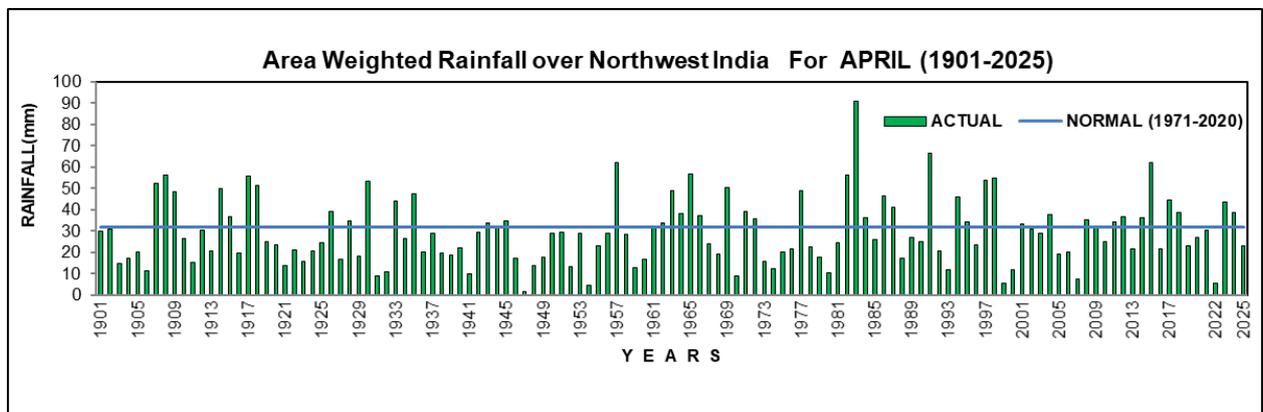


Fig. 1(d): Time series of area weighted rainfall over northwest India for April (1901 – 2025)

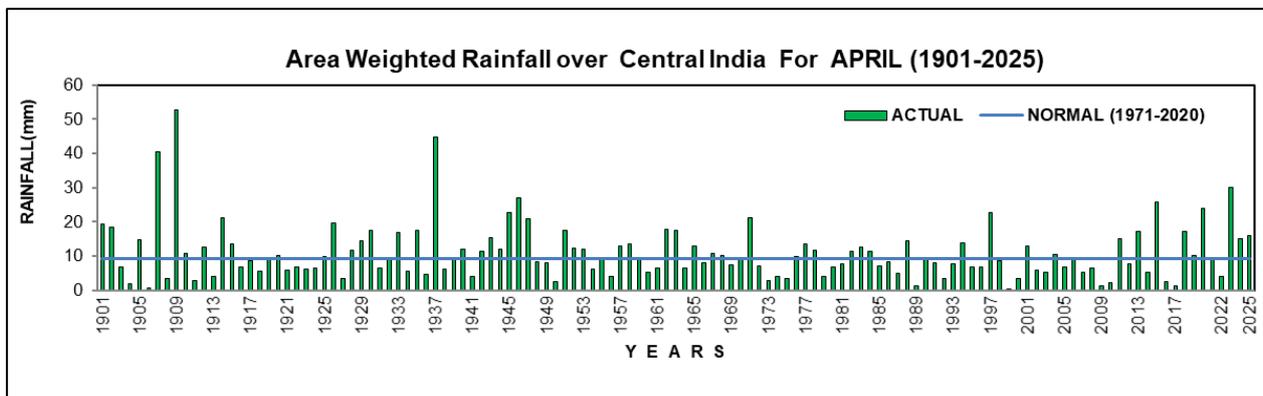


Fig. 1(e): Time series of area weighted rainfall over Central India for April (1901 – 2025)

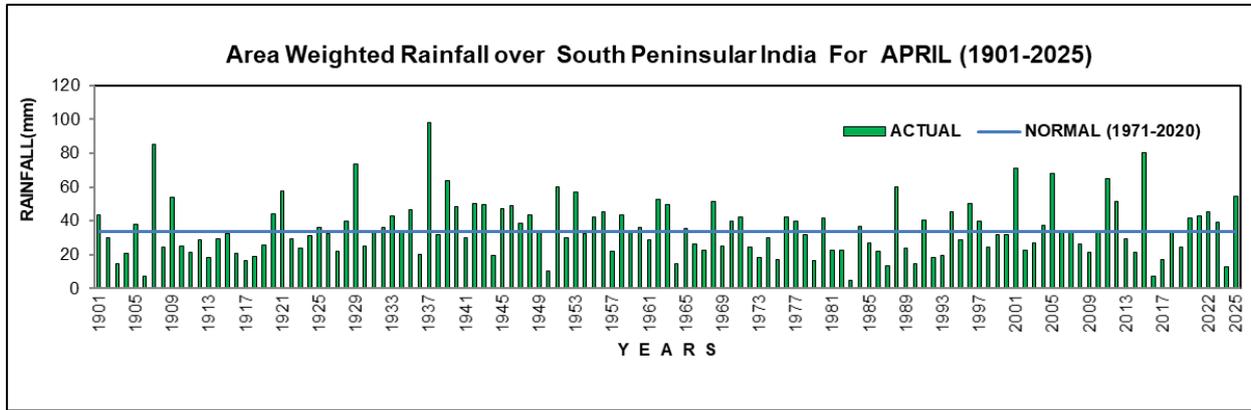


Fig. 1(f): Time series of area weighted rainfall over South peninsular India for April (1901 – 2025)

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

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	38.7	39.3	-1.5
Northwest India	23.1	31.9	-27.5
Central India	15.9	9.2	73.3
South Peninsula	54.4	33.9	60.4
East & northeast India	97.5	123.5	-21.1

During this month, 11 sub-divisions received large excess rainfall, 6 sub-divisions received excess rainfall, 8 sub-divisions received normal rainfall, 7 received deficient rainfall and 4 sub-divisions received large deficient rainfall (Fig. 2).

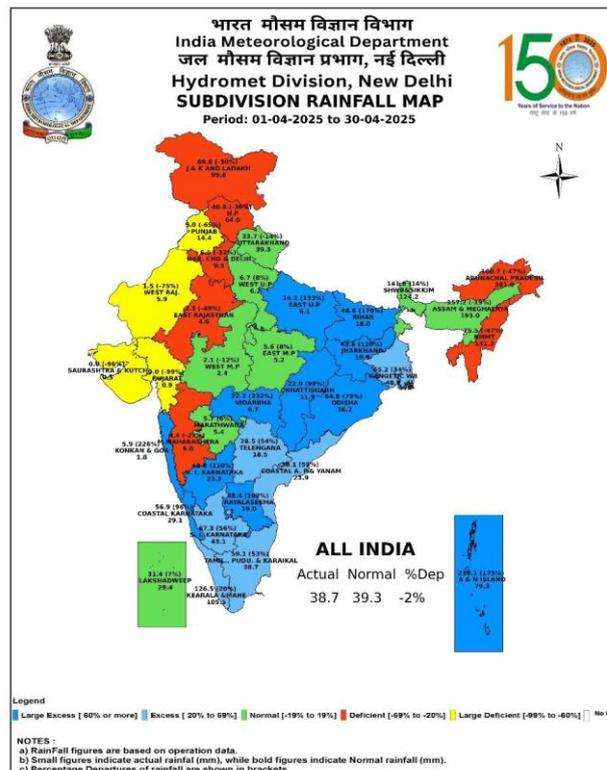


Fig. 2: Subdivision-wise rainfall distribution for April 2025

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

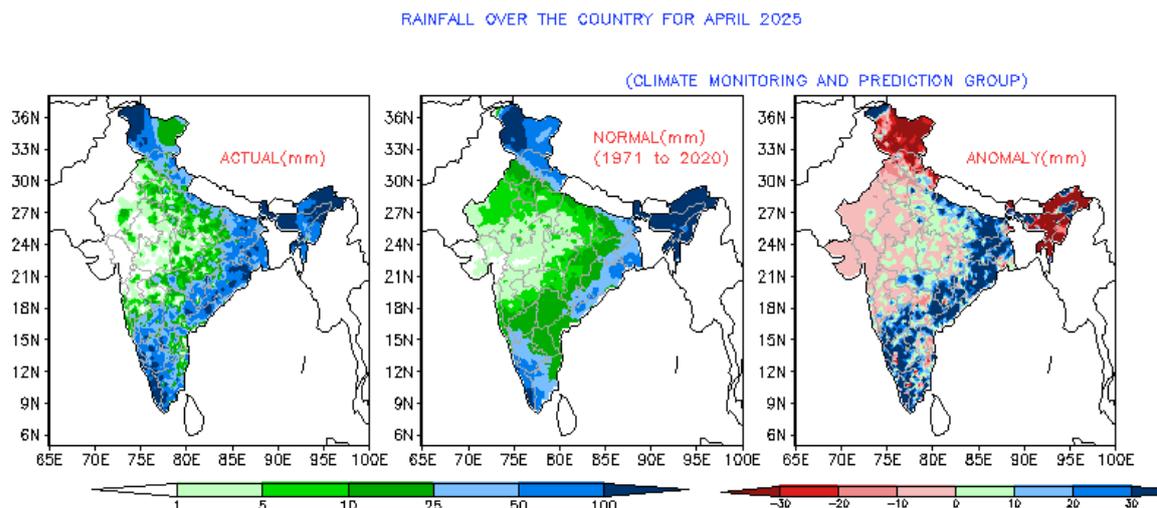


Fig. 3: Observed spatial Rainfall pattern for the month April 2025 over India and their departure from normal (1971 to 2020 period). Departure from normal is anomaly = actual rainfall - normal rainfall

2. Frequency of Heavy Rainfall events

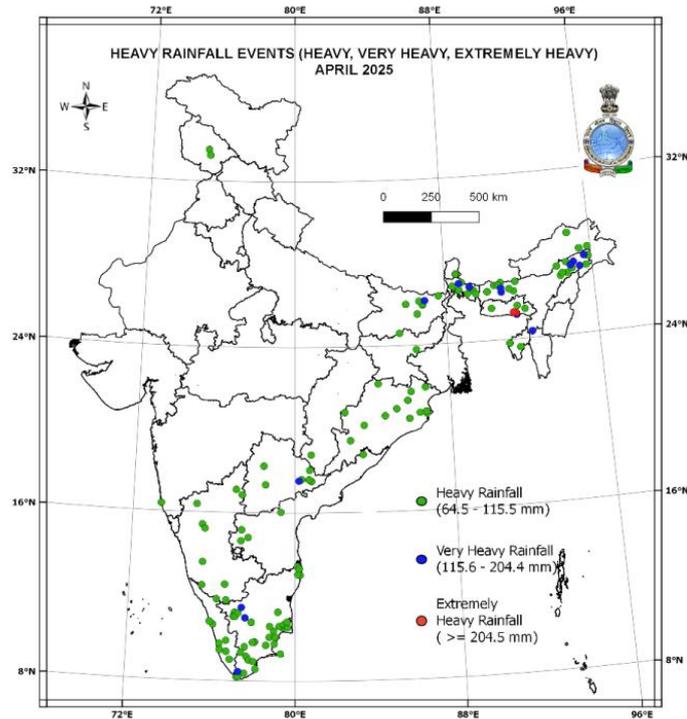
April 2025 witnessed Extremely heavy rainfall (> 204.4 mm) over Assam & Meghalaya, very heavy rainfall (115.6 – 204.4 mm) over Sub Himalayan West Bengal & Sikkim, Bihar, Tamil Nadu, Puducherry & Karaikal and Telangana, heavy rainfall events (64.5 – 115.5 mm) were observed over peninsular India and east and northeast India.

Some stations received record rainfall (24 hours). The table below shows stations that received 24-hour record rainfall and their previous record.

24 hour record rainfall				
STATION NAME	NEW RECORD (mm)#	DATE (APRIL 2025)	PREVIOUS RECORD (mm)	DATE
MOHANBARI	187.7	24-04-2025	124.6	18-04-1973
PATNA	42.6	11-04-2025	34.0	16-04-1983
T.B.I.A.	16.8	04-04-2025	0.4	22-04-2014

based on real-time available data

The location of occurrences of heavy and very heavy rainfall events is shown in the Fig. 4. Out of total 136 occasions, 3 were extremely heavy rainfall (>204.4 mm), 15 were very heavy rainfall (115.6 to 204.4 mm) and 118 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 April 2025

3. Chief Synoptic weather features observed during April 2025

A Low Pressure System (well-marked) formed over the Bay of Bengal during 7-10 April 2025. There were Four Western Disturbances (WDs) observed over Indian region during 1-6 , 8-14 ,17-24 and 24-30 April. Which impacted many regions of the country. Severe thunderstorm activity associated with an active Western Disturbances passed over the country frequently causing intense thunderstorms especially over central, peninsular, east and NE India. Associated squally/gusty winds and Hailstorm, Lightning occurred over many parts of the country. With Bihar, Utter Pradesh, Odisha, Chhattisgarh, MP, Western Himalayan Region, North Interior Karnataka, North Andhra Pradesh being worst affected.

Heat wave: Rajasthan and Gujarat observed 6-11 number of heat wave days and east MP and Vidarbha observed 4-6 number of heat wave days. Over East central India, Maharashtra and adjoining northern Peninsular India, 1-3 days of heat wave was observed

Sub-division wise heat wave days are shown in the Figure 5.

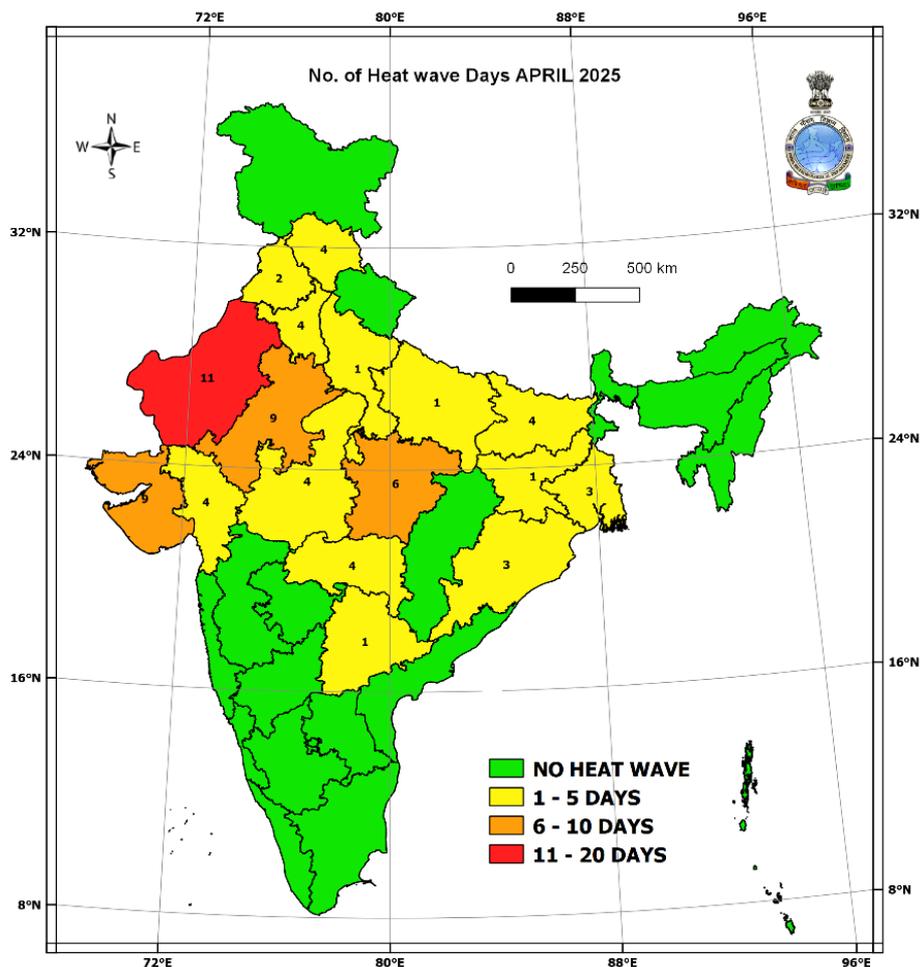


Fig. 5: Observed heat wave days during April 2025.

Some stations recorded the highest maximum and lowest minimum temperature for the month. A list of stations is given below with their previous record and date.

Highest Maximum				
STATION NAME	NEW RECORD (°C) #	DATE (APRIL 2025)	PREVIOUS RECORD (°C)	DATE
BALLIA (MIRDHA)	44	26-04-2025	43.1	30-04-2019
CHITTORGARH	45.2	18-04-2025	45.1	29-04-2009
HONAVAR	39.5	24-04-2025	37.5	18-04-1987
JAISALMER	46.4	30-04-2025	45.8	29-04-2009
JHARSUGUDA	46.2	22-04-2025	46.1	20-04-2010
KALPA	25.3	30-04-2025	25.2	16-04-2007
KOKERNAG	29.1	30-04-2025	28.3	30-04-2007
NANDURBAR	46.5	10-04-2025	45.6	25-04-1958
PAHALGAM	27.8	29-04-2025	27.4	28-04-1979
RAJKOT	46.2	28-04-2025	44.8	14-04-2017
UDGIR	42.6	24-04-2025	42.3	17-04-2010
Lowest Minimum				
STATION NAME	NEW RECORD (0C)#	DATE (APRIL 2025)	PREVIOUS RECORD (0C)	DATE
KARUR PARAMATHI	17	07-04-2025	17.6	22-04-1999

based on real-time available data

4. Characteristics of Temperatures for the month of April 2025

The average maximum, average minimum and mean temperature for the country as a whole during April 2025 were 35.97°C, 22.35°C and 29.16°C respectively, against the normal of 35.02°C, 21.57°C and 28.29°C based on data of 1991-2020. Thus, the average maximum, average minimum and mean temperature were above normal with departure from normal of 0.95°C, 0.78°C and 0.86°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 April 2025 is shown in the figure 6(a) and (b), respectively.

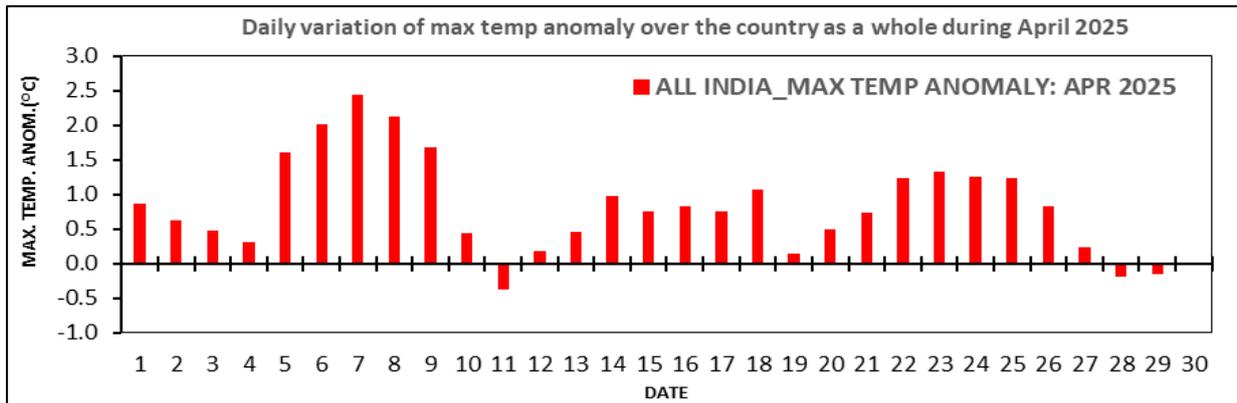


Fig. 6(a): Daily variation of maximum temperature anomaly (departure from normal) over the country as a whole for April 2025

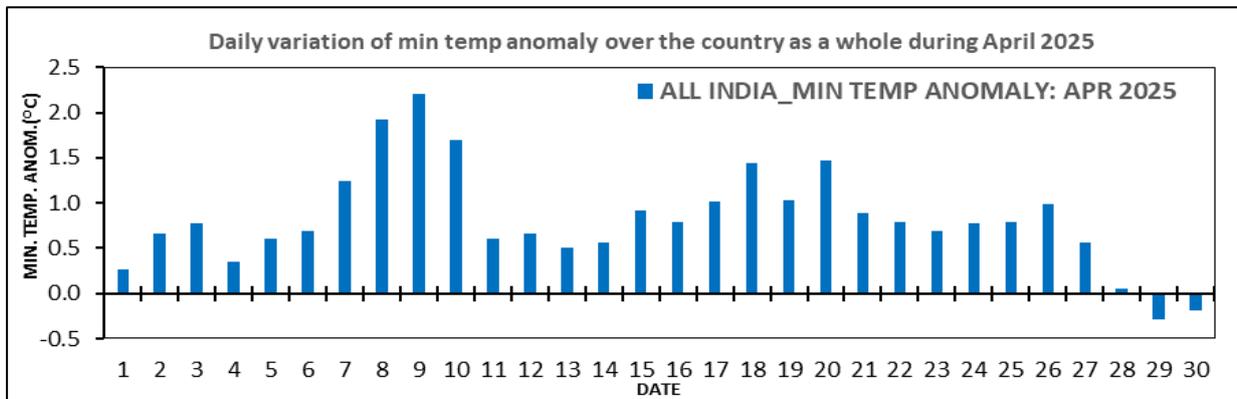


Fig. 6(b): Daily variation of minimum temperature anomaly (departure from normal) over the country as a whole for April 2025

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 April 1901-2025. Over the country during April, the average maximum temperature was the 8th highest and average minimum temperature was the 9th highest since 1901. The mean temperature was the 7th highest since 1901.

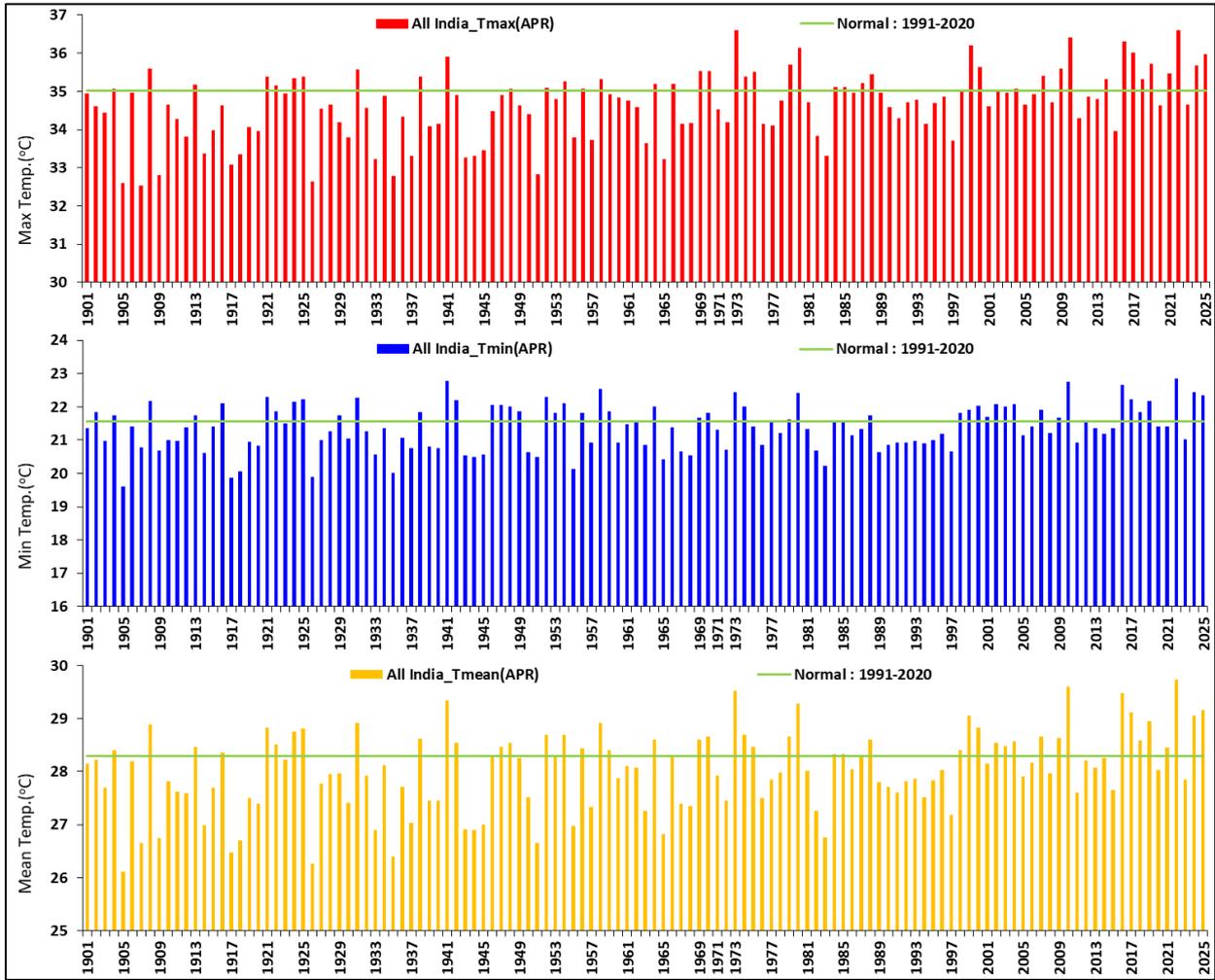


Fig. 7: Time series of monthly average maximum, average minimum and mean temperature over the country as a whole for the month of April 1901-2025

Figure 8 shows the time series of average maximum, average minimum and mean temperature over Northwest India for the month of April 1901-2025. Over Northwest India during April, the average maximum temperature was the 3rd highest (35.55°C with departure from normal of 2.10°C) after the years 2022 (37.03°C) and 2010 (36.13°C) since 1901. The average minimum temperature was 19.56°C with departure from normal of 1.02°C (12th highest since 1901). The mean temperature was the 3rd highest (27.56°C with departure from normal of 1.56°C) after the years 2022 (28.75°C) and 2010 (28.38°C) since 1901.

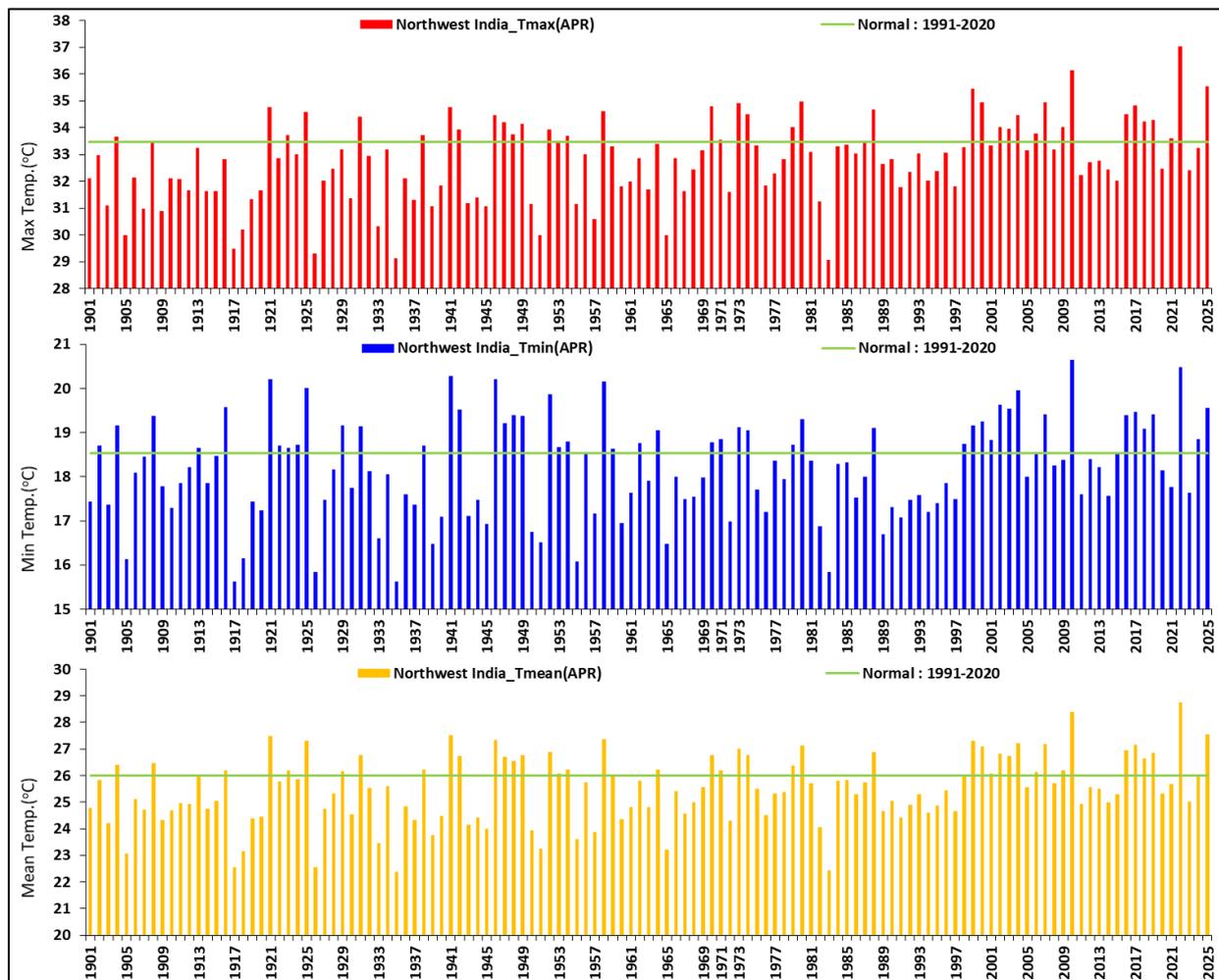


Fig. 8: Time series of monthly average maximum, average minimum and mean temperature over Northwest India for the month of April 1901-2025

Figure 9 shows the time series of average maximum, average minimum and mean temperature over the Central India for the month of April 1901-2025. Over Central India during April, the average maximum temperature was 38.83°C with departure from normal of 0.93°C (9th highest since 1901). The average minimum temperature was 23.98°C with departure from normal of 0.81°C (10th highest since 1901). The mean temperature was 31.41°C with departure from normal of 0.87°C (6th highest since 1901).

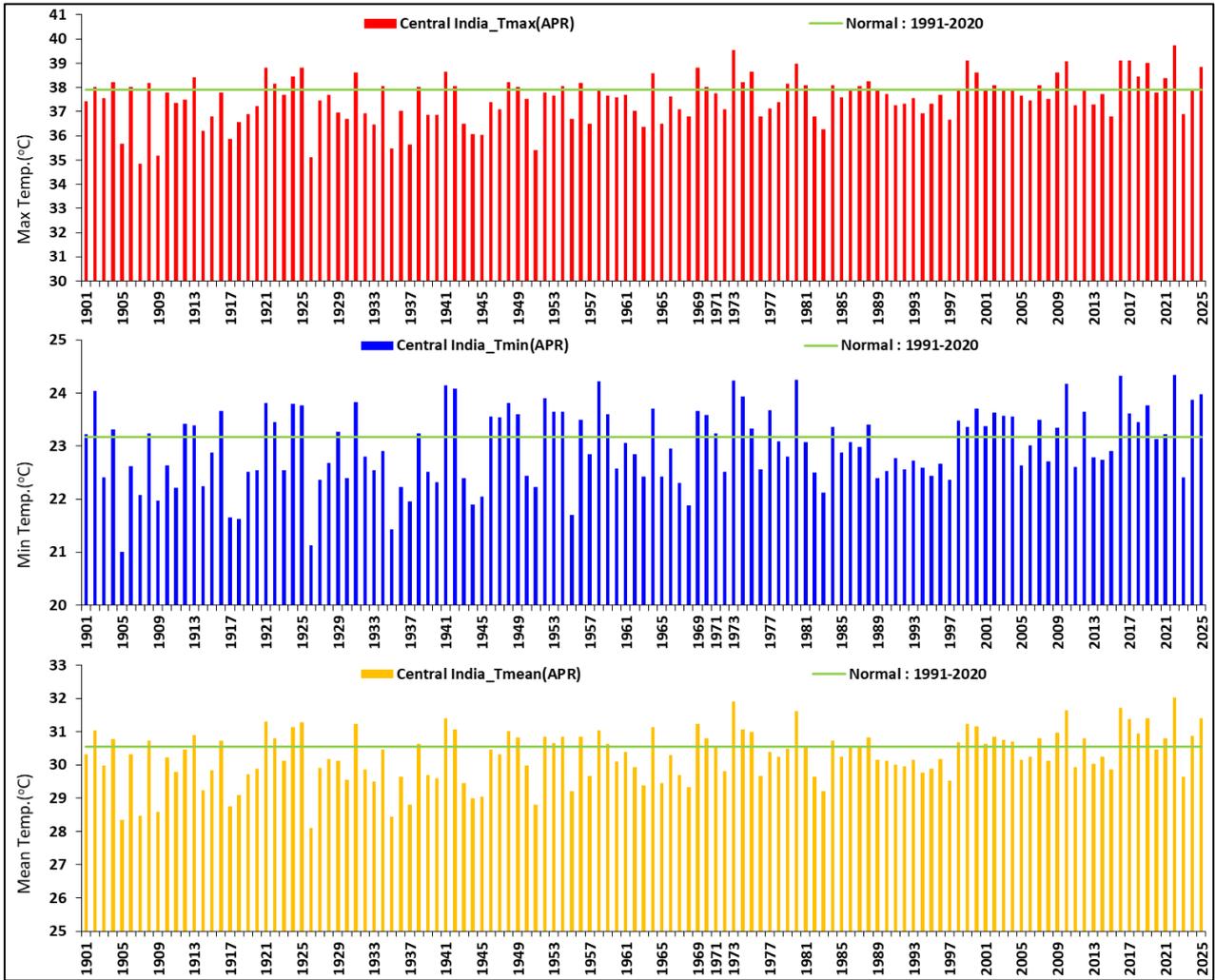


Fig. 9: Time series of monthly average maximum, average minimum and mean temperature over Central India for the month of April 1901-2025

Figure 10 shows the time series of average minimum temperature over the East & Northeast India for the month of April 1901-2025. Over East & Northeast India during April, the average minimum temperature was 21.46°C with departure from normal of 1.05°C (8th highest since 1901).

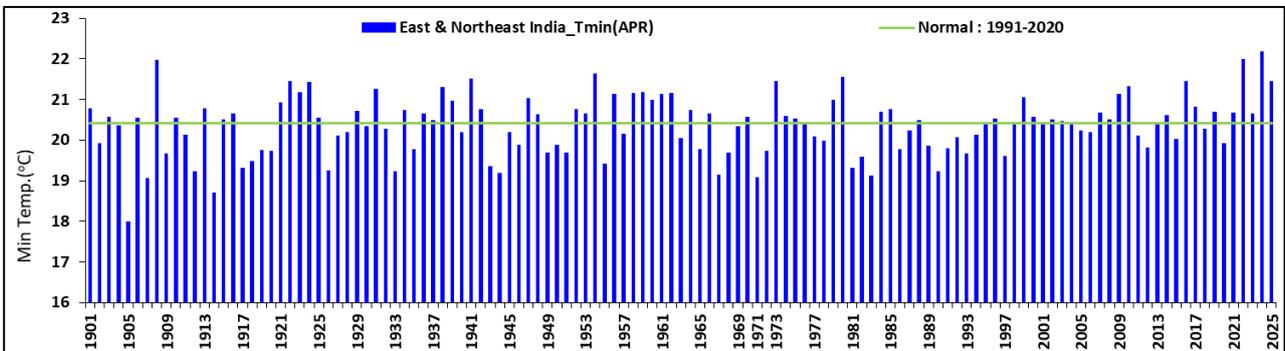


Fig. 10: Time series of monthly average minimum temperature over East & Northeast India for the month of April 1901-2025

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

APR 2025		Max Temp (°C)	Min Temp (°C)	Mean Temp (°C)
ALL INDIA	ACTUAL	35.97	22.35	29.16
	NORMAL	35.02	21.57	28.29
	ANOMALY	0.95	0.78	0.86
	Rank since 1901	8	9	7
NORTHWEST INDIA	ACTUAL	35.55	19.56	27.56
	NORMAL	33.45	18.54	26.00
	ANOMALY	2.10	1.02	1.56
	Rank since 1901	3	12	3
EAST & NORTHEAST INDIA	ACTUAL	32.32	21.46	26.89
	NORMAL	31.80	20.41	26.11
	ANOMALY	0.52	1.05	0.78
	Rank since 1901	50	8	27
CENTRAL INDIA	ACTUAL	38.83	23.98	31.41
	NORMAL	37.90	23.17	30.54
	ANOMALY	0.93	0.81	0.87
	Rank since 1901	9	10	6
SOUTH PENNINSULAR INDIA	ACTUAL	35.68	24.60	30.14
	NORMAL	35.89	24.43	30.16
	ANOMALY	-0.22	0.17	-0.02
	Rank since 1901	53	28	44

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

The five highest temperature records with corresponding top ranks since 1901 along with year of occurrence for Northwest India (TMax, TMean) are given in the tables below:

Northwest India (April 2025)				
Year	TMax	Normal	Anomaly	Rank
2022	37.03	33.45	3.58	1
2010	36.13		2.67	2
2025	35.55		2.10	3
1999	35.45		2.00	4
1980	34.98		1.53	5

Northwest India (April 2025)				
Year	TMean	Normal	Anomaly	Rank
2022	28.75	26.00	2.76	1
2010	28.38		2.39	2
2025	27.56		1.56	3
1941	27.52		1.52	4
1921	27.48		1.49	5

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 April 2025 is given in Figure 11.

TEMPERATURE & ITS ANOMOLY FOR THE MONTH APRIL 2025

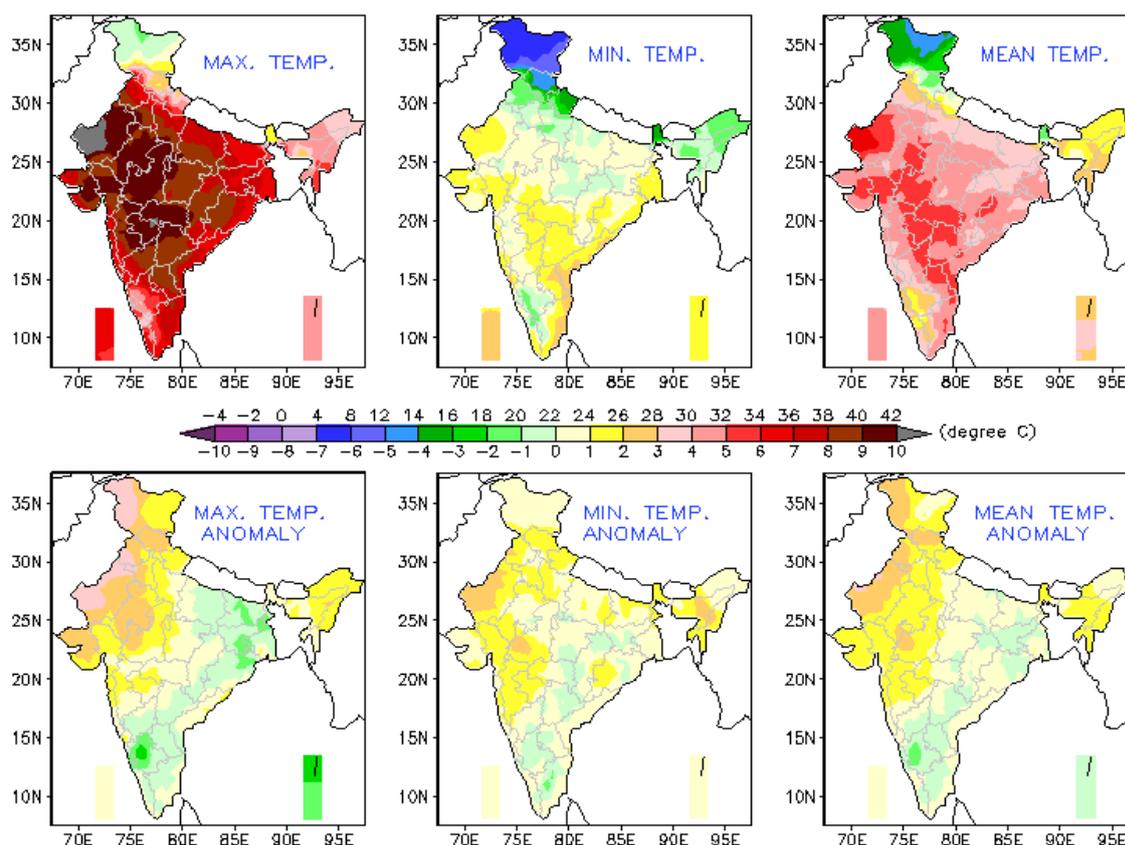


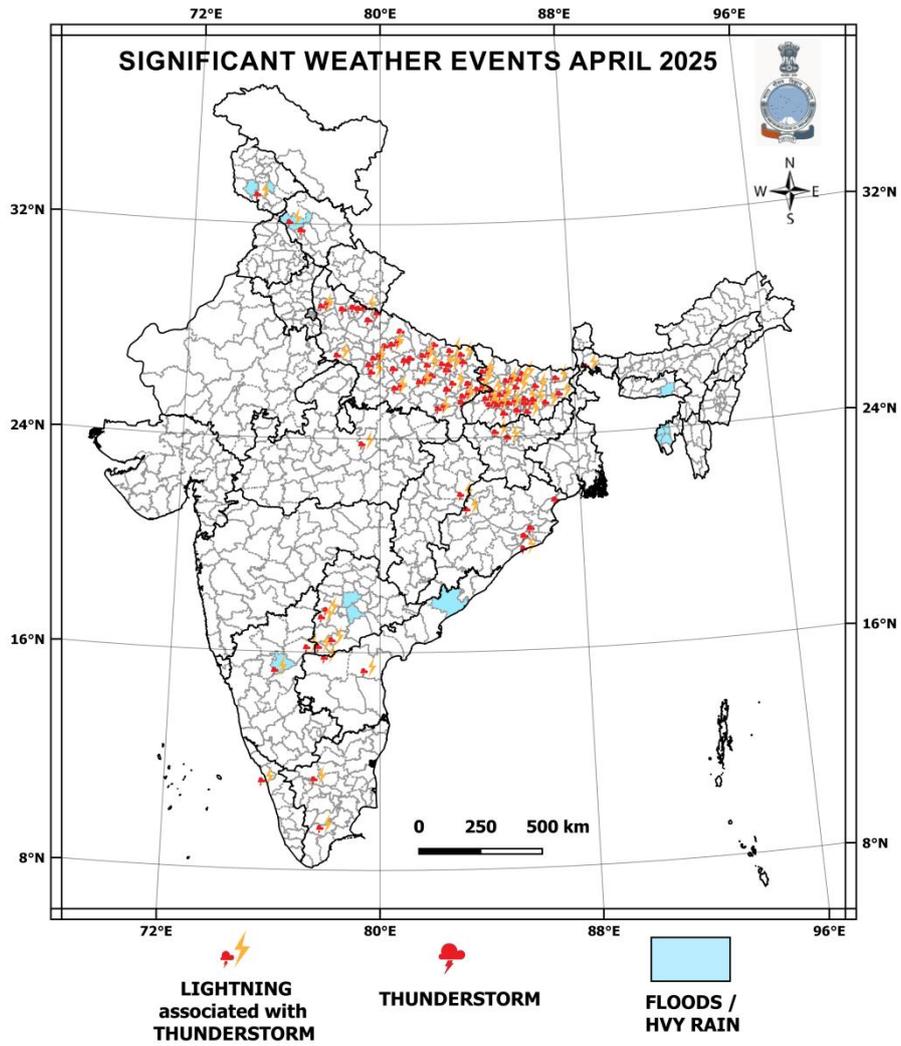
Fig. 11: Observed spatial temperature pattern of monthly average maximum, average minimum, and mean temperature over India (top three from left to right) and their departure from normal (1991 to 2020 period) for April 2025 (lower three from left to right)

5. Significant Weather Events:

During April, about 195 people reportedly died, more than 35 people injured, more than 320 livestock perished and damage occurred because of the mentioned hazards, as per the media report. The casualties and damages due to significant weather events are given in Fig.12 The details of event-wise casualties are given below. However, the actual data on casualties and damages may be available to concerned state governments.

Event	Number of human deaths
Lightning and Thunderstorm:	182 (Bihar, Uttar Pradesh, Jharkhand, Karnataka, Andhra Pradesh, Odisha, Telangana, Jammu and Kashmir, Madhya Pradesh, Chhattisgarh, Himachal Pradesh, Kerala, Tamil Nadu, Uttarakhand, West Bengal)
Heavy Rains, Floods and Landslides:	13 (Andhra Pradesh, Tripura, Telangana, Jammu and Kashmir)

Also, East Khasi Hills district of Meghalaya affected due to Extremely Heavy Rains.



**Fig. 12: Deaths and damages due to significant weather events during April 2025
(Based on real-time media reports)**