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)

Climate Summary for the month of July 2025

1. Monthly Rainfall Scenario (01 to 31 July, 2025)

Rainfall over the country as a whole for the month of July 2025 was 294.1 mm which is 5% more than its Long Period Average (LPA) of 280.5 mm. Daily variation of the rainfall over the country as a whole during the month of July 2025 with normal based on data of 1971-2020 is presented in Fig 1 (a). Figure 1(b) presents the percentage departure from normal of all-India rainfall for the month of July during the period 1901–2025.

All-India rainfall, recorded at 294.1 mm, ranked as the 58th highest since 1901 and the 10th highest since 2001, as shown in Fig. 1(c). In contrast, rainfall over East & Northeast India, measured at 312.3 mm, was the 7th lowest since 1901 and the 4th lowest since 2001, as shown in Fig. 1(d).

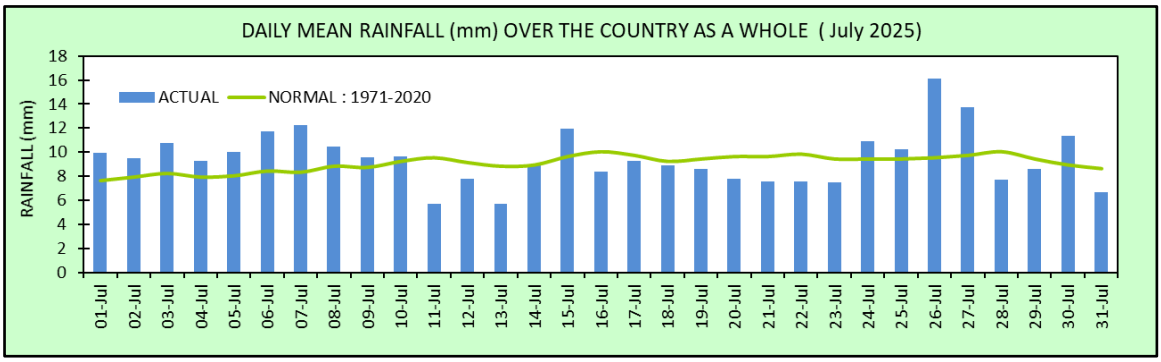


Fig.1 (a): Daily variation of rainfall over the country as a whole during July 2025.

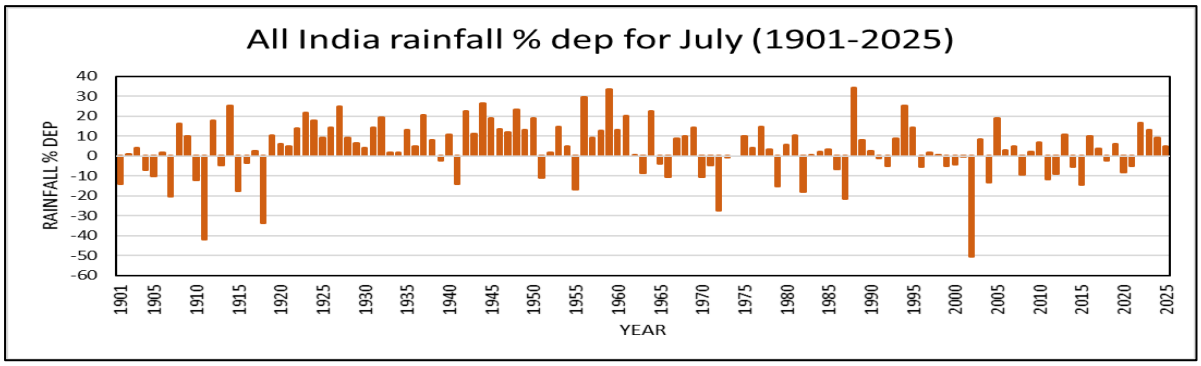


Fig 1(b): All India monthly rainfall percentage departure from normal (1971-2020) for July (1901-2025.)

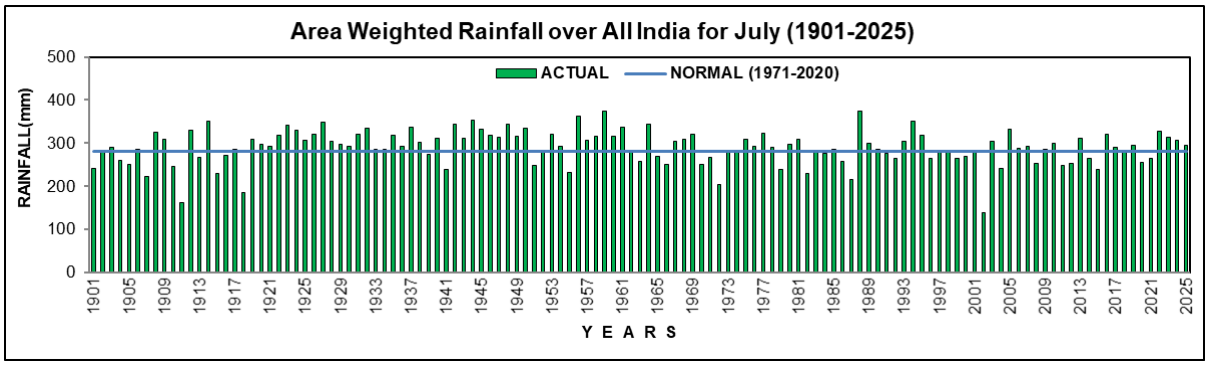


Fig 1(c): Time series of area weighted rainfall over All India for July (1901 – 2025).

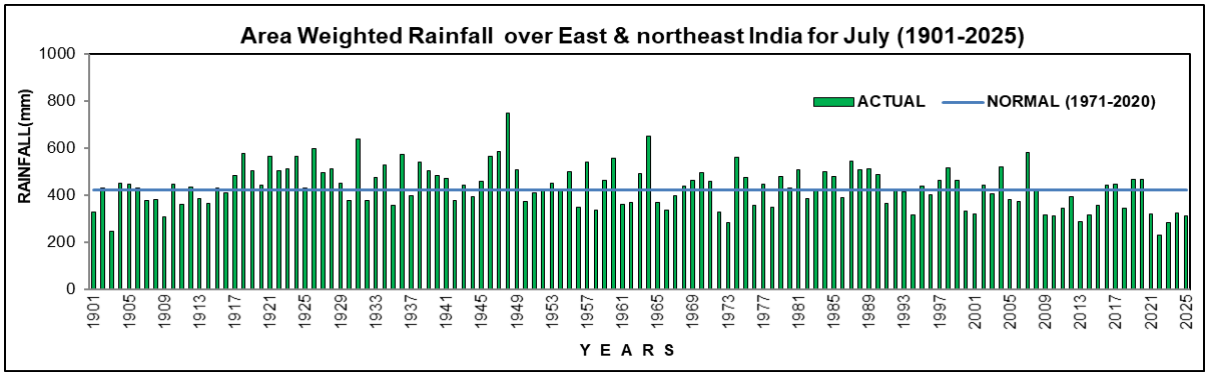


Fig 1(d): Time series of area weighted rainfall over East & Northeast India for July (1901 – 2025).

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

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	**294.1**	**280.5**	**4.8**
Northwest India	**237.4**	**209.7**	**13.2**
Central India	**391.8**	**321.3**	**21.9**
South Peninsula	**200.4**	**204.5**	**-2.0**
East & Northeast India	**312.3**	**424.1**	**-26.4**

During this month, 3 sub-divisions received large excess rainfall, 7 sub-divisions received excess rainfall, 18 sub-divisions received normal rainfall and 8 sub-divisions received deficient rainfall. (Fig 2).

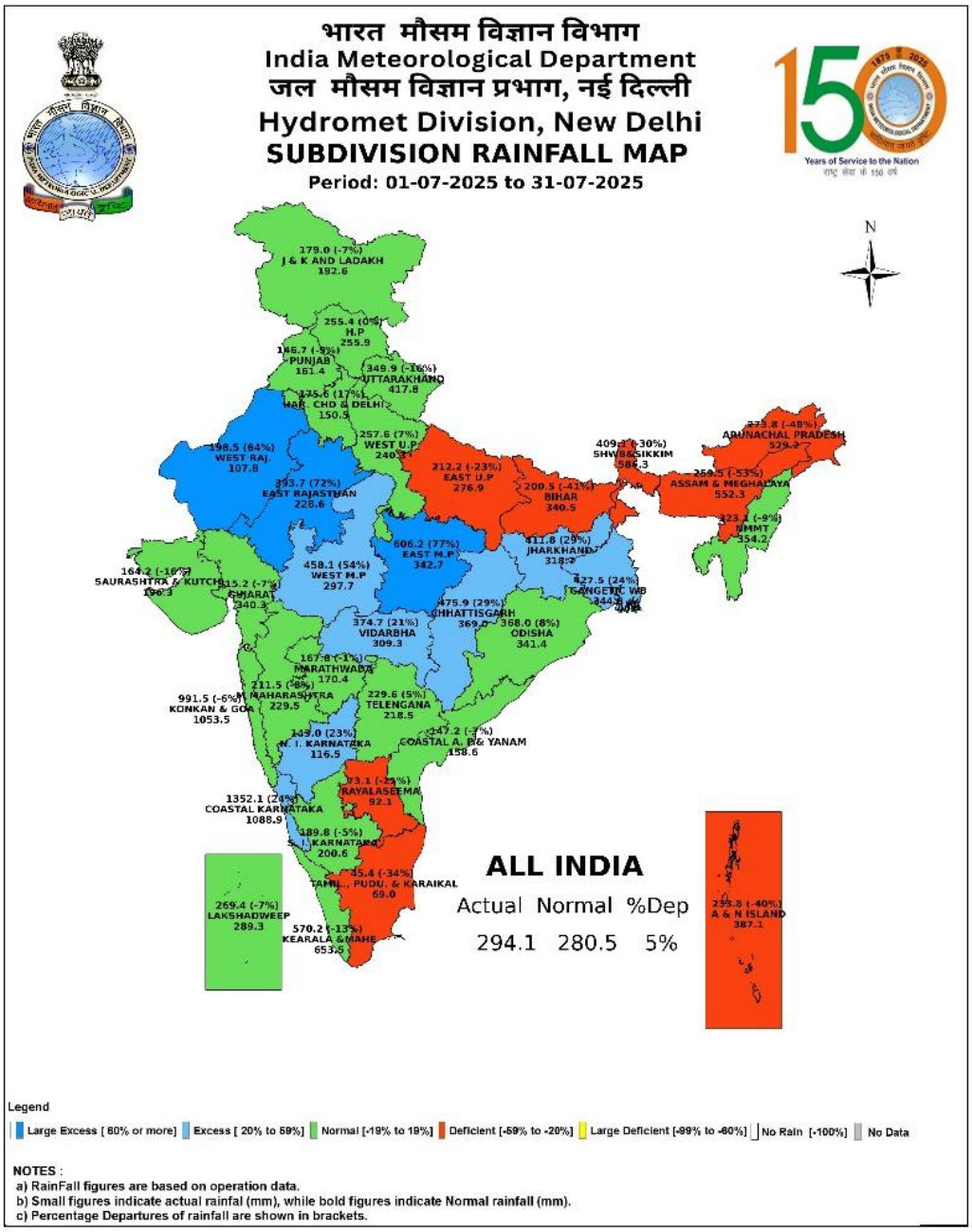


Fig 2: Sub-division wise rainfall distribution for July 2025.

Figure 3 shows the observed spatial distribution of rainfall during July 2025, the normal rainfall based on 1971–2020 climatology, and the rainfall departures from normal for July 2025.

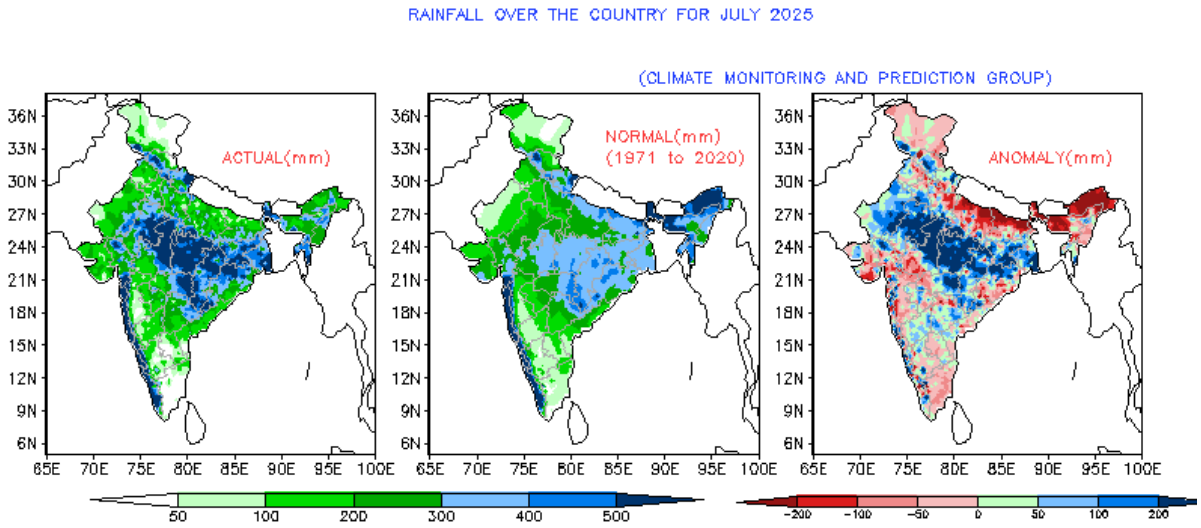


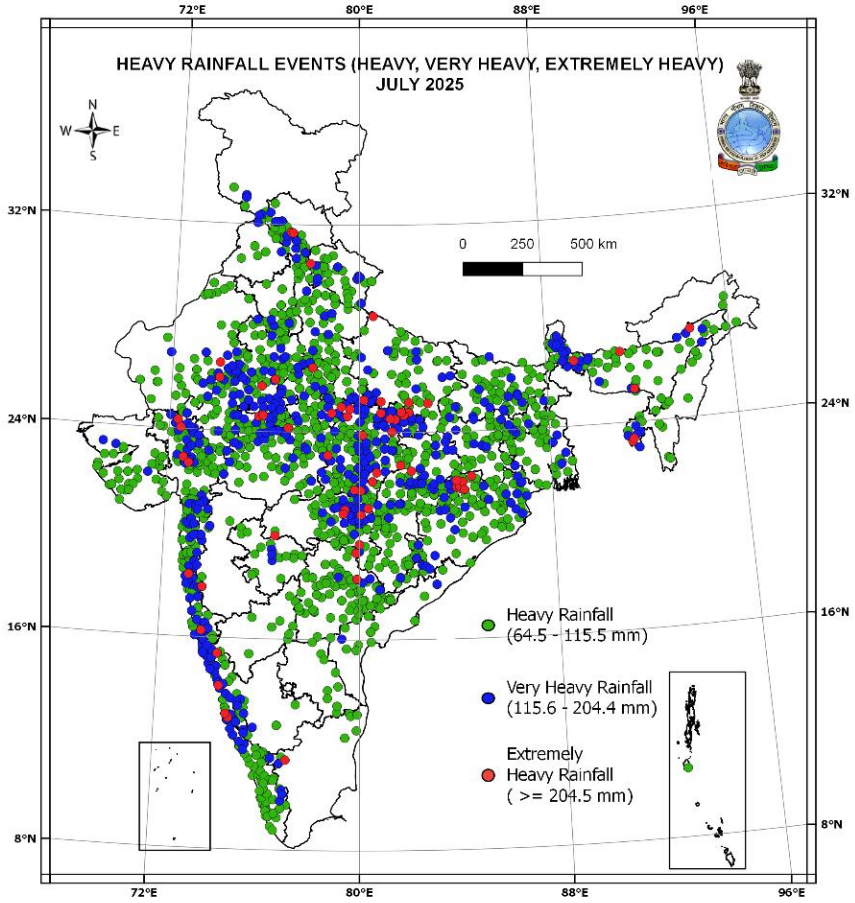
Fig 3: Observed spatial rainfall pattern for the month July 2025 over India and their departure from normal (1971 to 2020 period).
Departure from normal is Anomaly = Actual rainfall - Normal rainfall.

2. Frequency of Heavy Rainfall events

In July 2025, Extremely Heavy Rainfall events (>204.4 mm) were observed over several regions, including Assam & Meghalaya, Chhattisgarh, Coastal Karnataka, Madhya Pradesh, Rajasthan, Gujarat Region, East Uttar Pradesh, Himachal Pradesh, Konkan & Goa, Madhya Maharashtra, Vidarbha, Nagaland, Manipur, Mizoram & Tripura, Odisha, Sub-Himalayan West Bengal & Sikkim, Tamil Nadu, Puducherry & Karaikal, Uttarakhand, and Telangana.

Very Heavy Rainfall (115.6–204.4 mm) occurred in Arunachal Pradesh, Bihar, Coastal Andhra Pradesh & Yanam, Gangetic West Bengal, Haryana, Chandigarh & Delhi, Jammu & Kashmir & Ladakh, Jharkhand, Kerala & Mahe, Marathwada, Punjab, South Interior Karnataka, Saurashtra & Kutch, and West Uttar Pradesh.

Of the 1,743 rainfall events recorded during the month, 78 were classified as Extremely Heavy Rainfall (>204.4 mm), 495 as Very Heavy Rainfall (115.6–204.4 mm), and 1,170 as Heavy Rainfall (64.5–115.5 mm). Heavy Rainfall events (64.5–115.5 mm) were reported across almost all meteorological subdivisionsThe location of occurrences of Heavy, Very Heavy Rainfall and Extremely Heavy events is shown in the Fig. 4.



(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 July 2025.

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

	24 Hours Record Rainfall				
STATION NAME	STATE (UNION TERRITORY)	NEW RECORD (mm)#	DATE (JULY 2025)	PREVIOUS RECORD (mm)	DATE
GUNA	MADHYA PRADESH	323.0	30-07-2025	293.4	25-07-1958
JHARSUGUDA	ODISHA	205.2	06-07-2025	195.1	17-07-2002
KHAJURAHO	MADHYA PRADESH	160.4	13-07-2025	143.2	07-07-1981
NEW DELHI (RIDGE)	DELHI (UT)	129.8	30-07-2025	124.0	11-07-2003
TADONG	SIKKIM	124.6	29-07-2025	117.0	06-07-2005
TIKAMGARH	MADHYA PRADESH	215.0	13-07-2025	180.0	03-07-1974

based on real-time available data

3. Chief Synoptic weather features observed during July 2025.

Low pressure systems: In the month of July, four depressions formed during 15 – 16 July, 14 – 15 July, 17 – 20 July (remnant of depression over Gangetic West Bengal) and 25 – 27 July (remnant of cyclone WIPHA from south China Sea). Out of these four depressions three formed over land and one over north Bay of Bengal. Besides these depressions one low pressure area formed over Bay of Bengal during 6 – 10 July. Tracks of these systems are shown in Fig. 5.

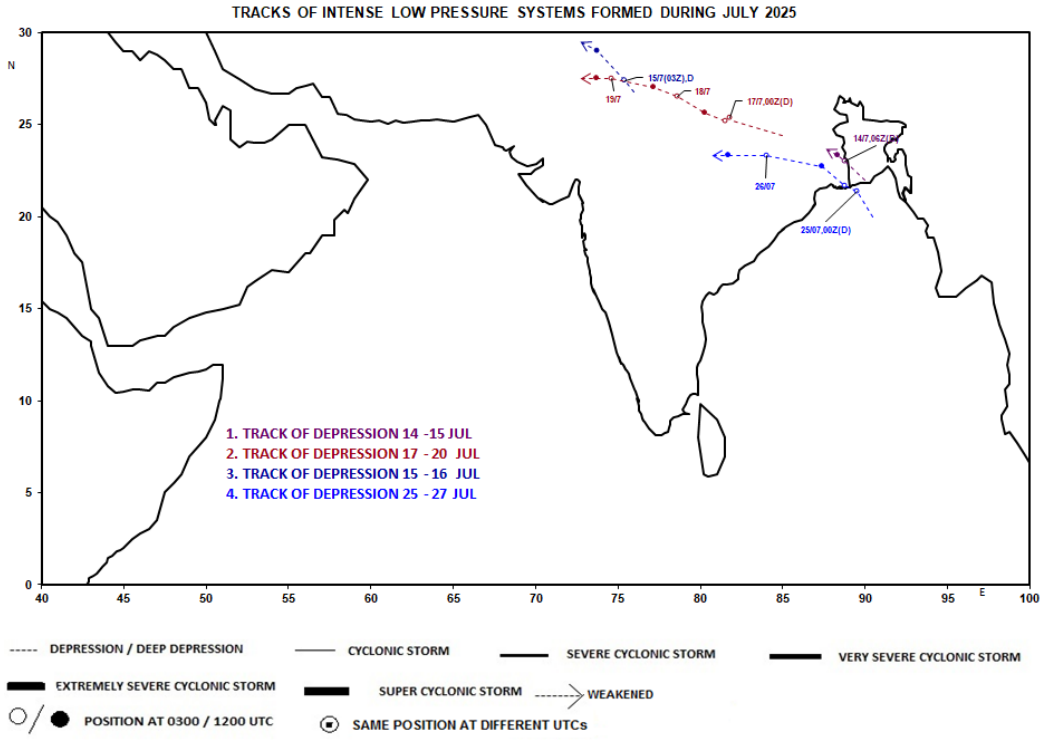


Fig 5: Observed tracks during July 2025.

Western Disturbance (WD): During July 2025, there were five western disturbances affected the country during 11 – 13, 13 – 18, 18 – 20, 23 – 28 and 28 July onwards.

4. Characteristics of Temperature for the month of July 2025

The average maximum, average minimum and mean temperature for the country as a whole during July 2025 were 31.50ºC, 24.36ºC and 27.93ºC respectively, against the normal of 31.79ºC, 24.10ºC and 27.95ºC based on data of 1991-2020. Thus, the average maximum and mean temperature were below normal to normal with departure from normal of -0.29ºC, -0.01ºC respectively, except the average minimum temperature was above normal by 0.26ºC for the country as a whole. The daily variation of maximum and minimum temperature departure from normal over the country as a whole for July 2025 is shown in the Fig. 6(a) and (b) respectively.

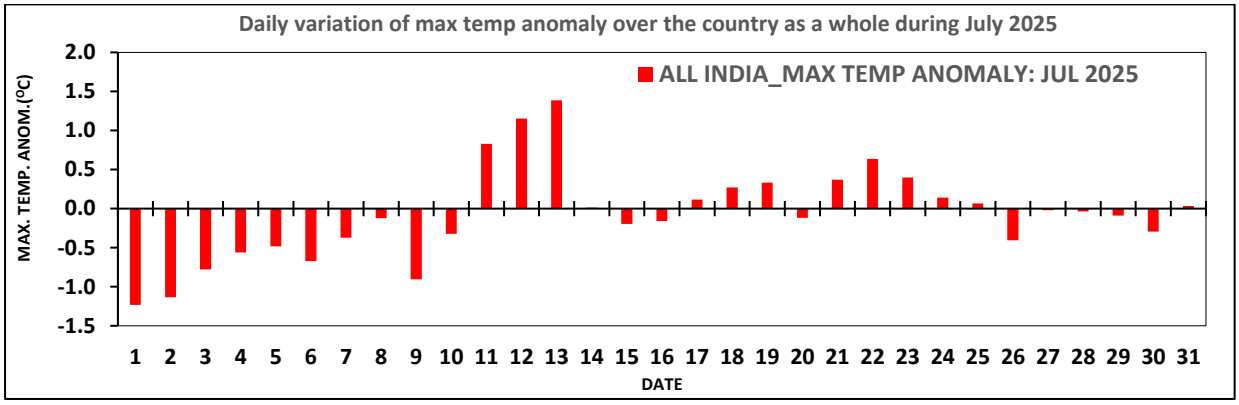


Fig 6(a): Daily variation of maximum temperature anomaly (departure from normal) over the country as a whole for July 2025

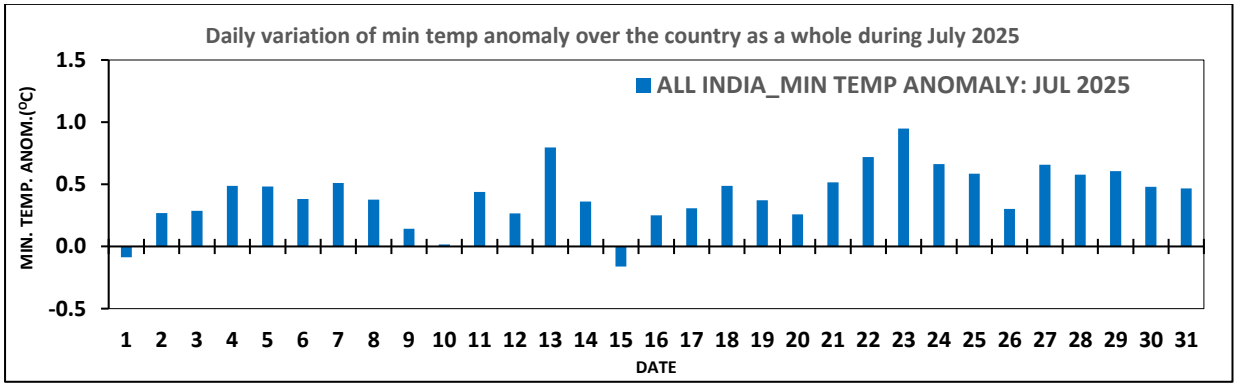


Fig 6(b): Daily variation of minimum temperature anomaly (departure from normal) over the country as a whole for July 2025

Fig. 7 shows the time series of monthly average maximum, average minimum and mean temperature over the country as a whole for the month of July 1901-2025. Over the country during July, the average maximum temperature was the 54th highest and average minimum temperature was the 9th highest since 1901. The mean temperature was the 35th highest since 1901.

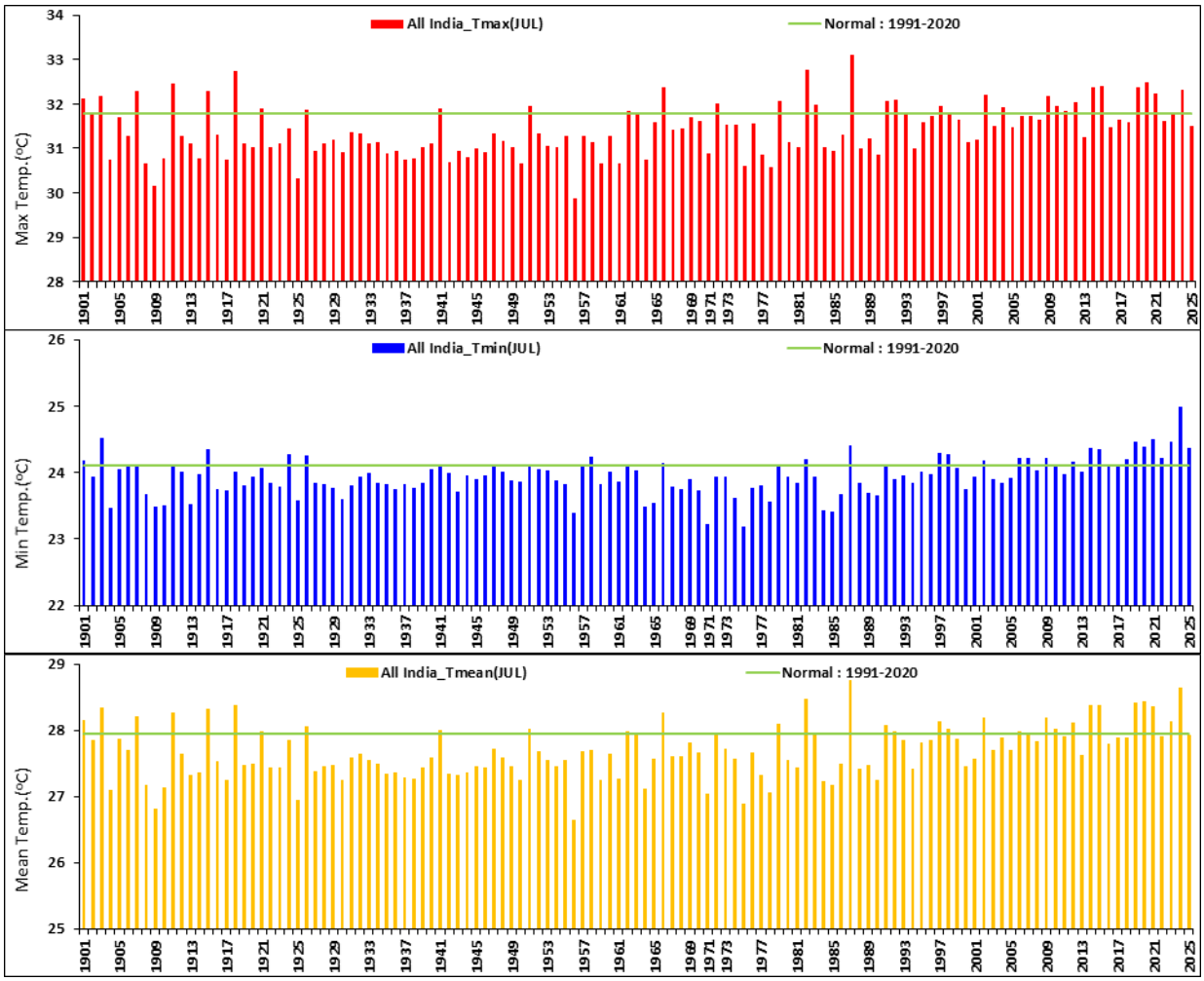


Fig. 7: Time series of monthly average maximum, average minimum and mean temperature over the country as a whole for the month of July 1901-2025

Fig. 8 shows the time series of average maximum, average minimum and mean temperature over East & Northeast India for the month of July 1901-2025. Over East & Northeast India during July, the average maximum temperature was the 4th highest (32.28ºC with departure from normal of 1.33ºC) after the years 2022(32.78ºC), 2024(32.45ºC) and 2023(32.39ºC) since 1901. The average minimum temperature was the 5th highest (24.979ºC with departure from normal of 0.597ºC) after the years 2024(25.57ºC), 2023(25.21ºC), 2022(25.06ºC) and 1958(24.980ºC) since 1901. The mean temperature was also the 4th highest (28.63ºC with departure from normal of 0.96ºC) after the years 2024(29.01ºC), 2022(28.92ºC) and 2023(28.80ºC) since 1901.

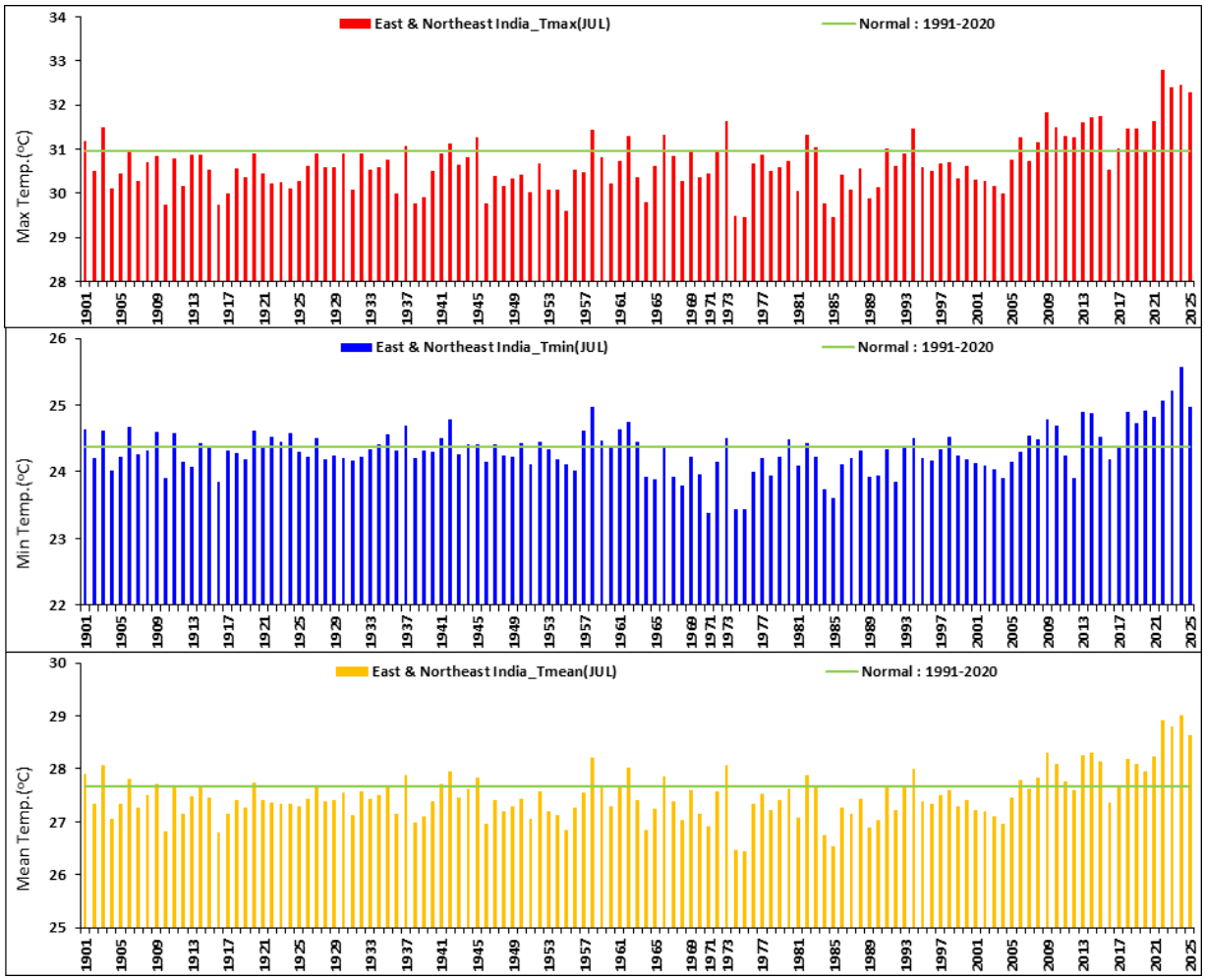


Fig. 8: Time series of monthly average maximum, average minimum and mean temperature over East & Northeast India for the month of July 1901-2025

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

JULY 2025		Max Temp (^{0}C)	Min Temp (^{0}C)	Mean Temp (^{0}C)
ALL INDIA	**ACTUAL**	**31.50**	**24.36**	**27.93**
	NORMAL	31.79	24.10	27.95
	ANOMALY	-0.29	0.26	-0.01
	Rank since 1901	**54**	**9**	**35**
NORTHWEST INDIA	**ACTUAL**	**32.16**	**24.41**	**28.29**
	NORMAL	33.08	24.09	28.58
	ANOMALY	-0.91	0.33	-0.29
	Rank since 1901	**94**	**13**	**62**
EAST & NORTHEAST INDIA	**ACTUAL**	**32.28**	**24.98**	**28.63**
	NORMAL	30.95	24.38	27.67
	ANOMALY	1.33	0.60	0.96
	Rank since 1901	**4**	**5**	**4**
CENTRAL INDIA	**ACTUAL**	**30.41**	**24.21**	**27.31**
	NORMAL	31.30	24.24	27.77
	ANOMALY	-0.89	-0.03	-0.46
	Rank since 1901	**90**	**51**	**83**
SOUTH PENNINSULAR INDIA	**ACTUAL**	**31.46**	**23.98**	**27.72**
	NORMAL	31.44	23.68	27.56
	ANOMALY	0.02	0.30	0.16
	Rank since 1901	**25**	**7**	**16**

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 East & Northeast India (TMax, TMin and TMean) are given in the tables below:

East & Northeast India (July 2025)				
Year	**TMax**	Normal	Anomaly	Rank
2022	32.78	30.95	1.83	1
2024	32.45		1.50	2
2023	32.39		1.44	3
2025	**32.28**		**1.33**	**4**
2009	31.84		0.89	5

East & Northeast India (July 2025)				
Year	**TMin**	Normal	Anomaly	Rank
2024	25.57	24.38	1.19	1
2023	25.21		0.83	2
2022	25.06		0.68	3
1958	24.980		0.598	4
2025	**24.979**		**0.597**	**5**

East & Northeast India (July 2025)				
Year	**TMean**	Normal	Anomaly	Rank
2024	29.01	27.67	1.34	1
2022	28.92		1.26	2
2023	28.80		1.13	3
2025	**28.63**		**0.96**	**4**
2009	28.31		0.64	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 July 2025 is given in Fig. 9.

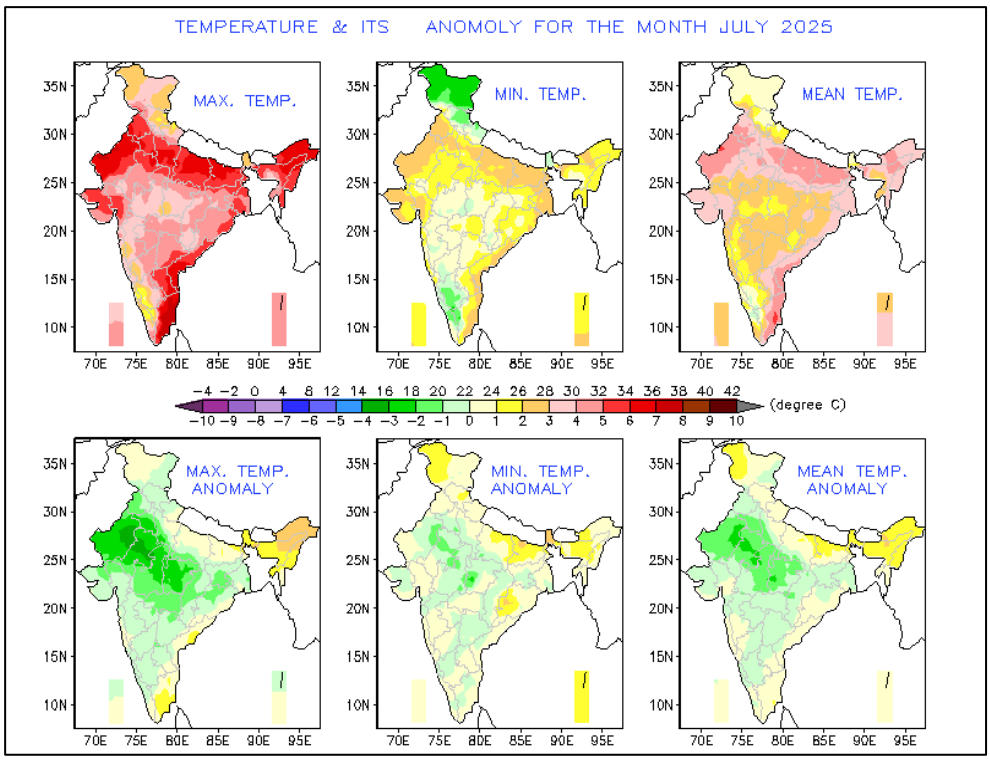


Fig 9: Observed spatial temperature pattern of monthly average maximum, average minimum, and mean temperature over India (top three from left to right) and their departure from normal (1991 to 2020 period) for July 2025 (lower three from left to right).

The stations recorded the highest maximum and lowest minimum temperature for July 2025 is given in table below. A list of stations is given below with their previous record and date.

Highest Maximum					
STATION NAME	**STATE (UNION TERRITORY)**	**NEW RECORD (^{0}C) #**	**DATE (JULY 2025)**	**PREVIOUS RECORD (^{0}C)**	**DATE**
BEED	MAHARASHTRA	38.9 @	22-07-2025	38.9	11-07-1966
KANNUR	KERALA	31.4	21-07-2025	26.2	26-07-1968
GUWAHATI	ASSAM	38.4 @	13-07-2025	38.4	18-07-2017
KORAPUT	ODISHA	35.5	06-07-2025	33.6	09-07-1969
MINICOY	LAKSHADWEEP (UT)	33.6 @	09-07-2025	33.6	27-07-2024
NARSAPUR	ANDHRA PRADESH	39.6	12-07-2025	38.9	11-07-2002
PAHALGAM	JAMMU & KASHMIR (UT)	31.6	05-07-2025	31.5	21-07-2024
SUPAUL	BIHAR	38.6 @	13-07-2025	38.6	21-07-2018
TADONG	SIKKIM	32.8	24-07-2025	32.6	19-07-2017
Lowest Minimum					
STATION NAME	**STATE (UNION TERRITORY)**	**NEW RECORD (^{0}C) #**	**DATE (JULY 2025)**	**PREVIOUS RECORD (^{0}C)**	**DATE**
BAPATLA	ANDHRA PRADESH	21.4	22-07-2025	21.7	23-07-2022
DURG	CHATTISGARH	18.2	29-07-2025	18.6	29-07-2024
KHARGONE	MADHYA PRADESH	17.8	12-07-2025	18.2	30-07-1996
MATHERAN	MAHARASHTRA	18.0 @	29-07-2025	18.0	07-07-2024
NALGONDA	TELANGANA	20.0	03-07-2025	21.0	21-07-2024

@ equals previous record # based on real-time available data

5. Significant Weather Events

During July, according to media reports and situation updates from disaster management authorities, over 260 fatalities were reported, along with more than 100 injuries, over 25 missing persons, and the loss of more than 200 livestock, all attributed to extreme weather events. 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 associated with Thunderstorm	**153** (Bihar, Uttar Pradesh, Odisha, Jharkhand, West Bengal, Chhattisgarh, Assam, Madhya Pradesh, Himachal Pradesh)
Heavy Rains, Floods and Landslides	**111** (Uttar Pradesh, Himachal Pradesh, Gujarat, Rajasthan, Jammu and Kashmir, Madhya Pradesh, Uttarakhand, West Bengal, Assam, Jharkhand, Maharashtra, Nagaland)

Extreme weather events also impacted several parts of the country, with districts affected by extremely heavy rainfall including Cachar, Dibrugarh, Hailakandi, and

Karimganj (Assam); North Goa (Goa); Amreli, Banaskantha, Bhavnagar, Botad, Dangs, Mahisagar, Mehsana, Narmada, Panchmahal, Sabarkantha, Surat, and Valsad (Gujarat); East Singhbhum, Ranchi, and Seraikela-Kharsawan (Jharkhand); Dakshina Kannada, Udupi, and Uttara Kannada (Karnataka); Alirajpur, Ashoknagar, Guna, and Tikamgarh (Madhya Pradesh); Kolhapur, Palghar, Raigad, Ratnagiri, Satara, and Sindhudurg (Maharashtra); East Khasi Hills and South West Khasi Hills (Meghalaya); Mayurbhanj (Odisha); Nilgiris (Tamil Nadu); and Jalpaiguri and Purulia (West Bengal).

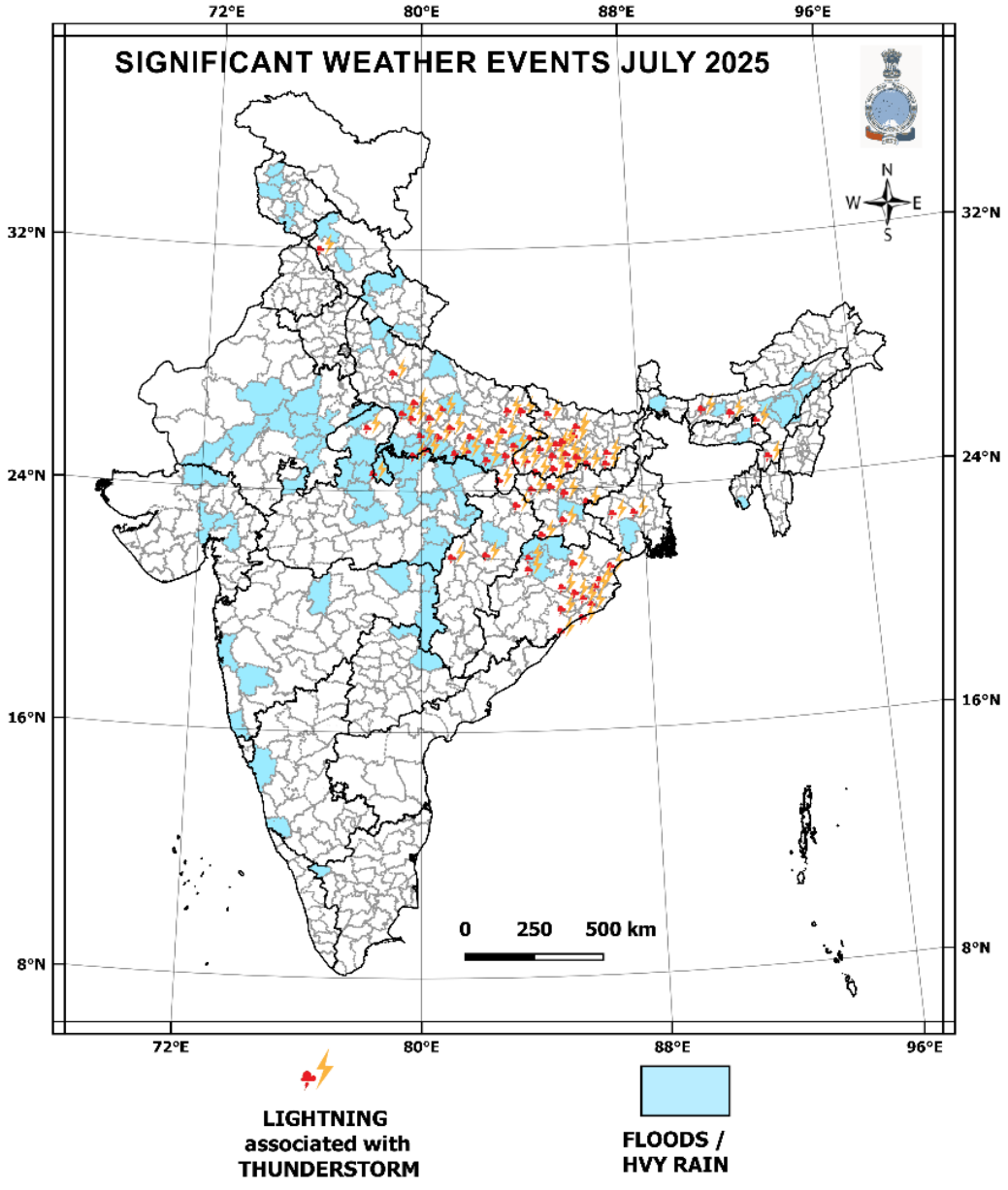


Fig. 10.: Deaths and damages due to significant weather events during July 2025 (Based on real time media reports and other state government agencies)