Government of India
Ministry of Earth Sciences
India Meteorological Department

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Climate Summary for the month of May 2025

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

Rainfall over the country as a whole for the month of May 2025 was 126.7 mm which is 106% more than its Long Period Average (LPA) of 61.4 mm. Daily variation of the rainfall over the country as a whole during the month of May 2025 with normal based on data of 1971-2020 is presented in Fig 1 (a). The all-India monthly rainfall percentage departure from normal for May during 1901-2025 is presented in Fig 1(b), actual monthly rainfall for all-India and for four homogenous region for the same period are given in Figs 1(c) to 1(g).

The average monthly rainfall for May 2025 over All-India (126.7 mm) and Central India (100.9 mm) was highest since 1901, as presented in Figs 1(c) and 1(d). While the monthly rainfall over South Peninsular India reached 199.7 mm, marking the second highest total since 1901, surpassed only by 201.4 mm recorded in 1990, as presented in Fig. 1(e). Similarly, the monthly average rainfall over Northwest India (48.1 mm) was 13th highest since 1901 and 4th highest since 2001 as given in Fig 1(f). The monthly rainfall over East & Northeast India region was 242.8 mm which is 29th highest since 1901 and 4th highest since 2001 as presented in Fig 1(g).

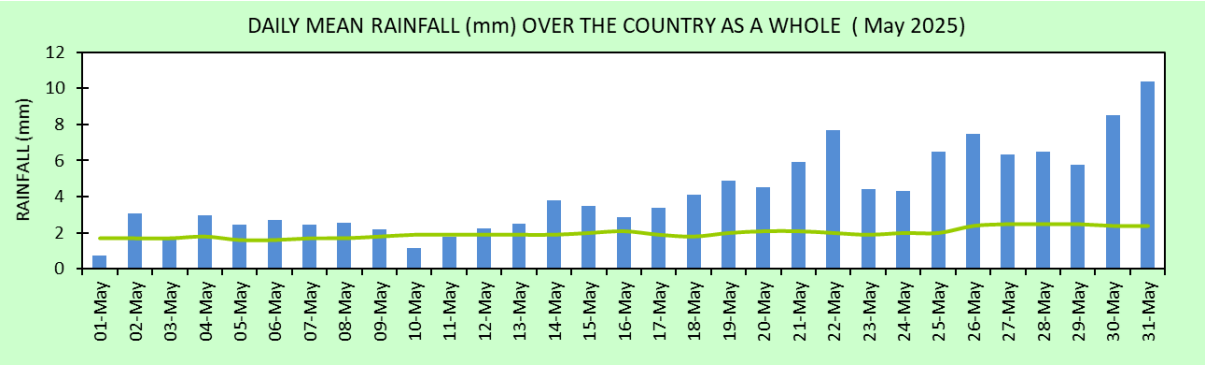


Fig.1 (a): Daily variation of rainfall over the country as a whole during May 2025.

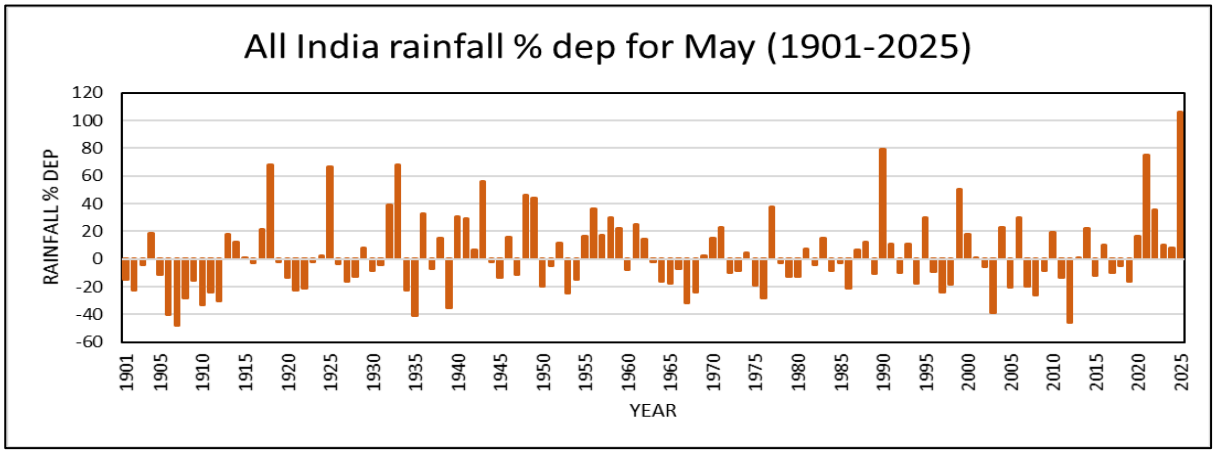


Fig 1(b): All-India monthly rainfall percentage departure from normal (1971-2020) for May from 1901-2025.

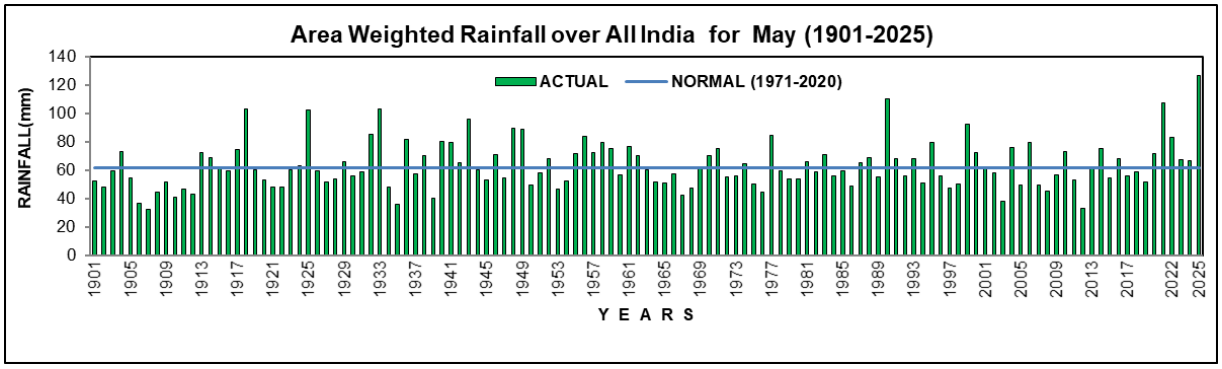


Fig 1(c): Time series of area weighted rainfall over All-India for May (1901 – 2025).

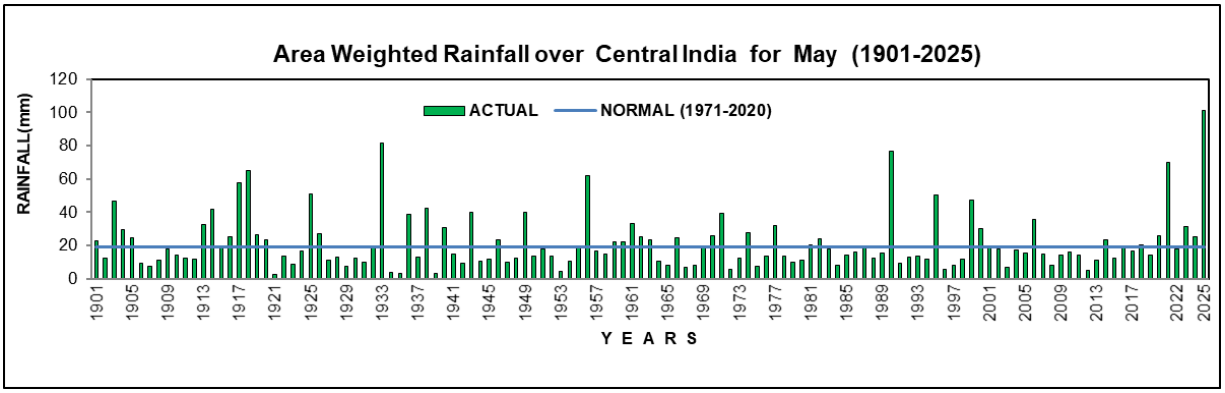


Fig 1(d): Time series of area weighted rainfall over Central India for May (1901 – 2025).

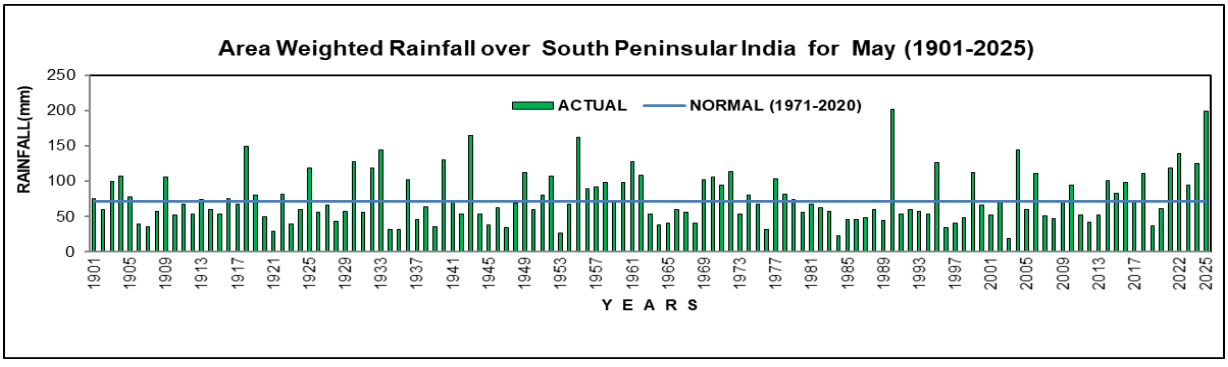


Fig 1(e): Time series of area weighted rainfall over South Peninsular India for May (1901 – 2025).

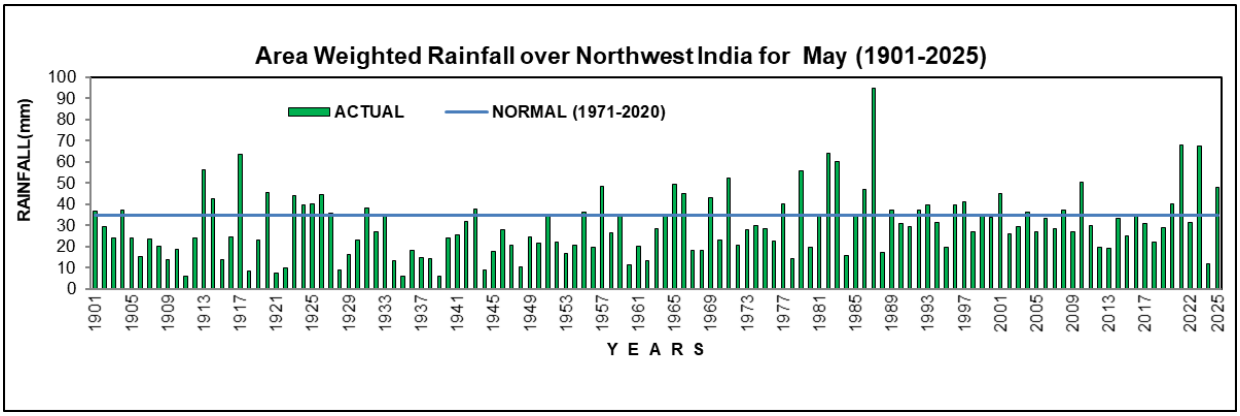


Fig 1(f): Time series of area weighted rainfall over Northwest India for May (1901 – 2025).

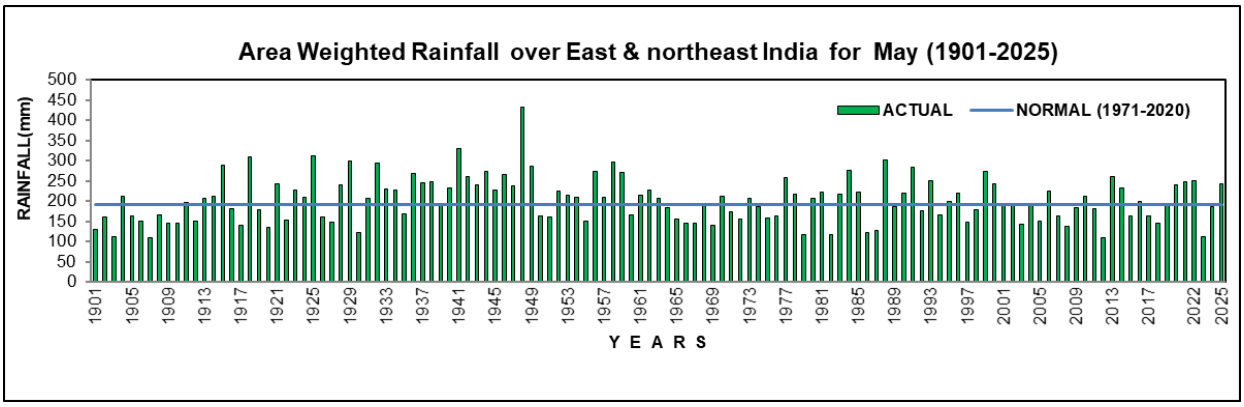


Fig 1(g). Time series of area weighted rainfall over East & northeast India for May (1901 – 2025).

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

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	126.7	61.4	106.4
Northwest India	48.1	34.6	39.0
Central India	100.9	19.0	430.9
South Peninsula	199.7	71.8	178.2
East & Northeast India	242.8	189.9	27.9

During this month, 25 sub-divisions received large excess rainfall, 5 sub-divisions received excess rainfall and 6 sub-divisions received normal rainfall. (Fig 2).

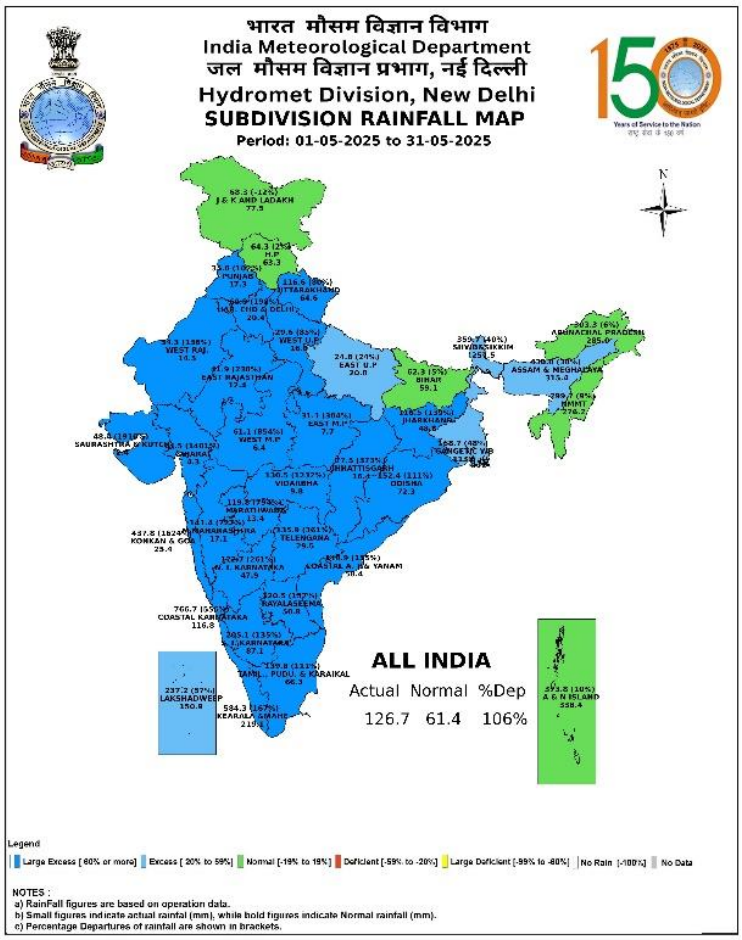


Fig 2: Subdivision-wise rainfall distribution for May 2025.

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

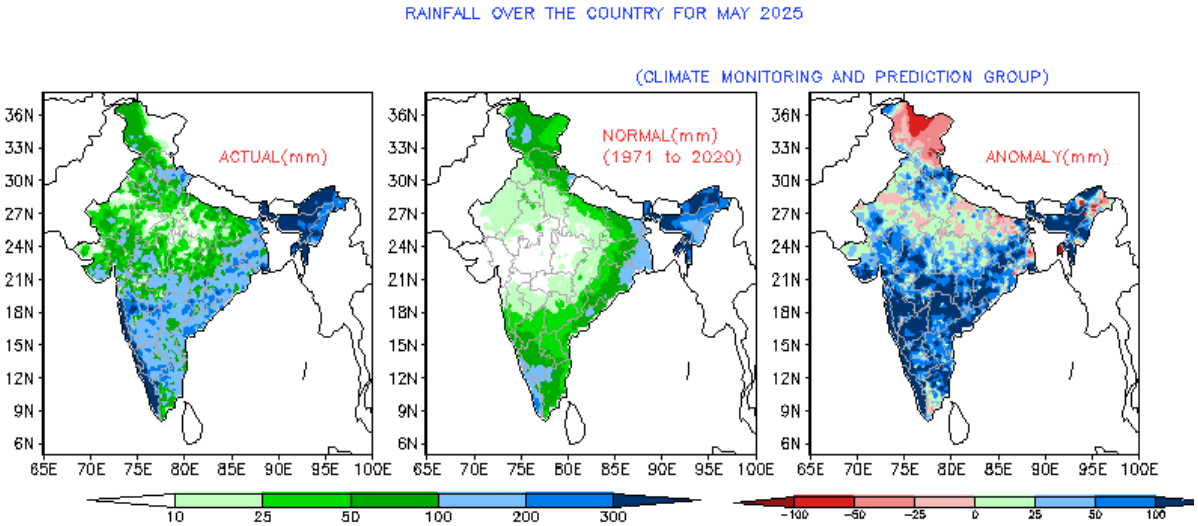
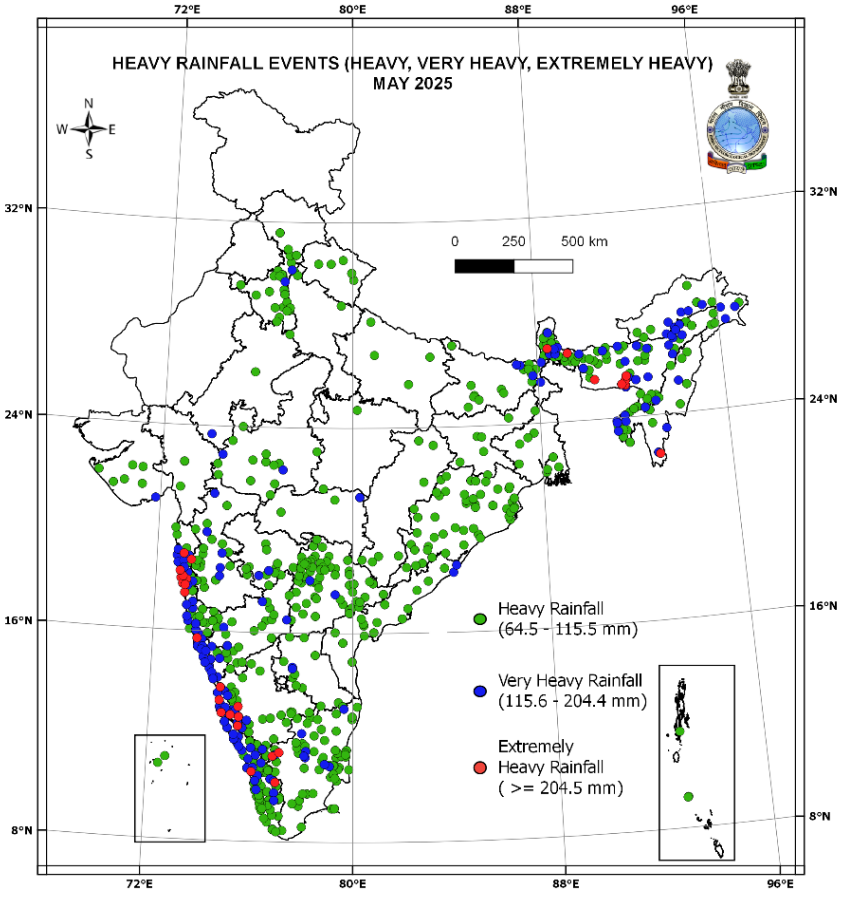


Fig 3: Observed spatial rainfall pattern for the month of May 2025 over India and their departure from normal (1971 to 2020 period). Departure from normal is, Anomaly = Actual rainfall - Normal rainfall.

2. Frequency of Heavy Rainfall events

In May 2025, extremely heavy rainfall (>204.4 mm) was recorded along the West Coast, as well as in Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Mizoram, Tamil Nadu, Puducherry & Karaikal, Madhya Maharashtra, and South Interior Karnataka. Very heavy rainfall (115.6–204.4 mm) occurred in Arunachal Pradesh, Bihar, Coastal Andhra Pradesh & Yanam, East Rajasthan, Haryana, Chandigarh & Delhi, Marathwada, North Interior Karnataka, Rayalaseema, Saurashtra & Kutch, Telangana, Vidarbha, and West Madhya Pradesh. Additionally, heavy rainfall events (64.5–115.5 mm) were observed across the Andaman & Nicobar Islands, Chhattisgarh, East Madhya Pradesh, East Uttar Pradesh, Gangetic West Bengal, Gujarat Region, Himachal Pradesh, Jharkhand, Lakshadweep, Odisha, Uttarakhand, and West Uttar Pradesh.

The location of occurrences of heavy very, heavy rainfall and extremely heavy events is shown in Fig 4. Out of total 699 occasions, 30 were Extremely heavy rainfall (>204.4 mm), 155 were Very heavy rainfall (115.6 to 204.4 mm) and 514 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 and extremely heavy rainfall events in the month of May 2025.

3. Advance of the Southwest Monsoon over the country

The Southwest Monsoon advanced into some parts of south Bay of Bengal, south Andaman Sea, Nicobar Islands and some parts of north Andaman Sea on 13th May, 2025

against the normal date of 22 May. It further advanced into some parts of southeast Arabian Sea, Maldives & Comorin area and some more parts of South Bay of Bengal, Andaman Islands and Andaman Sea on 15th May, 2025; over some more parts of south Arabian Sea, Maldives & Comorin area; South Bay of Bengal, remaining parts of Andaman Islands and Andaman Sea; and some parts of East central Bay of Bengal on 17th May; over some more parts of south Arabian Sea, Maldives & Comorin area; South Bay of Bengal; some more parts of central Bay of Bengal and some parts of northeast Bay of Bengal 19th May, 2025; over some more parts of south Arabian Sea, Maldives & Comorin area; South Bay of Bengal; some more parts of central Bay of Bengal and some parts of northeast Bay of Bengal on 21st May, 2025. Then it has further advanced into remaining parts of south Arabian Sea, some parts of westcentral & eastcentral Arabian Sea, entire Lakshadweep area, Kerala, Mahe, some parts of Karnataka, remaining parts of Maldives and Comorin area; many parts of Tamil Nadu, remaining parts of southwest and eastcentral Bay of Bengal, some parts of westcentral and north Bay of Bengal, and some parts of Mizoram on 24th May 2025. **Thus, the Southwest Monsoon has set in over Kerala on 24th May 2025, against the normal date of 1st June (8 days before the normal date)**. The normal date of advance and onset of monsoon and actual dates in 2025 is shown in Fig.5. It further advanced into some more parts of westcentral & eastcentral Arabian Sea, some more parts of Karnataka, entire Goa, some parts of Maharashtra, some more parts of westcentral and north Bay of Bengal, and some more parts of Mizoram, some parts of Manipur and Nagaland on 25th May; further advanced into some more parts of central Arabian Sea, some more parts of Maharashtra including Mumbai, Karnataka including Bengaluru, remaining parts of Tamil Nadu, some parts of Telangana and Andhra Pradesh, some more parts of westcentral & North Bay of Bengal, Remaining parts of Mizoram, entire Tripura, Manipur, Nagaland, Arunachal Pradesh, some parts of Assam and Meghalaya on 26th May; further advanced into some more parts of Maharashtra, remaining parts of Karnataka, most parts of Telangana, remaining parts of Andhra Pradesh, some parts of Chhattisgarh & Odisha, remaining parts of westcentral Bay of Bengal on 28th May. Monsoon onset over Kerala on 24th May against the normal date of 1st June (8 days before the normal date and earliest onset in 17 years after 2009). Over Mumbai, it advanced on 26th May against the normal date of advancement, 11th June with record of 16 days earlier than usual. And, it is the earliest monsoon advancement over Mumbai during in 75 years of the period 1950–2025.

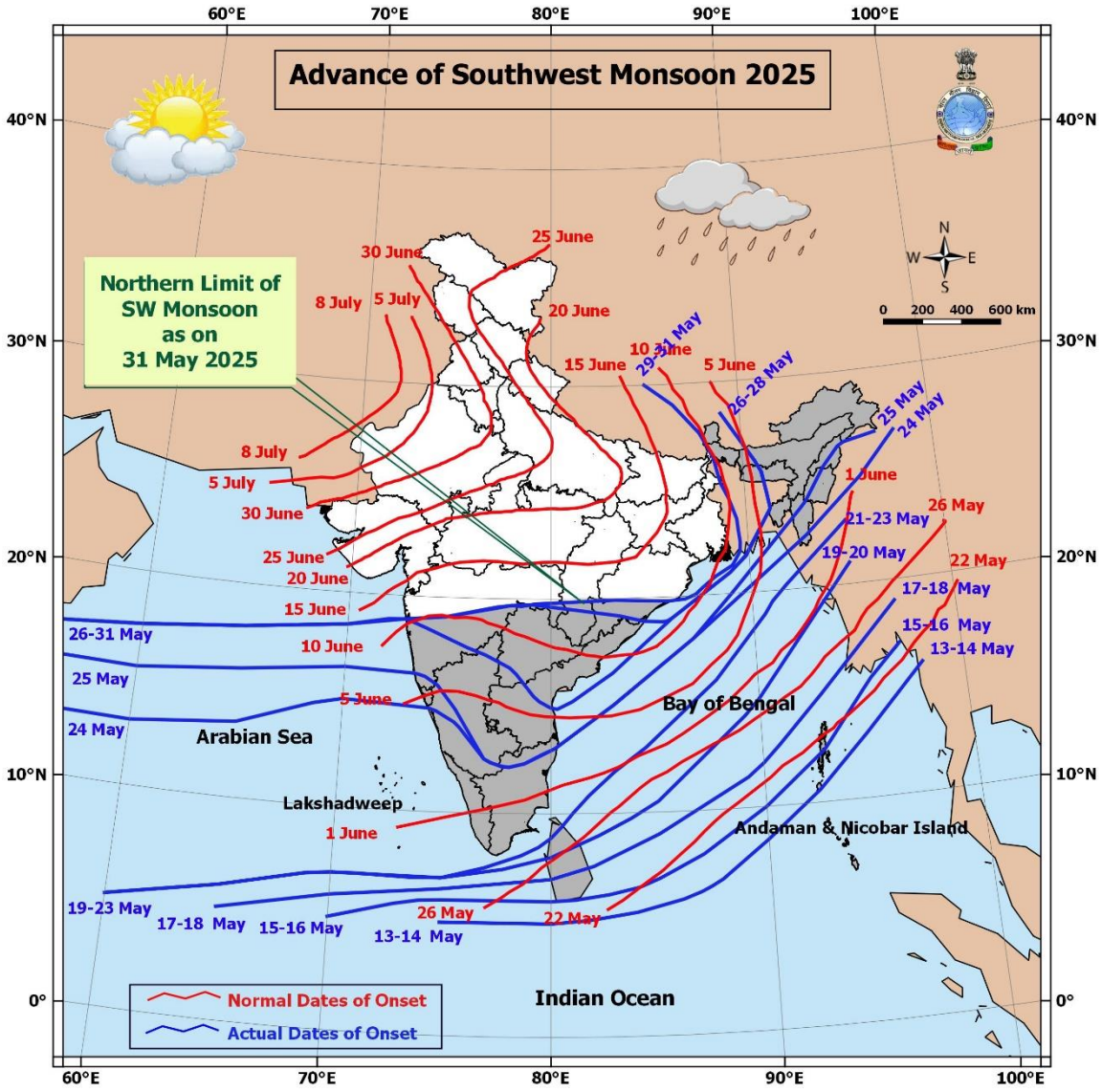


Fig 5: Isochrones of the advance of southwest monsoon during the month of May 2025

4. Chief Synoptic weather features associated severe weather observed during May 2025

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 if 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. Also, four of these WDs were formed at in-situ mainly observed over Pakistan and adjoining Jammu and Kashmiri and stay for longer period. Movement of these WDs across north and central India at regular intervals during the month was the main reason of higher rainfall and thunderstorm activities over these areas and low day maximum temperatures and very less heat waves in the months.

Thunderstorms and Hailstorms: In the month of May, most parts of India experienced thunderstorm accompanied with gusty winds activities in regular intervals. In terms of meteorological sub-division days observed in the month, it was of 16-23 days of Thunderstorms observed in southeast Peninsular India, eastern and parts of northeast India and parts of western Himalayan region (Fig 6a and Fig 6b). Hail storms were also

observed during these events and it was of 6-9 days over parts of western Himalayan region.

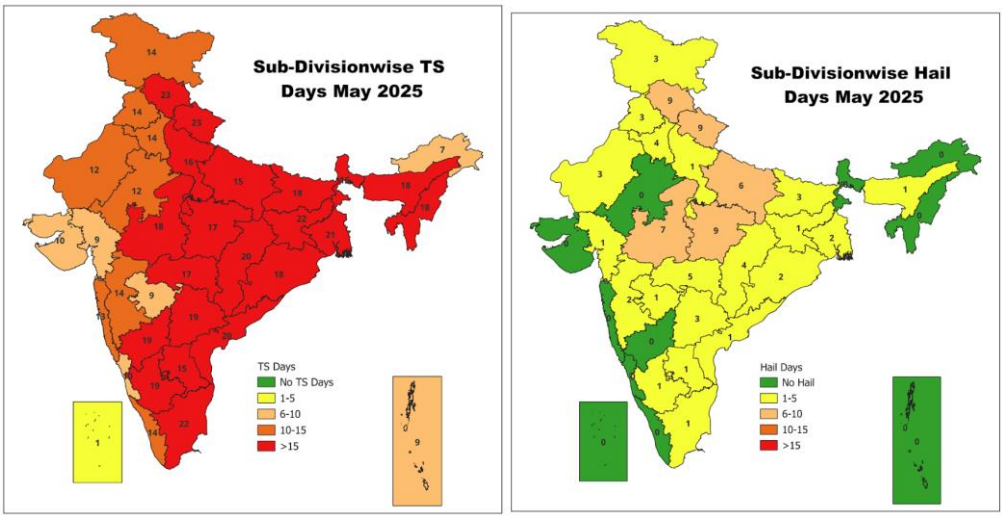


Fig. 6(a and b): Number of days of Thunderstorms and Hailstorms over India at meteorological sub-divisional scale

Low pressure systems: In the month of May, one Depression (during the period 24 to 25 May) formed over Arabian sea and one Deep Depression (during the period 29 - 30 May) formed over Bay of Bengal. Tracks of these systems are shown in Fig 7.

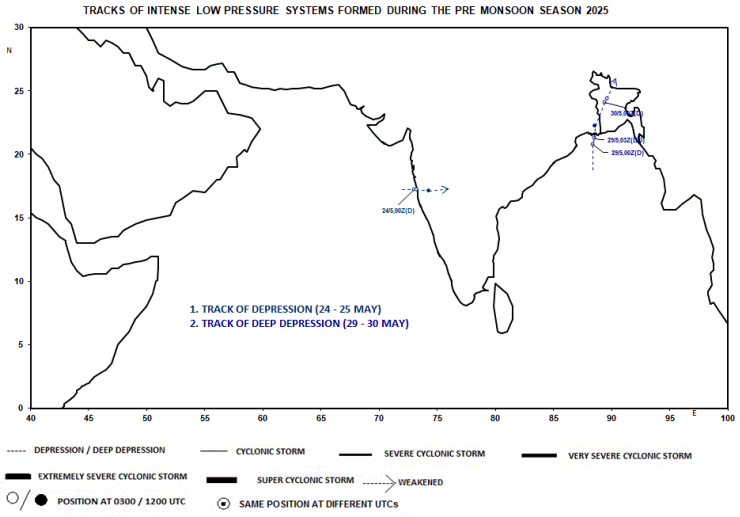


Fig 7: Tracks of low pressure systems during May 2025.

Heat wave: West Rajasthan observed 11-20 number of heat wave days and East Rajasthan and Jammu, Kashmir & Ladakh observed 4-6 number of heat wave days (Fig 8).

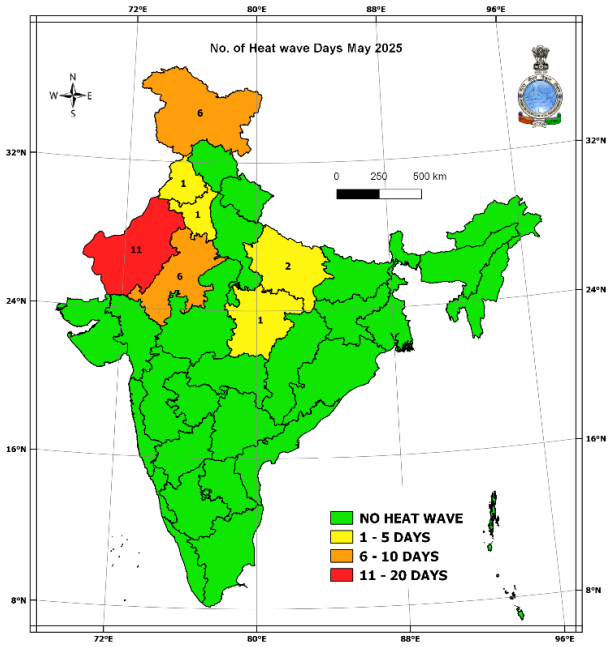


Fig 8: Subdivision-wise heat wave days during May 2025.

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	NEW RECORD (mm)#	DATE (MAY 2025)	PREVIOUS RECORD (mm)	DATE
ADILABAD	65	30-05-2025	47.6	01-05-2023
AKOLA	66	22-05-2025	44.7	28-05-1943
ALIBAG	163.4	27-05-2025	117.8	18-05-2021
ANANTAPUR	168.4	15-05-2025	95.3	29-05-2016
BARAMATI	130.2	25-05-2025	84.7	04-05-1966
DHARWAD	127.6	14-05-2025	75.4	12-05-2018
FURSATGANJ	56.6	22-05-2025	51.2	20-05-2021
GUWAHATI	111.4	31-05-2025	96.8	12-05-1958
HARNAI	307	26-05-2025	157.0	03-05-1956
KANDLA (A)	6	11-05-2025	5.2	03-05-2021
KARNAL	118	25-05-2025	43.8	04-05-2005
KESHOD	37.4	08-05-2025	33.8	18-05-2000
MAHUVA	143.6	07-05-2025	13.2	19-05-2021
MALANJKHAND	33.4	14-05-2025	31.8	03-05-1987
MANDLA	45	25-05-2025	33.4	31-05-2001
MATHERAN	181	26-05-2025	73.0	31-05-2021
MEDAK	117	22-05-2025	100.0	13-05-1990
RATLAM	59	20-05-2025	42.4	28-05-1990
SATARA	86.6	22-05-2025	44.0	28-05-2014
TEHRI	65.8	27-05-2025	52.3	20-05-1957
UDGIR	58	19-05-2025	36.0	26-05-2006
WASHIM	53.2	26-05-2025	7.0	11-05-2014

based on real-time available data

5. Characteristics of Temperatures for the month of May 2025

The average maximum, average minimum and mean temperature for the country as a whole during May 2025 were 35.08ºC, 24.07ºC and 29.57ºC respectively, against the normal of 36.60ºC, 24.17ºC and 30.38ºC based on data of 1991-2020. Thus, the average maximum, average minimum and mean temperature were below normal with departure from normal of -1.52ºC, -0.10ºC and -0.81ºC 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 May 2025 is shown in Figs 9(a) and (b), respectively.

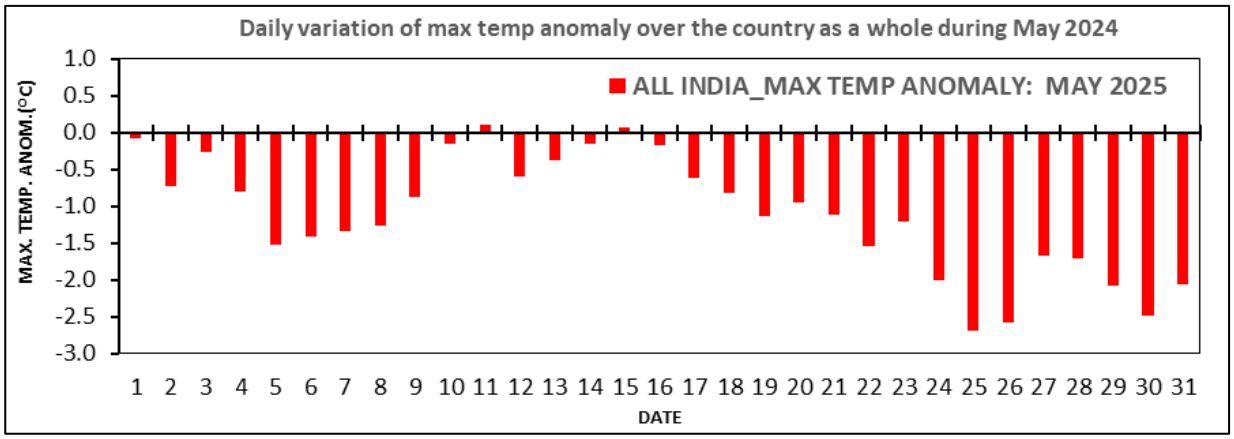


Fig 9(a): Daily variation of maximum temperature anomaly (departure from normal) over the country as a whole for May 2025

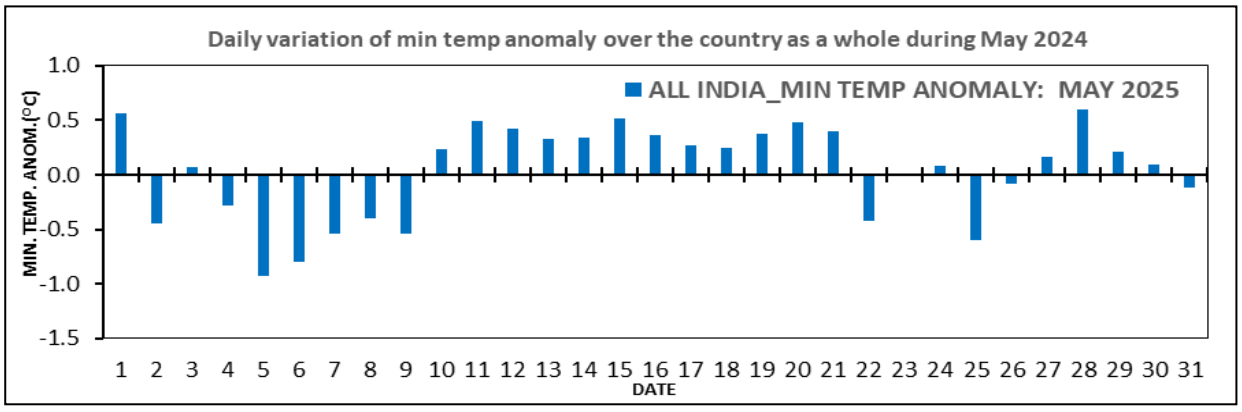


Fig 9(b): Daily variation of minimum temperature anomaly (departure from normal) over the country as a whole for May 2025

Fig 10 shows the time series of monthly average maximum, average minimum and mean temperature over the country as a whole for the month of May 1901-2025. Over the country during May 2025, the average maximum temperature was the 7th lowest and average minimum temperature was the 59th lowest since 1901. The mean temperature was the 19th lowest since 1901.

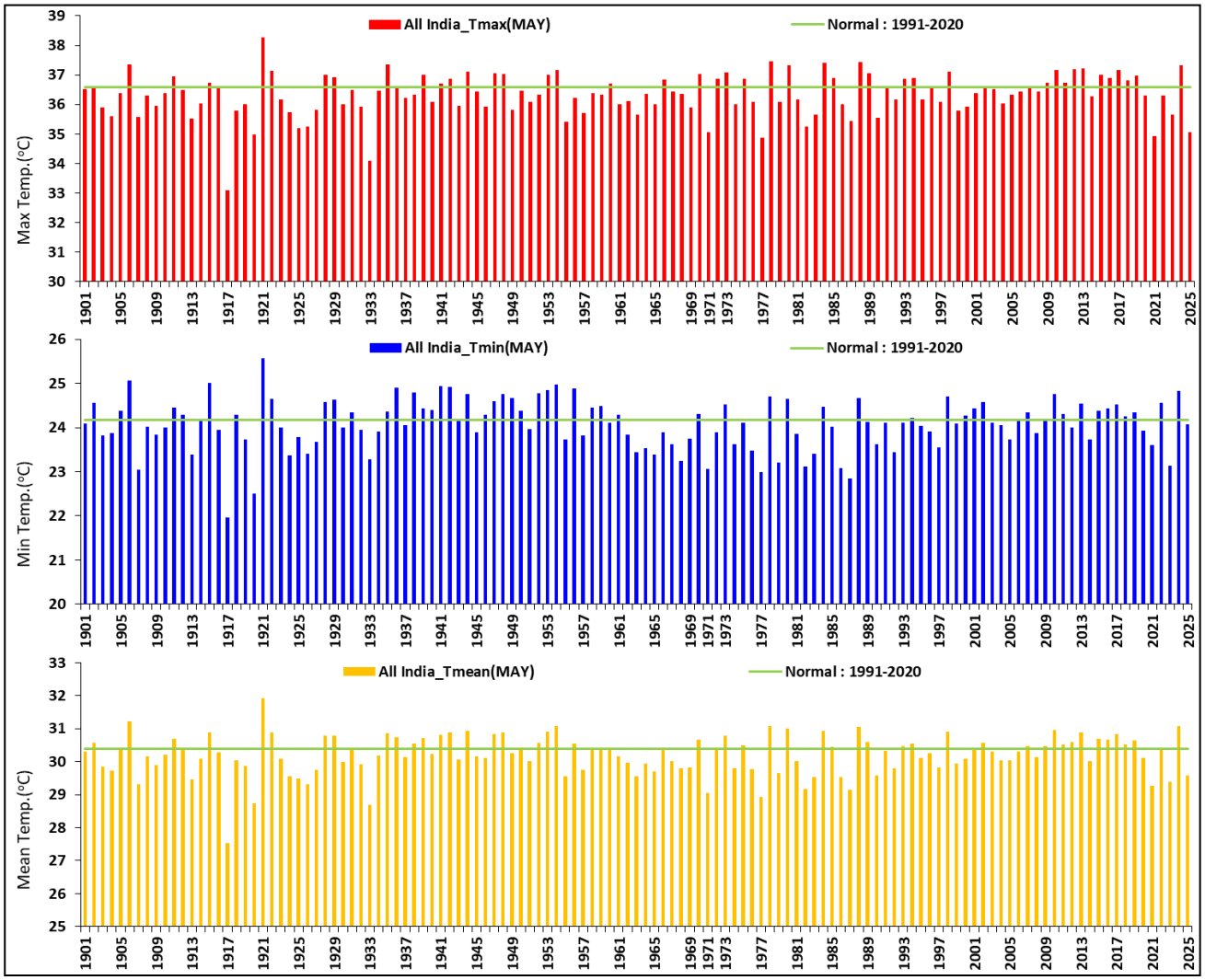


Fig 10: Time series of monthly average maximum, average minimum and mean temperature over the country as a whole for the month of May 1901-2025

Fig 11 shows the time series of average maximum, average minimum and mean temperature over Central India for the month of May 1901-2025. Over Central India during May 2025, the average maximum temperature was the 3rd lowest (36.63ºC with departure from normal of -2.63ºC) after the years 1917 (34.92ºC) and 1933 (36.47ºC) since 1901. The average minimum temperature was 25.14ºC with departure from normal of -0.74ºC (12th lowest since 1901). The mean temperature was the 3rd lowest (30.89ºC with departure from normal of -1.69ºC) after the years 1917 (28.86ºC) and 1933 (30.77ºC) since 1901.

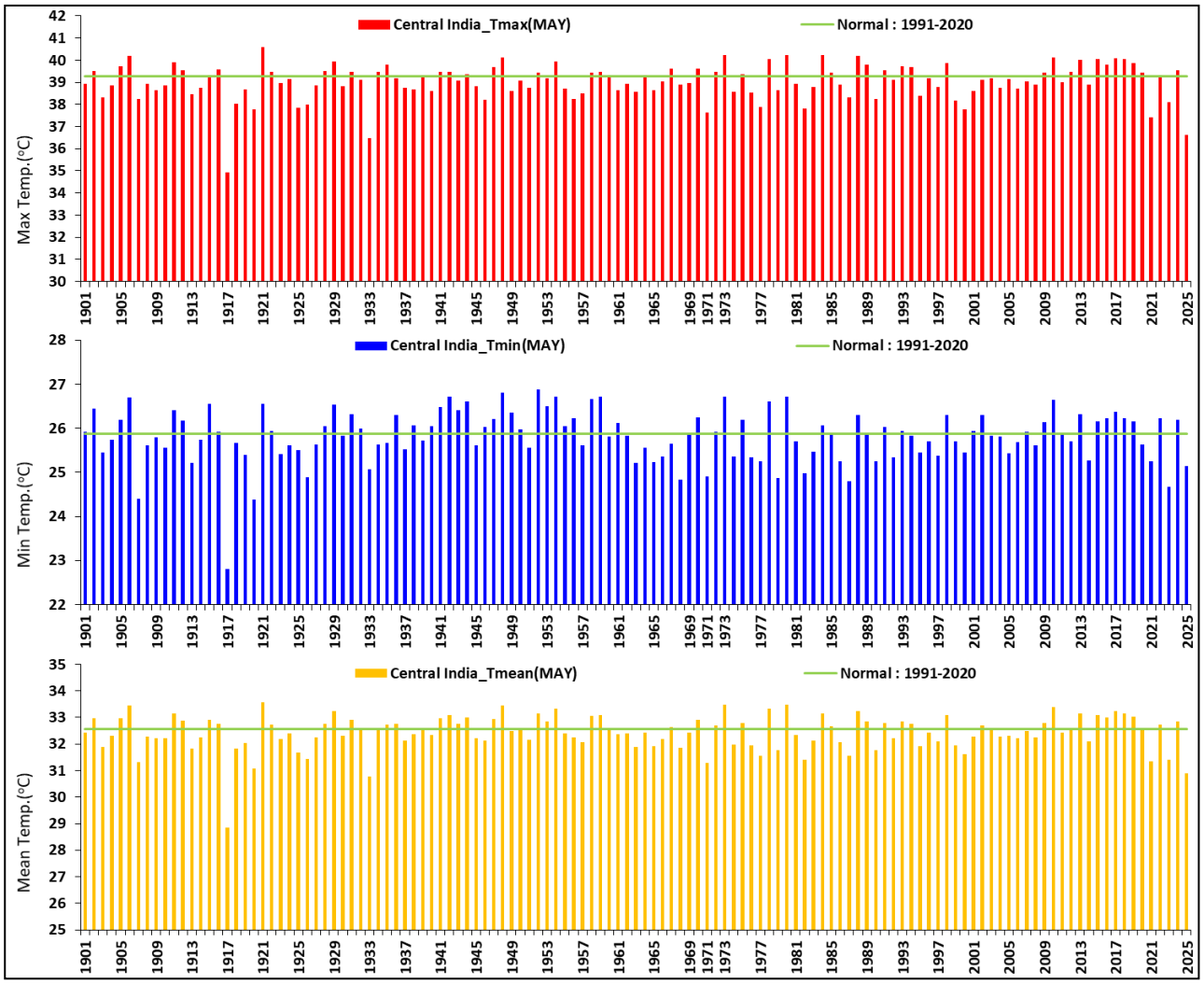


Fig 11: Time series of monthly average maximum, average minimum and mean temperature over Central India for the month of May 1901-2025

Fig 12 shows the time series of average maximum, average minimum and mean temperature over the South Peninsular India for the month of May 1901-2025. Over South Peninsular India during May 2025, the average maximum temperature was the 5th lowest (34.13ºC with departure from normal of -2.25ºC) after the years 1918 (33.69ºC), 1933 (33.78), 1943 (33.82) and 1955 (33.89ºC) since 1901. The average minimum temperature was also the 5th lowest (24.53ºC with departure from normal of -0.88ºC) after the years 1917 (23.59ºC), 1990 (24.21ºC), 1918(24.24ºC) and 1955 (24.49ºC) since 1901. The mean temperature was the 6th lowest (29.33ºC with departure from normal of -1.56ºC) since 1901.

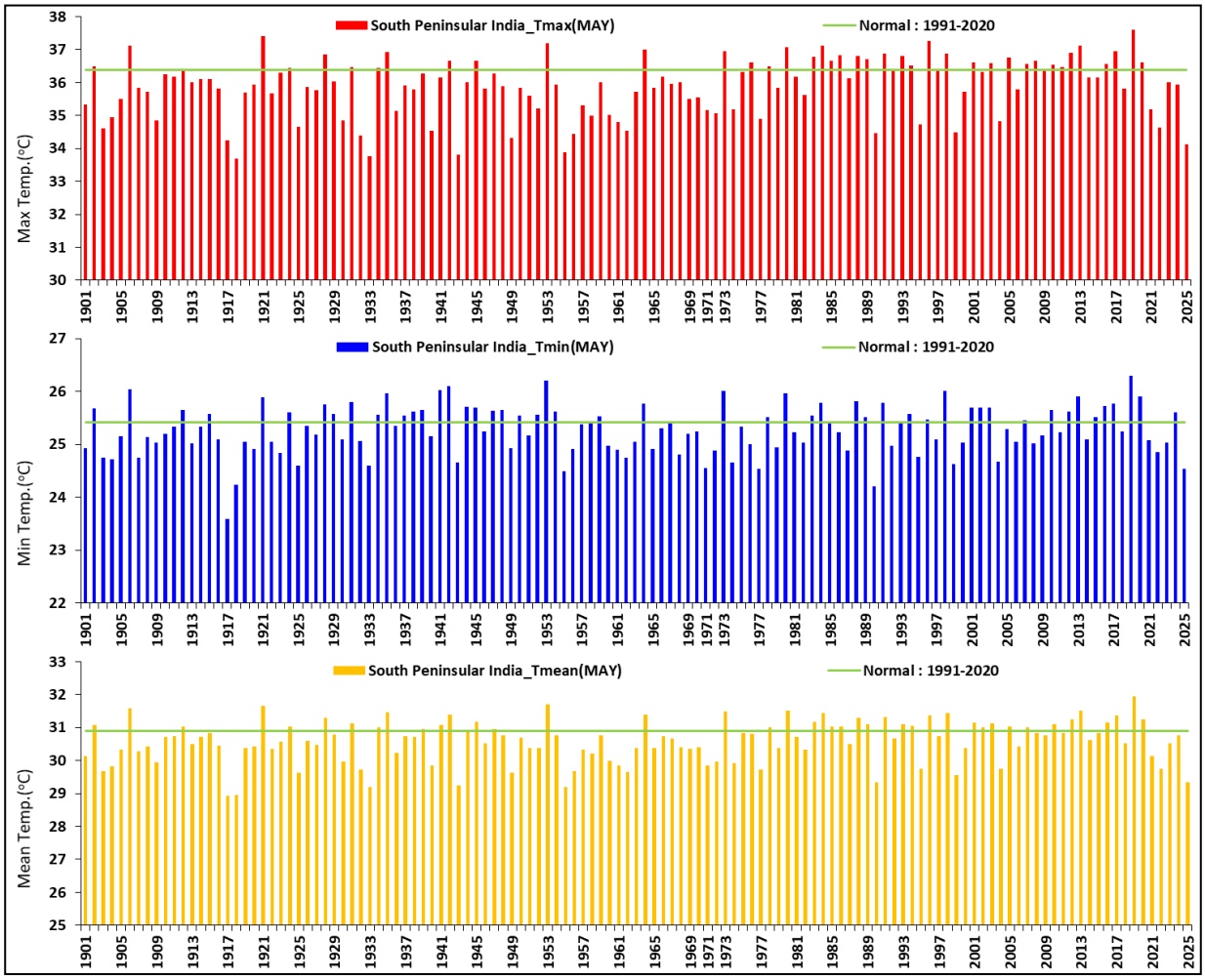


Fig 12: Time series of monthly average maximum, average minimum and mean temperature over South Peninsular India for the month of May 1901-2025

The temperatures during May 2025 for all India and homogeneous regions with its top and bottom ranks since 1901 are given below:

MAY 2025		Max Temp (°C)	Min Temp (°C)	Mean Temp (°C)
ALL INDIA	**ACTUAL**	**35.08**	**24.07**	**29.57**
	NORMAL	36.60	24.17	30.38
	ANOMALY	-1.52	-0.10	-0.81
	Rank since 1901	**119**	**67**	**107**
NORTHWEST INDIA	**ACTUAL**	**35.96**	**23.19**	**29.58**
	NORMAL	36.55	22.37	29.46
	ANOMALY	-0.58	0.81	0.12
	Rank since 1901	**84**	**25**	**50**
EAST & NORTHEAST INDIA	**ACTUAL**	**32.25**	**23.20**	**27.72**
	NORMAL	32.60	22.80	27.70
	ANOMALY	-0.35	0.40	0.03
	Rank since 1901	**78**	**14**	**50**
CENTRAL INDIA	**ACTUAL**	**36.63**	**25.14**	**30.89**
	NORMAL	39.26	25.88	32.57
	ANOMALY	-2.63	-0.74	-1.69
	Rank since 1901	**122**	**112**	**122**
SOUTH PENNINSULAR INDIA	**ACTUAL**	**34.13**	**24.53**	**29.33**
	NORMAL	36.38	25.41	30.90
	ANOMALY	-2.25	-0.88	-1.56
	Rank since 1901	**121**	**121**	**120**

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

The five lowest temperature records with corresponding bottom ranks since 1901 along with year of occurrence for Central India (TMax, TMean) and South Peninsular India (TMax, TMin) are given in the tables below:

Central India (May 2025)				
Year	**TMax**	Normal	Anomaly	**Bottom Rank**
1917	34.92	39.26	-4.35	1
1933	36.47		-2.80	2
2025	**36.63**		**-2.63**	**3**
2021	37.43		-1.83	4
1971	37.64		-1.62	5

South Peninsular India (May 2025)				
Year	**TMax**	Normal	Anomaly	**Bottom Rank**
1918	33.69	36.38	-2.69	1
1933	33.78		-2.61	2
1943	33.82		-2.56	3
1955	33.89		-2.49	4
2025	**34.13**		**-2.25**	**5**

Central India (May 2025)				
Year	**TMean**	Normal	Anomaly	**Bottom Rank**
1917	28.86	32.57	-3.71	1
1933	30.77		-1.81	2
2025	**30.89**		**-1.69**	**3**
1920	31.08		-1.50	4
1971	31.28		-1.30	5

South Peninsular India (May 2025)				
Year	**TMin**	Normal	Anomaly	**Bottom Rank**
1917	23.59	25.41	-1.83	1
1990	24.21		-1.20	2
1918	24.24		-1.18	3
1955	24.49		-0.92	4
2025	**24.53**		**-0.88**	**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 May 2025 is given in Fig 13.

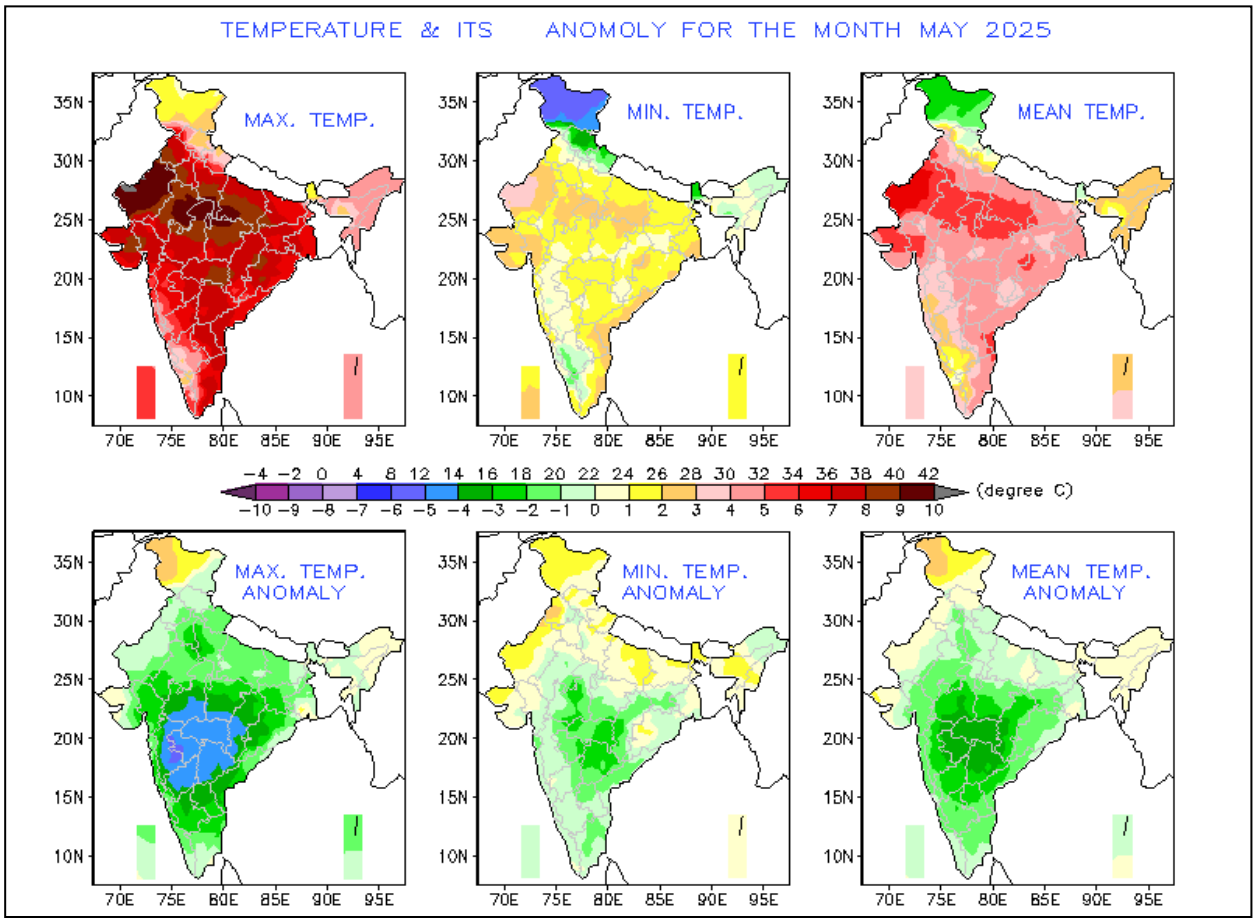


Fig 13: Observed spatial temperature pattern of monthly average maximum, average minimum, and mean temperature over India (top three from left to right) and their departure from normal (1991 to 2020 period) for May 2025 (lower three from left to right)

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

Highest Maximum				
STATION NAME	**NEW RECORD (^{0}C)#**	**DATE (MAY 2025)**	**PREVIOUS RECORD (^{0}C)**	**DATE**
KOKERNAG	33.3	22-05-2025	32.6	15-05-2001
Lowest Minimum				
STATION NAME	**NEW RECORD (^{0}C)#**	**DATE (MAY 2025)**	**PREVIOUS RECORD (^{0}C)**	**DATE**
ALIBAG	19.8	08-05-2025	21.7	25-05-1943
DHARWAD	14	21-05-2025	17.0	02-05-2023
DURG	18.6	02-05-2025	19.7	02-05-2005
KARAIKAL	19.2	15-05-2025	21.0	18-05-2003
KHARGONE	20	09-05-2025	20.5	23-05-1979
MUMBAI (COLABA)	22.2	08-05-2025	22.8	25-05-1951

6. Significant Weather Events

During May, about 260 people reportedly died, more than 85 people injured, about 1200 livestock perished and damage reported because of the mentioned hazards, as per the media report. The details of event-wises 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:	**199** (Uttar Pradesh, Maharashtra, Odisha, Andhra Pradesh, Chhattisgarh, Karnataka, Jharkhand, Bihar, Delhi, Haryana, Madhya Pradesh, Telangana, Assam, Gujarat, Kerala, Punjab, Chandigarh, Jammu and Kashmir)
Heavy Rains, Floods:	**58** (Maharashtra, Gujarat, Karnataka, Kerala, Tamil Nadu, Assam, Delhi)
Gale:	**2** (Jammu and Kashmir)
Hailstorm:	**1** (Uttar Pradesh)

Also, North Goa (Goa); Chikkamagaluru, Dakshina Kannada, Kodagu, Udupi (Karnataka); Thrissur (Kerala); Pune, Raigad, Ratnagiri (Maharashtra); East Garo Hills, East Khasi Hills, South West Khasi Hills (Meghalaya); Saiha (Mizoram); Coimbatore, Nilgiris (Tamil Nadu); Darjeeling, Jalpaiguri (West Bengal) districts were affected due to Extremely Heavy Rains. Fig 14 shows deaths and damages due to significant weather events during the month of May 2025.

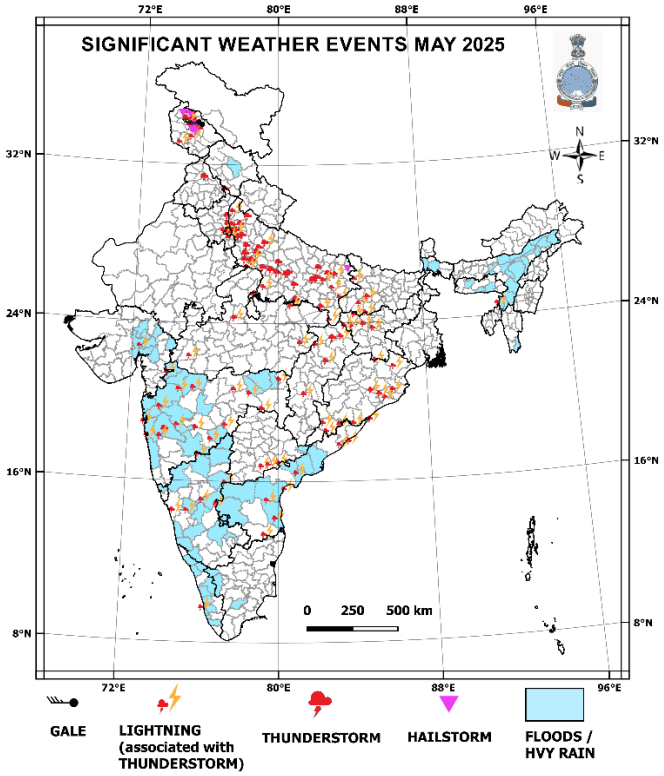


Fig. 14: Deaths and damages due to significant weather events during May 2025 (Based on real time media reports)