



Government of India
Earth System Science Organization
Ministry of Earth Sciences
India Meteorological Department

Press Release: Dated: 5 June 2022

Subject: Monthly Weather and Climate Summary for the month of May 2022

1. Salient features of month of May 2022

➤ **Western Disturbances (WDs):**

- A total of six WDs(1-5, 9-13, 14-18, 18-21, 22-25 and 28-31 May) moved across Western Himalayan region and adjoining plains of northwest India, out of which two WDs (1-5 and 22-25 May) were active. In the month, induced cyclonic circulations were formed regularly at lower levels, from most of these WDs and there were persistent easterly wind pattern at lower levels across Indo-Gangetic plains in the region in many days of the month. All these synoptic features had caused scattered to fairly widespread rainfall/thunderstorm activity over western Himalayan region and isolated to scattered rainfall over adjoining plains of India in many days mainly during 1-10 May and 21-31 May.
- The WD of 22-25 May have caused an induced low pressure area over northwest Rajasthan & neighbourhood on 23 May and under their influence, for the 1st time in this summer of 2022, a significant wet spell occurred over these areas and also heavy rainfall at isolated places, had been reported over plains, along with thunder squall and hailstorm activity at isolated places over West Uttar Pradesh and Haryana during 22-24 May.
- The WD and induced cyclonic circulation during 28-31 May had caused severe squall line in Delhi and adjoining NOIDA between 1612 IST and 1712 IST on 30 May 2022. Maximum squall wind speed of 100 kmph was recorded by IMD Safdarjung observatory at 1640 IST and 70 kmph squall wind speed was recorded by IMD Palam observatory at about 1630 IST on 30 May. This squall impacted the city with damages to traffic lights post and telephone towers. It also caused uprooting of trees and break down of tree branches, damaged few parking vehicles, disrupted road transport in the city and also aviation operations at IGIA.

➤ **Heat wave:**

- Due to the above features, heat wave conditions were substantially reduced during May 2022 in both frequencies and areas compared to April 2022. East central India and adjoin eastern states have hardly reported any heat wave during this month.

➤ **Thunderstorms over east and northeast India:**

- Over the Peninsular India and northeastern states and adjoin eastern India, due to favorable synoptic weather systems and wind conditions, rain and thunderstorms occurred at regular intervals. States like Kerala and Karnataka had most cases heavy rainfall events occurred during 10-23 May and then during 28-31 May during the month while northeastern states had a long spell of heavy to very heavy rainfall with isolated extremely heavy rainfall during 11-22 May 2022 causing flash flood and riverine floods over part of these states.

➤ **Cyclones and depression over north Indian Ocean:**

- A total of 2 low pressure systems formed over Bay of Bengal during the month against normal of 1 (severe cyclonic storm “Asani” during 7th – 12th May over Southeast Bay of Bengal and adjoining south Andaman Sea and Depression over Gulf of Martaban and adjoining Myanmar during 20th-21st May, 2022) while Arabian Sea had no system formed during the month).

➤ **Monsoon onset over Kerala:**

- Southwest Monsoon has set in over Kerala on 29th May, 2022 against the normal date of 01st June.

2. Frequency of Heavy Rainfall events over India

Heavy rainfall events occurred mainly over some stations of south peninsular India and northeast India. The location of occurrences of extremely heavy rainfall, heavy rainfall and heavy rainfall events is shown in the Fig 1. Out of total 392 events, 9 events were extremely heavy rainfall (≥ 204.5 mm), 62 were very heavy rainfall (115.6 to 204.4 mm) and 321 were heavy rainfall (64.5 to 115.5 mm of rainfall) events during this month.

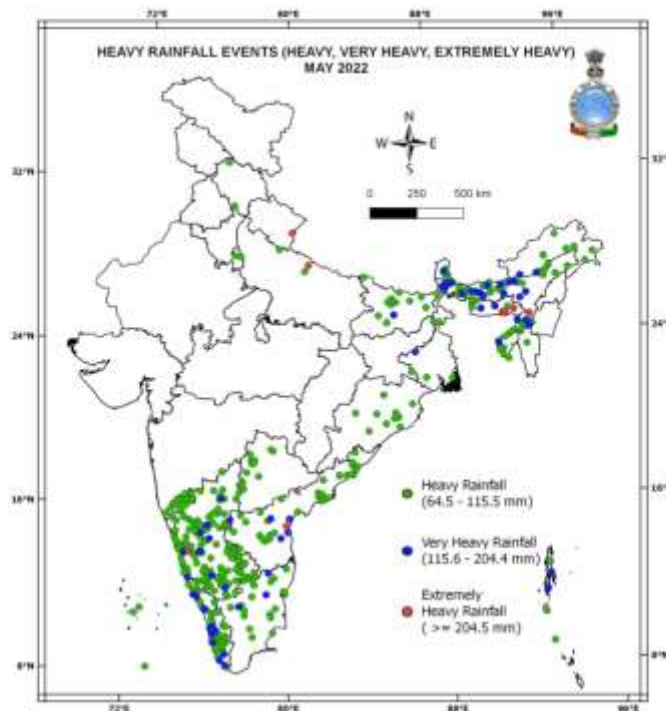


Fig 1: The location of occurrences of heavy rainfall events in the month of May 2022.

Some stations received record rainfall (24 hour) during this month. The table below shows stations received 24-hour record rainfall and its previous record.

Station	24 Hour Record Rainfall In May 2022(mm)*	Date	Previous Rainfall Record(Mm)	Date
Itanagar	131.8	16	74.4	23-05-2015
Orai	39	24	37	31-05-1959
Gurgaon	73.4	23	58	02-05-1987
Pathankot	11	24	4.4	20-05-2017
Jaipur Tehsil Sr	8	24	1.2	09-05-1981
Kavali	124.2	12	98	20-05-2010
Hakimpet	61.2	4	60.4	04-05-2015
Chamarajanagar	82.2	13	54.8	25-05-2011
Davanagere	87.6	19	60.5	26-05-2008
Shivamogga	118.4	20	93.8	31-05-1973
Kochi C.I.A.L.	165.4	15	119	13-05-2017

*Based on real time available data

3. Monthly Rainfall Scenario (01 to 31 May, 2022):

Rainfall over the country as a whole for the month of May 2022 was 83.4 mm, which is 34% more than its Long Period Average (LPA) of 62 mm based on the data of 1961-2010. During May 2022, rainfall over South Interior Karnataka (232.3 mm) was highest since 1901. The monthly rainfall for May 2022 is given in the table below:

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	83.4	62	34
Northwest India	31.5	35	-10
Central India	17.7	20.1	-12
South Peninsula	140.2	73.5	91
East & northeast India	252	188.5	34

During this month, 11 sub-divisions received large excess, 9 excess, 5 normal, 5 deficient rainfall and 6 large deficient rainfall. The observed spatial rainfall, normal rainfall (Averaged over 1961 to 2010) and its departures from normal for the month of May 2022 is given in Fig 2.

RAINFALL OVER THE COUNTRY FOR MAY 2022

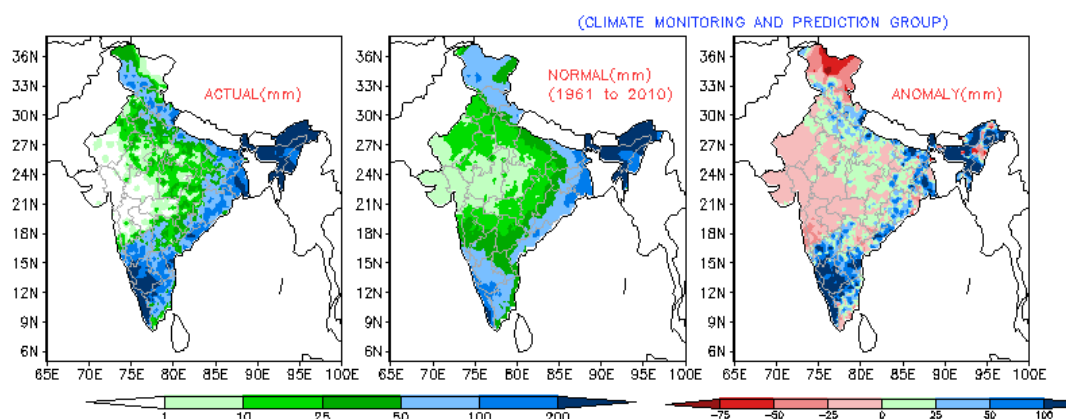


Fig 2: Observed spatial Rainfall pattern for the month of May 2022 over India and their departure from normal (1961 to 2010 period)

4. Characteristics of Temperatures for the month of May 2022

The observed average maximum, average minimum and mean temperature for the country as a whole during May 2022 are 35.07°C, 24.84°C and 29.96°C respectively, against the normal of 35.17°C, 24.32°C and 29.74°C based on data of 1981-2010. Thus, for the country as a whole, the average maximum temperature was normal with anomaly of -0.1°C, average minimum temperature is above normal with anomaly of 0.52°C and mean temperature is above normal with anomaly of 0.21°C. Figure 3 shows time series of monthly average maximum, average minimum and mean temperature over all India for the month of May during 1901-2022. The temperatures during May 2022 for all India and homogeneous regions with its ranks since 1901 is given in table 1.

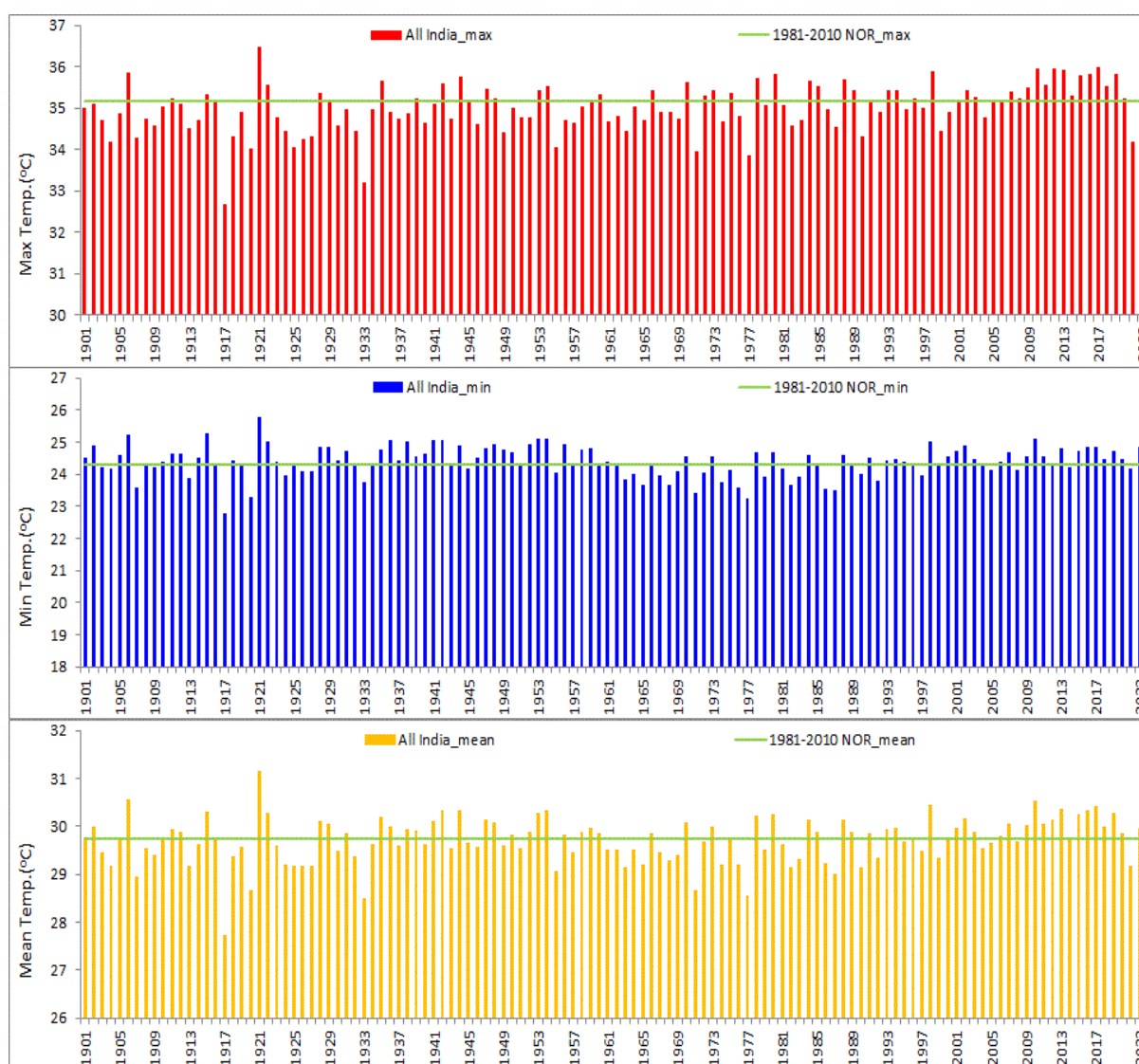


Fig 3: Time series of monthly average maximum, average minimum and mean temperature over all India for the month of May during 1901-2022.

Table1: Temperature and its anomaly during May 2022 for all India and homogeneous regions with its ranks since 1901.

MAY 2022		Max Temp (°C)	Min Temp (°C)	Mean Temp (°C)
ALL INDIA	ACTUAL	35.07	24.84	29.96
	NORMAL	35.17	24.32	29.74
	ANOMALY	-0.10	0.52	0.21
	TOP RANK	60	20	38
	BOT RANK	63	103	85
NORTHWEST INDIA	ACTUAL	36.60	22.90	29.75
	NORMAL	35.58	21.46	28.52
	ANOMALY	1.02	1.43	1.23
	TOP RANK	23	9	14
	BOT RANK	100	114	109
EAST & NORTHEAST INDIA	ACTUAL	32.85	23.12	27.98
	NORMAL	33.03	22.64	27.84
	ANOMALY	-0.18	0.48	0.15
	TOP RANK	66	26	50
	BOT RANK	57	97	73
CENTRAL INDIA	ACTUAL	37.69	26.38	32.04
	NORMAL	37.43	25.94	31.68
	ANOMALY	0.26	0.45	0.35
	TOP RANK	32	28	30
	BOT RANK	91	95	93
SOUTH PENNINSULAR INDIA	ACTUAL	33.42	25.88	29.65
	NORMAL	34.46	25.88	30.17
	ANOMALY	-1.04	-0.01	-0.52
	TOP RANK	101	72	97
	BOT RANK	22	51	26

The observed spatial temperature pattern of monthly average maximum, average minimum and mean temperature over India and their departures from normal (1981 to 2010 period) for the month of May 2022 is given in Figure 4.

TEMPERATURE & ITS ANOMOLY FOR THE MONTH MAY 2022

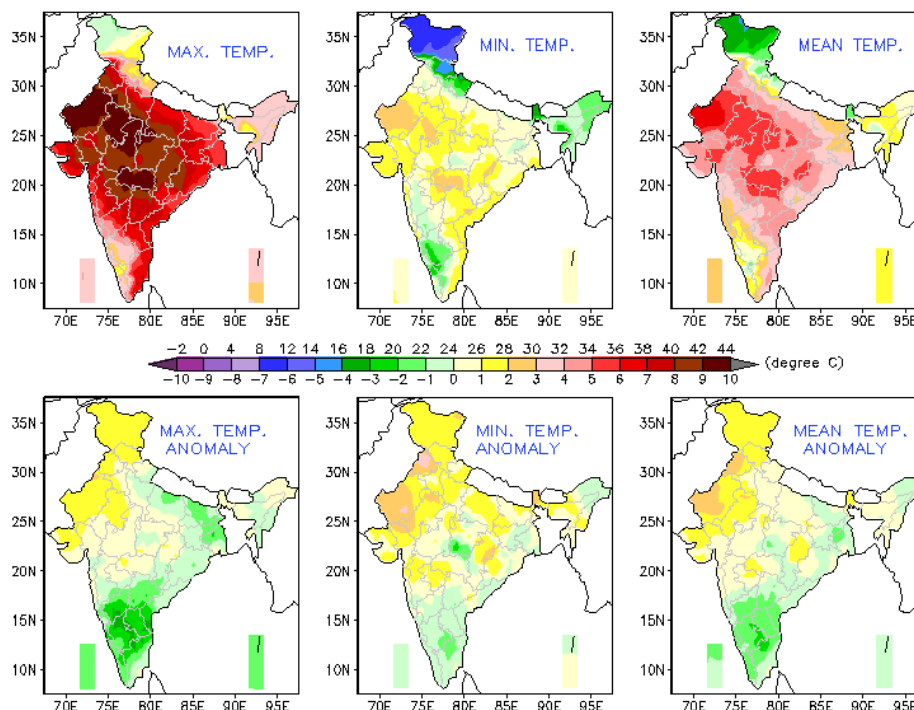


Fig 4: Observed spatial temperature pattern of monthly average maximum, average minimum, and mean temperature over India (top three from left to right) and their departures from normal (1981 to 2010 period) for May 2022 (lower three from left to right).

Some stations reported record (highest) temperature during this month. The table below shows the stations that reported highest temperature and its previous record.

STATION NAME	NEW RECORD (°C)*	DATE (MAY 2022)	PREVIOUS RECORD (°C)	Date
Ratlam	46	9	45.5	13-05-1970
Naliya	46.1	14	44.2	23-05-2018
Karwar	37.6	3 & 4	37.4	10-05-2010

* Based on real time available data