

**Tuesday, May 14, 2024** Time of Issue: 0745 hours IST (MORNING)

#### ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### **Significant Weather Features:**

#### **Weather Systems and Forecast & Warnings:**

- A cyclonic circulation lies over South Interior Karnataka and a trough runs from this cyclonic circulation to northwest Madhya Pradesh in lower tropospheric levels. Another cyclonic circulation lies over Comorin area in lower tropospheric levels. Under their influence:
  - > Isolated to scattered light to moderate rainfall accompanied with thunderstorm, lightning & squally winds (40-60 kmph) very likely over Madhya Pradesh, Vidarbha, Chhattisgarh, Madhya Maharashtra and Marathwada during next 4 days and accompanied with thunderstorm, lightning & gusty winds (30-40 kmph) very likely over Gujarat region on 14th May. Isolated Hailstorm activity very likely at isolated places over Madhya Pradesh on 14th May, 2024.
  - Scattered to Fairly widespread light to moderate rainfall accompanied with thunderstorm, lightning & squally winds (40-50 kmph) very likely over Sub-Himalayan West Bengal & Sikkim and Andaman & Nicobar Islands during next 7 days; Odisha on 14th and Isolated to scattered light to moderate rainfall accompanied with thunderstorm, lightning & gusty winds (30-40 kmph) over Bihar and [harkhand on 14th May, 2024. Isolated heavy rainfall also likely over Sub-Himalayan West Bengal & Sikkim on 18th May, 2024.
  - Scattered to Fairly widespread light to moderate rainfall accompanied with thunderstorm, lightning & squally winds (40-50 kmph) very likely over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Karnataka during next 6-7 days and isolated to scattered light to moderate rainfall accompanied with thunderstorm, lightning & gusty winds (30-40 kmph) over Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema during the same period. Isolated heavy rainfall very likely over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe during 14th-18th; Coastal Karnataka and South Interior Karnataka during 14th-16th May, 2024.
- A cyclonic circulation lies over northeast Assam in lower tropospheric levels. Under its influence:
  - Scattered light to moderate rainfall accompanied with thunderstorm, lightning & squally winds (30-40 kmph) very likely over Arunachal Pradesh, Assam, Meghalaya, Nagaland, Manipur, Mizoram and Tripura on 14th and likely to increase to fairly widespread to widespread rainfall during 15th-18th May, 2024.
  - Isolated heavy rainfall also likely over Arunachal Pradesh on 16th & 17th and Assam & Meghalaya on 17th May, 2024.
- A Western Disturbance seen as a trough in middle tropospheric westerlies roughly along long. 79°E to the north of lat. 32°N. A fresh Western Disturbance likely to affect western Himalayan region form 17th May. Under their influence:
  - ➤ Isolated rainfall activity very likely over Himachal Pradesh and Uttarakhand on 14th May, 2024.
  - > Isolated light to moderate rainfall accompanied with thunderstorm, lightning & gusty winds (40-50 kmph) very likely over Rajasthan on 14th May, 2024.
  - > A fresh spell of isolated rainfall activity likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand during 17th-20th May, 2024.

#### **Maximum temperature observation:**

\* Areas having maximum temperatures greater than 40°C: Yesterday, maximum temperatures were in the range of 40-42°C in some parts of Rajasthan, Madhya Pradesh, Gujarat state & south Haryana and in isolated pockets of East Uttar Pradesh, Rayalaseema & Vidarbha.

#### Heat Wave and Hot & Humid weather warning for next 5 days:

- ❖ Heat wave conditions likely over West Rajasthan during 15th-18th; West Uttar Pradesh, Punjab, East Rajasthan and south Haryana during 16th-18th; East Uttar Pradesh on 16th & 17th; northwest Madhya Pradesh on 17th & 18th and Bihar on 17th May, 2024.
- Hot and humid weather very likely to prevail over Saurashtra & Kutch during next 5 days.







#### **Main Weather Observations:**

- ❖ Rainfall distribution (from 0830 hours IST to 1730 hours IST of yesterday): at many places over Kerala & Mahe; at a few places over Uttarakhand and at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Bihar, West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, East Uttar Pradesh, West Madhya Pradesh, Jharkhand, Tamil Nadu, Puducherry & Karaikal, Konkan & Goa and Madhya Maharashtra.
- ❖ Significant amount of rainfall (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): Kerala: Alappuzha, Pathanamthitta-7 each, Periakulum-4; Tamil Nadu- Erode-2, Yercaud-1; Maharashtra: Mumbai Suburban-4, Raigad-3.
- **❖ Heavy Rainfall** observed (from 0830 hours IST to 1730 hours IST of yesterday): at isolated places over Kerala.
- **♦ Maximum wind speed** (from 0830 hours IST to 1730 hours IST of yesterday) (in kmph): **Konkan:** Santacruz-59, Colaba-51.
- ❖ Minimum Temperature Departures (as on 13-05-2024): Minimum temperatures were above normal (1.6°C to 3.0°C) at isolated places over West Rajasthan, Gujarat Region, Madhya Maharashtra and Konkan & Goa. These were markedly below normal (-5.1°C or less) at isolated places over Telangana; appreciably below normal (-3.1°C to -5.0°C) at isolated places over Himachal Pradesh; below normal (-1.6°C to -3.0°C) at many places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Chhattisgarh, Vidarbha; at a few places over Marathwada, Odisha, East Madhya Pradesh; at isolated places over West Madhya Pradesh, Coastal Andhra Pradesh & Yanam, Rayalaseema and near normal over rest parts of the country. Yesterday, the lowest minimum temperature of 15.2°C was reported at Dehri (Bihar) over the plains of the country.
- ❖ Maximum Temperature Departures (as on 13-05-2024): Maximum temperatures were markedly above normal (5.1°C or more) at isolated places Assam & Meghalaya; above normal (1.6°C to 3.0°C) at isolated places over Tamil Nadu, Puducherry & Karaikal, Konkan & Goa, West Rajasthan & Haryana-Chandigarh-Delhi. These were markedly below normal (-5.1°C or less) at isolated places over Vidarbha, Telangana; appreciably below normal (-3.1°C to -5.0°C) at isolated places over Madhya Maharashtra, Marathwada, Rayalaseema, Coastal Andhra Pradesh & Yanam, East Madhya Pradesh, East Uttar Pradesh; below normal (-1.6°C to -3.0°C) at a few places over West Madhya Pradesh; at isolated places over West Uttar Pradesh and near normal over rest parts of the country. Yesterday, the highest maximum temperature of 43.1°C was reported at Kota (East Rajasthan) over the country.



#### राष्ट्रीय मौसम पूर्वानुमान केन्द्र भारत मौसम विज्ञान विभाग पृथ्वी विज्ञान मंत्रालय



#### National Weather Forecasting Centre India Meteorological Department Ministry of Earth Sciences

## Meteorological Analysis (Based on 0530 hours IST)

- The trough aloft in middle & upper tropospheric westerlies with its axis at 5.8 km above mean sea level now runs roughly along long. 79°E to the north of lat. 32°N.
- The cyclonic circulation over east Jharkhand & neighbourhood at 1.5 km above mean sea level persists.
- The cyclonic circulation over northeast Assam & neighbourhood extending upto 1.5 km above mean sea level persists.
- The cyclonic circulation over South Interior Karnataka & neighbourhood extending upto 1.5 km above mean sea level persists.
- The trough from above cyclonic circulation over South Interior Karnataka to northwest Madhya Pradesh across Madhya Maharashtra at 0.9 km above mean sea level persists.
- ❖ The cyclonic circulation over northwest Madhya Pradesh & neighbourhood at 1.5 km above mean sea level persists.
- The cyclonic circulation over Comorin Area between 1.5 & 3.1 km above mean sea level persists.
- ❖ Moderate to intense convection lies over Southeast & adjoining Eastcentral Bay of Bengal in association with a feeble cyclonic circulation at lower level as observed in Oceansat-3 image.
- ❖ **Southwest Monsoon** is very likely to advance into South Andaman Sea, some parts of Southeast Bay of Bengal and Nicobar Islands around 19th May, 2024.
- ❖ A fresh Western Disturbance is likely to affect Western Himalayan Region from 17<sup>th</sup> May, 2024.

#### Weather Forecast for next 7 days (Upto 0830 hours IST of 21st May, 2024)

- ❖ Meteorological sub-division wise detailed 7 days rainfall forecast is given in Table-1.
- ❖ Gradual rise by about 3-5°C in maximum temperatures very likely over many parts of Northwest & East India during next 5 days.
- ❖ No significant change in maximum temperatures very likely over many parts of West & Central India during next 24 hours and rise by about 2-4°C for subsequent 4 days.
- ❖ No significant change in maximum temperatures very likely over rest parts of the country.

## Weather Outlook for subsequent 3 days (During 21st-23rd May, 2024)

- ❖ Isolated to scattered light/moderate rainfall likely over Islands, Western Himalayan Region, Northeast & south Peninsular India.
- \* Rainfall intensity likely to increase over Andaman & Nicobar Islands from 18th may.
- ❖ Dry weather likely to prevail over rest parts of the country.



# राष्ट्रीय मौसम पूर्वानुमान केन्द्र भारत मौसम विज्ञान विभाग पृथ्वी विज्ञान मंत्रालय



## National Weather Forecasting Centre India Meteorological Department Ministry of Earth Sciences

## Table-1

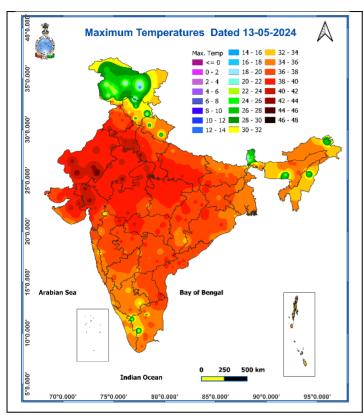
	7 Days Rainfall Forecast							
S. No.	Subdivision	14- May Day 1	15- May Day 2	16- May Day 3	17- May Day 4	18- May Day 5	19- May Day 6	20- May Day 7
1	ANDAMAN & NICOBAR ISLANDS	SCT	SCT	FWS	FWS	WS	WS	WS
2	ARUNACHAL PRADESH	SCT	FWS	FWS	WS	WS	WS	FWS
3	ASSAM & MEGHALAYA	SCT	SCT	FWS	FWS	WS	WS	FWS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	ISOL	ISOL	SCT	SCT	SCT	SCT	SCT
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	SCT	SCT	SCT	FWS	FWS	FWS	SCT
6	GANGETIC WEST BENGAL	ISOL	ISOL	DRY	DRY	DRY	DRY	SCT
7	ODISHA	SCT	ISOL	ISOL	ISOL	DRY	DRY	ISOL
8	JHARKHAND	ISOL	DRY	DRY	DRY	DRY	ISOL	SCT
9	BIHAR	ISOL	ISOL	DRY	DRY	DRY	ISOL	SCT
10	EAST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	ISOL
11	WEST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	ISOL
12	UTTARAKHAND	ISOL	DRY	DRY	DRY	ISOL	ISOL	ISOL
13	HARYANA CHANDIGARH & DELHI	DRY						
14	PUNJAB	DRY						
15	HIMACHAL PRADESH	ISOL	DRY	DRY	ISOL	ISOL	ISOL	ISOL
16	JAMMU & KASHMIR AND LADAKH	DRY	DRY	DRY	ISOL	ISOL	ISOL	ISOL
17	WEST RAJASTHAN	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
19	WEST MADHYA PRADESH	ISOL	ISOL	ISOL	ISOL	DRY	DRY	DRY
20	EAST MADHYA PRADESH	ISOL	ISOL	ISOL	ISOL	ISOL	DRY	DRY
21	GUJARAT REGION	ISOL	ISOL	ISOL	ISOL	DRY	DRY	DRY
22	SAURASHTRA & KUTCH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
23	KONKAN & GOA	ISOL						
24	MADHYA MAHARASHTRA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	DRY
25	MARATHAWADA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	DRY
26	VIDARBHA	ISOL	ISOL	ISOL	ISOL	DRY	DRY	DRY
27	CHHATTISGARH	ISOL	ISOL	ISOL	ISOL	ISOL	DRY	DRY
28	COASTAL ANDHRA PRADESH & YANAM	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	DRY
29	TELANGANA	SCT	SCT	SCT	SCT	SCT	ISOL	DRY
30	RAYALASEEMA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	DRY
31	TAMILNADU PUDUCHERRY & KARAIKAL	SCT	FWS	FWS	FWS	SCT	SCT	ISOL
32	COASTAL KARNATAKA	FWS	FWS	FWS	FWS	FWS	FWS	SCT
33	NORTH INTERIOR KARNATAKA	FWS	FWS	FWS	FWS	SCT	SCT	ISOL
34	SOUTH INTERIOR KARNATAKA	FWS	FWS	FWS	FWS	FWS	FWS	SCT
35	KERALA & MAHE	FWS						
36	LAKSHADWEEP	SCT	SCT	SCT	FWS	FWS	FWS	FWS

Legend	Category	% Stations
WS	Widespread/Most Places	76-100
FWS	Fairly Widespread/Many Places	51-75
SCT	Scattered/ A Few Places	26-50
ISOL	Isolated Places	1-25
DRY	No Rain	0



Fig. 1: Maximum Temperatures

#### Fig. 2: Departure of Maximum Temperatures



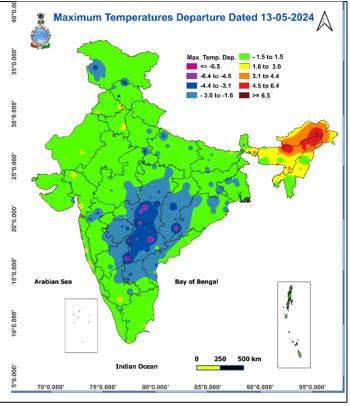
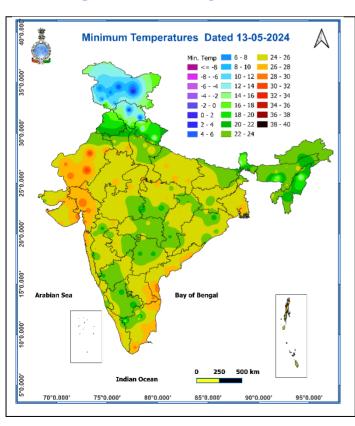


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures



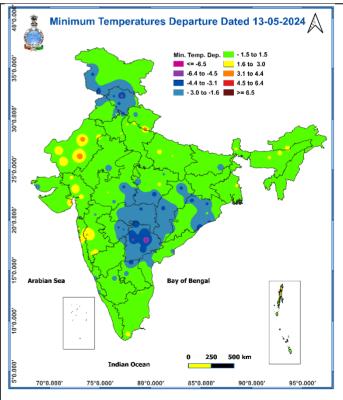
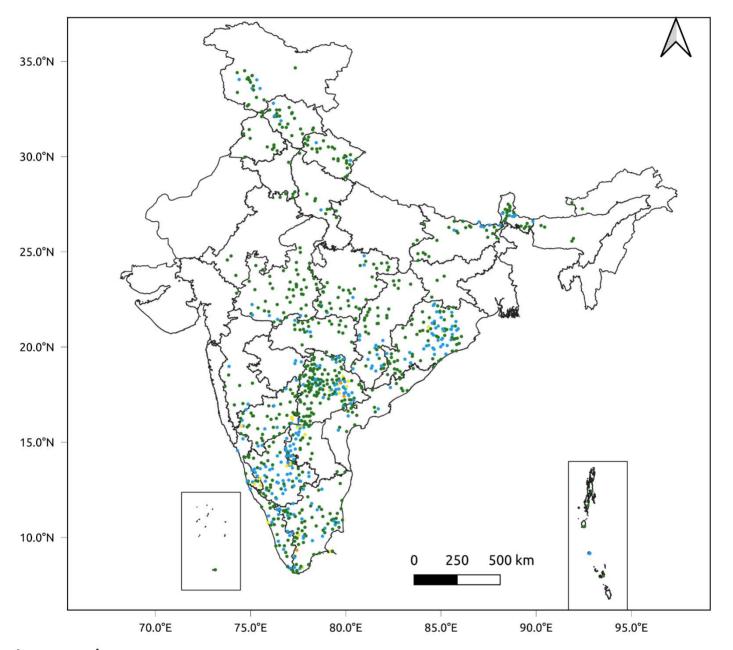




Fig. 5: Accumulated Rainfall (mm) during past 24 hours



# 24 Hr cumulative rainfall recorded over different stations during 0830 IST of 12-5-2024 to 0830 IST of 13-5-2024

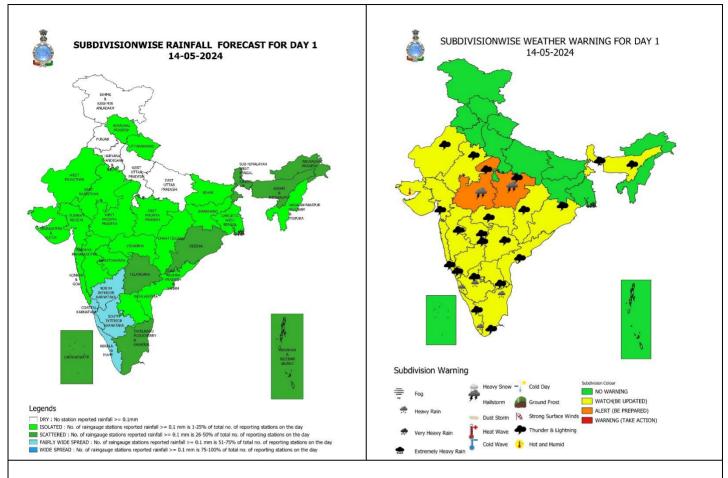


# Legends

- Very Light to Light Rainfall (0.1 15.5 mm)
- Moderate Rainfall (15.6 64.4 mm)
- Heavy Rainfall (64.5 115.5 mm)
- Very Heavy Rainfall (115.6 204.4 mm)
- Extremely Heavy Rainfall (>=204.5 mm)





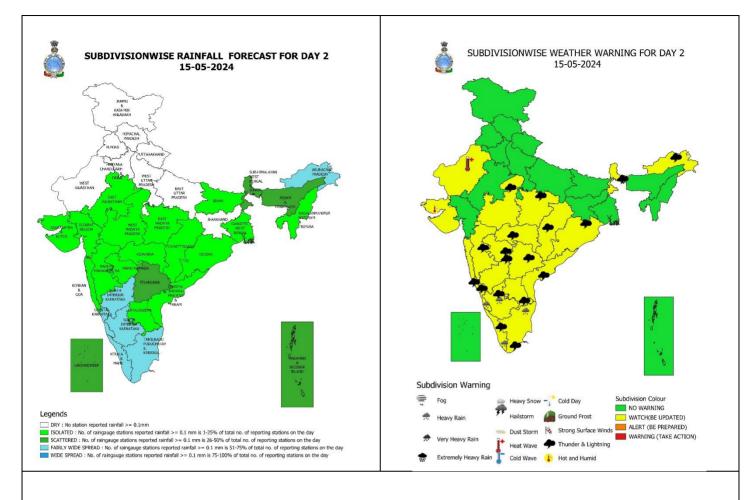


# 14 May (Day 1):

- ❖ Thunderstorm accompanied with lightning, squally winds (speed reaching 60-70 kmph) & hailstorm very likely at isolated places over West Madhya Pradesh; with lightning & gusty winds (speed reaching 50-60 kmph) at isolated places over East Madhya Pradesh, Telangana; with lightning & gusty winds (speed reaching 40-50 kmph) at isolated places over Vidarbha, Chhattisgarh, Madhya Maharashtra, Marathwada, Interior Karnataka; with lightning, gusty winds (speed reaching 30-40 kmph) at isolated places over Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Odisha, Assam & Meghalaya, Rajasthan; with lightning at isolated places over Gujarat Region, Konkan & Goa, Coastal Karnataka, Sub-Himalayan West Bengal & Sikkim.
- ❖ Heavy rainfall very likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Coastal Karnataka, South Interior Karnataka, Kerala & Mahe.
- ❖ Hot and humid weather very likely to prevail over Saurashtra & Kutch.





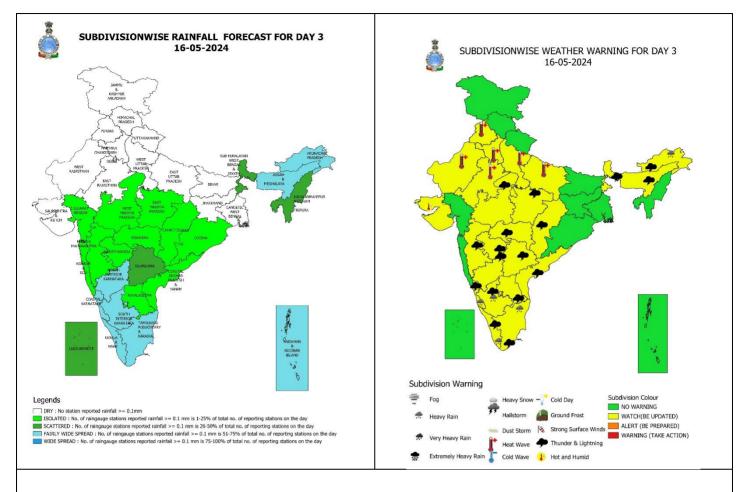


# 15 May (Day 2):

- ❖ Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph) very likely at isolated places over East Madhya Pradesh, Chhattisgarh, Interior Karnataka; with lightning & gusty winds (speed reaching 50-60 kmph) at isolated places over West Madhya Pradesh; with lightning & gusty winds (speed reaching 30-40 kmph) at isolated places over Vidarbha, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe; with lightning at isolated places over Konkan & Goa, Coastal Karnataka, Sub-Himalayan West Bengal & Sikkim, Odisha, Arunachal Pradesh.
- ❖ Heavy rainfall very likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Coastal Karnataka, South Interior Karnataka and Kerala & Mahe.
- **\Display** Heat Wave Conditions very likely to prevail in isolated pockets over West Rajasthan.
- ❖ Hot and humid weather very likely to prevail over Saurashtra & Kutch.





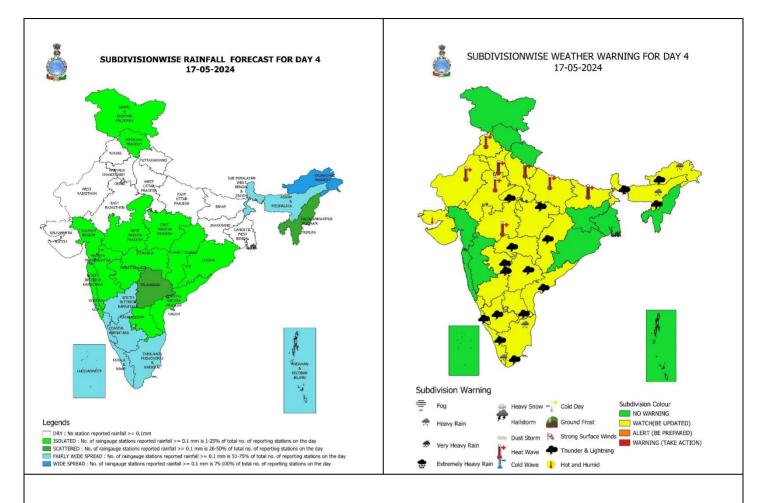


# 16 May (Day 3):

- ❖ Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph) very likely at isolated places over Interior Karnataka, Kerala & Mahe; with lightning & gusty winds (speed reaching 30-40 kmph) at isolated places over Madhya Pradesh, Chhattisgarh, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Tamil Nadu, Puducherry & Karaikal; with lightning at isolated places over Vidarbha, Coastal Karnataka, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya.
- ❖ Heavy rainfall very likely at isolated places over Arunachal Pradesh, Coastal Karnataka, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ Heat Wave Conditions very likely to prevail in isolated pockets over Uttar Pradesh, south Harvana, Punjab and Rajasthan.
- ❖ Hot and humid weather very likely to prevail over Saurashtra & Kutch.





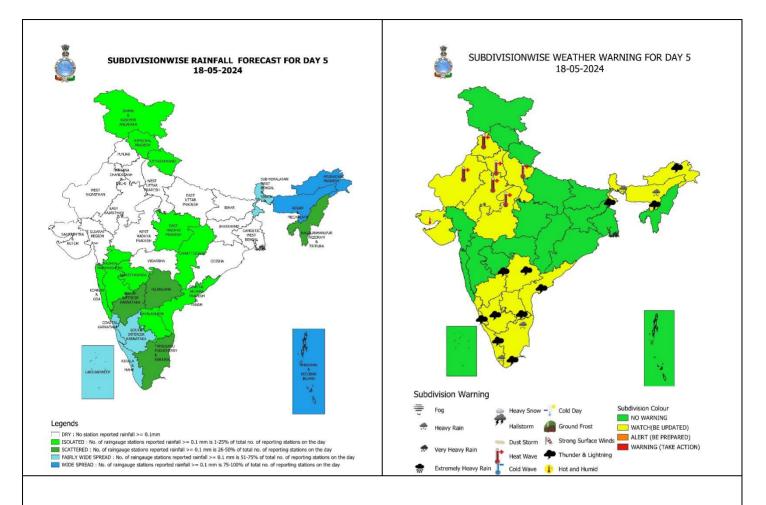


# 17 May (Day 4):

- ❖ Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph) likely at isolated places over Telangana, Interior Karnataka, Kerala & Mahe; with lightning & gusty winds (speed reaching 30-40 kmph) at isolated places over Madhya Pradesh, Chhattisgarh, Marathwada, Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Sub-Himalayan West Bengal & Sikkim; with lightning at isolated places over Vidarbha, Coastal Karnataka, Arunachal Pradesh, Assam & Meghalaya.
- ❖ Heavy rainfall likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- Heat Wave Conditions likely to prevail in some pockets over West Rajasthan and in isolated pockets over Bihar, Uttar Pradesh, Haryana-Chandigarh-Delhi, Punjab, East Rajasthan and northwest Madhya Pradesh.
- ❖ Hot and humid weather likely to prevail over Saurashtra & Kutch.







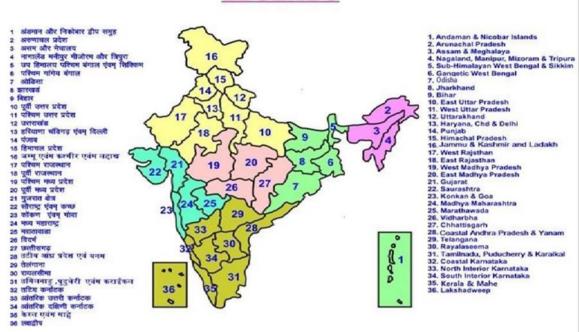
# 18 May (Day 5):

- ❖ Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph) likely at isolated places over Telangana, Interior Karnataka, Kerala & Mahe; with lightning & gusty winds (speed reaching 30-40 kmph) at isolated places over Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Sub-Himalayan West Bengal & Sikkim; with lightning at isolated places over Coastal Karnataka, Arunachal Pradesh, Assam & Meghalaya.
- ❖ Heavy rainfall likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ Heat Wave Conditions likely to prevail in some pockets over West Rajasthan and in isolated pockets over West Uttar Pradesh, Haryana-Chandigarh-Delhi, Punjab, East Rajasthan and northwest Madhya Pradesh.
- ❖ Hot and humid weather likely to prevail over Saurashtra & Kutch.









## SPATIAL DISTRIBUTION (% of Stations reporting)

% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespred (FWS/ Many Places)	1-25	Isolated (ISOL)

#### WARNING

WARNING (TAKE ACTION)
ALERT ( BE PREPARED)
WATCH (BE UPDATED)
NO WARNING ( NO ACTION)

## **Probabilistic Forecast**

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75





