

Friday, March 29, 2024  
Time of Issue: 0800 hours IST  
(MORNING)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

#### Weather Systems and Forecast & Warnings:

- ❖ A cyclonic circulation lies over south Assam in lower tropospheric levels. Under the influence of these systems:
  - ✓ Isolated to scattered rainfall/snowfall with isolated **thunderstorms & lightning** very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura on 29<sup>th</sup> and increase thereafter with fairly widespread to widespread light to moderate rainfall/snowfall with isolated **thunderstorms & lightning** very likely over Arunachal Pradesh and scattered to fairly widespread over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal & Sikkim during 30<sup>th</sup> March-03<sup>rd</sup> April, 2024.
  - ✓ **Isolated heavy rainfall/snowfall very likely over Arunachal Pradesh and isolated heavy rainfall over Assam & Meghalaya on 30<sup>th</sup> March & 01<sup>st</sup> April and isolated heavy to very heavy over Arunachal Pradesh & Assam & Meghalaya on 31<sup>st</sup> March, 2024.**
  - ✓ Isolated light to moderate rainfall with **thunderstorms & lightning** very likely over Gangetic West Bengal and Odisha during 29<sup>th</sup> March-01<sup>st</sup> April, 2024.
  - ✓ Isolated light to moderate rainfall very likely over Bihar on 29<sup>th</sup> & 30<sup>th</sup> and over Jharkhand with **thunderstorms & lightning** on 30<sup>th</sup> & 31<sup>st</sup> March, 2024.
- ❖ A Western Disturbance as a trough in middle & upper tropospheric westerlies runs roughly along Long. 56°E to the north of Lat. 22°N. An induced cyclonic circulation lies over northwest Rajasthan & adjoining Pakistan in lower tropospheric levels. Under their influence:
  - ✓ Fairly widespread to widespread light rainfall/snowfall with isolated **thunderstorms & lightning** likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand during 29<sup>th</sup>-31<sup>st</sup> March, 2024 and decrease thereafter.
  - ✓ Isolated **heavy rainfall/snowfall** very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh on 29<sup>th</sup> & 30<sup>th</sup> March, 2024.
  - ✓ Isolated light to moderate rainfall with **thunderstorms & lightning** likely over Punjab, Haryana, Chandigarh, West Uttar Pradesh during 29<sup>th</sup>-31<sup>st</sup>; Rajasthan and East Uttar Pradesh on 29<sup>th</sup> & 30<sup>th</sup> March, 2024.
  - ✓ Isolated **hailstorm** also likely over Jammu & Kashmir and Himachal Pradesh on 29<sup>th</sup>; over Uttarakhand during 29<sup>th</sup>-31<sup>st</sup>, Punjab and Haryana & Chandigarh on 29<sup>th</sup> & 30<sup>th</sup> March, 2024.

#### Temperature observation and forecast for next 5 days:

- ❖ Yesterday, the maximum temperatures were in the range 40-42°C at many places over Vidarbha; at some places over Madhya Pradesh, Marathwada, Madhya Maharashtra, Gujarat and Rayalaseema which were above normal by 3-4°C; in the range 36-39°C over at many parts of peninsular & East India except Bihar; at some parts over Rajasthan, Haryana-Chandigarh-Delhi and Uttar Pradesh and at isolated pockets over Gangetic West Bengal and Jharkhand which were above normal by 1-2°C; in the range 30-35°C at many parts over Punjab which were near normal.
- ❖ Yesterday, 95<sup>th</sup> percentile of maximum temperature departures were in the range of 2-4°C in isolated pockets of southwest Uttar Pradesh, north Madhya Pradesh and in the range of 4-6°C over Marathwada. It is likely to continue in the range of 4-6°C over Marathwada till 29<sup>th</sup> and decrease thereafter to fall in the range of 2-4°C till 30<sup>th</sup> March over Madhya Pradesh and Marathwada and decrease further thereafter to the range of 0-2°C over the region.
- ❖ Yesterday, 95<sup>th</sup> percentile of Minimum temperature departures were in the range of 2-4°C in isolated pockets of Southwest Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Gujarat region and north Madhya Maharashtra. It is likely to continue in the similar range over Gujarat Region next 24 hours, East Rajasthan next 48 hours and over southwest Uttar Pradesh & West Madhya Pradesh during next 3 days.
- ❖ Fall in maximum temperatures by 2-3°C very likely over Northwest India during next 3 days and no significant change thereafter.
- ❖ Gradual rise in maximum temperatures by 2-3°C very likely over Central & East India during next 24 hours and no significant change thereafter.
- ❖ No significant change in maximum temperatures very likely over rest part of the country during next 5 days.
- ❖ **Heat wave conditions** very likely in isolated pockets over North Interior Karnataka on 29<sup>th</sup> and Vidarbha on 29<sup>th</sup> & 30<sup>th</sup> March, 2024.
- ❖ **Warm night** very likely to prevail in isolated pockets over Marathwada and Madhya Maharashtra on 29<sup>th</sup> March, 2024.
- ❖ **Hot and humid weather** very likely to prevail over Saurashtra & Kutch on 29<sup>th</sup>; over Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe during 29<sup>th</sup> March-01<sup>st</sup> April, 2024.

## Main Weather Observations:

- ❖ **Rainfall/snowfall distribution** (from 0830 to 1730 hours IST of yesterday): at many places over Jammu-Kashmir.
- ❖ **Rainfall distribution** (from 0830 to 1730 hours IST of yesterday): at isolated places over Madhya Maharashtra, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Significant amount of rainfall** (from 0830 to 1730 hours IST of yesterday): **Nil**.
- ❖ Yesterday, **Heat wave conditions** prevailed in isolated pockets over West Madhya Pradesh.
- ❖ **Minimum Temperature Departures (as on 28-03-2024):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at most places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand; at many places over West Uttar Pradesh and Haryana-Chandigarh-Delhi; at a few places over Punjab, Rajasthan, Madhya Maharashtra and Saurashtra & Kutch; at isolated places over West Madhya Pradesh and Bihar; **above normal (1.6°C to 3.0°C)** at most places over East Uttar Pradesh, at many places over East Madhya Pradesh; at a few places over Gujarat Region, Konkan & Goa, Vidarbha, Marathwada, Chhattisgarh and North Interior Karnataka; at isolated places over West Bengal & Sikkim, Telangana, Tamil Nadu, Puducherry & Karaikal. These were **below normal (-1.6°C to -3.0°C)** at isolated places over Assam & Meghalaya, South Interior Karnataka and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of 15.8°C** was reported at **Ludhiana (Punjab)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 28-03-2024):** Maximum temperatures were **Markedly above normal (5.1°C or more)** at isolated places over Madhya Pradesh; **appreciably above normal (3.1°C to 5.0°C)** at a few places over Haryana-Chandigarh-Delhi; at isolated places over Himachal Pradesh, West Uttar Pradesh, East Rajasthan, Arunachal Pradesh and Assam & Meghalaya; **above normal (1.6°C to 3.0°C)** at many places over Chhattisgarh, Vidarbha, Marathwada and Kerala & Mahe; at a few places over Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Lakshadweep; at isolated places over Punjab, West Rajasthan, East Uttar Pradesh, Odisha, Madhya Maharashtra, Konkan & Goa and North Interior Karnataka. These were **Markedly below normal (-5.1°C or less)** at isolated places over Bihar; **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Sub-Himalayan West Bengal & Sikkim and Nagaland, Manipur, Mizoram & Tripura; **below normal (-1.6°C to -3.0°C)** at isolated places over Gangetic West Bengal and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature of 42.6°C** was reported at **Akola (Vidarbha)** over the country.

## Meteorological Analysis (Based on 0530 hours IST)

- ❖ The Western Disturbance as a trough in middle & upper tropospheric westerlies with its axis at 5.8 km above mean sea level roughly along Long. 56°E to the north of Lat. 22°N persists.
- ❖ The induced cyclonic circulation over northwest Rajasthan & adjoining Pakistan extending upto 1.5 km above mean sea level persists.
- ❖ The cyclonic circulation over south Assam & neighbourhood persists and now seen at 1.5 km above mean sea level.
- ❖ The trough/wind discontinuity from North Interior Karnataka to central parts of Madhya Pradesh extending upto 1.5 km above mean sea level persists.
- ❖ The cyclonic circulation over north Bihar at 0.9 km above mean sea level has become less marked.

## Weather Forecast for next 7 days (Upto 0830 hours IST of 05<sup>th</sup> April, 2024)

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

## Weather Outlook for subsequent 3 days (During 05<sup>th</sup>-07<sup>th</sup> April, 2024)

- ❖ Scattered to fairly widespread light to moderate rainfall/snowfall likely over Northeast India and Western Himalayan Region.
- ❖ Isolated light rainfall likely over Odisha, north Coastal Andhra Pradesh, Chhattisgarh and Kerala & Mahe.
- ❖ Dry weather likely to prevail over rest parts of the country.

Table-1

7 Days Rainfall Forecast

S. No.	Subdivision	29-Mar	30-Mar	31-Mar	01-Apr	02-Apr	03-Apr	04-Apr
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	ISOL	ISOL	SCT	ISOL	DRY	DRY	DRY
2	ARUNACHAL PRADESH	SCT	FWS	WS	WS	FWS	FWS	FWS
3	ASSAM & MEGHALAYA	SCT	FWS	WS	FWS	FWS	FWS	FWS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	SCT	SCT	FWS	SCT	FWS	FWS	SCT
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	SCT	FWS	FWS	SCT	SCT	SCT	ISOL
6	GANGETIC WEST BENGAL	ISOL	SCT	ISOL	ISOL	DRY	DRY	DRY
7	ODISHA	ISOL	ISOL	ISOL	ISOL	DRY	DRY	ISOL
8	JHARKHAND	DRY	ISOL	DRY	DRY	DRY	DRY	DRY
9	BIHAR	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
10	EAST UTTAR PRADESH	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
11	WEST UTTAR PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
12	UTTARAKHAND	FWS	FWS	SCT	DRY	ISOL	ISOL	ISOL
13	HARYANA CHANDIGARH & DELHI	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
14	PUNJAB	SCT	SCT	ISOL	DRY	DRY	DRY	DRY
15	HIMACHAL PRADESH	WS	WS	FWS	ISOL	ISOL	SCT	SCT
16	JAMMU & KASHMIR AND LADAKH	WS	WS	FWS	DRY	ISOL	SCT	SCT
17	WEST RAJASTHAN	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
19	WEST MADHYA PRADESH	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
20	EAST MADHYA PRADESH	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
21	GUJARAT REGION	DRY	DRY	DRY	DRY	DRY	DRY	DRY
22	SAURASHTRA & KUTCH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
23	KONKAN & GOA	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
24	MADHYA MAHARASHTRA	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
25	MARATHAWADA	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
26	VIDARBHA	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
27	CHHATTISGARH	DRY	ISOL	ISOL	DRY	DRY	DRY	DRY
28	COASTAL ANDHRA PRADESH & YANAM	DRY	DRY	DRY	DRY	DRY	DRY	ISOL
29	TELANGANA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
30	RAYALASEEMA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
31	TAMILNADU PUDUCHERRY & KARAIKAL	DRY	DRY	DRY	DRY	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	DRY	DRY	ISOL	ISOL	ISOL	ISOL	DRY
33	NORTH INTERIOR KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
34	SOUTH INTERIOR KARNATAKA	DRY	ISOL	ISOL	ISOL	ISOL	ISOL	DRY
35	KERALA & MAHE	ISOL	ISOL	DRY	DRY	ISOL	ISOL	ISOL
36	LAKSHADWEEP	DRY	DRY	DRY	DRY	DRY	DRY	DRY

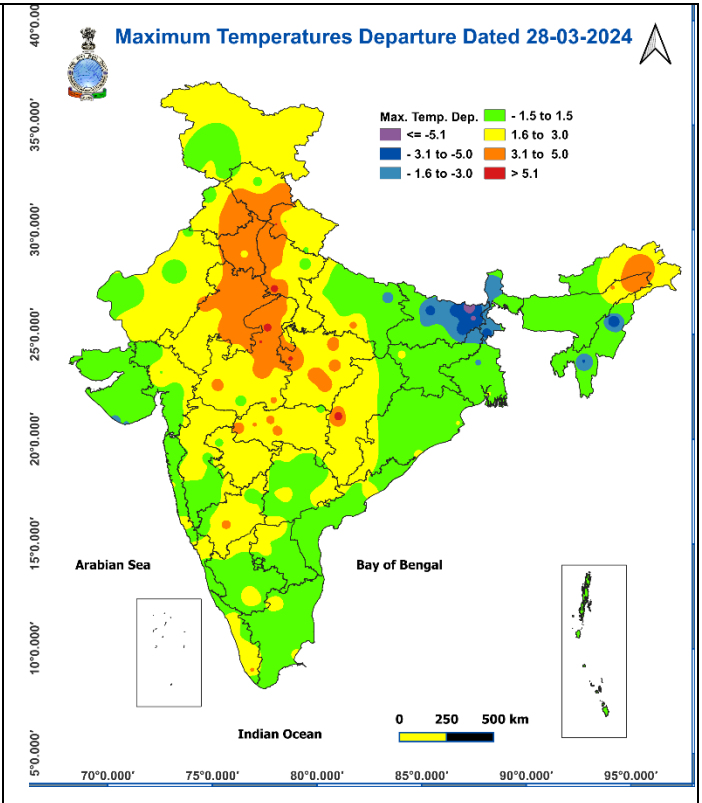
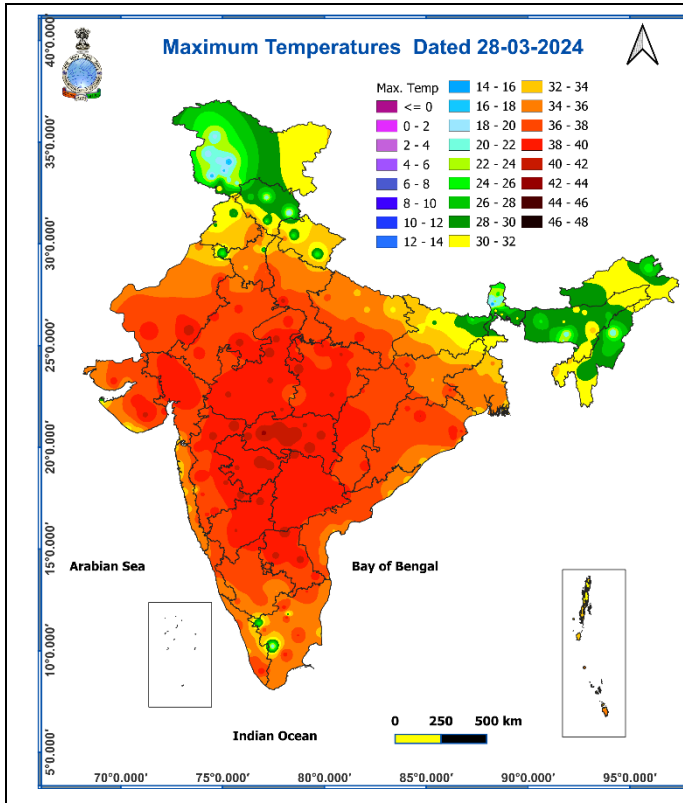
Legend	Category	% Stations
WS	Widespread/Most Places	76-100
FWS	Fairly Widespread/Many Places	51-75
SCT	Scattered/ A Few Places	26-50
ISOL	Isolated Places	1-25
DRY	No Rain	0

\* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".  
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.  
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599  
(Service to the Nation since 1875)



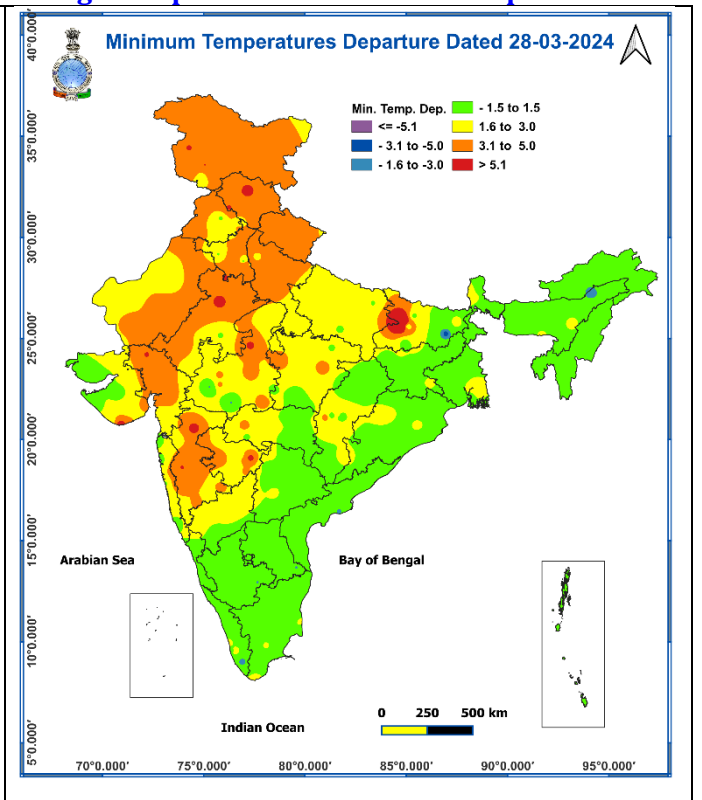
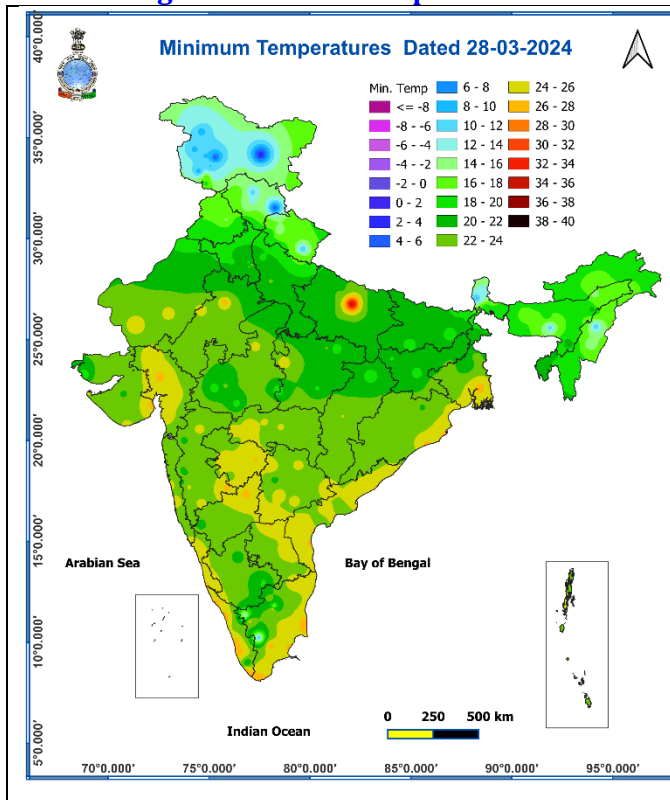
**Fig. 1: Maximum Temperatures**

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



**Fig. 3: Minimum Temperatures**

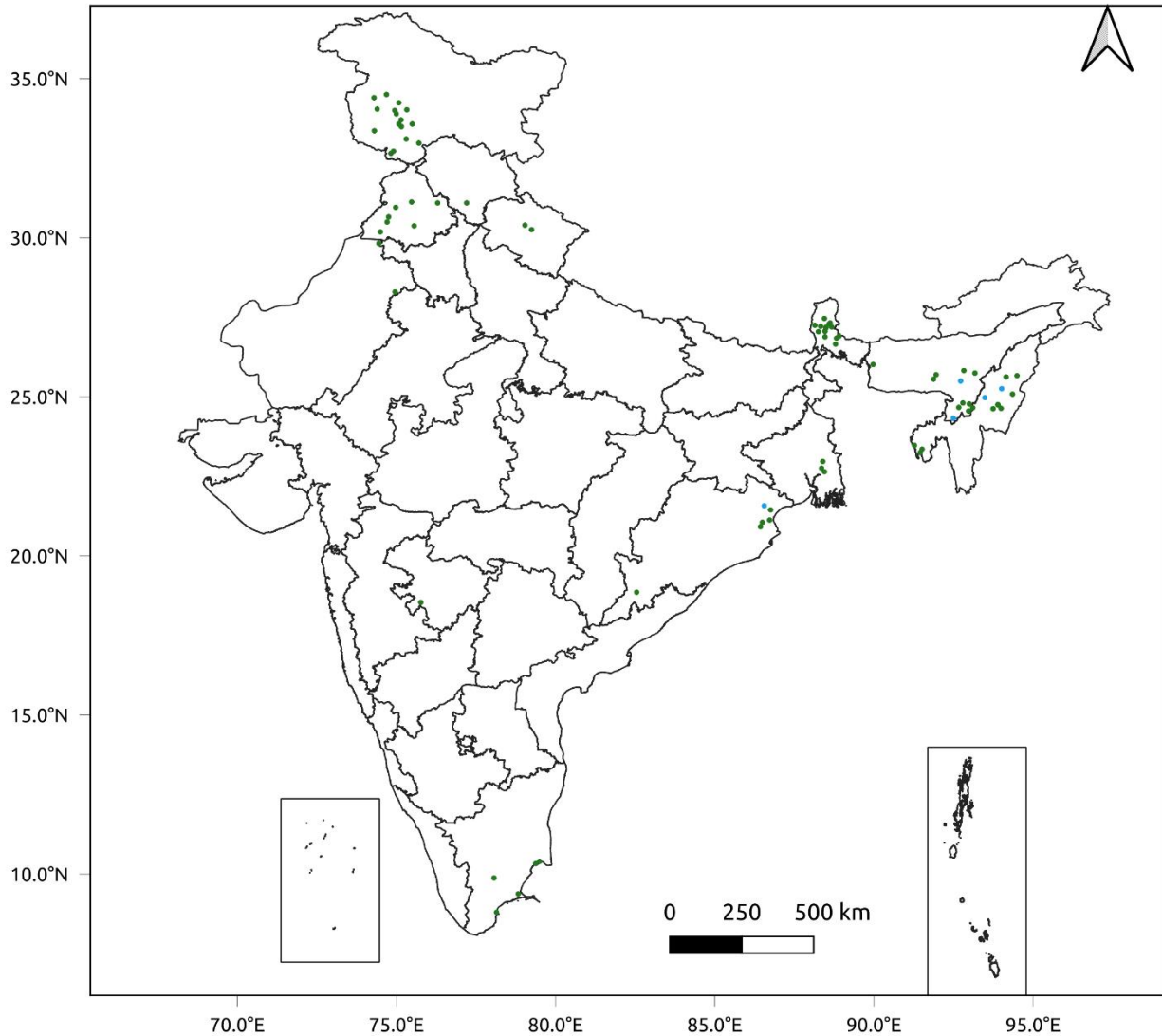
**Fig. 4: Departure of Minimum Temperatures**



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

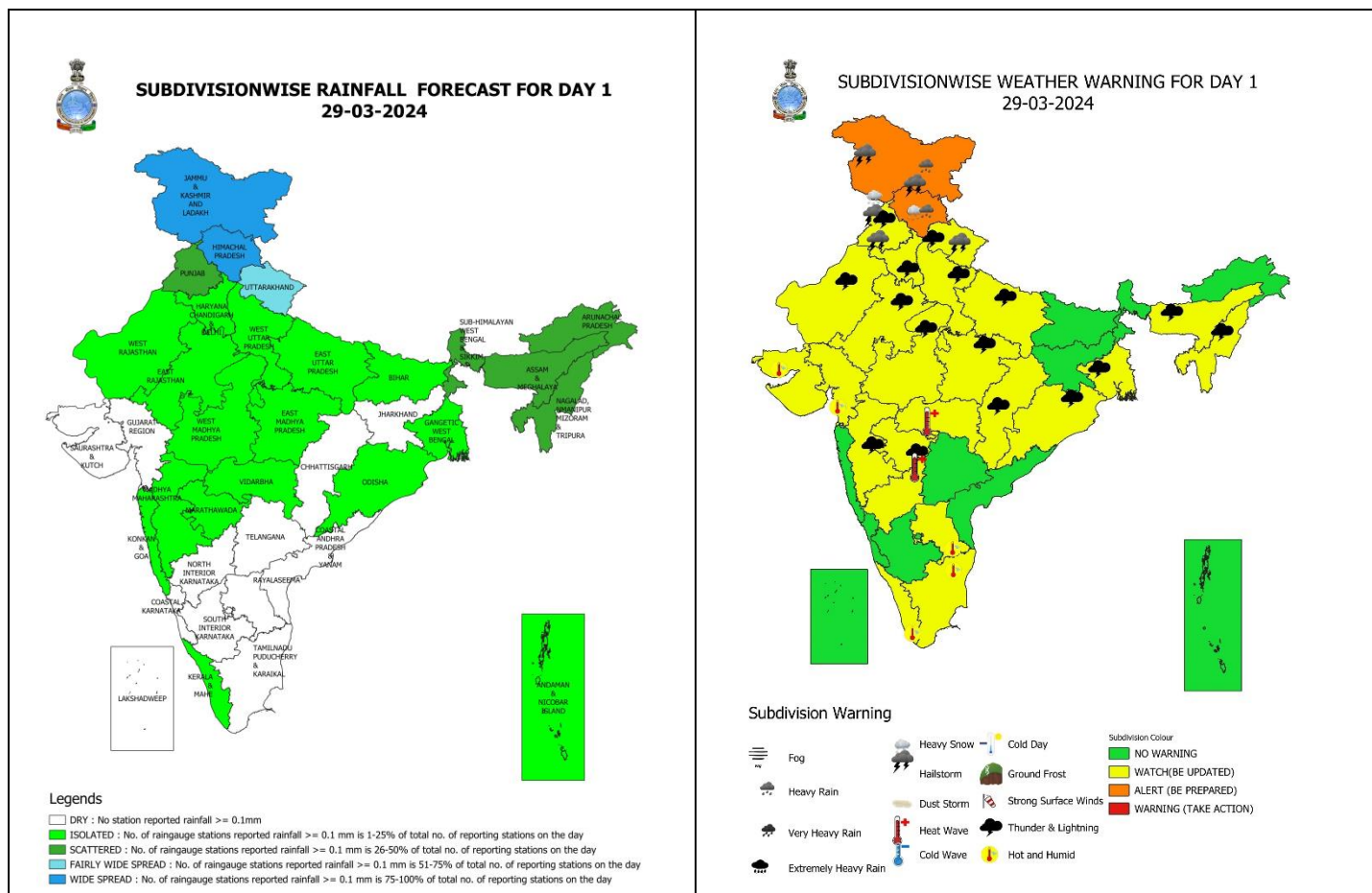


24 Hr cumulative rainfall recorded over different stations during 0830 IST of 27-3-2024 to 0830 IST of 28-3-2024



## Legends

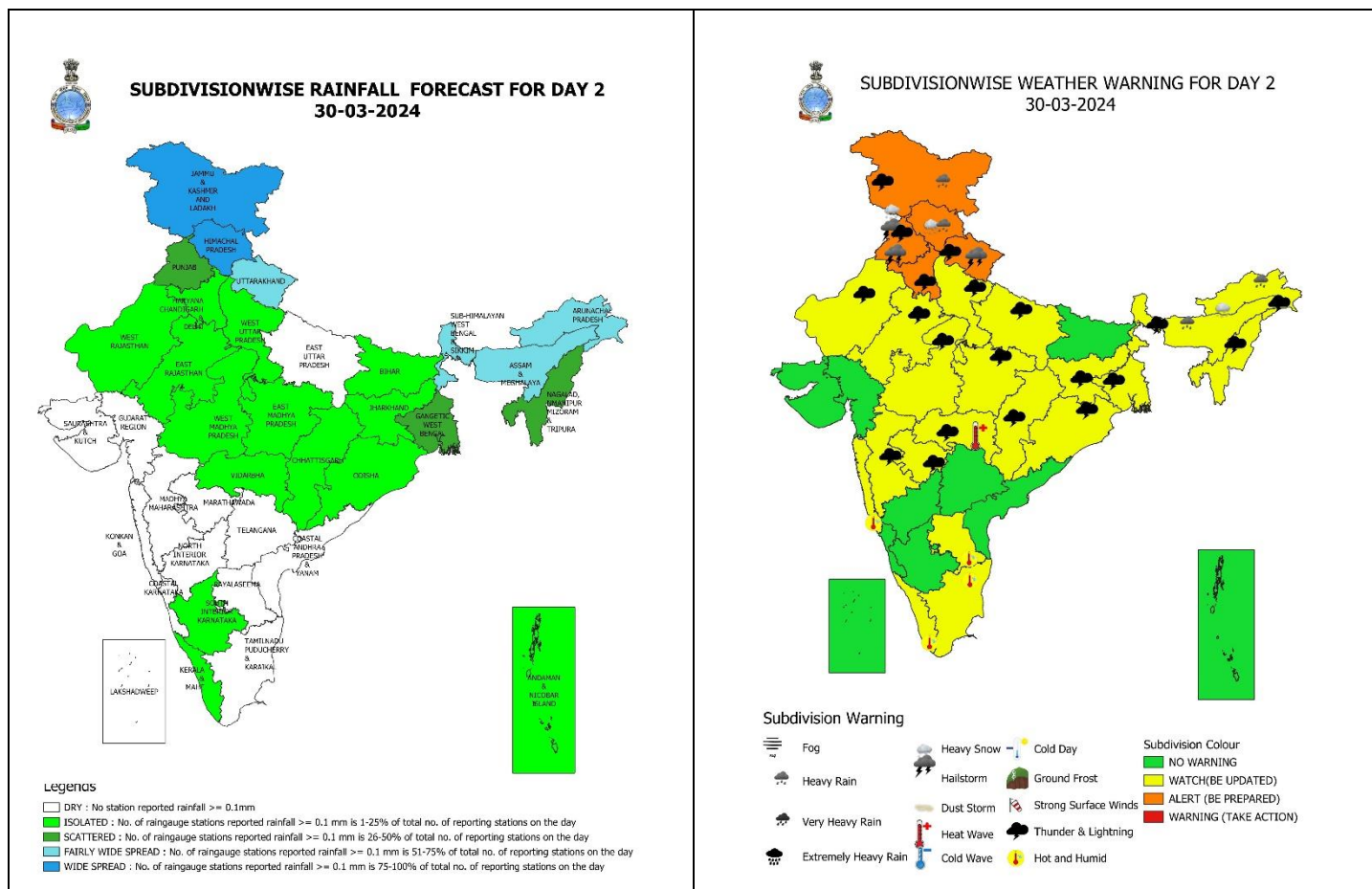
- Very Light to Light Rainfall (0.1 - 15.5 mm)
- Moderate Rainfall (15.6 - 64.4 mm)
- Heavy Rainfall (64.5 - 115.5 mm)
- Very Heavy Rainfall (115.6 - 204.4 mm)
- Extremely Heavy Rainfall ( $\geq 204.5$  mm)



## 29 March (Day 1):

- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40-50 kmph) & hailstorm** very likely at isolated places over Uttarakhand, Punjab, Haryana, Chandigarh; **with lightning & hailstorm** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over East Rajasthan; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Uttar Pradesh, West Rajasthan, Gangetic West Bengal; **with lightning** at isolated places over Madhya Pradesh, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada.
- ❖ **Heavy rainfall/snowfall** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh.
- ❖ **Warm night** very likely to prevail in isolated pockets over Marathwada and Madhya Maharashtra.
- ❖ **Heat wave conditions** very likely at isolated places over Vidarbha and North Interior Karnataka.
- ❖ **Hot and humid weather** very likely to prevail over Saurashtra & Kutch, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

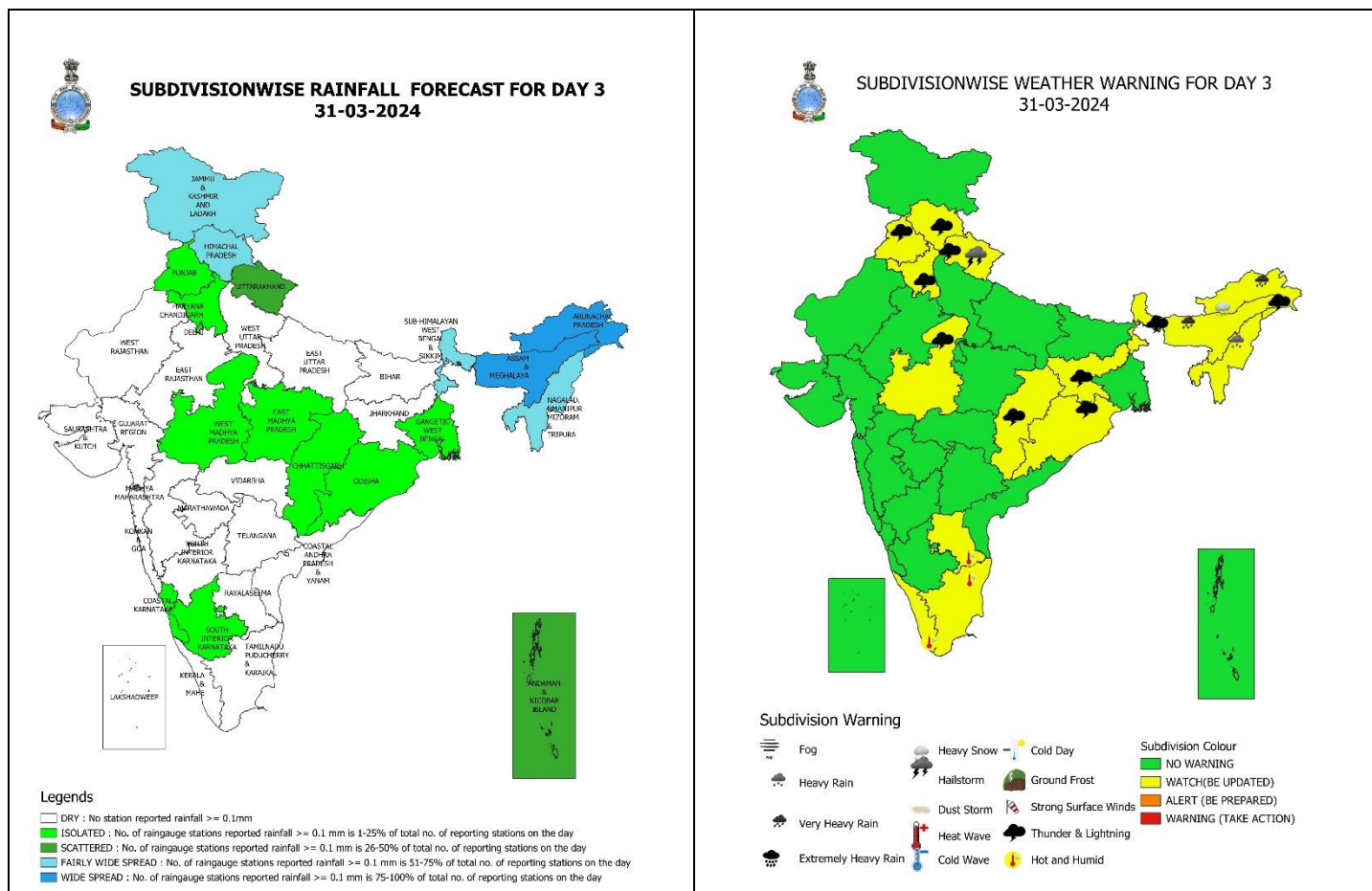




### 30 March (Day 2):

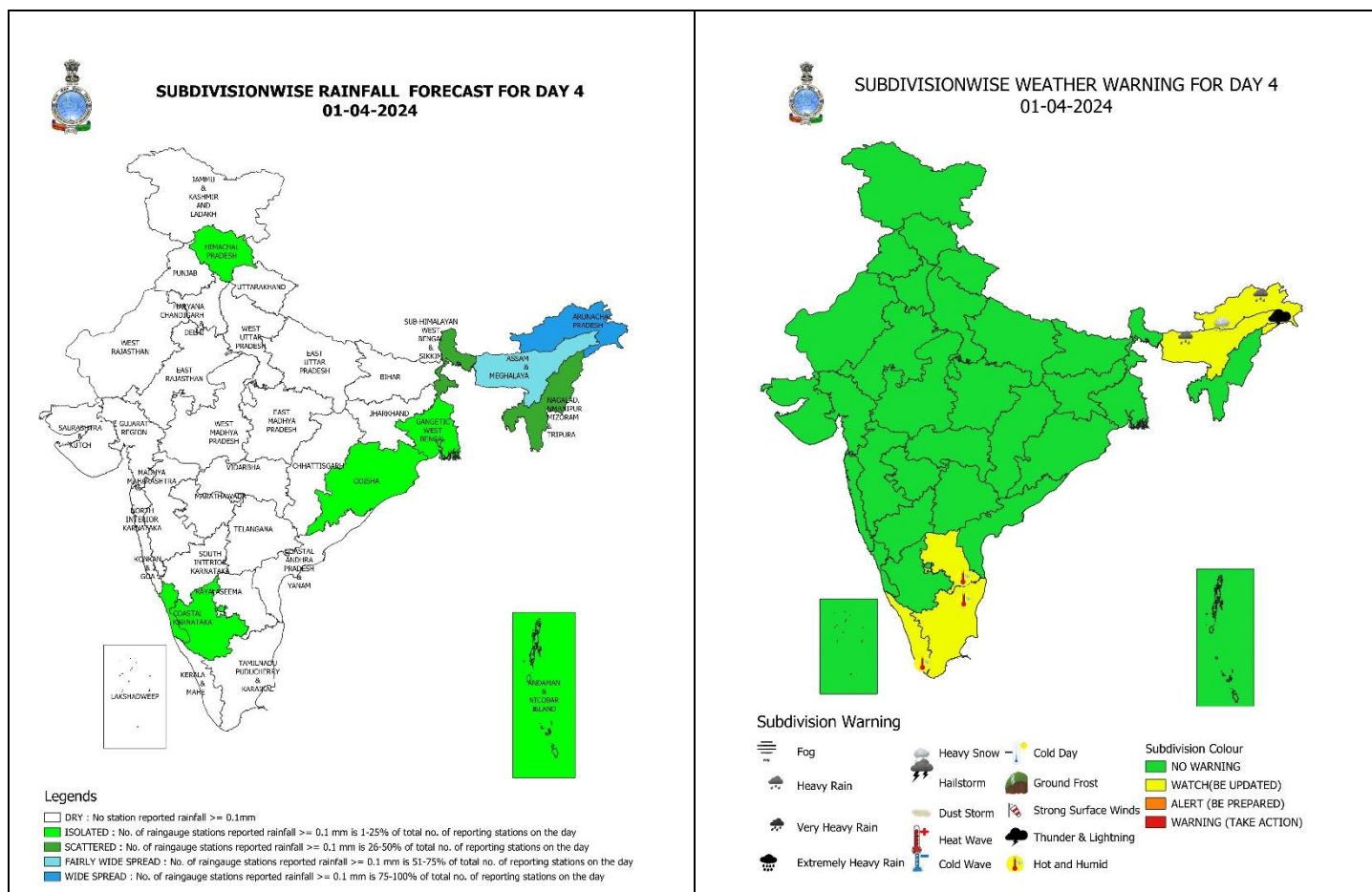
- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40-50 kmph) & hailstorm** very likely at isolated places over Uttarakhand, Haryana, Chandigarh; **with lightning, gusty winds (speed reaching 30-40 kmph) & hailstorm** at isolated places over Punjab; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Uttar Pradesh, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Jharkhand, Odisha, Arunachal Pradesh, Assam & Meghalaya, Madhya Maharashtra and Marathwada.
- ❖ **Heavy rainfall/snowfall** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Arunachal Pradesh; **Heavy rainfall** at isolated places over Assam & Meghalaya.
- ❖ **Heat wave conditions** very likely at isolated places over Vidarbha.
- ❖ **Hot and humid weather** very likely to prevail over Konkan & Goa, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.





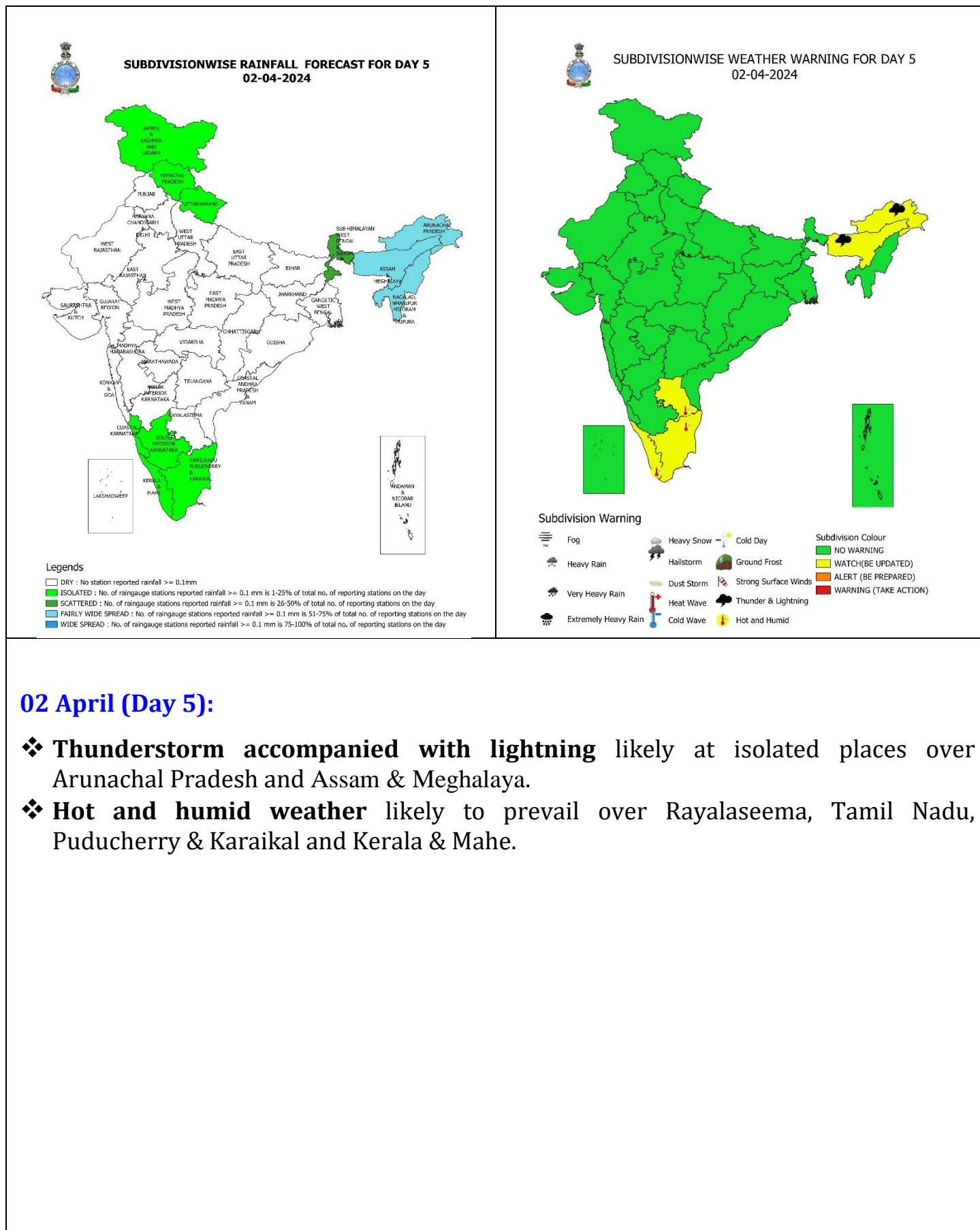
### 31 March (Day 3):

- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 30-40 kmph) & hailstorm** likely at isolated places over Uttarakhand; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Punjab, Haryana, Chandigarh, West Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim; **with lightning** at isolated places over Jharkhand, Odisha and Arunachal Pradesh.
- ❖ **Heavy to very heavy rainfall/ snowfall** likely at isolated places over Arunachal Pradesh; **Heavy to very heavy rainfall** at isolated places over Assam & Meghalaya; **Heavy rainfall** at isolated places over Nagaland.
- ❖ **Hot and humid weather** likely to prevail over Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.



## 01 April (Day 4):

- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Arunachal Pradesh.
- ❖ **Heavy rainfall/snowfall** likely at isolated places over Arunachal Pradesh; **Heavy rainfall** at isolated places over Assam & Meghalaya.
- ❖ **Hot and humid weather** likely to prevail over Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.



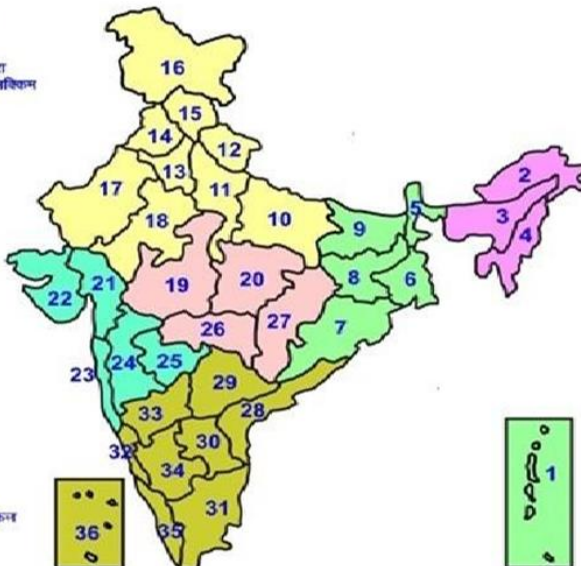
## 02 April (Day 5):

- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Arunachal Pradesh and Assam & Meghalaya.
- ❖ **Hot and humid weather** likely to prevail over Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.



## LEGENDS

- 1 अंडमान और निकोबार द्वीप समुह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड, मणिपुर, मिजोरम और त्रिपुरा
- 5 उप-हिमालय पश्चिम बंगाल एवं सिक्किम
- 6 गंगोत्री पश्चिम बंगाल
- 7 ओडिशा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखंड
- 13 हरियाणा, चंडीगढ़ एवं दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू एवं कश्मीर एवं लद्दाख
- 17 पश्चिम राजस्थान
- 18 पूर्वी राजस्थान
- 19 पश्चिम मध्य प्रदेश
- 20 पूर्वी मध्य प्रदेश
- 21 गुजरात क्षेत्र
- 22 सौराष्ट्र एवं कच्छ
- 23 कोकण एवं गोवा
- 24 मध्य महाराष्ट्र
- 25 मराठवाड़ा
- 26 विदर्भ
- 27 उत्तरीसमूह
- 28 तटीय आंध्र प्रदेश एवं यानम
- 29 तेलंगाना
- 30 दक्षिण तेलंगाना
- 31 तमिलनाडु, पुदुचेरी एवं काराईकल
- 32 तटस्थ कर्नाटक
- 33 आंतरिक उत्तरी कर्नाटक
- 34 आंतरिक दक्षिणी कर्नाटक
- 35 केरल एवं माहे
- 36 लक्षद्वीप



1. Andaman & Nicobar Islands
2. Arunachal Pradesh
3. Assam & Meghalaya
4. Nagaland, Manipur, Mizoram & Tripura
5. Sub-Himalayan West Bengal & Sikkim
6. Gangetic West Bengal
7. Odisha
8. Jharkhand
9. Bihar
10. East Uttar Pradesh
11. West Uttar Pradesh
12. Uttarakhand
13. Haryana, Chd & Delhi
14. Punjab
15. Himachal Pradesh
16. Jammu & Kashmir and Ladakh
17. West Rajasthan
18. East Rajasthan
19. West Madhya Pradesh
20. East Madhya Pradesh
21. Gujarat
22. Saurashtra
23. Konkan & Goa
24. Madhya Maharashtra
25. Marathwada
26. Vidharbha
27. Chhattisgarh
28. Coastal Andhra Pradesh & Yanam
29. Telangana
30. Rayalaseema
31. Tamilnadu, Puducherry & Karaikal
32. Coastal Karnataka
33. North Interior Karnataka
34. South Interior Karnataka
35. Kerala & Mahe
36. Lakshadweep

## 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 Widespread (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

\* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".

Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.

For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599

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## LEGENDS

### WARNING

<b>WARNING (TAKE ACTION)</b>
<b>ALERT (BE PREPARED)</b>
<b>WATCH (BE UPDATED)</b>
<b>NO WARNING (NO ACTION)</b>

### Probabilistic Forecast

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



Rain/ Snow \*

Heavy: 64.5 to 115.5 mm/cm \*  
Very Heavy: 115.6 to 204.4 mm/cm \*  
Extremely Heavy: > 204.4 mm/cm \*



Heat Wave

When maximum temperature of a station reaches  $\geq 40^{\circ}\text{C}$  for plains and  $\geq 30^{\circ}\text{C}$  for hilly regions  
(a) Based on Departure from normal

Heat Wave: Maximum Temperature Departure from normal  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .  
Severe Heat Wave: Maximum Temperature Departure from normal  $\geq 6.5^{\circ}\text{C}$

(b). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature  $\geq 45^{\circ}\text{C}$ .  
Severe Heat Wave: When actual maximum temperature  $\geq 47^{\circ}\text{C}$

(c). Criteria for heat wave for coastal stations

When maximum temperature departure is  $> 4.5^{\circ}\text{C}$  from normal. Heat Wave may be described provided maximum temperature  $\geq 37^{\circ}\text{C}$



Warm Night

When maximum temperature remains  $40^{\circ}\text{C}$

Warm Night: When minimum temperature departure  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .  
Severe Warm Night: When minimum temperature departure  $> 6.4^{\circ}\text{C}$ .



Cold Wave

When minimum temperature of a station  $\leq 10^{\circ}\text{C}$  for plains and  $\leq 0^{\circ}\text{C}$  for hilly regions.

(a). Based on departure

Cold Wave: Minimum Temperature Departure from normal  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .  
Severe Cold Wave: Minimum Temperature Departure from normal  $\leq -6.5^{\circ}\text{C}$

(b) Based on actual Minimum Temperature (for Plains only)

Cold Wave : When Minimum Temperature is  $\leq 4.0^{\circ}\text{C}$   
Severe Cold Wave: When Minimum Temperature is  $\leq 2.0^{\circ}\text{C}$

(c) For Coastal Stations

When Minimum Temperature departure is  $\leq -4.5^{\circ}\text{C}$  & actual Minimum Temperature is  $\leq 15^{\circ}\text{C}$



Cold Day

When minimum temperature of a station  $\leq 10^{\circ}\text{C}$  for plains and  $\leq 0^{\circ}\text{C}$  for hilly regions  
Based on departure

Cold Day: Maximum Temperature Departure from normal  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .  
Severe Cold Day: Maximum Temperature Departure from normal  $\leq -6.5^{\circ}\text{C}$



Fog

Phenomenon of small droplets suspended in air and the horizontal visibility  $< 1\text{km}$

Moderate Fog: When the visibility between 500-200 metres  
Dense Fog: when the visibility between 50-200 metres  
Very Dense Fog: when the visibility  $< 50$  metres



Thunderstorm

Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)



Dust/Sand Storm

An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.



Frost

Ice deposits on ground

Air temperature  $\leq 4^{\circ}\text{C}$  (over Plains)



Squall

A strong wind that rises suddenly, lasts for atleast 1 minute.

Moderate: Wind speed 52-61 kmph  
Severe: Wind speed 62-87 kmph  
Very Severe: Wind speed  $> 87$  kmph



Sea State

Effect of various waves in the sea over specific area

Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre  
High to very high: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre  
Phenomenal: Wind speed  $> 117$  kmph ( $> 63$  knots) & Wave height  $> 14$  metre



Cyclone

Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)  
Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)  
Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)  
Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 - 119 knots)  
Super Cyclone Storm: Wind speed  $> 220$  kmph ( $> 119$  knots)

\* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".

Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.

For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599

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