

Friday, March 22, 2024  
Time of Issue: 1315 hours IST  
(MID-DAY)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

- ❖ A cyclonic circulation lies over northeast Assam & neighbourhood in lower to middle tropospheric levels. Under the influence of this systems:
  - ✓ Fairly widespread/widespread light to moderate rainfall with isolated thunderstorms & lightning very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal & Sikkim during 22<sup>nd</sup>-26<sup>th</sup> March, 2024.
  - ✓ Isolated **heavy rainfall/snowfall** very likely over Arunachal Pradesh during 22<sup>nd</sup>, 23<sup>rd</sup>, 25<sup>th</sup> & 26<sup>th</sup>; over Sikkim on 23<sup>rd</sup> and isolated **heavy rainfall** over Assam & Meghalaya 23<sup>rd</sup>, 25<sup>th</sup> & 26<sup>th</sup> March, 2024.
  - ✓ Isolated to scattered light to moderate rainfall with isolated **thunderstorms, lightning** very likely over Gangetic West Bengal on 22<sup>nd</sup>; over Bihar on 23<sup>rd</sup> & 24<sup>th</sup> March.
- ❖ The Western Disturbance now seen as a trough in middle tropospheric westerlies roughly along Long. 70°E to the north of Lat. 32°N. Two fresh Western Disturbances are likely to affect Western Himalayan Region, the first from night of 23<sup>rd</sup> March and the second from night of 26<sup>th</sup> March, 2024. Under their influence:
  - ✓ Isolated to Scattered light rainfall/snowfall with isolated **thunderstorms & lightning** very likely over Himachal Pradesh, Uttarakhand on 22<sup>nd</sup> and over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad during 22<sup>nd</sup> - 24<sup>th</sup> March, 2024.
  - ✓ Isolated to Scattered light rainfall/snowfall likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh on 26<sup>th</sup> & 27<sup>th</sup> and increase in intensity on 28<sup>th</sup> March, 2024.
  - ✓ Isolated to scattered light rainfall/snowfall over Uttarakhand during 23<sup>rd</sup> - 28<sup>th</sup> March.
  - ✓ Isolated light rainfall with isolated **thunderstorms & lightning** very likely over Punjab on 22<sup>nd</sup> March, 2024.
  - ✓ Isolated light rainfall likely over Punjab during 22<sup>nd</sup> - 24<sup>th</sup> and over Haryana on 22<sup>nd</sup> & 24<sup>th</sup> and north Rajasthan on 24<sup>th</sup> March, 2024.
  - ✓ Strong surface winds are to prevail very likely over Punjab and Haryana during 22<sup>nd</sup> - 24<sup>th</sup> March, 2024.

### Maximum temperature forecast for next 5 days:

- ❖ **Maximum temperatures** are below normal by 8-10°C over many parts of Gangetic West Bengal, Jharkhand; by 4-8°C over East Uttar Pradesh, Bihar, north Odisha, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura; by 2-4°C over West Uttar Pradesh, Delhi, East Madhya Pradesh, Chhattisgarh, Telangana, Coastal Andhra Pradesh & Yanam. These are above normal by 2-4°C over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, West Rajasthan, Saurashtra & Kutch, Konkan & Goa and near normal over rest parts of the country.
- ❖ **Hot and humid weather** very likely to prevail over Rayalaseema, Kerala & Mahe during next 5 days; over Tamil Nadu, Puducherry & Karaikal during next 2 days

### Heat wave warning:

- ❖ **Heat wave conditions** very likely in isolated pockets over Saurashtra & Kutch during 22<sup>nd</sup>-26<sup>th</sup> March.

## Main Weather Observations:

- ❖ **Rainfall/snowfall** (from 0830 hours IST of yesterday to 0830 hours IST of today): at most places over Arunachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Sub-Himalayan West Bengal & Sikkim; at a few places over Himachal Pradesh and at isolated places over Uttarakhand.
- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): at most places over Assam & Meghalaya; at many places over Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura; at isolated places over Odisha, Jharkhand, Bihar, Punjab, Haryana, Tamil Nadu, Puducherry & Karaikal, Kerala, Coastal Karnataka, South Interior Karnataka, Coastal Andhra Pradesh.
- ❖ **Heavy rainfall/snowfall** at isolated places over Arunachal Pradesh and Sub-Himalayan West Bengal & Sikkim and **Heavy rainfall** at isolated places over Assam & Meghalaya.
- ❖ **Hailstorm** observed at isolated places over Gangetic West Bengal.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today): (in cm) ( $\geq 3$  cm): **Sub-Himalayan West Bengal & Sikkim:** Sevoke (dist. Darjeeling) 10, Kalimpong (dist. Darjeeling) 3;; **Arunachal Pradesh:** Bomdila\_Aws (dist West Kameng) 9, Kalaktang (dist West Kameng) 4, Bomdila (dist West Kameng) 4, Seppa\_Aws (dist East Kameng) 3, Kabu Basti (dist West Siang) 3, Itanagar (dist Papumpara) 3, Tawang\_Aws (dist Tawang) 3, Roing (dist Lower Dibang Valley) 3, Tawang Chamgbu Kvk Aws (dist Tawang) 3; **Assam & Meghalaya:** Dhemaji (dist Dhemaji) 7, Dhekiajuli (dist Shonitpur) 4, Tezpur (dist Shonitpur) 4, Drf (dist Baksa) 4, Williamnagar (dist East Garo Hills) 3, Bhumuraguri (dist Shonitpur) 3, Udalguri\_aws (dist Udalguri) 3, Majbat (dist Udalguri) 3, Ranganadi Nt Xing (dist Lakhimpur) 3, Dalgaon Arg (dist Darrang) 3, Goibargaon (dist Baksa) 3, Badatighat (dist Lakhimpur) 3, Mushalpur\_aws (dist Baksa) 3; **Tamil Nadu:** Nalumukku (Dist. Tirunelveli) 4
- ❖ Yesterday, **Heat Wave conditions** observed in isolated pockets over Saurashtra.
- ❖ **Minimum Temperature Departures (as on 22-03-2024):** Minimum temperatures are **markedly above normal (5.1°C or more)** at isolated places over Punjab; **appreciably above normal (3.1°C to 5.0°C)** at most places over Himachal Pradesh; at few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; at isolated place over West Rajasthan; **above normal (1.6°C to 3.0°C)** at most places over Coastal Karnataka; at many places over Haryana-Chandigarh-Delhi; at a few places over Uttarakhand, Konkan & Goa, and Kerala & Mahe and at isolated places over East Rajasthan, Madhya Maharashtra and Tamil Nadu, Puducherry & Karaikal. They are **markedly below normal (-5.1°C or less)** at most places over Bihar; **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Chhattisgarh and East Madhya Pradesh; **below normal (-1.6°C to -3.0°C)** at most places over Jharkhand and West Bengal & Sikkim; at a few places over East Uttar Pradesh, Odisha and at isolated places over Vidarbha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam and **near normal** over rest parts of the country. Today, **the lowest minimum temperature** of 12.2°C is reported at **Rewa (East Madhya Pradesh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 21-03-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Saurashtra & Kutch, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, West Rajasthan and Konkan & Goa; **above normal (1.6°C to 3.0°C)** at isolated places over Gujarat Region and Kerala & Mahe. They were **markedly below normal (-5.1°C or less)** at most places over Jharkhand and Gangetic West Bengal; at many places over Nagaland, Manipur, Mizoram & Tripura; at a few places over Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Bihar and Odisha; **appreciably below normal (-3.1°C to -5.0°C)** at many places over East Uttar Pradesh; at isolated places over Arunachal Pradesh; **below normal (-1.6°C to -3.0°C)** at many places over Chhattisgarh, Telangana, East Madhya Pradesh, West Uttar Pradesh; at isolated places over Uttarakhand, Haryana-Chandigarh-Delhi, Punjab, West Madhya Pradesh, Vidarbha, North Interior Karnataka, Rayalaseema, Coastal Andhra Pradesh & Yanam and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature** of 40.2°C was reported at **Amreli (Saurashtra & Kutch)** over the country.

## Meteorological Analysis (Based on 0830 hours IST)

- ❖ The **trough** from eastcentral & adjoining southeast Arabian Sea off north Kerala-Karnataka coast to north Maharashtra coast at 0.9 km above mean sea level is now seen as a **trough/wind discontinuity** from north Tamil Nadu to west Vidarbha at 0.9 km above mean sea level.
- ❖ A **cyclonic circulation** lies over northwest Rajasthan & adjoining Pakistan and extends upto 1.5 km above mean sea level.
- ❖ The **cyclonic circulation** over northeast Jharkhand & neighbourhood between 3.1 & 9.6 km above mean sea level is now seen over northeast Assam & neighbourhood between 1.5 & 4.5 km above mean sea level.
- ❖ The **Western Disturbance** as a trough in middle tropospheric westerlies with its axis at 5.8 km above mean sea level now runs roughly along Long. 70°E to the north of Lat. 32°N.
- ❖ A fresh **Western Disturbance** is likely to affect Western Himalayan Region from the night of 23<sup>rd</sup> March, 2024.
- ❖ Another fresh **Western Disturbance** is likely to affect Western Himalayan Region from the night of 26<sup>th</sup> March, 2024.
- ❖ The **cyclonic circulation** over west Vidarbha & neighbourhood at 1.5 km above mean sea level has become less marked.
- ❖ The **cyclonic circulation** over north Jharkhand & neighbourhood extending upto 1.5 km above mean sea level has become less marked.
- ❖ The **trough** from above cyclonic circulation over north Jharkhand & neighbourhood to Manipur across Sub-Himalayan West Bengal and Meghalaya at 1.5 km above mean sea level has become less marked.

## Weather Forecast for next 7 days (Upto 0830 hours IST of 29<sup>th</sup> March, 2024)

- ❖ Meteorological sub-division wise detailed 7 days rainfall forecast is given in Table-1.
- ❖ Gradual rise in maximum temperatures by 4-6°C very likely over East India during next 5 days.
- ❖ Gradual rise in maximum temperatures by 2-4°C very likely over Central India during next 3 days and no large change thereafter.
- ❖ Gradual rise in maximum temperatures by 2-4°C very likely over Northwest India during next 4-5 days.
- ❖ No significant change in maximum temperatures very likely over rest part of the country during next 5 days.

## Weather Outlook for subsequent 3 days (29<sup>th</sup>-31<sup>st</sup> March, 2024)

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

Table-1

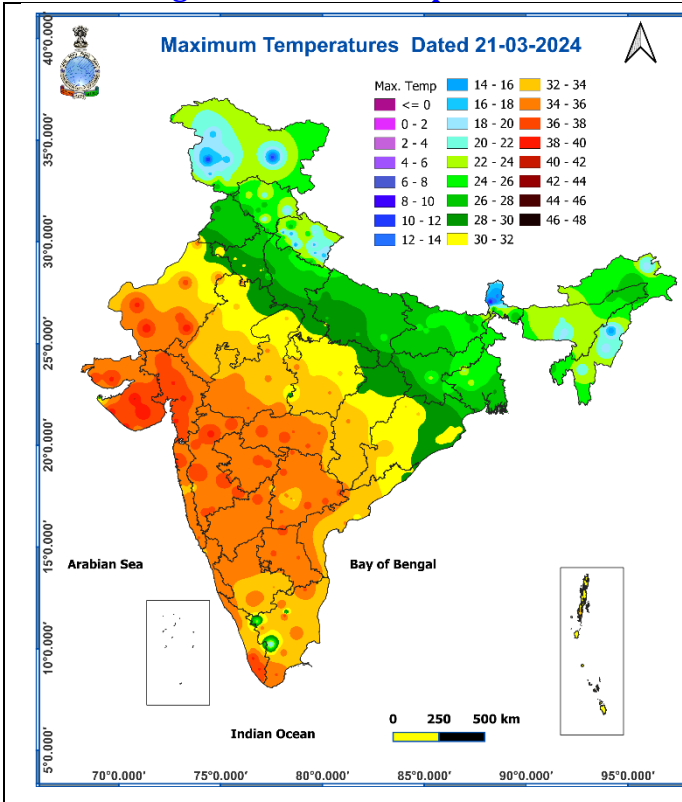
7 Days Rainfall Forecast								
S. No.	Subdivision	22-Mar	23-Mar	24-Mar	25-Mar	26-Mar	27-Mar	28-Mar
		Day1	Day2	Day3	Day4	Day5	Day6	Day7
1	ANDAMAN & NICOBAR ISLANDS	DRY	ISOL	ISOL	DRY	ISOL	ISOL	ISOL
2	ARUNACHAL PRADESH	WS	WS	SCT	WS	FWS	SCT	SCT
3	ASSAM & MEGHALAYA	FWS	FWS	SCT	WS	FWS	SCT	SCT
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	FWS	FWS	SCT	FWS	FWS	SCT	SCT
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	FWS	FWS	FWS	FWS	FWS	FWS	FWS
6	GANGETIC WEST BENGAL	ISOL	DRY	ISOL	ISOL	SCT	ISOL	DRY
7	ODISHA	DRY	DRY	DRY	ISOL	DRY	DRY	DRY
8	JHARKHAND	DRY	DRY	DRY	DRY	DRY	DRY	DRY
9	BIHAR	DRY	ISOL	ISOL	ISOL	DRY	DRY	DRY
10	EAST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
11	WEST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	ISOL
12	UTTARAKHAND	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	SCT
13	HARYANA CHANDIGARH & DELHI	ISOL	DRY	ISOL	DRY	DRY	ISOL	ISOL
14	PUNJAB	ISOL	ISOL	ISOL	DRY	DRY	ISOL	ISOL
15	HIMACHAL PRADESH	SCT	ISOL	ISOL	DRY	ISOL	SCT	FWS
16	JAMMU & KASHMIR AND LADAKH	SCT	ISOL	ISOL	DRY	ISOL	SCT	FWS
17	WEST RAJASTHAN	DRY	DRY	ISOL	DRY	ISOL	DRY	DRY
18	EAST RAJASTHAN	DRY	DRY	ISOL	DRY	DRY	DRY	DRY
19	WEST MADHYA PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
20	EAST MADHYA PRADESH	DRY	DRY	DRY	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	DRY	DRY	DRY	DRY	DRY	DRY	DRY
24	MADHYA MAHARASHTRA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
25	MARATHAWADA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
26	VIDARBHA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
27	CHHATTISGARH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
28	COASTAL ANDHRA PRADESH & YANAM	DRY	DRY	DRY	DRY	DRY	DRY	DRY
29	TELANGANA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
30	RAYALASEEMA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
31	TAMILNADU PUDUCHERRY & KARAIKAL	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
32	COASTAL KARNATAKA	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
33	NORTH INTERIOR KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
34	SOUTH INTERIOR KARNATAKA	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
35	KERALA & MAHE	ISOL	ISOL	DRY	DRY	DRY	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

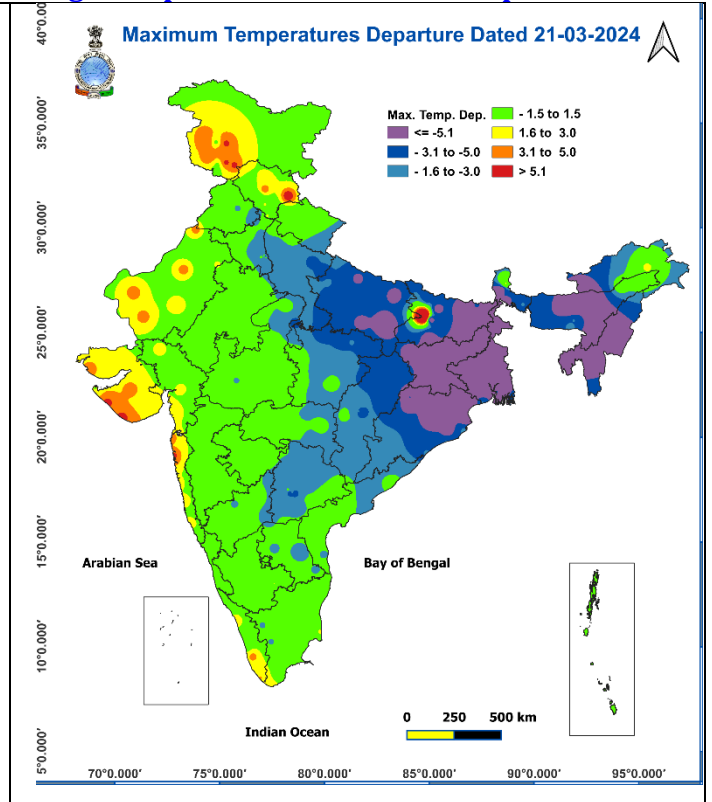
\* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".  
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.  
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599  
(Service to the Nation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



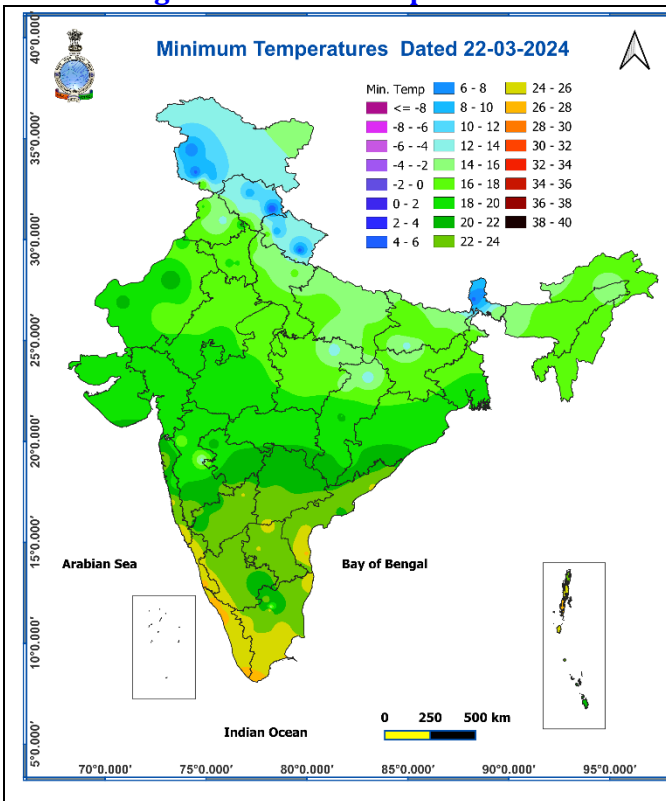
**Fig. 1: Maximum Temperatures**



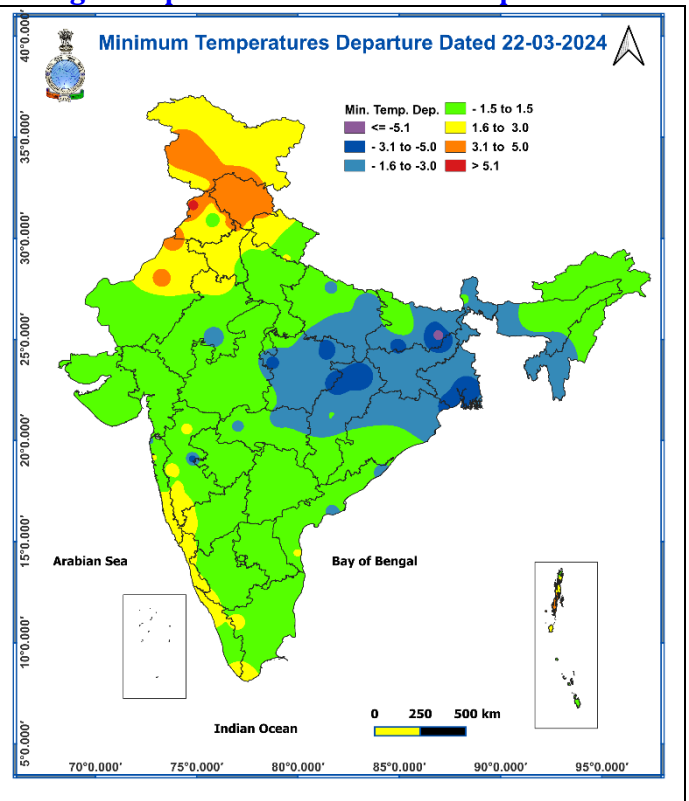
**Fig. 2: Departure of Maximum Temperatures**



**Fig. 3: Minimum Temperatures**



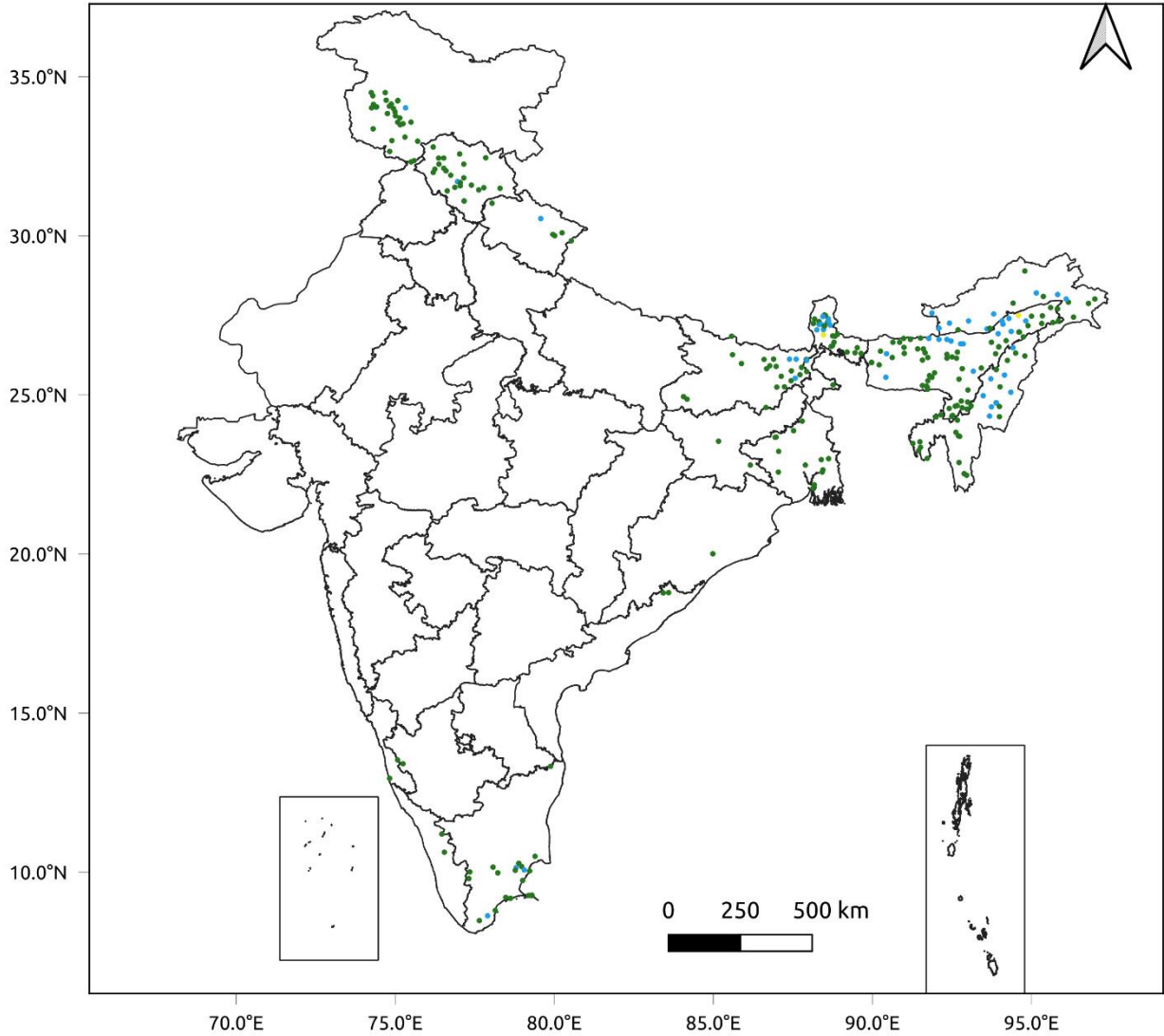
**Fig. 4: Departure of Minimum Temperatures**



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

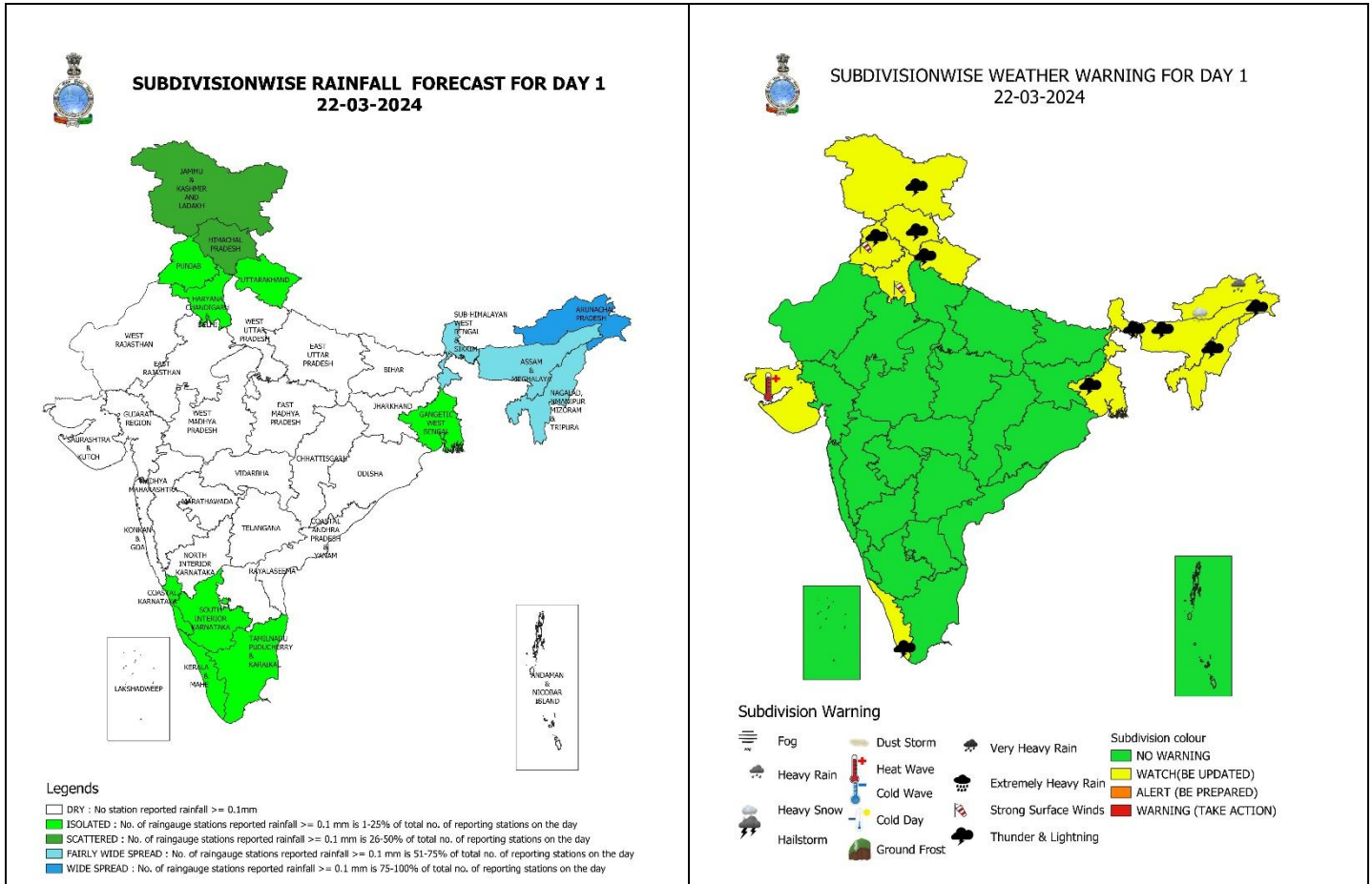


24 Hr cumulative rainfall recorded over different stations during 0830 IST of 21-3-2024 to 0830 IST of 22-3-2024



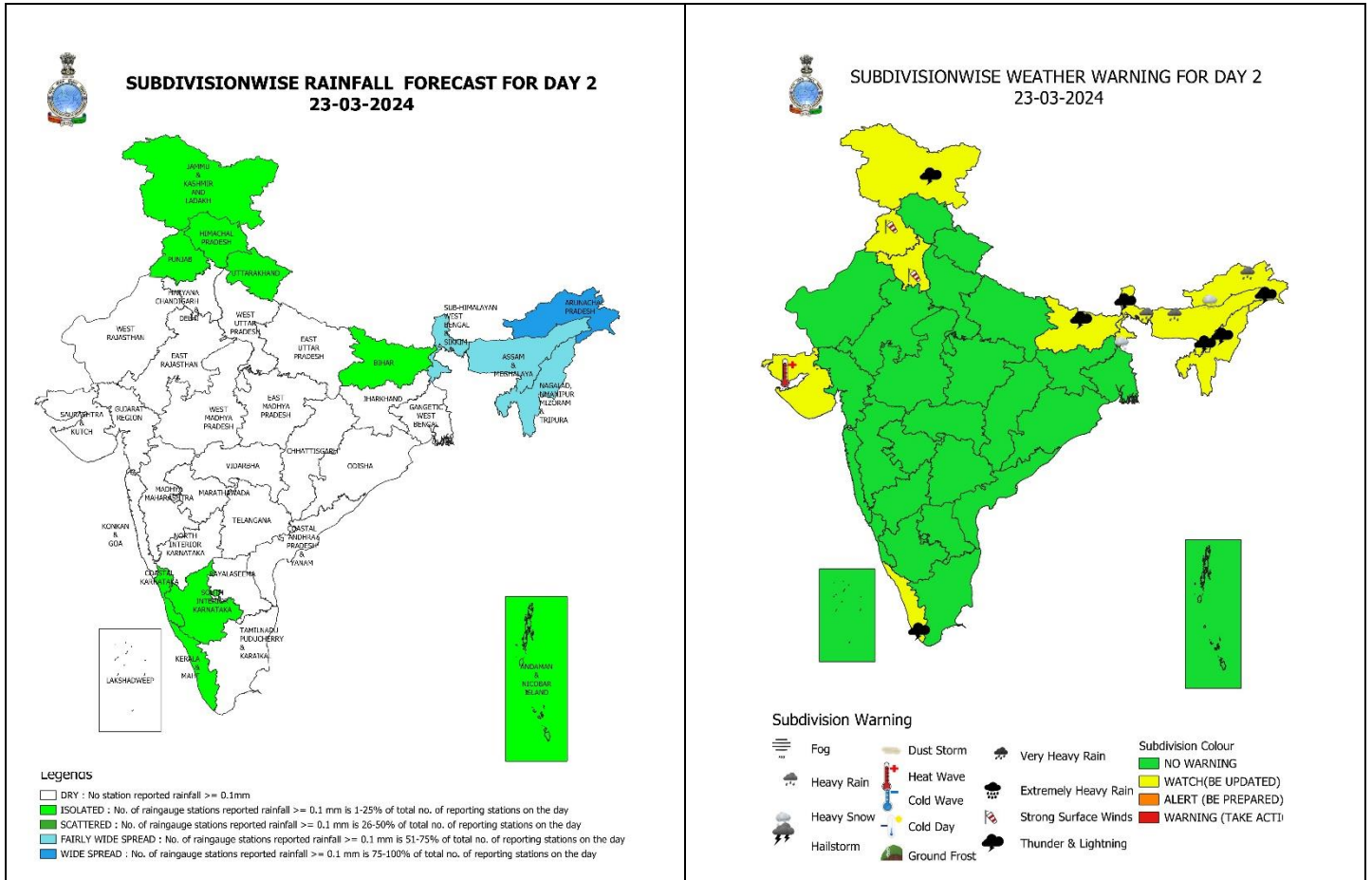
## Legends

- 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)



## 22 March (Day 1):

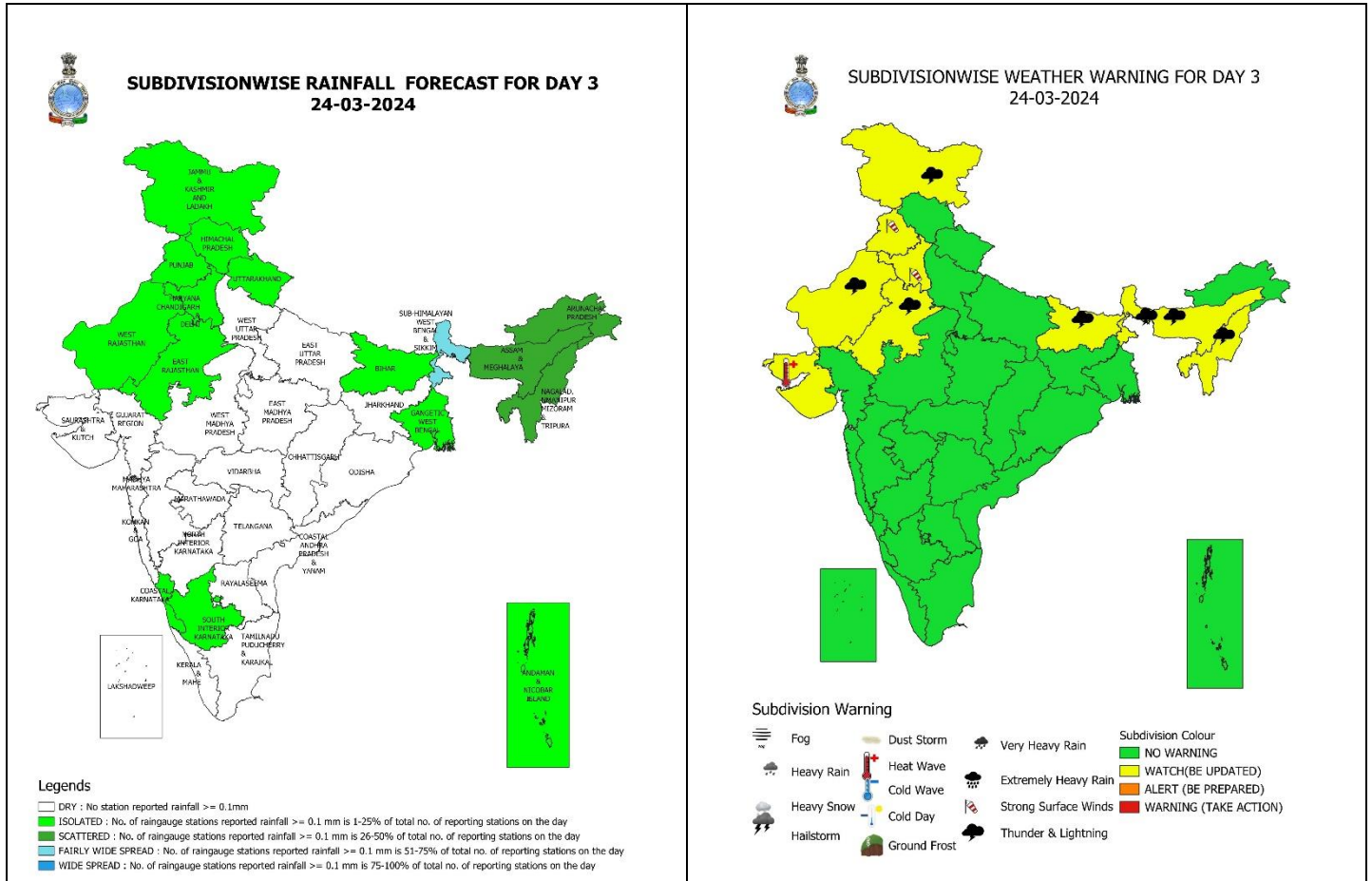
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, West Bengal & Sikkim and Kerala & Mahe.
- ❖ **Heavy rainfall/snowfall** very likely at isolated places over Arunachal Pradesh.
- ❖ **Strong surface winds** very likely to prevail over Punjab and Haryana.
- ❖ **Heat wave** very likely in isolated pockets of Saurashtra & Kutch.



## 23 March (Day 2):

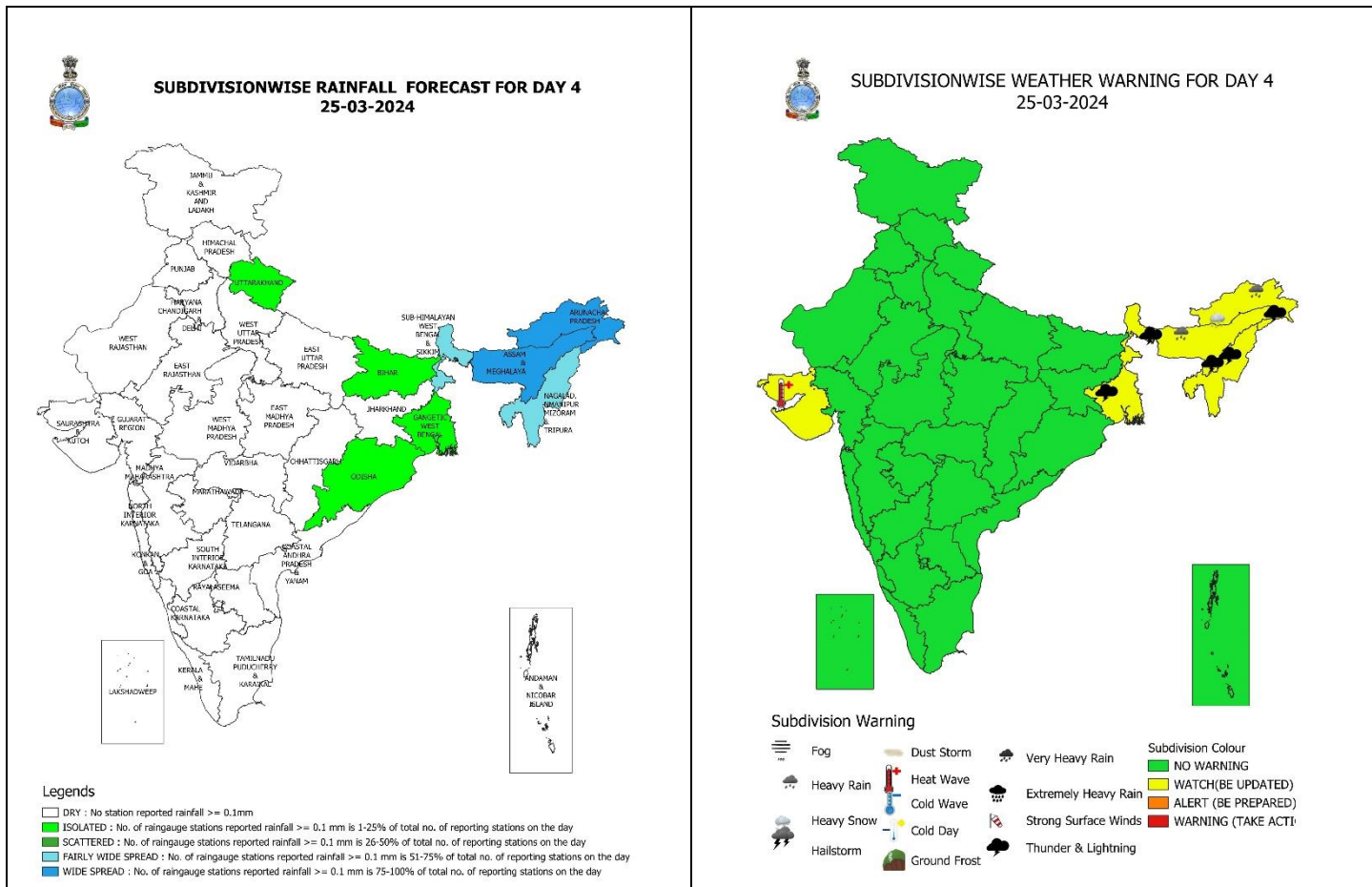
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Bihar, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Kerala & Mahe.
- ❖ **Heavy rainfall/snowfall** very likely at isolated places over Arunachal Pradesh, Sub-Himalayan West Bengal & Sikkim; **Heavy rainfall** at isolated places over Assam & Meghalaya.
- ❖ **Strong surface winds** very likely to prevail over Punjab and Haryana.
- ❖ **Heat wave** very likely in isolated pockets of Saurashtra & Kutch.





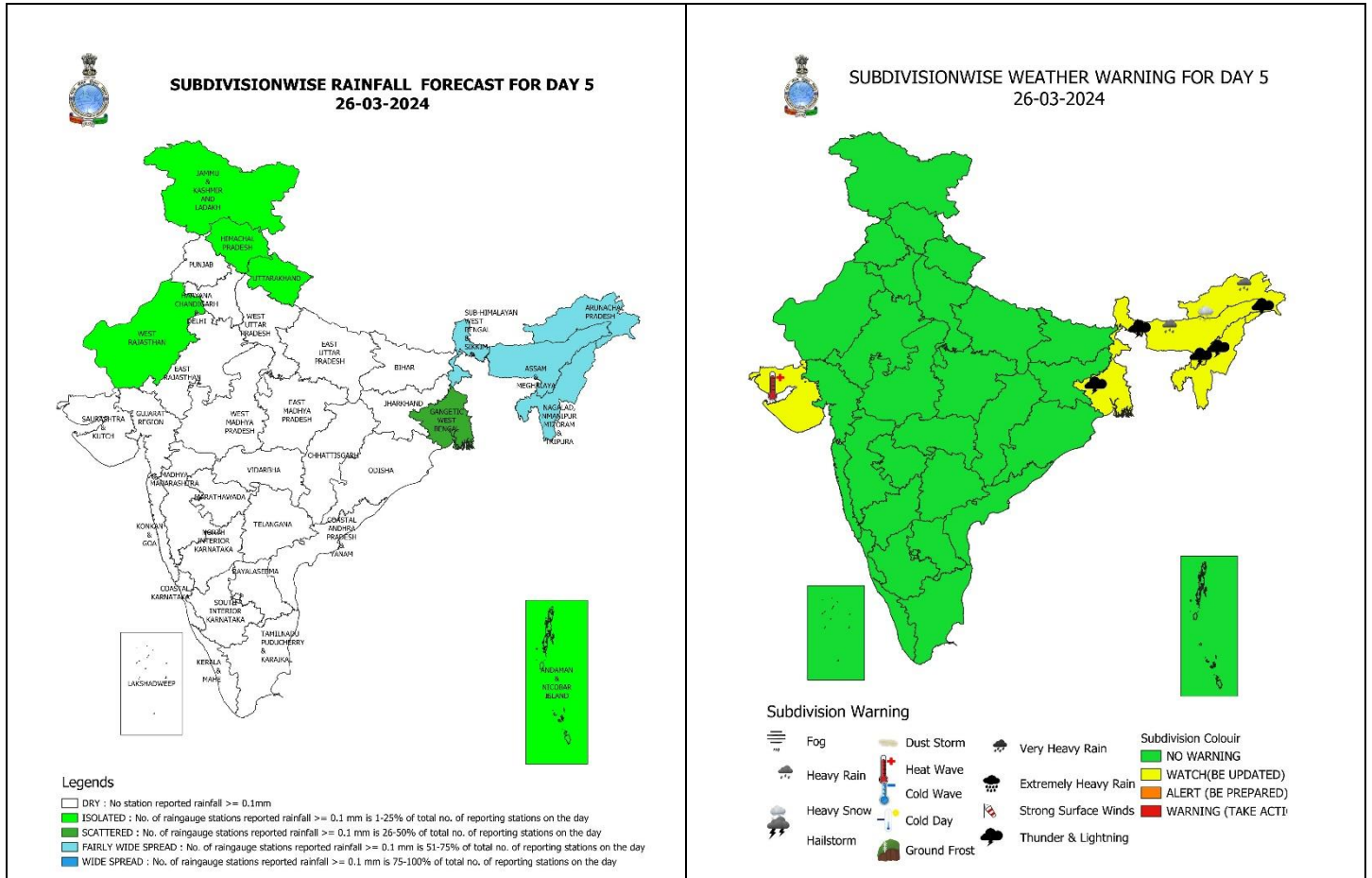
## 24 March (Day 3):

- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Rajasthan, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Bihar, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Strong surface winds** very likely to prevail over Punjab and Haryana.
- ❖ **Heat wave** very likely in isolated pockets of Saurashtra & Kutch.



## 25 March (Day 4):

- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 30-40 kmph)** likely at isolated places over Sub-Himalayan West Bengal & Sikkim; **with lightning** at isolated places over Gangetic West Bengal, Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Heavy rainfall/snowfall** likely at isolated places over Arunachal Pradesh; **Heavy rainfall** at isolated places over Assam & Meghalaya.
- ❖ **Heat wave** likely in isolated pockets of Saurashtra & Kutch.



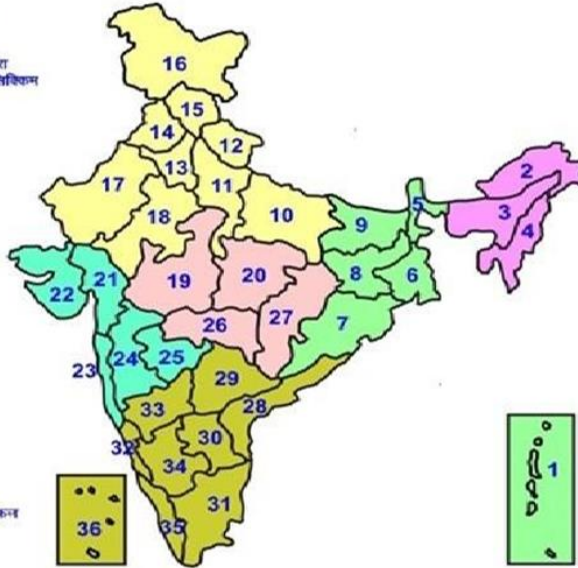
## 26 March (Day 5):

- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 30-40 kmph)** likely at isolated places over Gangetic West Bengal; **with lightning** at isolated places over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Heavy rainfall/snowfall** likely at isolated places over Arunachal Pradesh; **Heavy rainfall** at isolated places over Assam & Meghalaya.
- ❖ **Heat wave** likely in isolated pockets of Saurashtra & Kutch.



## LEGENDS

- 1 अंडमन और निकोबार द्वीप समूह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड मनीपुर मीज़ोरम और त्रिपुरा
- 5 उप हिमालय पश्चिम बंगाल एवं सिक्किम
- 6 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 एवंम लद्दाख
- 17 पश्चिम राजस्थान
- 18 पूर्वी राजस्थान
- 19 पश्चिम मध्य प्रदेश
- 20 पूर्वी मध्य प्रदेश
- 21 गुजरात क्षेत्र
- 22 सौराष्ट्र एवं कच्छ
- 23 कोंकण एवं गोवा
- 24 मध्य महाराष्ट्र
- 25 मराठवाड़ा
- 26 विदर्भ
- 27 उत्तरीसमूह
- 28 तटीय आंध्र प्रदेश एवं यानम
- 29 तेलंगाना
- 30 दख्खिणी
- 31 पश्चिमनाडु, पुदुचेरी एवंम कराईकल
- 32 तटिय कर्नाटक
- 33 आंतरिक उत्तरी कर्नाटक
- 34 आंतरिक दक्षिणी कर्नाटक
- 35 केरल एवंम 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. Marathawada
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



## LEGENDS

### WARNING

<b>WARNING (TAKE ACTION)</b>
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



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

Rain/ Snow \*



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 Strom: Wind speed  $> 220$  kmph ( $> 119$  knots)