



Tuesday, April 25, 2023  
MORNING  
Time of Issue: 0800 hours IST

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features

#### Significant Meteorological features:

- ❖ A Western Disturbance as a trough runs roughly along Long. 76°E to the north of 28°N in middle levels.
- ❖ A cyclonic circulation lies over central Madhya Pradesh and another over south Tamil Nadu in lower levels.
- ❖ A trough/wind discontinuity runs between the above two cyclonic circulations.
- ❖ **A fresh Western Disturbance is likely to affect Western Himalayan Region from 26th April.**

#### Maximum Temperatures observed:

- ❖ Yesterday, Maximum Temperatures are in the range of 34-40°C over many parts of Rajasthan, Odisha, central, west and south peninsular India and 25-34°C over rest parts of the country.
- ❖ Maximum Temperatures were below normal by 2-5°C over most parts of northwest, central and east India and near normal over rest parts of the country.

#### Maximum Temperatures Forecast and Heat Wave Warnings:

- ❖ **East India:** No significant change in maximum temperatures during next 24 hours and rise by 2-4°C during the subsequent 4 days.
- ❖ **Northwest India:** Rise by 2-3°C in maximum temperatures during next 2 days and fall by 2-3°C thereafter.
- ❖ **West India:** Rise by 2-3°C in maximum temperatures over Gujarat during next 24 hours and fall by 3-4°C thereafter.
- ❖ No significant change in maximum temperatures over rest parts of India during the next 5 days.
- ❖ **No Heat wave conditions over most parts of India during the next 7 days.**

#### Rainfall Forecast and Warnings:

##### East India:

- ❖ Light/moderate scattered to fairly widespread rainfall with thunderstorm/lightning/gusty winds very likely over the region during next 3 days and gradual reduction thereafter.
- ❖ **Hailstorm** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim on 25th April and over Odisha on 27th April.

##### Northeast India:

- ❖ Light/moderate isolated to scattered rainfall very likely over the region during next 4-5 days.
- ❖ **Heavy rainfall** likely at isolated places over Arunachal Pradesh and Assam & Meghalaya on 28th & 29th April.

##### Central India:

- ❖ Light/moderate isolated to scattered rainfall with thunderstorm/lightning/gusty winds very likely over Madhya Pradesh, Vidarbha and Chhattisgarh during next 5 days and gradual reduction thereafter.
- ❖ **Hailstorm** very likely at isolated places over Vidarbha & Chhattisgarh on 25th & 26th and East Madhya Pradesh on 26th April.

##### South India:

- ❖ Light scattered/fairly widespread rainfall with thunderstorm/lightning/gusty winds very likely over Andhra Pradesh, Telangana, Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe during next 3 days.
- ❖ **Heavy rainfall** very likely at isolated places over Kerala on 26th & 27th and over Telangana on 27th April.
- ❖ **Hailstorm** very likely at isolated places over Telangana during 25th-26th April.

##### West India:

- ❖ Light isolated/scattered rainfall with thunderstorm/lightning very likely over Madhya Maharashtra and Marathwada during next 5 days and over Gujarat on 27th & 28th April.
- ❖ **Hailstorm** activity very likely at isolated places over Madhya Maharashtra & Marathwada during 25th-27th April.

##### Northwest India:

Light/moderate scattered to fairly widespread rainfall/snowfall with thunderstorm/lightning very likely over Western Himalayan Region during 26th-29th April and isolated to scattered rainfall with thunderstorm/lightning over plains of Northwest India during 27th-29th April and increase thereafter.

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## Main Weather Observations

- ❖ **Rainfall/thundershowers observed** (from 0830 hours IST to 1730 hours IST of yesterday): **at many places** over Gangetic West Bengal; **at a few places over** Jharkhand and **at isolated places over** Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, East Uttar Pradesh, East Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Odisha, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Significant rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): **Gangetic West Bengal:** Digha-3, Canning-1; **East Uttar Pradesh:** Fursatganj-2; **Jharkhand:** Jamshedpur-2; **Kerala & Mahe:** Punalur-2
- ❖ **Thunderstorm observed** (from 0830 hours IST of yesterday to 0530 hours IST of today): at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, East Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, Telangana, Jharkhand, Gangetic West Bengal, Odisha and Coastal Andhra Pradesh & Yanam.
- ❖ **Hailstorm observed** (from 0830 hours IST of yesterday to 0530 hours IST of today): at isolated places over East Uttar Pradesh
- ❖ **Minimum Temperature Departures (as on 24-04-2023):** Minimum temperatures were **above normal (1.6°C to 3.0°C)** at a few places over Andaman & Nicobar Islands. They were **markedly below normal (-5.1°C or less)** at a few places over Haryana, Chandigarh & Delhi, East Rajasthan; at isolated places over Madhya Pradesh; **appreciably below normal (-3.1°C to -5.0°C)** at many places over Punjab and Chhattisgarh; at a few places over West Rajasthan, Bihar, Odisha, Gangetic West Bengal and Vidarbha; at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Uttar Pradesh, Telangana and Tamil Nadu, Puducherry & Karaikal; **below normal (-1.6°C to -3.0°C)** at most places over Coastal Karnataka; at many places over Jharkhand, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra and Coastal Andhra Pradesh & Yanam; at a few places over Marathwada; at isolated places over Himachal Pradesh, Uttarakhand and Konkan & Goa and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of 15.8°C** was reported at **Karnal (Haryana)** over plains of the country.
- ❖ **Maximum Temperature Departures (as on 24-04-2023):** Maximum temperatures were **appreciably above normal (3.1°C to 5.1°C )** at isolated places over Kerala & Mahe; **above normal (1.6°C to 3.0°C)** at a few places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Arunachal Pradesh, Assam & Meghalaya and at isolated places over Odisha, Saurashtra & Kutch. They were **markedly below normal (-5.1°C or less)** at most places over Chhattisgarh, Jharkhand; at a few places over Haryana, Chandigarh & Delhi, East Rajasthan, East Madhya Pradesh, Vidarbha, Bihar and at isolated places over West Madhya Pradesh, Gangetic West Bengal; **appreciably below normal (-3.1°C to -5.1°C )** at many places over West Rajasthan, Coastal Andhra Pradesh & Yanam and Telangana; **below normal (-1.6°C to -3.0°C)** at many places over Punjab; at a few places over Andaman & Nicobar Islands, Marathwada, Rayalaseema; at isolated places over Tamil Nadu, Puducherry & Karaikal and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature of 41.3°C** was reported at **Anantpur (Rayalaseema)**.

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### Meteorological Analysis (Based on 0530 hours IST)

- ❖ The **Western Disturbance** now seen as a trough roughly along Long. 76°E to the north of 28°N in middle tropospheric levels.
- ❖ The **cyclonic circulation** over central Madhya Pradesh extending upto 0.9 km above mean sea level persists.
- ❖ The **cyclonic circulation** over south Tamil Nadu & neighbourhood extending upto 0.9 km above mean sea level persists.
- ❖ The **trough/wind discontinuity** from the cyclonic circulation over central Madhya Pradesh to the cyclonic circulation over south Interior Tamilnadu & neighbourhood across interior Maharashtra and interior Karnataka at 0.9 km above mean sea level persists.
- ❖ The **cyclonic circulation** over northeast Bangladesh & neighbourhood extending upto 1.5 km above mean sea level persists
- ❖ A fresh Western Disturbance is likely to affect Western Himalayan Region from 26<sup>th</sup> April, 2023.

### Weather Forecast for next 5 days (Upto 0830 hours IST of 30<sup>th</sup> April, 2023)

- ❖ Meteorological sub-division wise detailed 5 days rainfall forecast is given in Table-1.

#### **Maximum Temperatures Forecast and Heat Wave Warnings:**

- ❖ **East India:** No significant change in maximum temperatures during next 24 hours and rise by 2-4°C during the subsequent 3 days.
- ❖ **Northwest India:** Rise by 2-3°C in maximum temperatures during next 2 days and fall by 2-3°C thereafter.
- ❖ **West India:** Rise by 2-3°C in maximum temperatures over Gujarat during next 24 hours and fall by 3-4°C thereafter.
- ❖ No significant change in maximum temperatures over rest parts of India during the next 5 days.
- ❖ **No Heat wave conditions over most parts of India during the next 7 days.**

### Weather Outlook for subsequent 2 days (During 30<sup>th</sup> April-02<sup>nd</sup> May, 2023)

- ❖ Scattered to Fairly widespread light/moderate rainfall likely over most parts of the country except east, west India, parts of central India and Islands, where isolated light rainfall is likely.

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### Weather Warning during next 5 days

**25 April (Day 1):** ♦ **Hailstorm with thunderstorm, lightning & gusty wind (40-50 kmph)** very likely at isolated places over Vidarbha, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim; **with thunderstorm, lightning & gusty wind (30-40 kmph)** at isolated places over Telangana; **with thunderstorm & lightning** at isolated places over Madhya Maharashtra, Marathwada.

♦ **Thunderstorm with lightning & gusty wind (40-50 kmph)** very likely at isolated places over Gangetic West Bengal; **with lightning & gusty wind (30-40 kmph)** over East Madhya Pradesh, Jharkhand, Odisha, Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe; **with lightning** at isolated places over Uttarakhand, East Uttar Pradesh, West Madhya Pradesh, Bihar, Interior Karnataka.

**26 April (Day 2):** ♦ **Heavy rainfall** very likely at isolated places over Kerala & Mahe.

♦ **Hailstorm with thunderstorm, lightning & gusty wind (30-40 kmph)** very likely at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, Telangana; **with thunderstorm & lightning** at isolated places over Madhya Maharashtra, Marathwada.

♦ **Thunderstorm with lightning & gusty wind (40-50 kmph)** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Odisha; **with lightning & gusty wind (30-40 kmph)** at isolated places over East Rajasthan, West Madhya Pradesh, Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe; **with lightning** at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Gangetic West Bengal, Jharkhand, Bihar, Konkan & Goa, Interior Karnataka.

**27 April (Day 3):** ♦ **Heavy rainfall** likely at isolated places over Telangana, Kerala & Mahe.

♦ **Hailstorm with thunderstorm, lightning & gusty wind (30-40 kmph)** likely at isolated places over Telangana; **with thunderstorm & lightning** at isolated places over Odisha, Madhya Maharashtra, Marathwada.

♦ **Thunderstorm with lightning & gusty wind (40-50 kmph)** likely at isolated places over East Madhya Pradesh; **with lightning & gusty wind (30-40 kmph)** over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Rajasthan, Vidarbha, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Coastal Andhra Pradesh & Yanam, Rayalaseema, Kerala & Mahe; **with lightning** at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Himachal Pradesh, West Madhya Pradesh, Jharkhand, Gangetic West Bengal, Karnataka.

♦ **Duststorm** likely at isolated places over Rajasthan.

**28 April (Day 4):** ♦ **Heavy rainfall** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya.

♦ **Thunderstorm with lightning & gusty wind (40-50 kmph)** likely at isolated places over Rajasthan; **with lightning & gusty wind (30-40 kmph)** over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Sub-Himalayan West Bengal & Sikkim, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema; **with lightning** at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Karnataka, Kerala & Mahe..

♦ **Duststorm** likely at isolated places over Rajasthan.

**29 April (Day 5):** ♦ **Heavy rainfall** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya.

♦ **Thunderstorm with lightning & gusty wind (40-50 kmph)** likely at isolated places over Rajasthan; **with lightning & gusty wind (30-40 kmph)** over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Sub-Himalayan West Bengal & Sikkim, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema; **with lightning** at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Karnataka, Kerala & Mahe..

♦ **Duststorm** likely at isolated places over Rajasthan.

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Table-1

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

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

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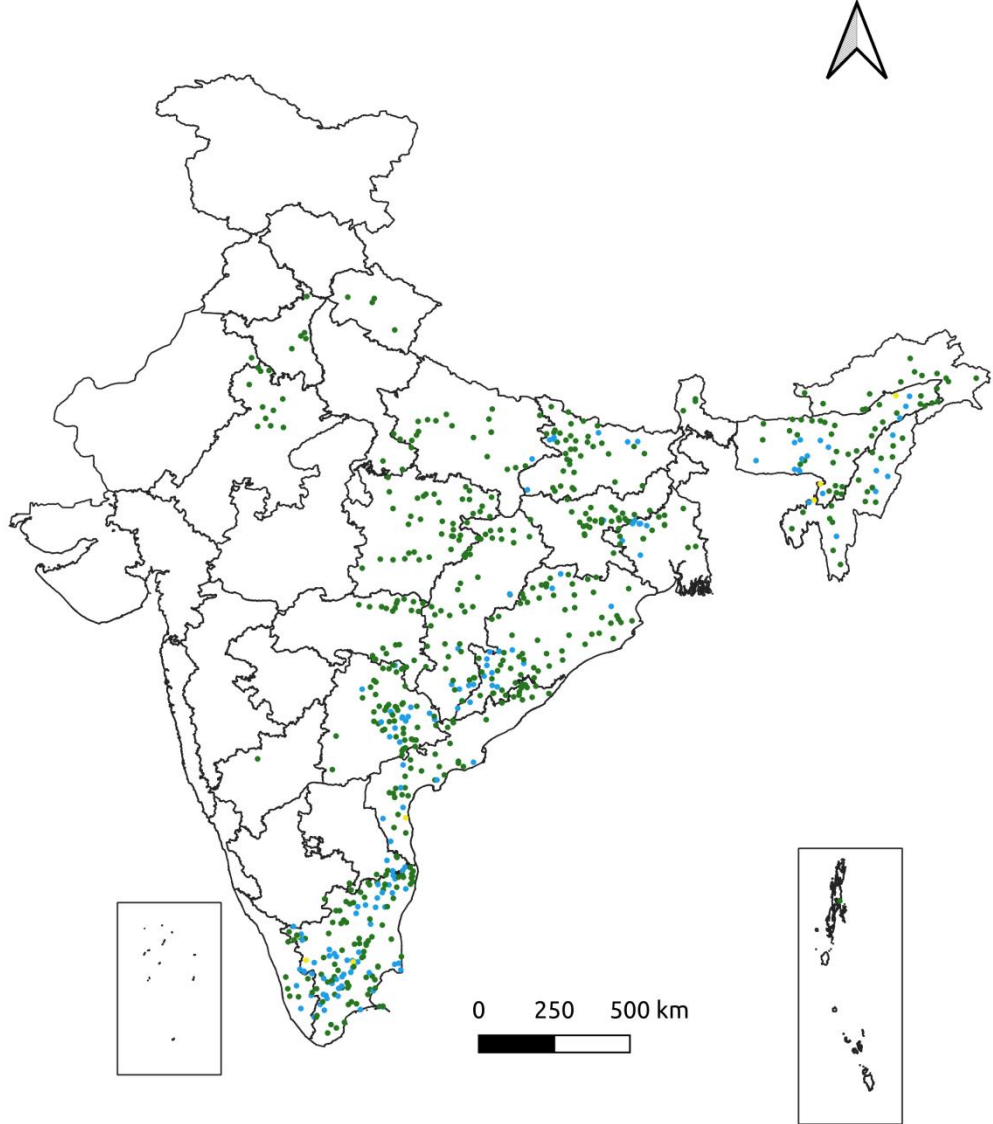
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Fig. 1: Accumulated Rainfall (mm) during past 24 hours



24 Hr cumulative rainfall recorded over different stations during 0830 IST of 23-4-2023 to 0830 IST of 24-4-2023



### 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)

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Fig. 2: Maximum Temperatures Dated 24.04.2023

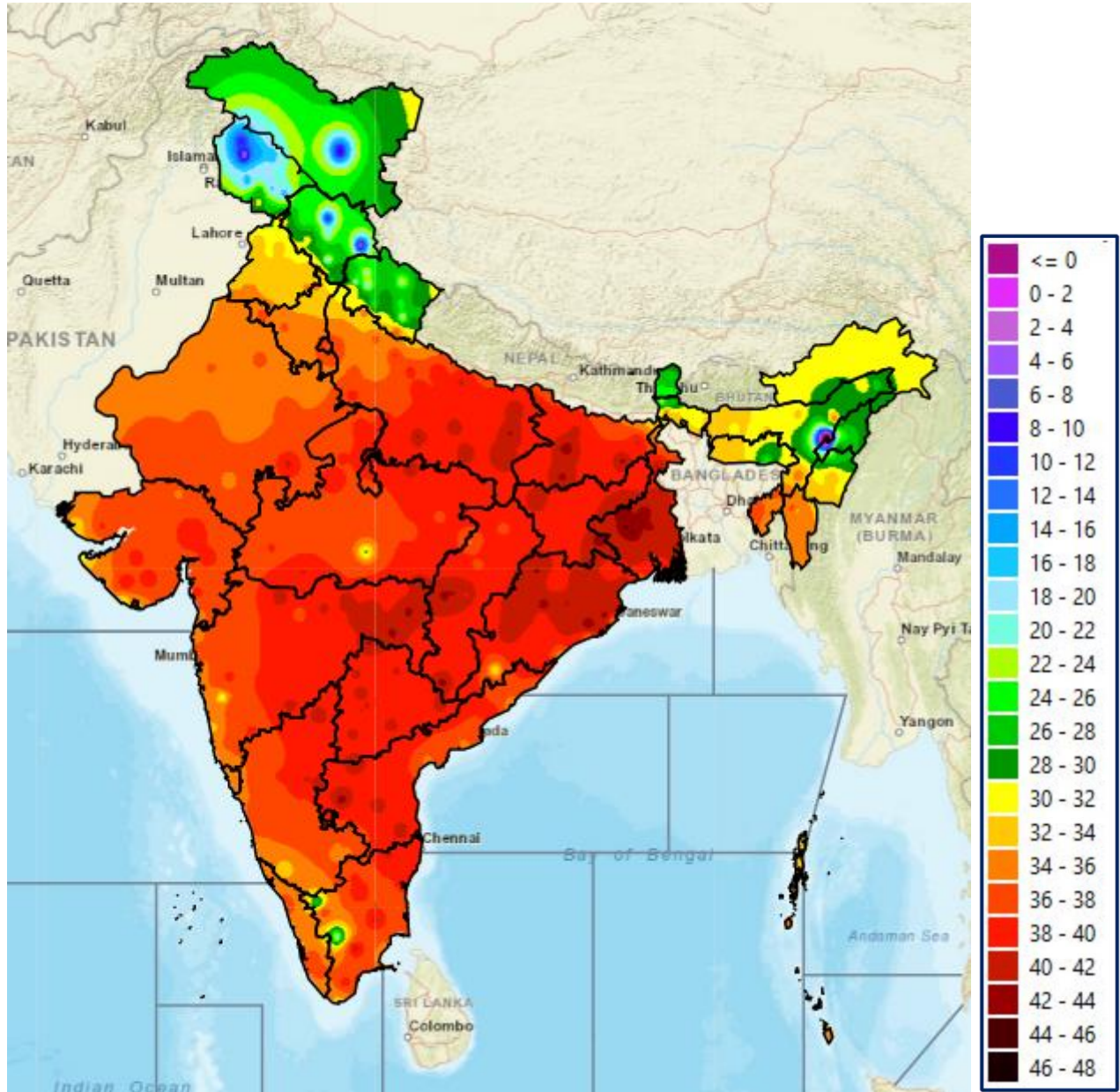
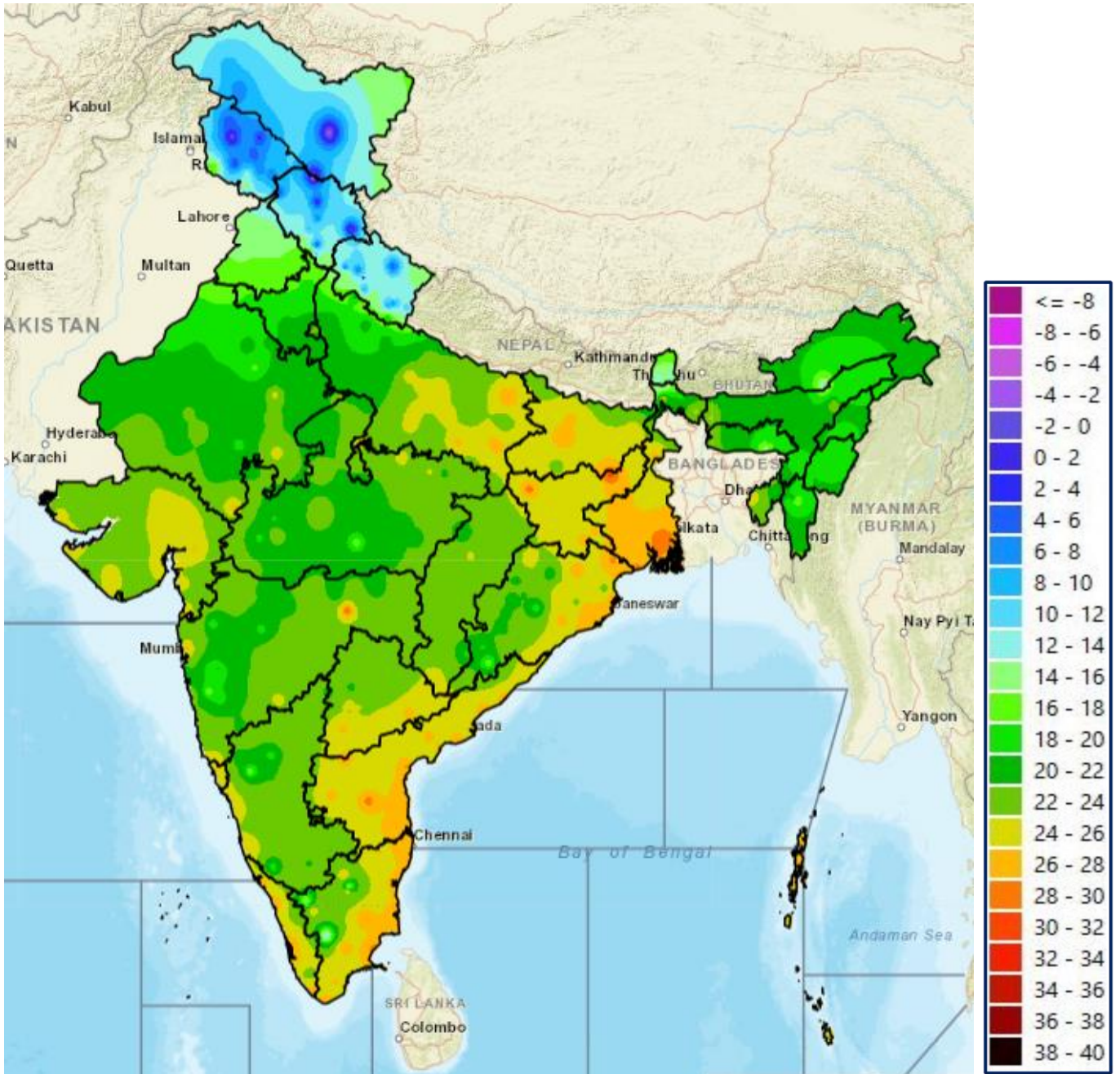


Fig. 3: Minimum Temperatures Dated 24.04.2023



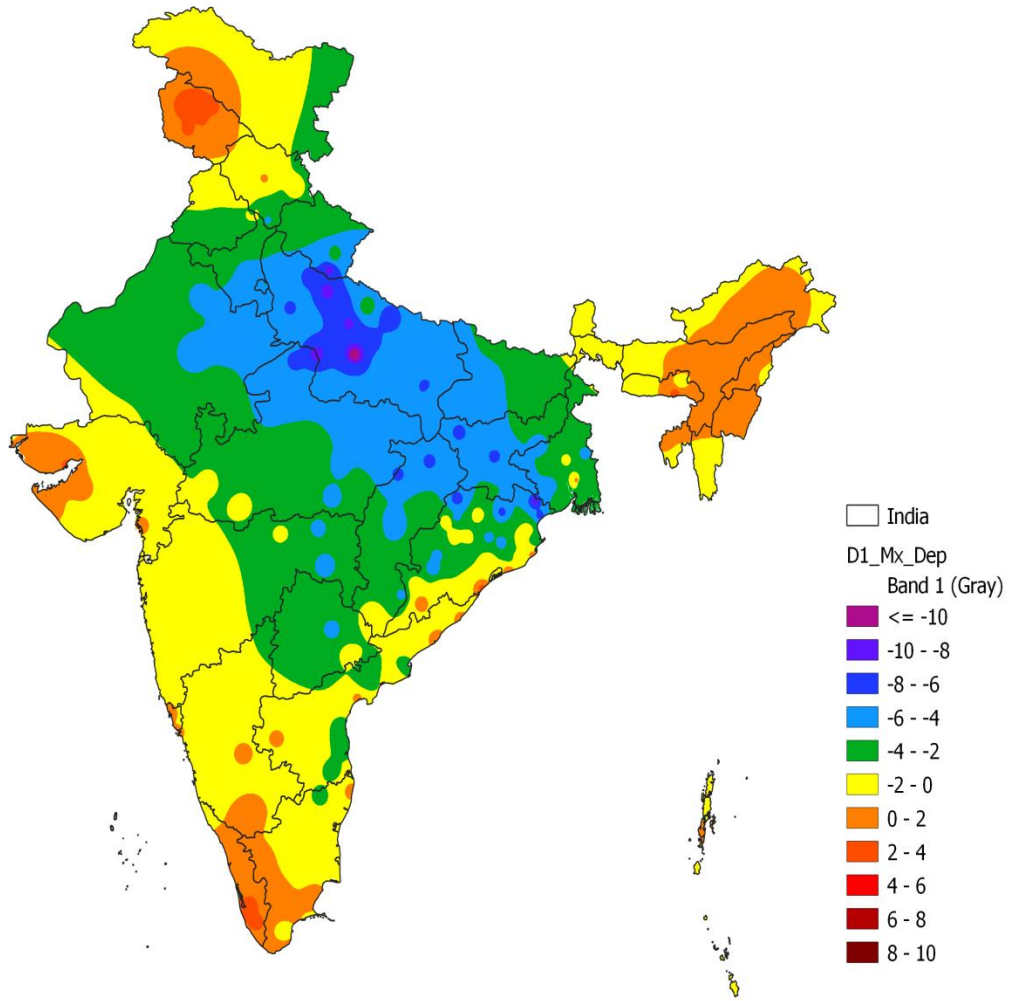
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Fig. 4: Departure from Normal of Maximum Temperatures Dated 24.04.2023

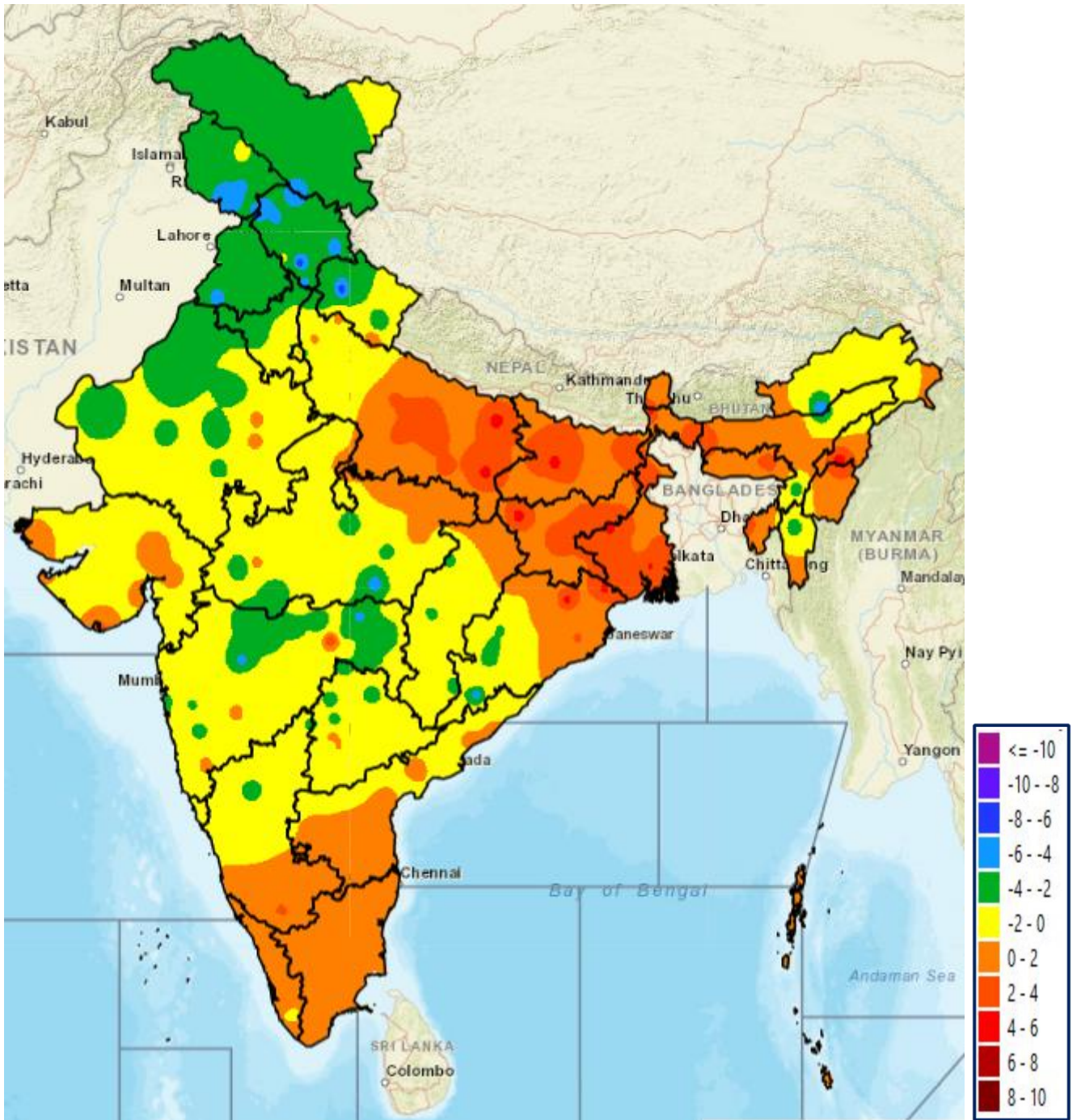


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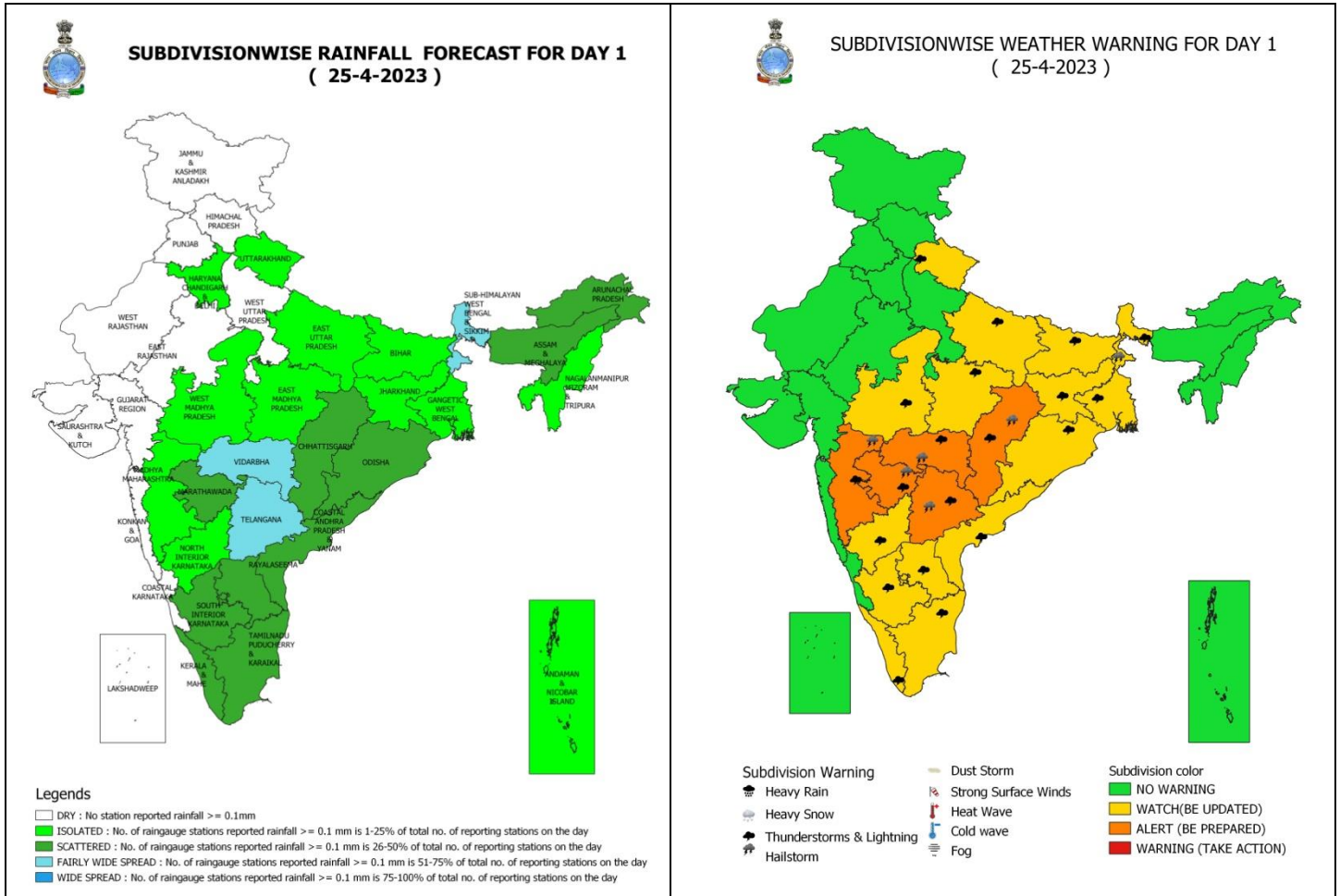
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Fig. 5: Departure from Normal of Minimum Temperatures Dated 24.04.2023



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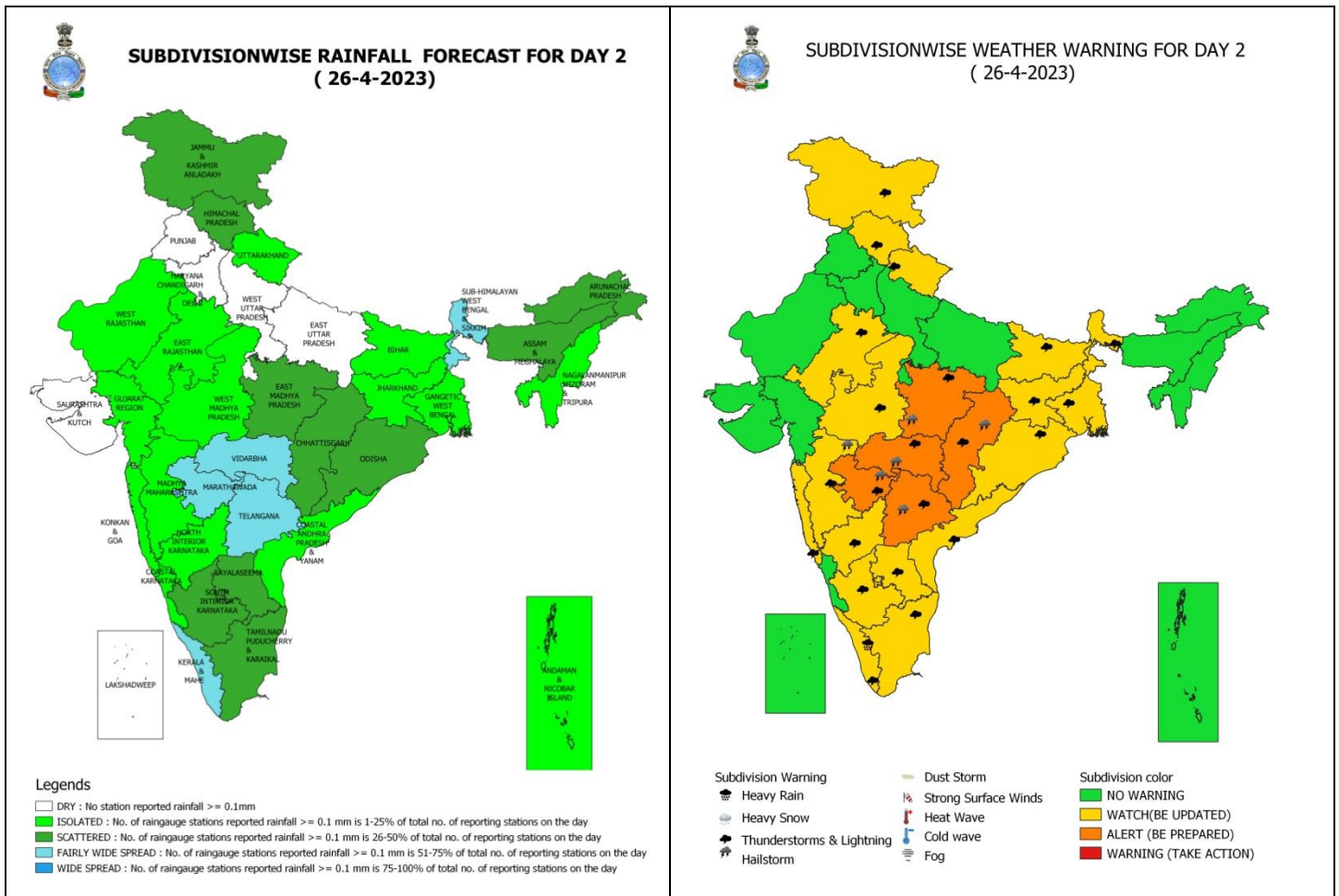
**25 April (Day 1):** ♦ **Hailstorm with thunderstorm, lightning & gusty wind (40-50 kmph)** very likely at isolated places over Vidarbha, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim; **with thunderstorm, lightning & gusty wind (30-40 kmph)** at isolated places over Telangana; **with thunderstorm & lightning** at isolated places over Madhya Maharashtra, Marathwada.

♦ **Thunderstorm with lightning & gusty wind (40-50 kmph)** very likely at isolated places over Gangetic West Bengal; **with lightning & gusty wind (30-40 kmph)** over East Madhya Pradesh, Jharkhand, Odisha, Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe; **with lightning** at isolated places over Uttarakhand, East Uttar Pradesh, West Madhya Pradesh, Bihar, Interior Karnataka.

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**26 April (Day 2):** ♦ **Heavy rainfall** very likely at isolated places over Kerala & Mahe.

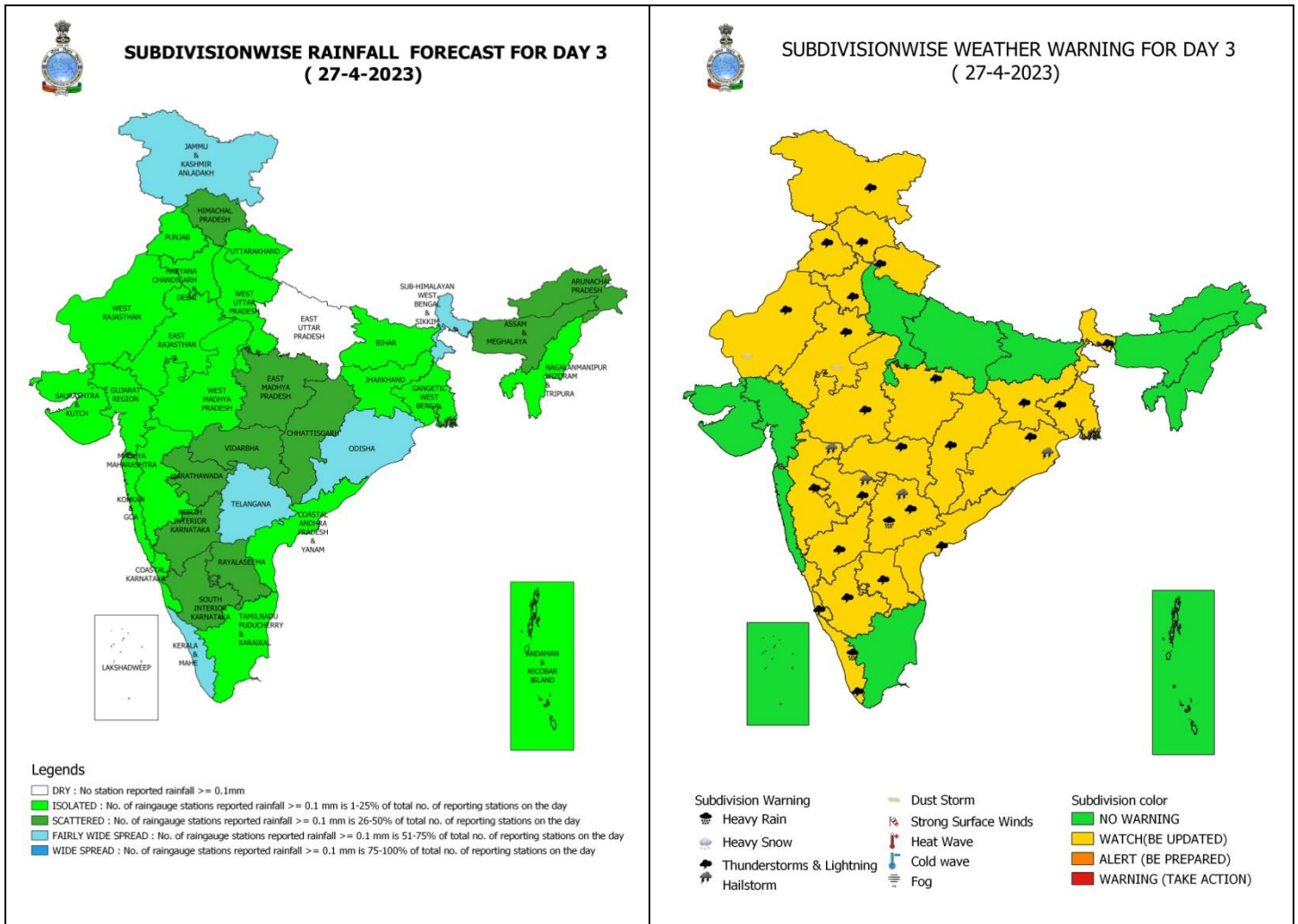
♦ **Hailstorm with thunderstorm, lightning & gusty wind (30-40 kmph)** very likely at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, Telangana; **with thunderstorm & lightning** at isolated places over Madhya Maharashtra, Marathwada.

♦ **Thunderstorm with lightning & gusty wind (40-50 kmph)** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Odisha; **with lightning & gusty wind (30-40 kmph)** at isolated places over East Rajasthan, West Madhya Pradesh, Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe; **with lightning** at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Gangetic West Bengal, Jharkhand, Bihar, Konkan & Goa, Interior Karnataka.

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**27 April (Day 3):** ♦ Heavy rainfall likely at isolated places over Telangana, Kerala & Mahe.

♦ Hailstorm with thunderstorm, lightning & gusty wind (30-40 kmph) likely at isolated places over Telangana; with thunderstorm & lightning at isolated places over Odisha, Madhya Maharashtra, Marathwada.

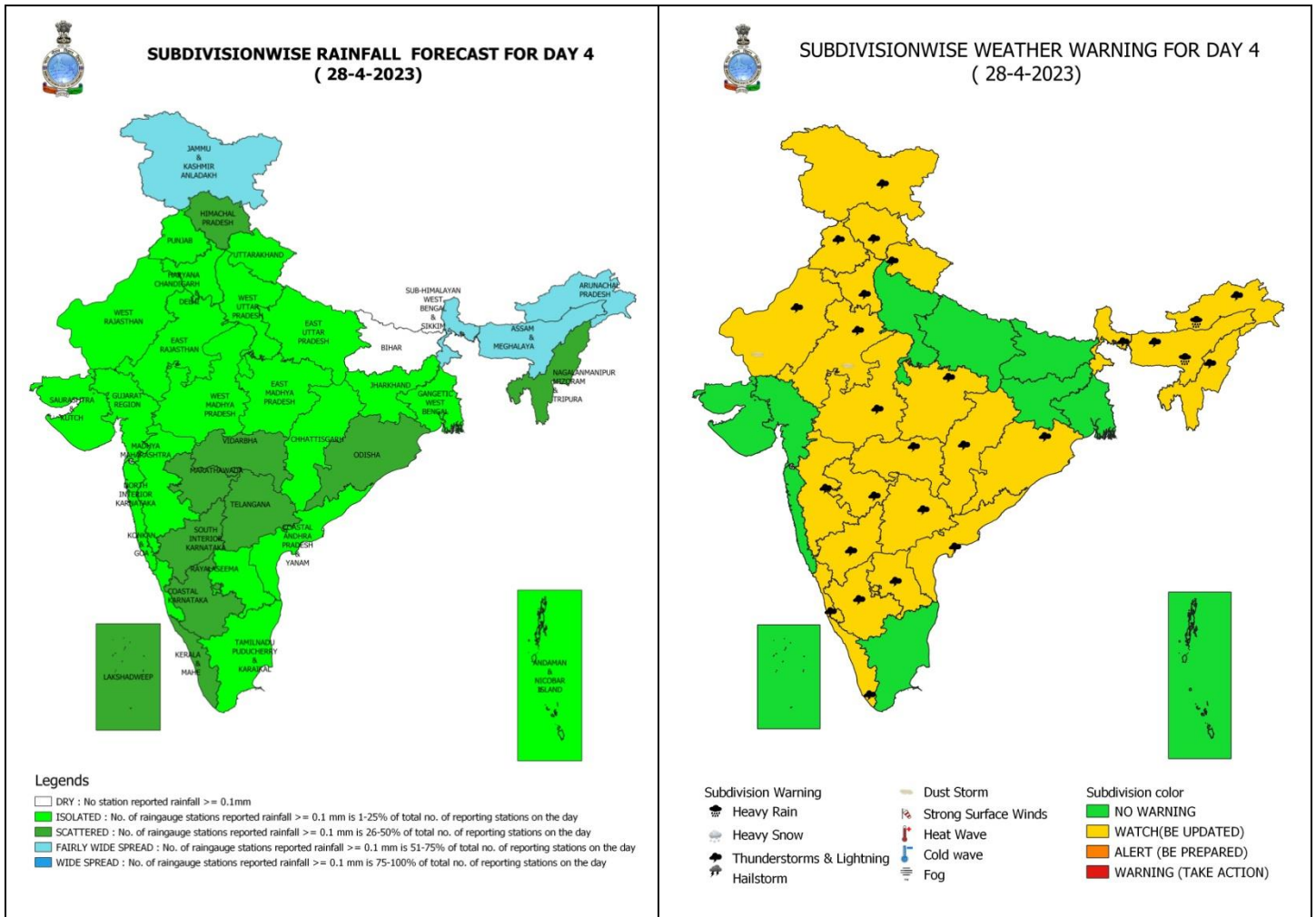
♦ Thunderstorm with lightning & gusty wind (40-50 kmph) likely at isolated places over East Madhya Pradesh; with lightning & gusty wind (30-40 kmph) over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Rajasthan, Vidarbha, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Coastal Andhra Pradesh & Yanam, Rayalaseema, Kerala & Mahe; with lightning at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Himachal Pradesh, West Madhya Pradesh, Jharkhand, Gangetic West Bengal, Karnataka.

♦ Duststorm likely at isolated places over Rajasthan.

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**28 April (Day 4):** ♦ **Heavy rainfall** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya.

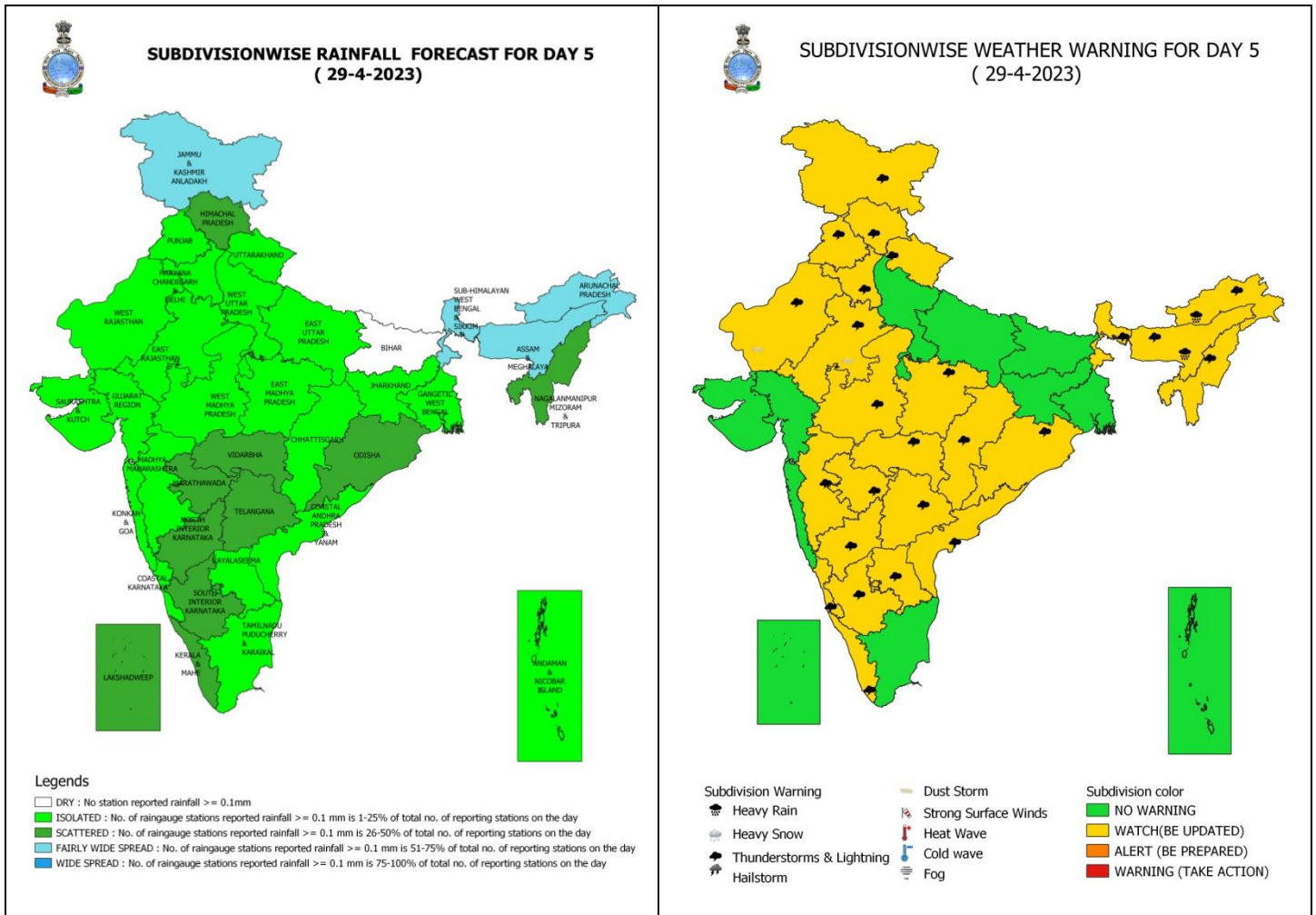
♦ **Thunderstorm with lightning & gusty wind (40-50 kmph)** likely at isolated places over Rajasthan; **with lightning & gusty wind (30-40 kmph)** over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Sub-Himalayan West Bengal & Sikkim, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema; **with lightning** at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Karnataka, Kerala & Mahe..

♦ **Duststorm** likely at isolated places over Rajasthan.

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**29 April (Day 5):** ♦ **Heavy rainfall** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya.

♦ **Thunderstorm with lightning & gusty wind (40-50 kmph)** likely at isolated places over Rajasthan; **with lightning & gusty wind (30-40 kmph)** over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Sub-Himalayan West Bengal & Sikkim, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema; **with lightning** at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Karnataka, Kerala & Mahe..

♦ **Duststorm** likely at isolated places over Rajasthan.

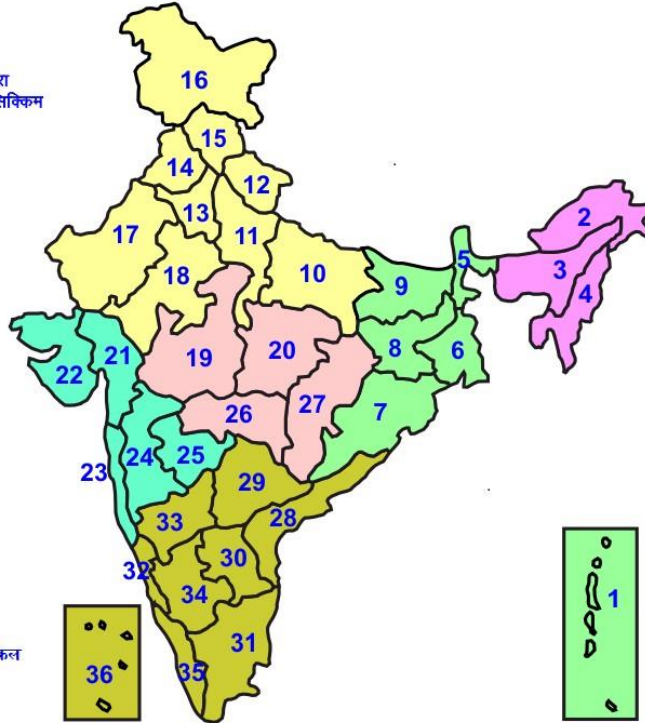
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## LEGENDS

- 1 अंडमान और निकोबार द्वीप समुह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड मनीपुर मीजोरम 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 चंडिगढ़ 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 कोंकण एवं गोवा
- 24 मध्य महाराष्ट्र
- 25 मराठावाडा
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 तटीय आंध्र प्रदेश एवं यनम
- 29 तेलंगाना
- 30 रायलसेमा
- 31 तमिलनाडु, पुदुचेरी एवं कराईकल
- 32 तटिय 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. Orissa
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

<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



Heavy Rain



Heavy Snow



Thunderstorm



Dust Storm



Strong Winds



Visibility



Cyclone



Squall/ Hail



Frost



Cold Wave



Heat Wave



Sea State

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## LEGENDS

### 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



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)

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