



Monday 04 April 2023

MORNING

Time of Issue: 0900 hours IST

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features

**Weather Forecast and Warnings:**

**Northwest India:**

- ◆ Isolated to scattered light/moderate rainfall very likely over Western Himalayan region during 04th-05th with thunderstorm, lightning/gusty over the region on 04th April.
- ◆ Isolated light/moderate rainfall with thunderstorm very likely over plains of northwest India on 04<sup>th</sup> April.

◆ **Isolated hailstorm** very likely over Uttarakhand on 04<sup>th</sup> April.

**East & Northeast India:**

- ◆ Scattered to Fairly widespread light/moderate rainfall/thunderstorm, lightning, gusty winds very likely to continue over Northeast India and Sub Himalayan West Bengal & Sikkim till 05th April and gradual reduction thereafter.

**South India:**

- ◆ Isolated to scattered light/moderate rainfall/thunderstorm, lightning/gusty winds very likely over Andhra Pradesh, Telangana, South Interior Karnataka, Tamil Nadu and Kerala during next 5 days.

**Central & West India:** No significant weather is expected over the region during next 5 days.

**Maximum Temperatures Forecast:**

- ◆ Maximum temperatures are below normal by 2-4°C over most parts of the country. It is likely to be below normal to near normal over most parts of the country during next 5 days.
- ◆ No heat wave likely over any part of country during next 5 days.

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

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## Main Weather Observations

◆ **Rainfall/thundershowers observed** (from 0830 hours IST to 1730 hours IST of yesterday): **at many places** over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura; **at a few places** over Assam & Meghalaya and **at isolated places** over Uttarakhand, Haryana, Chandigarh & Delhi, West Rajasthan and Kerala & Mahe.

◆ **Significant amount of rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday):(in cm): **Jammu & Kashmir:** Qazi Gund & Batote-1 each; **Himachal Pradesh:** Manali & Shimla-1 each; **Assam & Meghalaya:** Goalpara, Pet Jorhat & Silchar-1 each.

◆ **Thunderstorm observed** (from 0830 hours IST of yesterday to 0530 hours IST of today): at isolated places over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, Rajasthan, Assam & Meghalaya, Manipur, Odisha, Rayalaseema and Kerala & Mahe.

◆ **Hailstorm observed** (from 0830 hours IST to 1730 hours IST of yesterday): at isolated places over Jammu & Kashmir.

◆ **Minimum Temperature Departures (as on 03-04-2023):** Minimum temperatures were **above normal (1.6°C to 3.0°C)** at a few places over Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal; at isolated places over Saurashtra & Kutch. They were **appreciably below normal (-3.1°C to -5.0°C)** at a few places over Vidarbha and Gangetic West Bengal; at isolated places over Odisha, Madhya Pradesh and Madhya Maharashtra; **below normal (-1.6°C to -3.0°C)** at many places over Uttarakhand, Jharkhand, Assam & Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura and Coastal Karnataka; at a few places over East Rajasthan, Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim and North Interior Karnataka; at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan, Muzaffarabad, Bihar, Telangana, Konkan & Goa and Kerala & Mahe and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of 13.8°C** was reported at **Malanjhand (East Madhya Pradesh)** over plains of the country.

◆ **Maximum Temperature Departures (as on 03-04-2023):** Maximum temperatures were **markedly below normal (-5.1°C or less)** at many places over Punjab; at a few places over Assam & Meghalaya; at isolated places over Himachal Pradesh and Arunachal Pradesh; **appreciably below normal (-3.1°C to -5.0°C)** at most places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad; at many places over West Rajasthan and Nagaland, Manipur, Mizoram & Tripura; at a few places over Haryana, Chandigarh & Delhi, Gujarat State and Chhattisgarh; at isolated places over East Madhya Pradesh; **below normal (-1.6°C to -3.0°C)** at many places over Uttarakhand, Uttar Pradesh, Madhya Maharashtra, Telangana and Coastal Karnataka; at a few places over West Madhya Pradesh, Konkan & Goa, Vidarbha and Andaman & Nicobar Islands; at isolated places over East Rajasthan, Gangetic West Bengal and Odisha and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature of 40.5°C** was reported at **Kurnool (Rayalaseema)**.

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

- ◆ The **Western Disturbance** as a cyclonic circulation over east Iran & neighbourhood now lies over Afghanistan and adjoining Iran between 3.1 & 7.6 km above mean sea level.
- ◆ The trough in lower & middle tropospheric westerlies with its axis at 5.8 km above mean sea level roughly along Long. 89°E to the north of Lat. 25°N persists.
- ◆ The **cyclonic circulation** over West Rajasthan & neighbourhood extending upto 1.5 km above mean sea level persists.
- ◆ The north-south **trough/wind discontinuity** from Vidarbha to south Tamil Nadu across Marathwada and interior Karnataka at 0.9 km above mean sea level persists.
- ◆ The **cyclonic circulation** over northeast Bangladesh & neighbourhood at 0.9 km above mean sea level persists.

### Weather Forecast for next 5 days \* upto 0830 hours IST of 09th April, 2023

- ◆ Meteorological sub-division wise detailed 5 days rainfall forecast is given in Table-1.
- ◆ **Northwest India:** No significant change in Maximum Temperatures during next 24 hours and gradual rise by 2-4°C during subsequent 2 days.
- ◆ **East India:** Gradual rise in Maximum Temperatures by 2-4°C very likely during next 2 days and no significant change during subsequent 24 hours.
- ◆ **Central India:** Gradual rise by 2-3°C in Maximum Temperatures very likely during next 2 days and no significant change during subsequent 24 hours.
- ◆ **West India:** Gradual rise in Maximum Temperatures by 2-4°C during next 3 days and no significant change thereafter.
- ◆ **Rest parts of the Country:** No significant change in Maximum Temperatures very likely during next 5 days.

### Weather Outlook for subsequent 2 days during 09th-11th April, 2023

- ◆ A fresh Western Disturbance likely to affect Western Himalayan Region from the night of 08th April, 2023.
- ◆ Isolated light rainfall/thundershowers likely over Arunachal Pradesh, Madhya Maharashtra, Madhya Pradesh and Kerala & Mahe.
- ◆ Dry weather likely over rest parts of the country.



## Weather Warning during next 5 days

**04 April (Day 1):** ♦ **Thunderstorm accompanied with lightning & gusty wind (30-40 kmph)** very likely at isolated places over Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Coastal Andhra Pradesh & Yanam and Kerala & Mahe and **with lightning** over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, East Rajasthan, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Telangana and Tamilnadu, Puducherry & Karaikal.

**05 April (Day 2):** ♦ **Thunderstorm accompanied with lightning & gusty wind (30-40 kmph)** very likely at isolated places over Vidarbha, Chhattisgarh, Coastal Andhra Pradesh & Yanam and Kerala & Mahe and **with lightning** over Gujarat state, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Telangana.

**06 April (Day 3):** ♦ **Thunderstorm accompanied with lightning & gusty wind (30-40 kmph)** likely at isolated places over Kerala & Mahe and **with lightning** over Telangana, Gujarat state, Madhya Maharashtra and Marathwada.

**07 April (Day 4):** ♦ **Thunderstorm accompanied with lightning & gusty wind (30-40 kmph)** likely at isolated places over Kerala & Mahe and **with lightning** over Telangana, Madhya Maharashtra, Marathwada and Odisha.

**08 April (Day 5):** ♦ **Thunderstorm accompanied with lightning & gusty wind (30-40 kmph)** likely at isolated places over Kerala & Mahe and **with lightning** over Vidarbha, Chhattisgarh, Telangana, Madhya Maharashtra, Marathwada and Odisha.

Kindly download **MAUSAM APP** for location specific forecast & warning, **MEGHDOOT APP** for Agromet advisory and **DAMINI APP** for Lightning Warning & visit state MC/RMC websites for district wise warning.

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Table-1

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

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

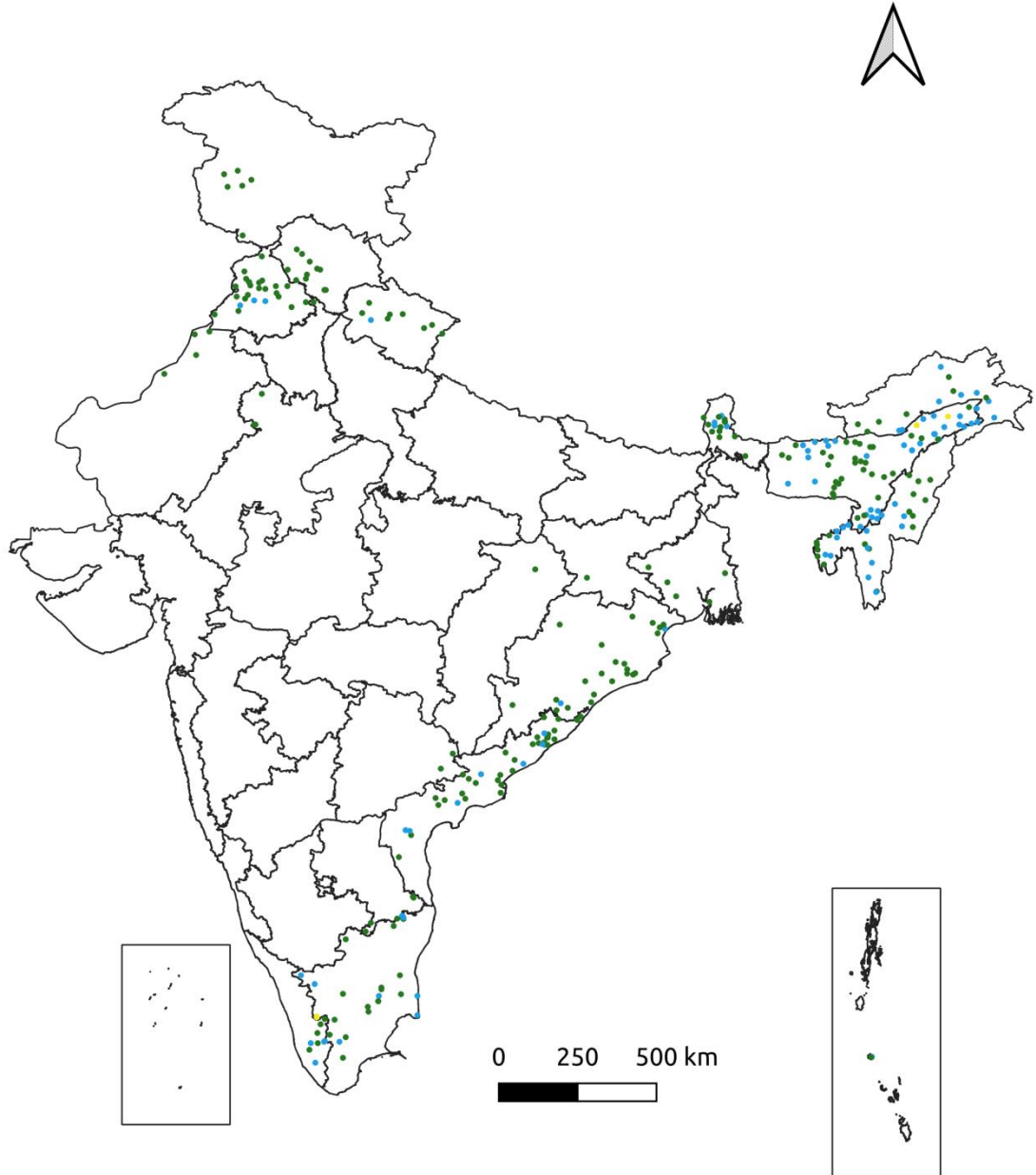
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**Fig. 1: Accumulated Rainfall (mm) during past 24 hours**

24 Hr cumulative rainfall recorded over different stations during 0830 IST of 2-4-2023 to 0830 IST of 3-4-2023



## Legends

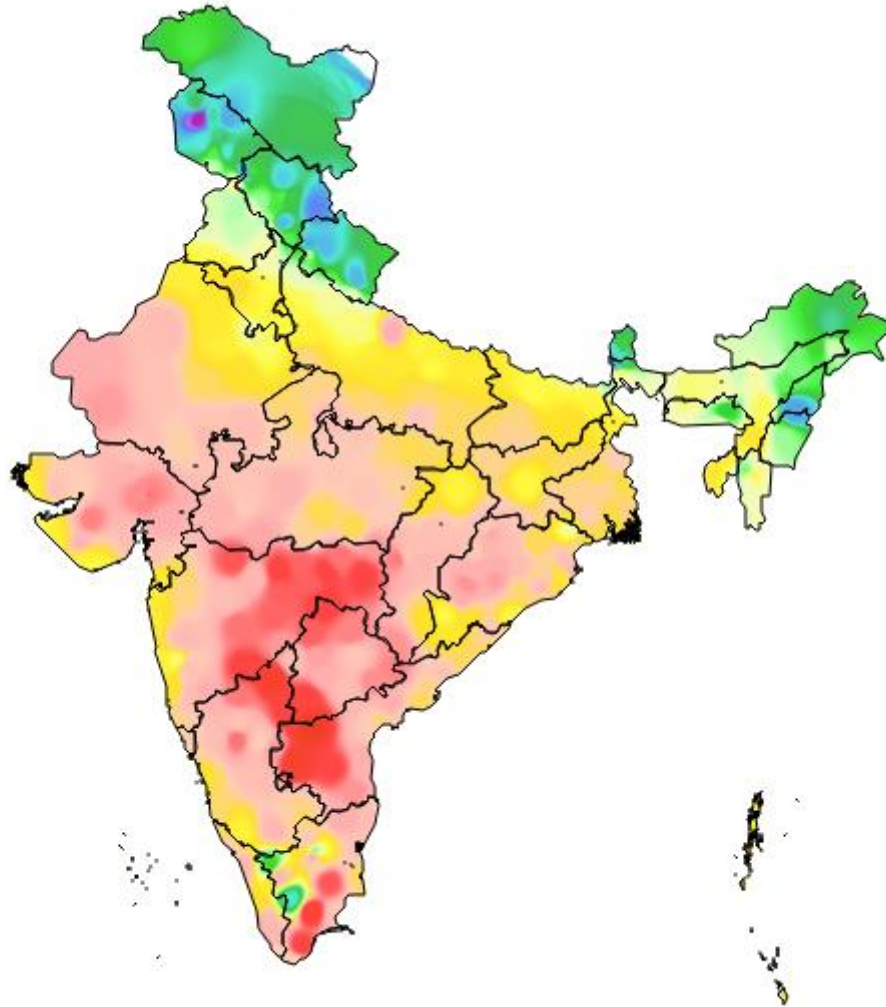
- Very Light to Light Rainfall (0.1 - 15.5 mm)
- Moderate Rainfall (15.6 - 64.4 mm)
- Heavy Rainfall (64.5 - 115.5 mm)
- Very Heavy Rainfall (115.6 - 204.4 mm)
- Extremely Heavy Rainfall ( $\geq 204.5$  mm)

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Fig. 2: Maximum Temperature during past 24 hours



Legend:Max Temperature (°C)

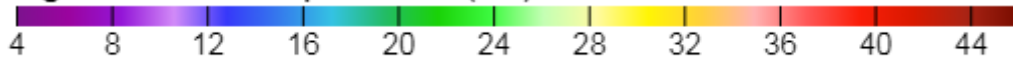


Fig. 3: Minimum Temperature during past 24 hours

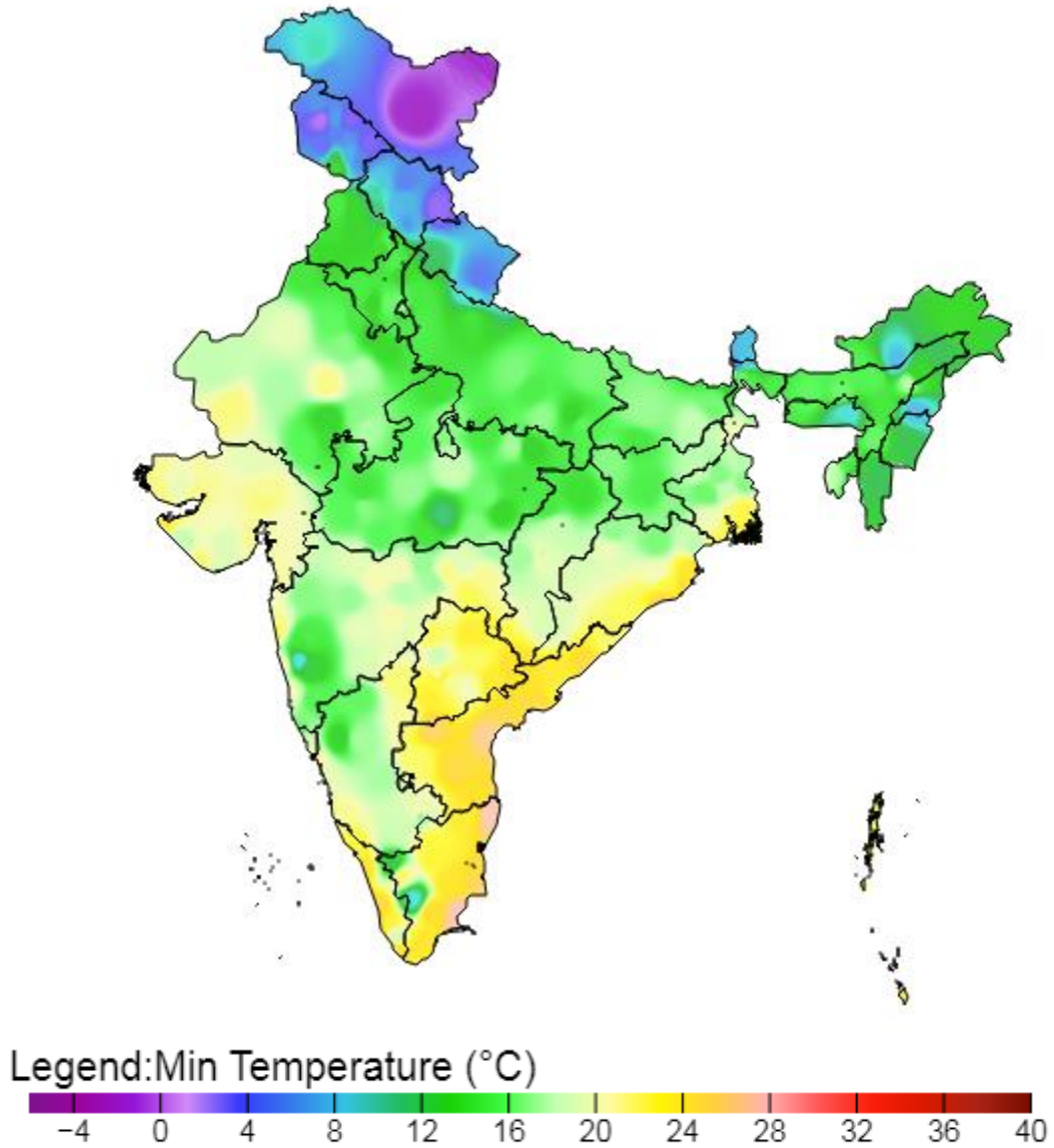


Fig. 4: Departure from Normal of Maximum Temperatures

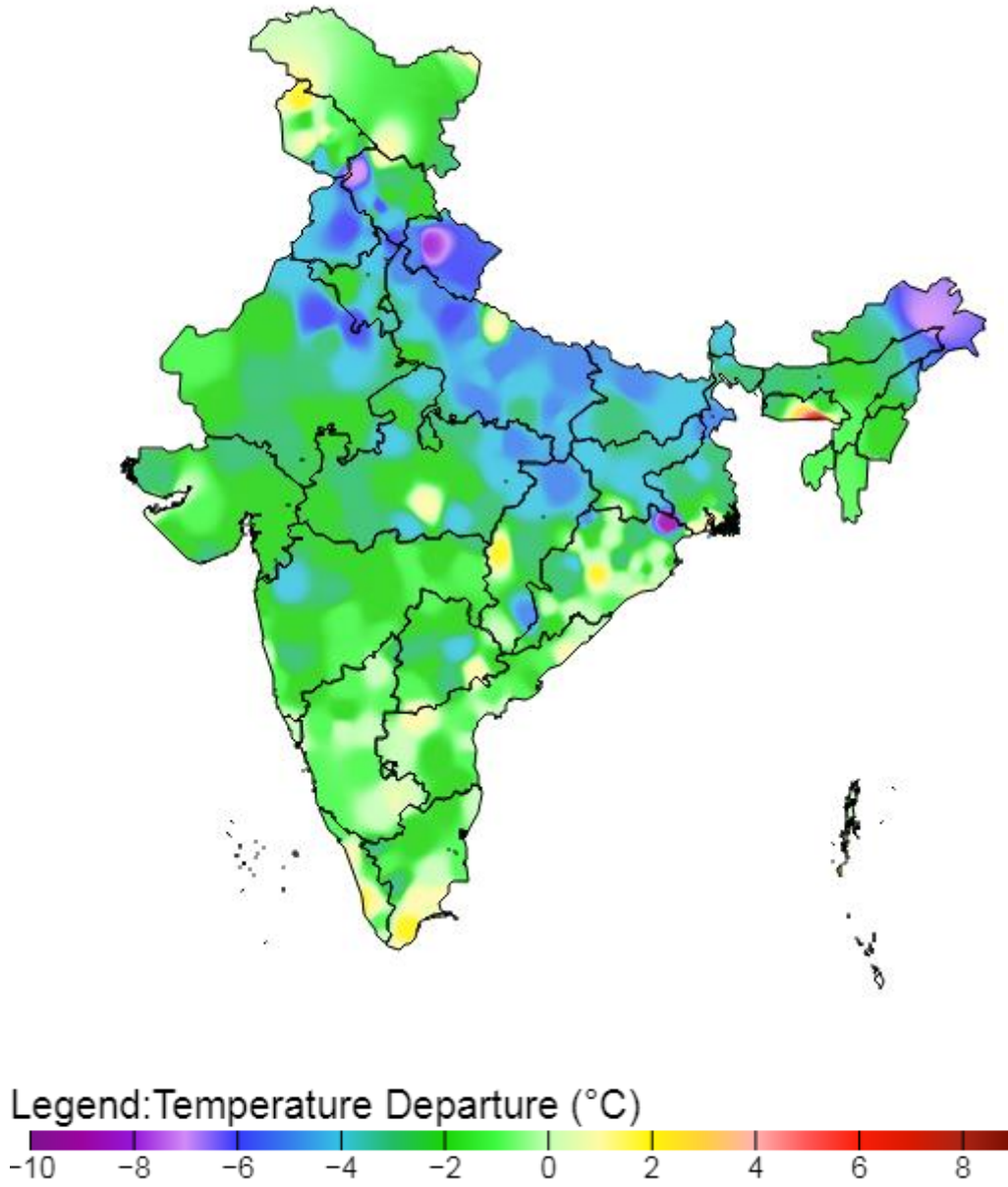
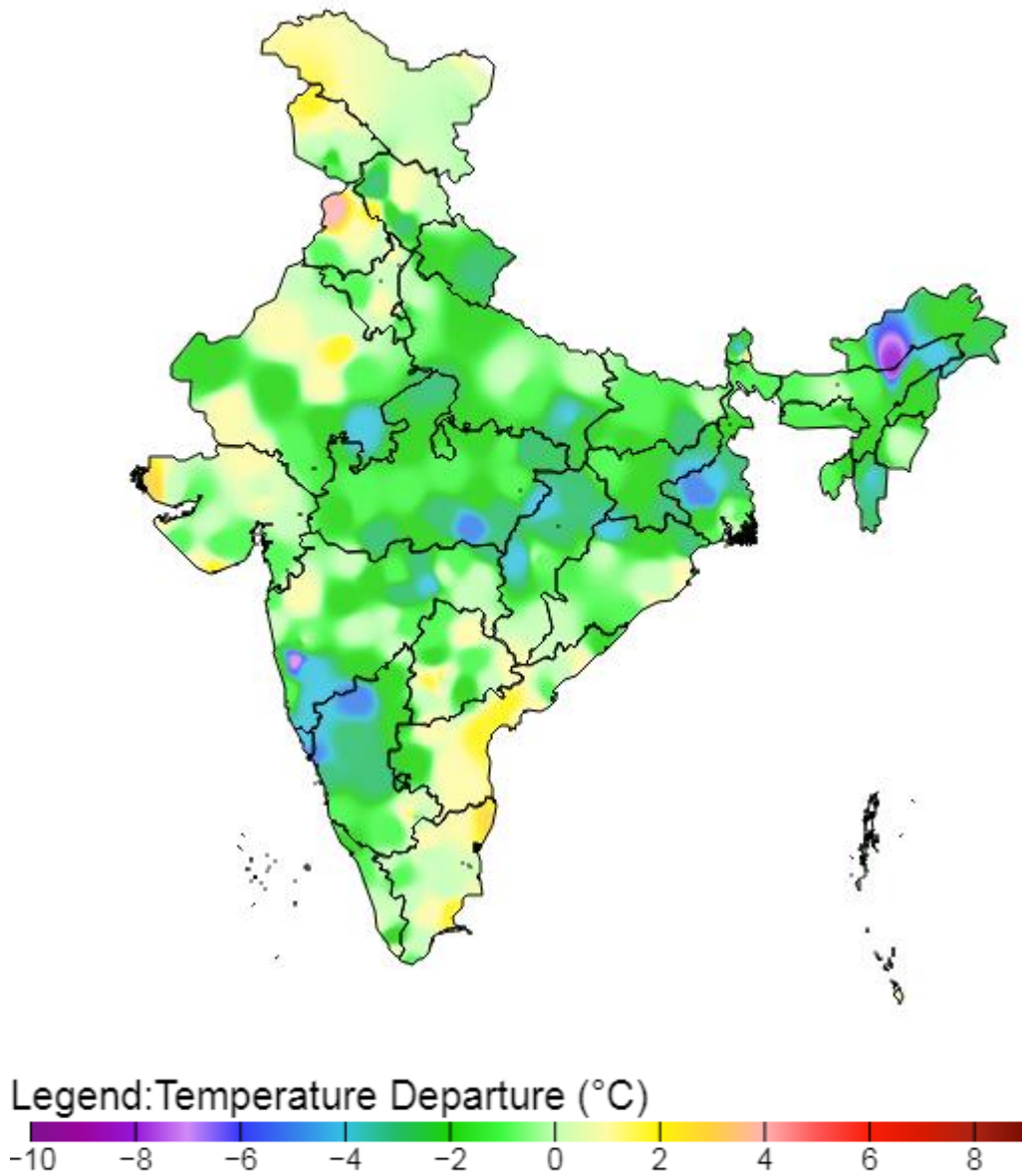
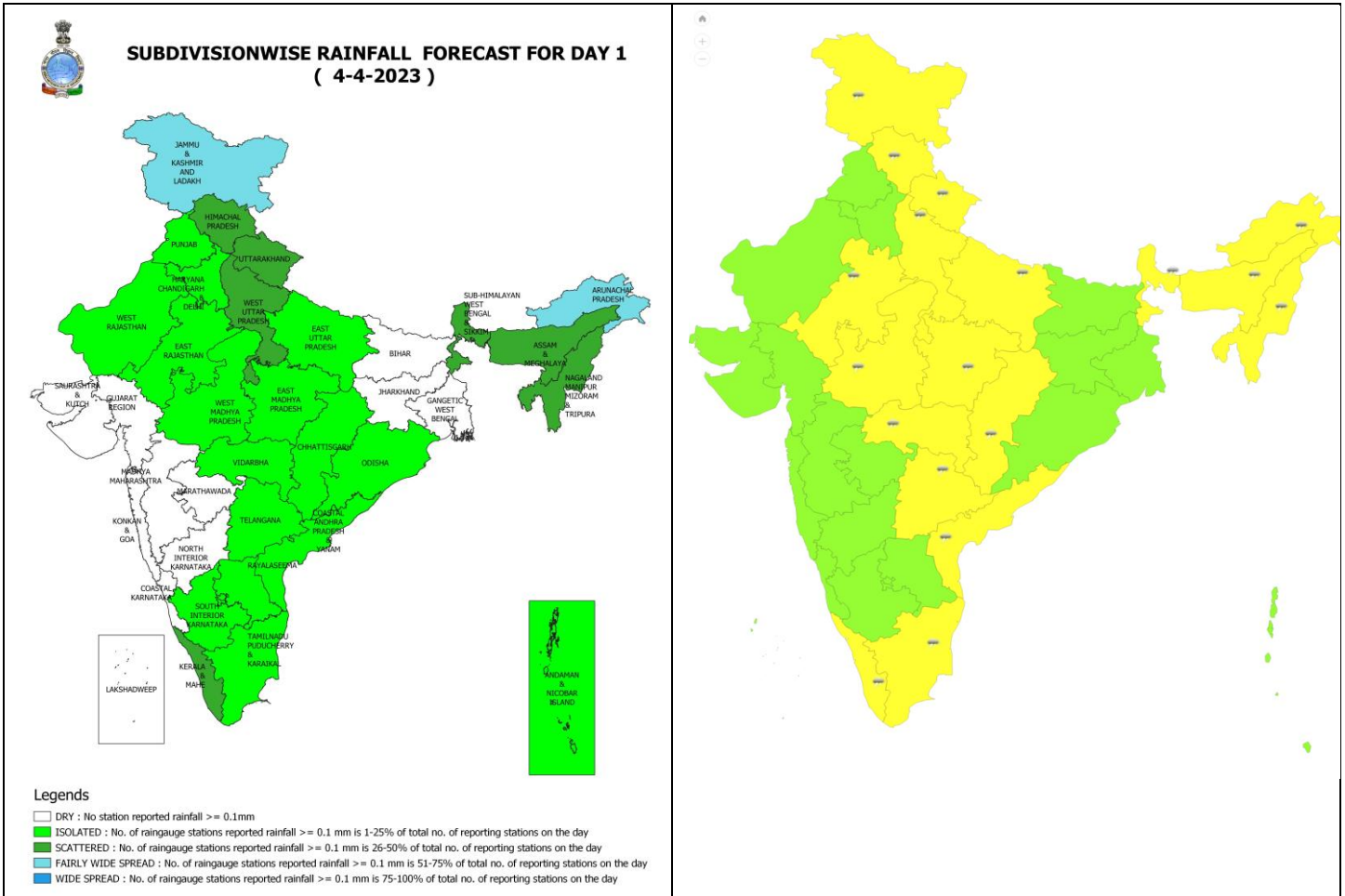


Fig. 5: Departure from Normal of Minimum Temperatures



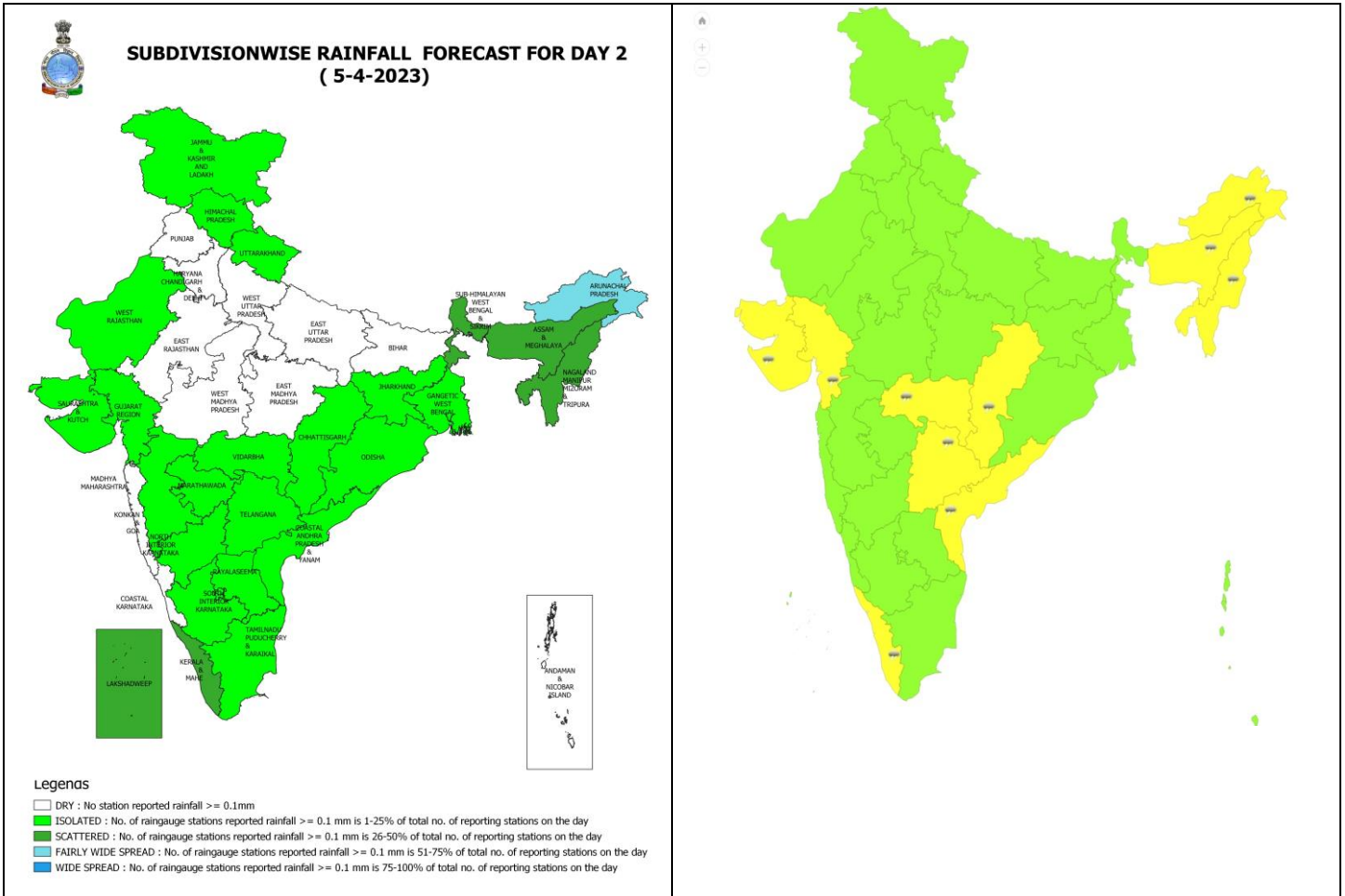


**04 April (Day 1): ♦ Thunderstorm accompanied with lightning & gusty wind (30-40 kmph) very likely at isolated places over Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Coastal Andhra Pradesh & Yanam and Kerala & Mahe and with lightning over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, East Rajasthan, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Telangana and Tamilnadu, Puducherry & Karaikal.**

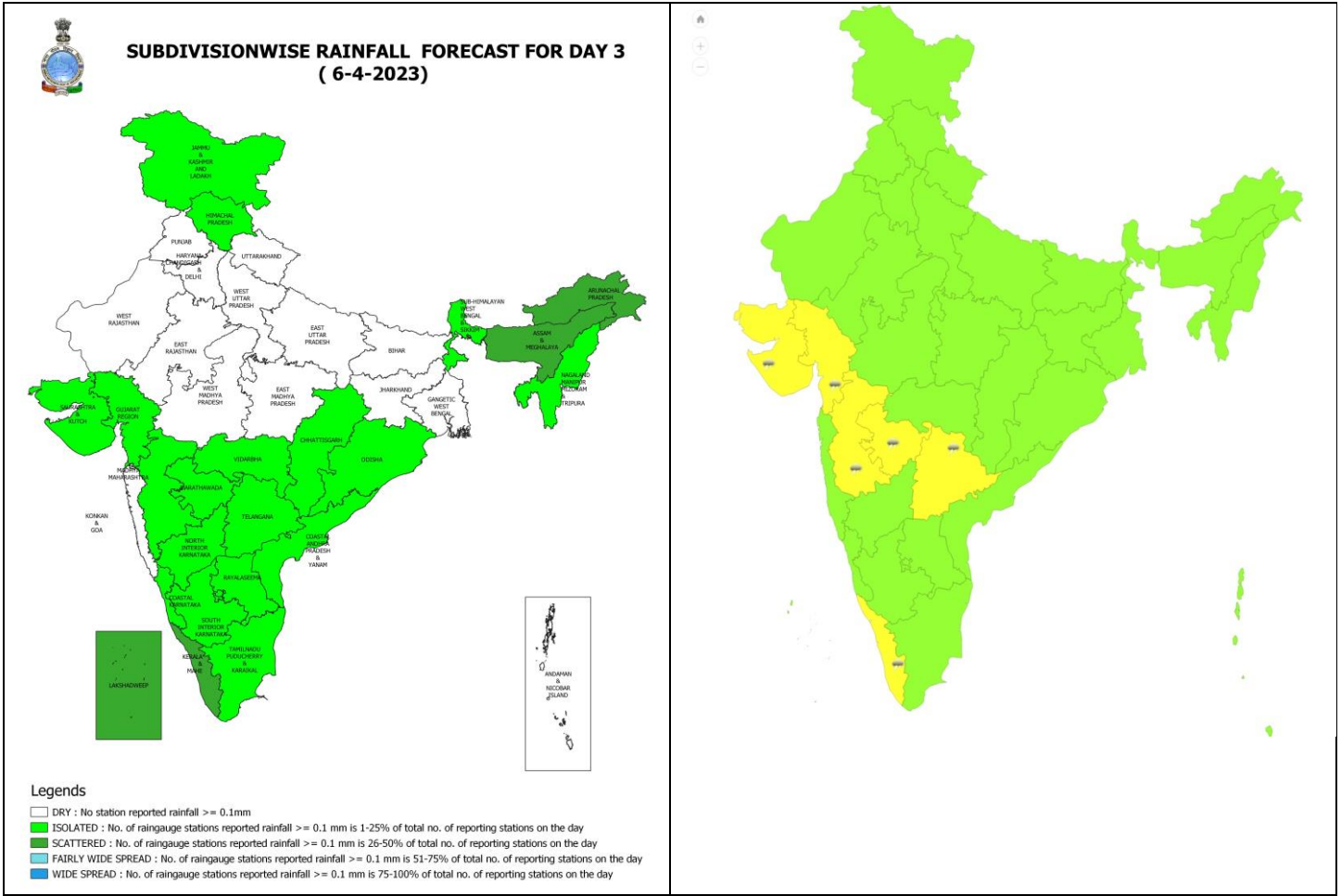
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**05 April (Day 2): ♦ Thunderstorm accompanied with lightning & gusty wind (30-40 kmph) very likely at isolated places over Vidarbha, Chhattisgarh, Coastal Andhra Pradesh & Yanam and Kerala & Mahe and with lightning over Gujarat state, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Telangana.**

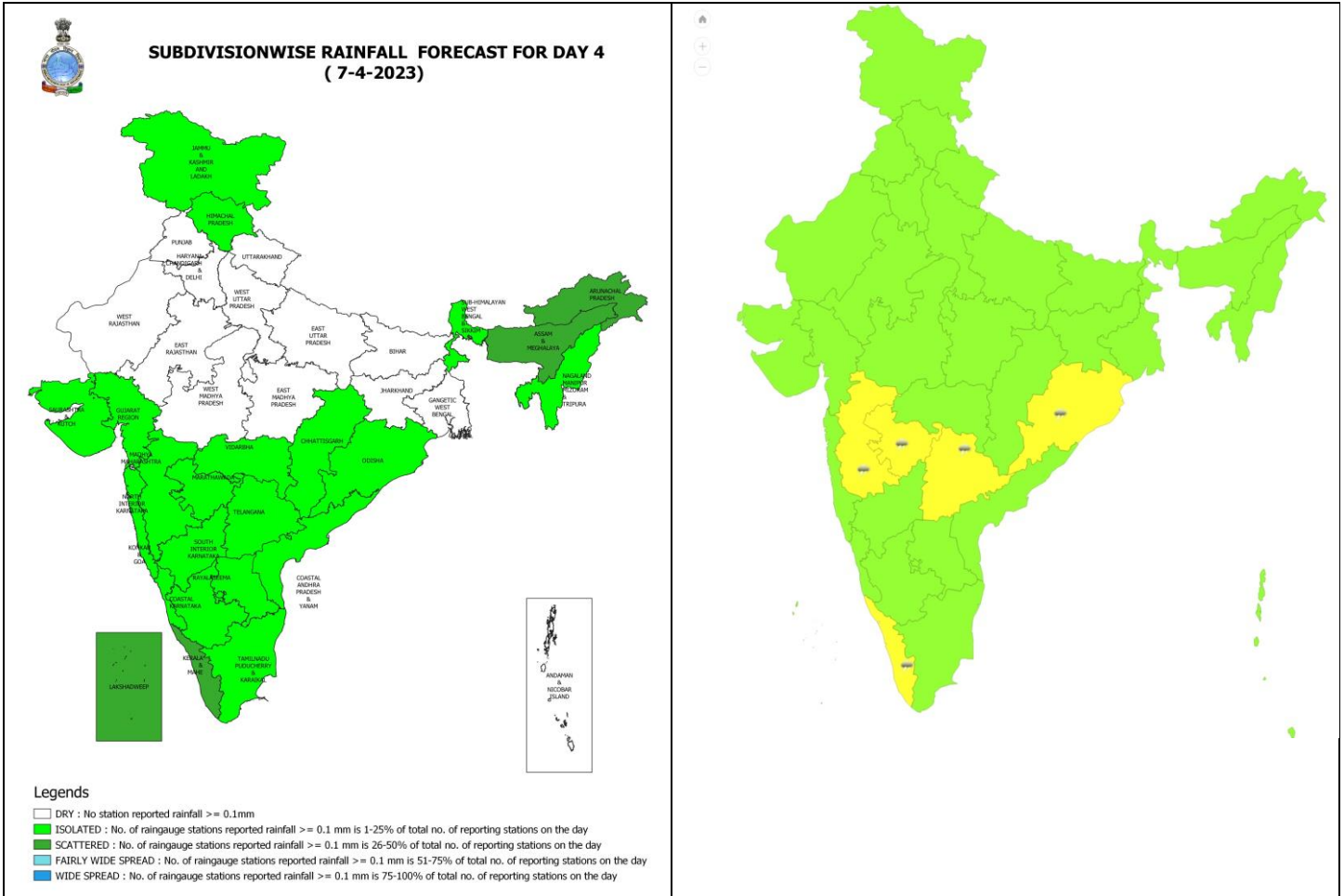


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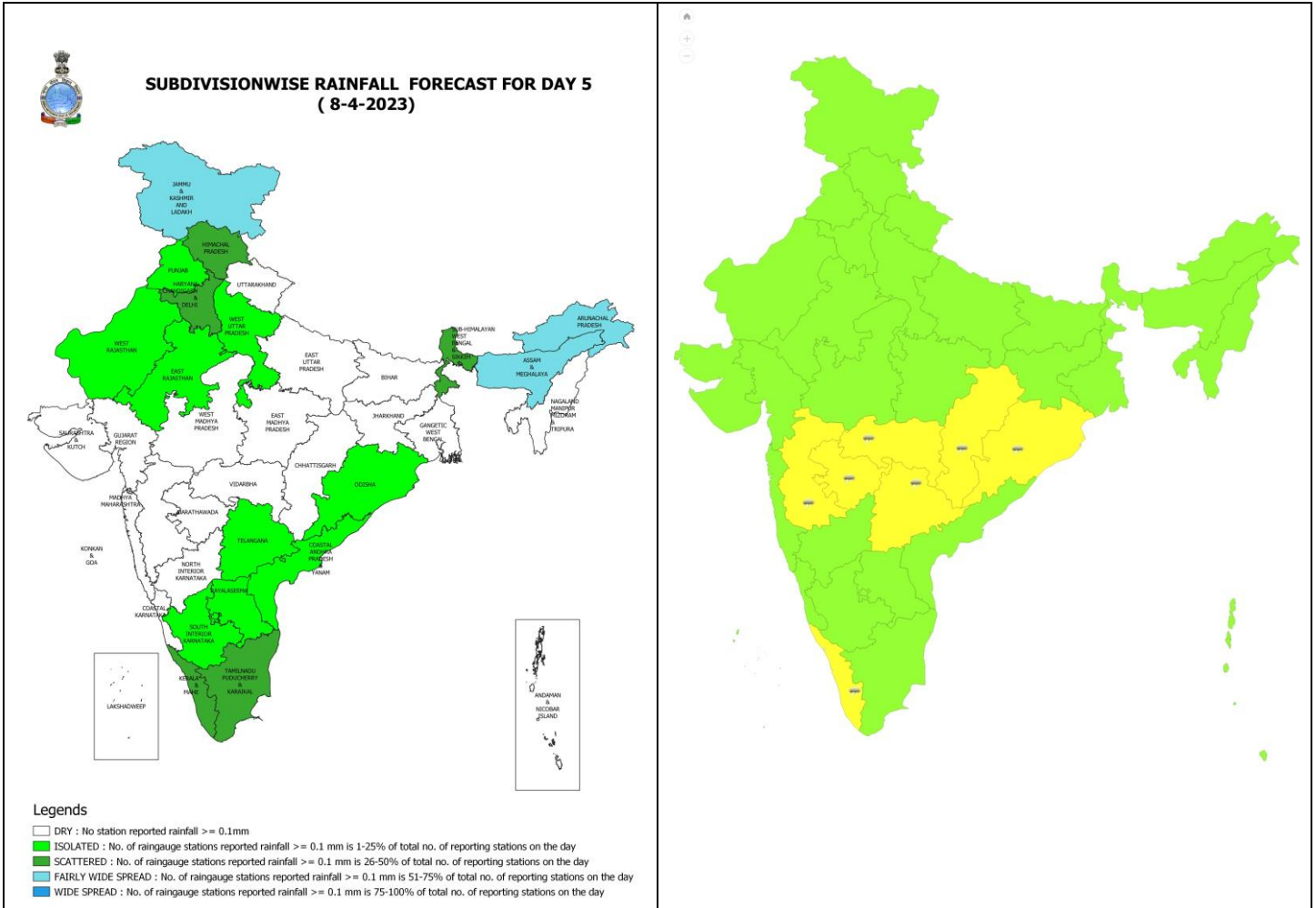


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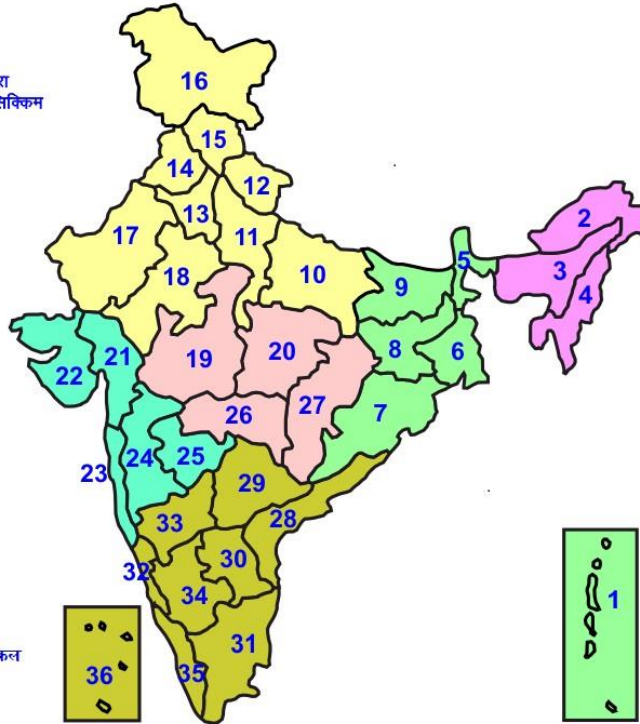
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**08 April (Day 5): Thunderstorm accompanied with lightning & gusty wind (30-40 kmph) likely at isolated places over Kerala & Mahe and with lightning over Vidarbha, Chhattisgarh, Telangana, Madhya Maharashtra, Marathwada and Odisha.**

## 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 एंवम् सिक्किम
- 6 पश्चिम गॉंगेय बंगाल
- 7 ओडिसा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखंड
- 13 हरियाणा चंडिगढ़ एंवम् दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू एंवम् कश्मीर एंवम् लद्दाख
- 17 पश्चिम राजस्थान
- 18 पूर्वी राजस्थान
- 19 पश्चिम मध्य प्रदेश
- 20 पूर्वी मध्य प्रदेश
- 21 गुजरात क्षेत्र
- 22 सौराष्ट्र एंवम् कच्छ
- 23 कोंकण एंवम् गोवा
- 24 मध्य महाराष्ट्र
- 25 मराठावाडा
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 तटीय आंध्र प्रदेश एंवम् यनम
- 29 तेलंगाना
- 30 रायलसीमा
- 31 तमिलनाडु, पुदुचेरी एंवम् कराईकल
- 32 तटिय कर्नाटक
- 33 आंतरिक उत्तरी कर्नाटक
- 34 आंतरिक दक्षिणी कर्नाटक
- 35 केरल एंवम् 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

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<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 color warning does not mean "Red Alert" Red color 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 [www.imd.gov.in](http://www.imd.gov.in) or contact : +91 11 24631913, 24643965, 24629798