

Wednesday, April 10, 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 central parts of Madhya Maharashtra and a trough/wind discontinuity runs from southeast Rajasthan to north parts of Coastal Karnataka in lower tropospheric levels. Under their influence:
 - ✓ Scattered light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-50 kmph)** very likely over Madhya Pradesh, Chhattisgarh, Vidarbha and isolated to scattered over West Madhya Pradesh, Marathwada, Madhya Maharashtra during 10th-14th April, 2024.
 - ✓ Isolated light/moderate rainfall accompanied with **thunderstorm, lightning** very likely over Gangetic West Bengal, Jharkhand, Odisha, Bihar and Andaman & Nicobar Islands during 10th-14th April.
 - ✓ Isolated light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-50 kmph)** very likely over Telangana, Kerala & Mahe during next 7 days and over Coastal Andhra Pradesh-Yanam, Tamil Nadu, Puducherry-Karaikal during 11th-14th April, 2024.
 - ✓ **Hailstorm activity also very likely at isolated places over West Madhya Pradesh, Vidarbha on 10th; East Madhya Pradesh on 10th & 11th April, 2024.**
- ❖ A **Western Disturbance** as a trough in middle tropospheric westerlies runs along Long. 66°E to the north of Lat. 30°N. An **Active Western Disturbance is likely to affect Northwest India from 12th April, 2024.** Under the influence of these systems:
 - ✓ Isolated light rainfall/snowfall very likely over Jammu-Kashmir, Himachal Pradesh, Uttarakhand during 10th-12th and fairly widespread to widespread light to moderate rainfall/snowfall with **thunderstorm, lightning** over the region during 13th-16th April, 2024.
 - ✓ Scattered to fairly widespread rainfall with **thunderstorm, lightning** very likely over Uttar Pradesh, Punjab and Haryana during 13th-15th and isolated to scattered light to moderate rainfall with **thunderstorm, lightning** over Rajasthan during 10th-15th April, 2024.
 - ✓ **Isolated heavy rainfall/snowfall very likely over Jammu & Kashmir on 13th & 14th and over Himachal Pradesh on 14th April, 2024.**
 - ✓ **Isolated hailstorm very likely over Himachal Pradesh and Uttarakhand on 13th & 14th April, 2024.**
 - ✓ **Duststorm/Thundersquall** (50-60 kmph gusting to 70kmph) very likely at isolated places over Rajasthan on 13th April, 2024.
- ❖ A cyclonic circulation lies over northeast Assam in lower tropospheric levels. Under its influence:
 - ✓ Scattered to fairly widespread light/moderate rainfall/snowfall with isolated **thunderstorm & lightning** very likely over Arunachal Pradesh; isolated/scattered light to moderate rainfall with isolated **thunderstorm, lightning & gusty winds** over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during on 10th & 11th days.

Maximum temperature observation and forecast for next 5 days:

- ❖ Yesterday, maximum temperatures were in the range of 40-42°C over many parts of West Rajasthan & Gujarat Region and in isolated pockets over Uttar Pradesh, West Madhya Pradesh, Saurashtra & Kutch, Madhya Maharashtra, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe. These were above normal by 2-4 °C over these areas.
- ❖ Yesterday, the **maximum temperature exceeded 98th percentile** over many parts of Maharashtra, Madhya Pradesh and in isolated pockets over South Interior Karnataka & Kerala. It is likely to exceed 98 percentiles in isolated pockets over Rayalaseema, Kerala & South Interior Karnataka during 10th-13th April, 2024.
- ❖ Yesterday, Minimum temperatures were above normal by 3-5°C at isolated places over Kerala, north Madhya Maharashtra, Marathwada, West Rajasthan and west Assam.

Heat wave, Warm Night and Hot & Humid weather warning for next 5 days:

- ❖ **Heat wave conditions** very likely in isolated pockets over Saurashtra & Kutch on 10th & 11th April, 2024.
- ❖ **Hot and humid weather** very likely to prevail over Kerala & Mahe during 10th-14th and over Coastal Andhra Pradesh & Yanam, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Rayalaseema during 10th-11th April, 2024.

* 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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Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 to 1730 hours IST of yesterday): at a few places over Vidarbha and at isolated places over Madhya Pradesh, Marathwada and Sub-Himalayan West Bengal & Sikkim.
- ❖ **Significant amount of rainfall** (from 0830 to 1730 hours IST of yesterday) (in cm): Nil.
- ❖ **Minimum Temperature Departures (as on 09-04-2024):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over East Rajasthan and Marathwada; **above normal (1.6°C to 3.0°C)** at isolated places over West Rajasthan, West Madhya Pradesh, Saurashtra & Kutch, Madhya Maharashtra, Assam & Meghalaya, Arunachal Pradesh, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe. These were **below normal (-1.6°C to -3.0°C)** at a few places over Chhattisgarh; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Haryana-Chandigarh-Delhi, Uttar Pradesh, East Madhya Pradesh, Vidarbha, Gangetic West Bengal, Odisha and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of 13.0°C** was reported at **Karnal (Haryana)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 09-04-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at a few places over West Rajasthan, Assam & Meghalaya and Kerala & Mahe; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Haryana-Chandigarh-Delhi and East Rajasthan; **above normal (1.6°C to 3.0°C)** at many places over Uttar Pradesh and Gujarat State; at a few places over West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal and Lakshadweep; at isolated places over Himachal Pradesh, Uttarakhand, West Madhya Pradesh, Konkan & Goa, Madhya Maharashtra and Karnataka. These were **markedly below normal (-5.1°C or less)** at isolated places over Odisha, Chhattisgarh, East Madhya Pradesh and Vidarbha; **below normal (-1.6°C to -3.0°C)** at isolated places over Telangana and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature of 43.0°C** was reported at **Jeur (Madhya Maharashtra)** over the country.

Meteorological Analysis (Based on 0530 hours IST)

- ❖ 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. 66°E to the north of Lat. 30°N.
- ❖ The cyclonic circulation over central Rajasthan now lies over southeast Rajasthan and extends upto 1.5 km above mean sea level.
- ❖ The cyclonic circulation over Sub-Himalayan West Bengal & neighbourhood at 0.9 km above mean sea level persists.
- ❖ The cyclonic circulation over northeast Assam & neighbourhood at 0.9 km above mean sea level persists.
- ❖ The cyclonic circulation over central parts of Madhya Maharashtra persists and now seen at 1.5 km above mean sea level.
- ❖ The trough/wind discontinuity now runs from cyclonic circulation over southeast Rajasthan to northern parts of Coastal Karnataka across Madhya Maharashtra & south Konkan at 0.9 km above mean sea level.
- ❖ An active Western Disturbance is likely to affect Northwest India from 12th April, 2024.

Weather Forecast for next 7 days (Upto 0830 hours IST of 17th April, 2024)

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

Weather Outlook for subsequent 3 days (During 17th-19th April, 2024)

- ❖ Isolated to scattered light/moderate rainfall/snowfall likely over Northeast India and Western Himalayan Region.
- ❖ Isolated light rainfall likely over plains of Northwest India, East, Central & south Peninsular India.
- ❖ Dry weather likely to prevail over rest parts of the country.

Table-1

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

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

Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

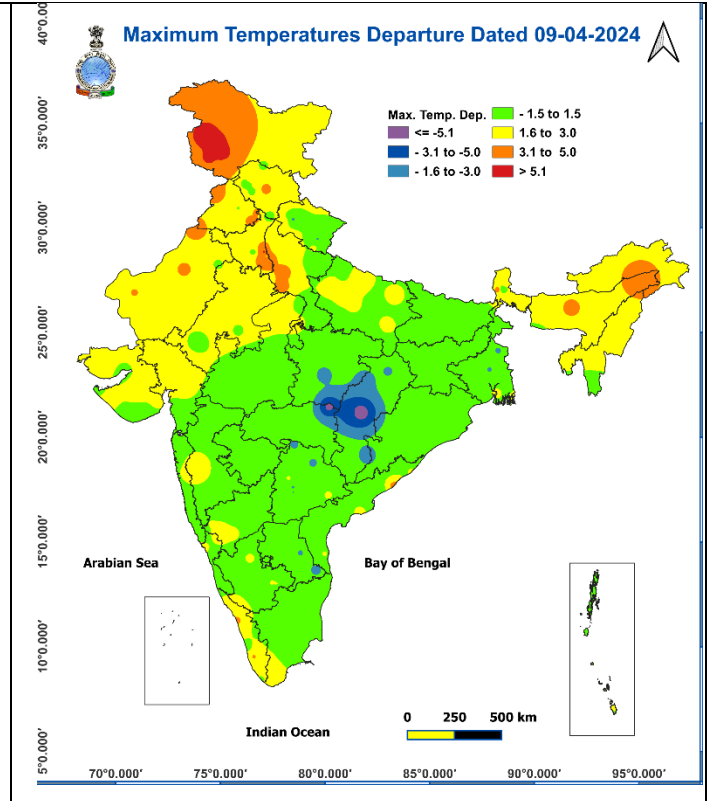
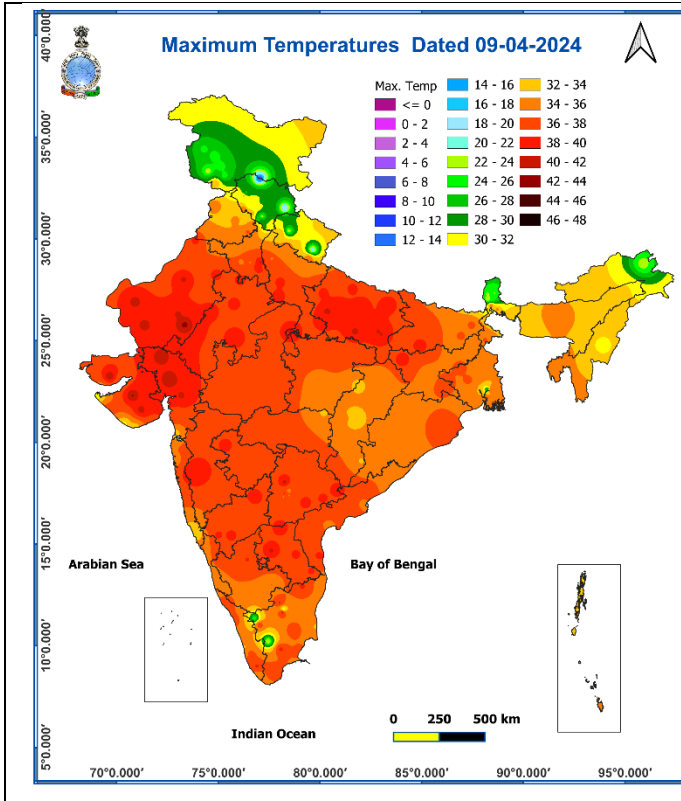


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

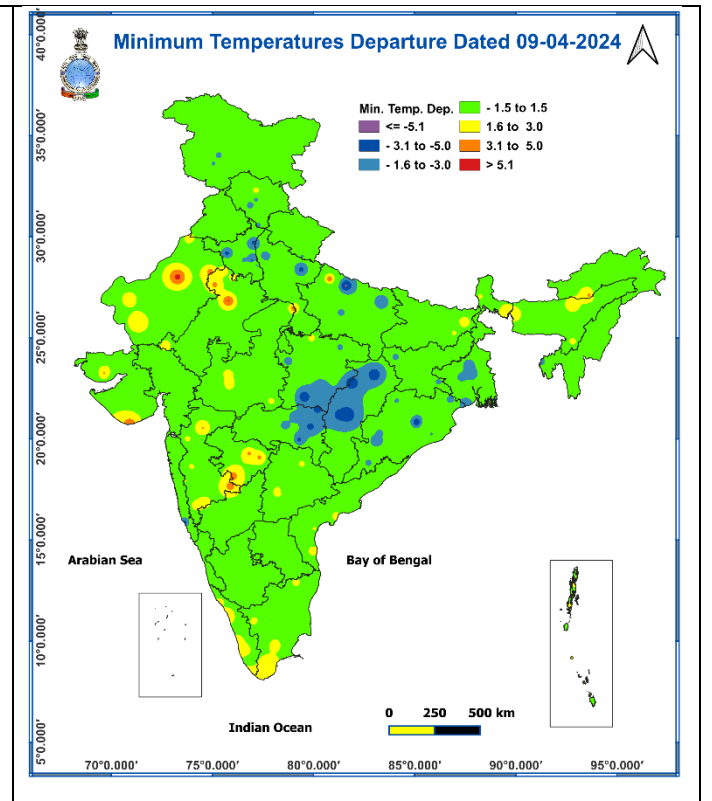
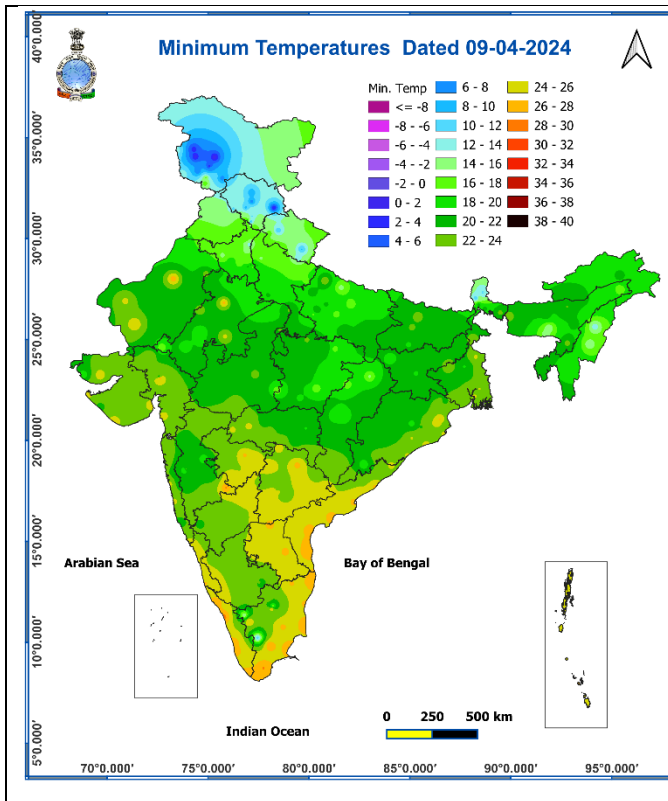
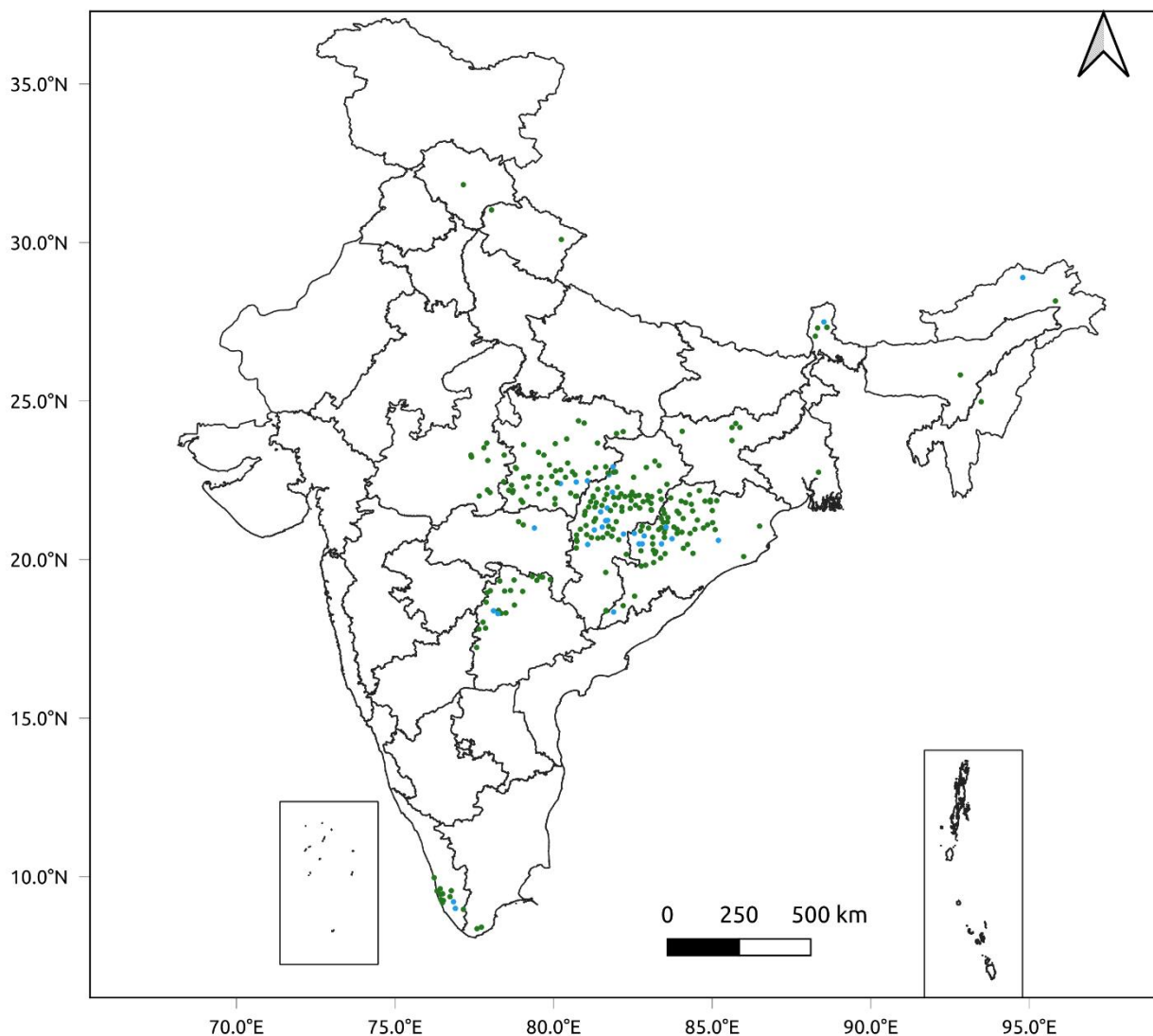


Fig. 5: Accumulated Rainfall (mm) during past 24 hours

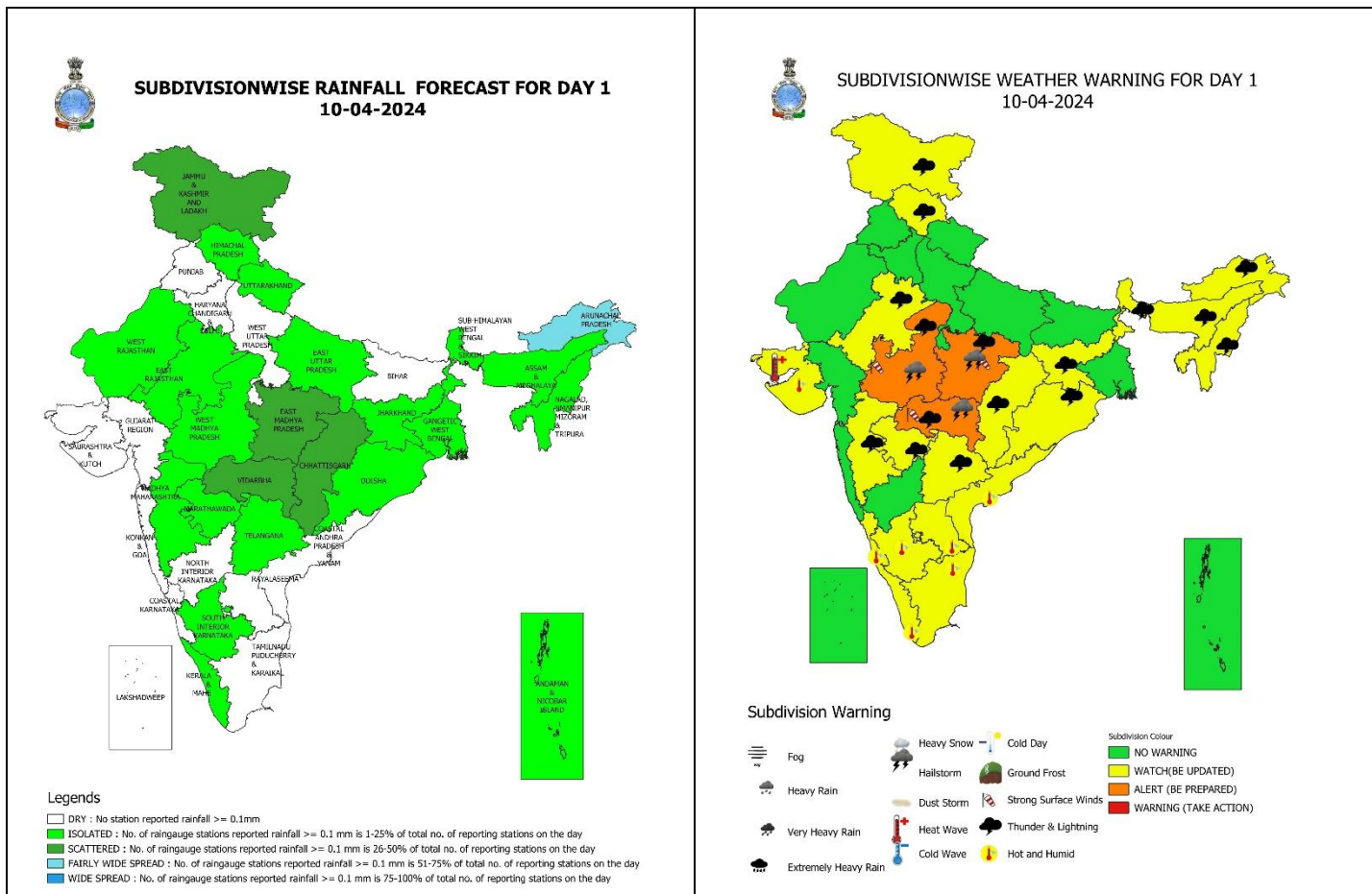


24 Hr cumulative rainfall recorded over different stations during 0830 IST of 8-4-2024 to 0830 IST of 9-4-2024



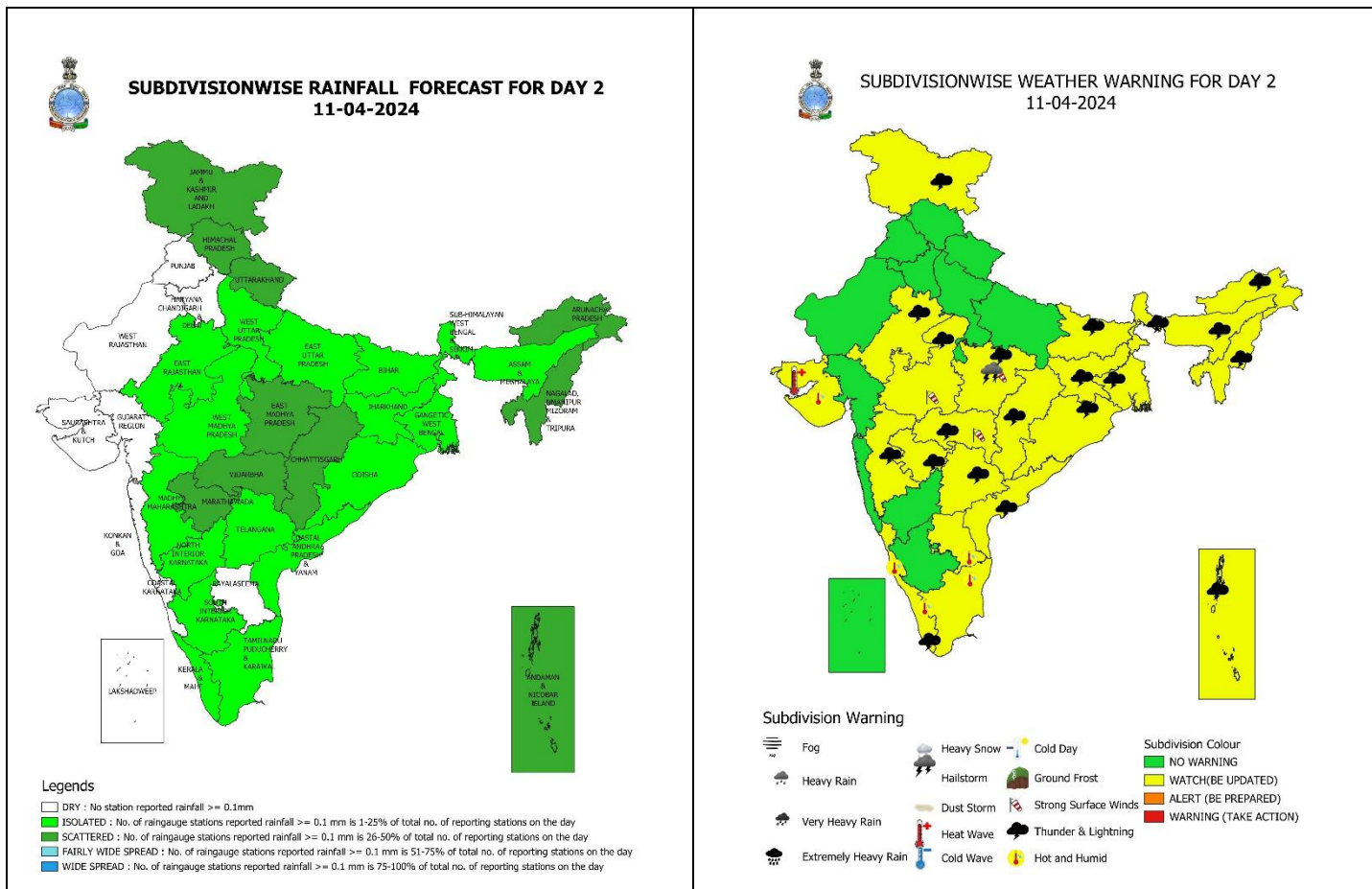
Legends

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



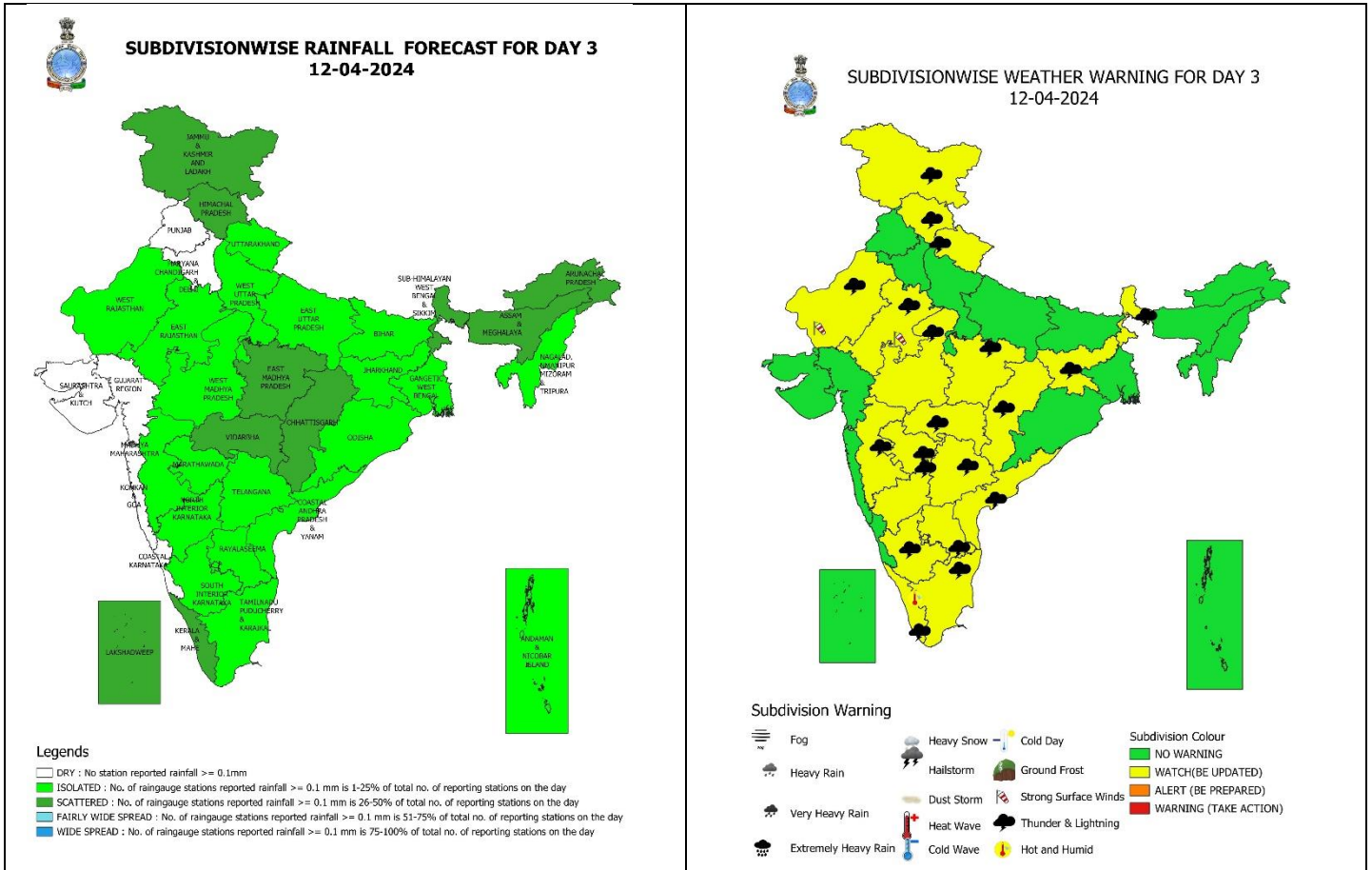
10 April (Day 1):

- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph) and Hail** very likely at isolated places over Madhya Pradesh and Vidarbha; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over East Rajasthan, Chhattisgarh, Jharkhand, Assam & Meghalaya and Telangana; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Sub-Himalayan West Bengal & Sikkim, Odisha, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada.
- ❖ **Heat Wave conditions** very likely to prevail in isolated pockets over Saurashtra & Kutch.
- ❖ **Hot and humid weather** very likely to prevail over Coastal Andhra Pradesh & Yanam, Rayalaseema, Coastal & south Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.



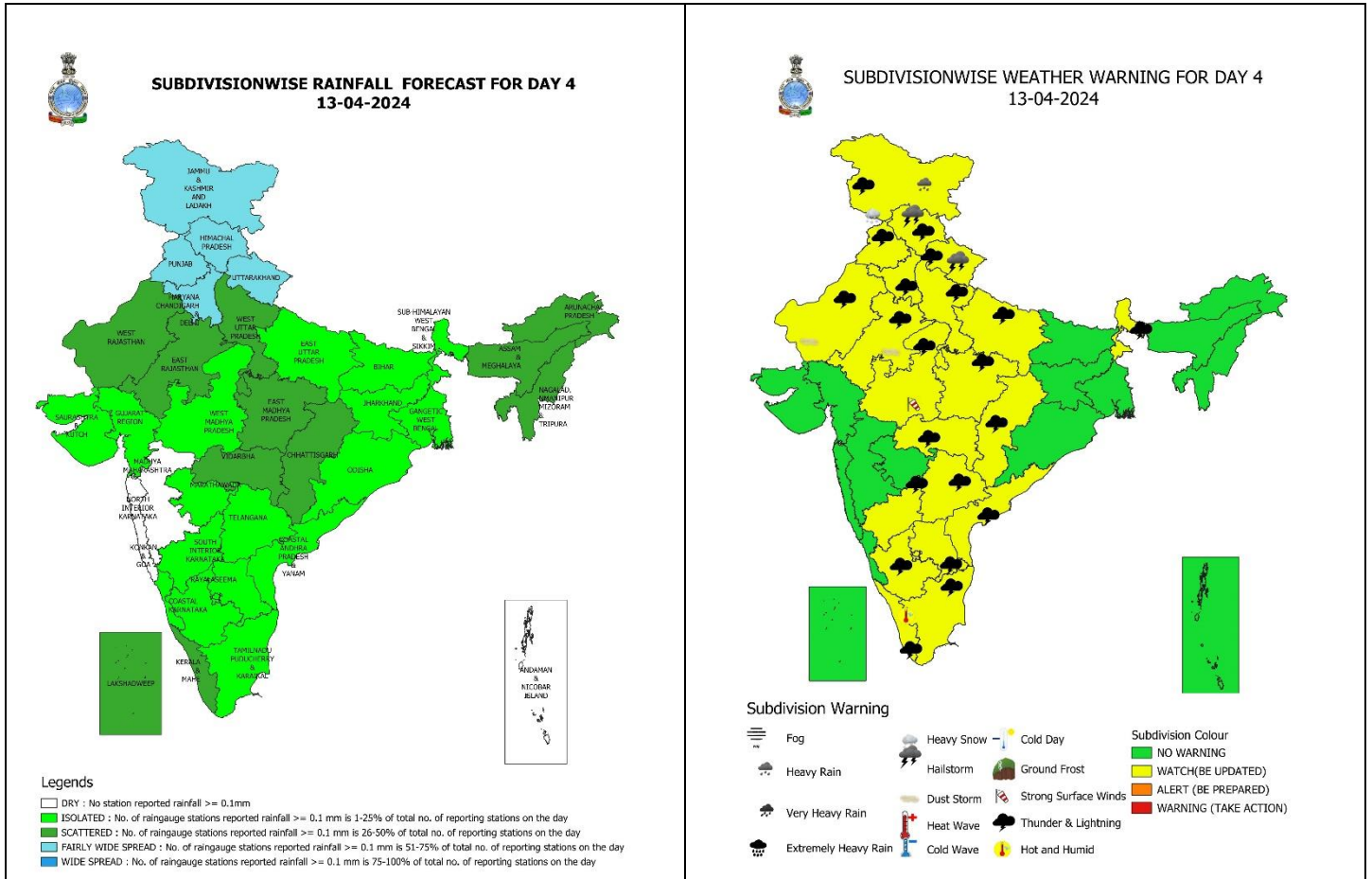
11 April (Day 2):

- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph) & hail** at isolated places very likely over East Madhya Pradesh; **thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places very likely over Madhya Pradesh and Vidarbha; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over East Rajasthan, Chhattisgarh, Andaman & Nicobar Islands, West Bengal & Sikkim, Bihar, Jharkhand, Nagaland, Manipur, Mizoram & Tripura and Telangana; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Odisha, Arunachal Pradesh, Assam & Meghalaya, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam and Kerala & Mahe.
- ❖ **Heat Wave conditions** very likely to prevail in isolated pockets over Saurashtra & Kutch.
- ❖ **Hot and humid weather** very likely to prevail over Coastal Andhra Pradesh & Yanam, Rayalaseema, Coastal & south Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.



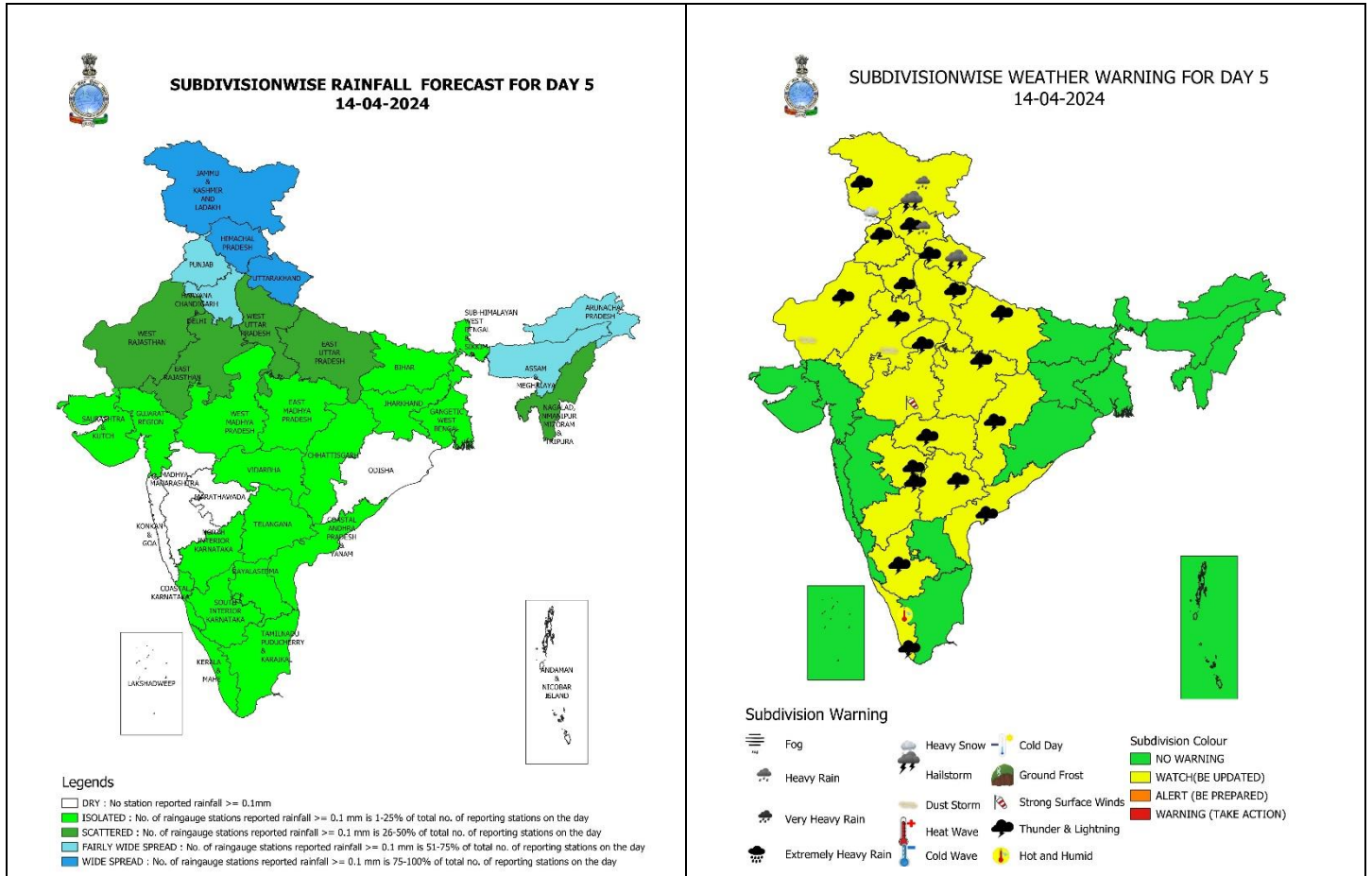
12 April (Day 3):

- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** likely at isolated places over East Rajasthan and Madhya Pradesh; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over West Rajasthan, Vidarbha, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim and Telangana; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Jharkhand, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Rayalaseema, Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Hot and humid weather** likely to prevail over Kerala & Mahe.



13 April (Day 4):

- ❖ **Thunderstorm/duststorm accompanied with lightning & squall (speed reaching 50-60 kmph)** likely at isolated places over Rajasthan; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over Madhya Pradesh; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Vidarbha, Chhattisgarh and Telangana; **with lightning & Hail** at isolated places over Himachal Pradesh and Uttarakhand; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Sub-Himalayan West Bengal & Sikkim, Coastal Andhra Pradesh & Yanam, Rayalaseema, Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Heavy rainfall/snowfall** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- ❖ **Hot and humid weather** likely to prevail over Kerala & Mahe.

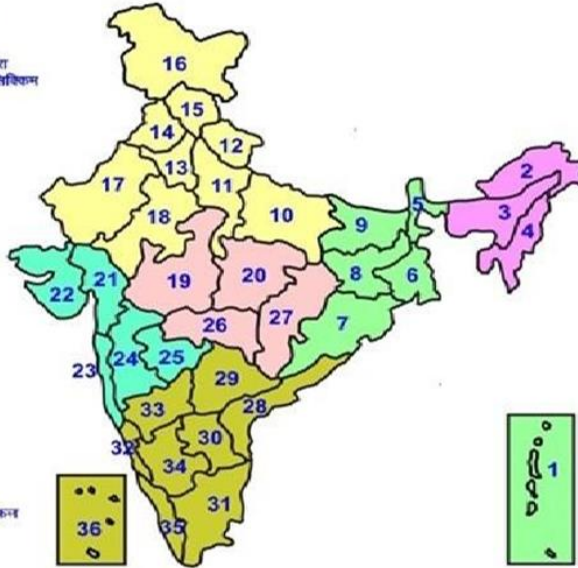


14 April (Day 5):

- ❖ **Thunderstorm/duststorm accompanied with lightning & squall (speed reaching 50-60 kmph)** likely at isolated places over Rajasthan; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over Madhya Pradesh; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Vidarbha, Chhattisgarh and Telangana; **with lightning & Hail** at isolated places over Himachal Pradesh and Uttarakhand; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Marathwada, Coastal Andhra Pradesh & Yanam, Interior Karnataka, and Kerala & Mahe.
- ❖ **Heavy rainfall/snowfall** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh.
- ❖ **Hot and humid weather** likely to prevail over Kerala & Mahe.

LEGENDS

- 1 अंडमन और निकोबार द्वीप समूह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड मणिपुर 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

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



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°C to 6.4°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°C

Warm Night: When minimum temperature departure 4.5°C to 6.4°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°C to -6.4°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°C to -6.4°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)

* 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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