

Friday, January 12, 2024  
Time of Issue: 0800 hours IST  
(MORNING)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

- ❖ Conditions are becoming favourable for cessation of Northeast Monsoon rains over Tamilnadu, Puducherry & Karaikal, Kerala & Mahe and adjoining areas of Coastal Andhra Pradesh & Yanam, Rayalaseema and South Interior Karnataka around 15<sup>th</sup> January, 2024.

### **Weather Systems and Forecast & Warnings during next 5 days:**

- A Western Disturbance as a trough in middle tropospheric westerlies roughly along Long. 55°E to the north of Lat. 32°N. Under its influence; Light rainfall/snowfall at isolated places very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh on 12<sup>th</sup> & 13<sup>th</sup> January.
- A fresh Western Disturbance is likely to affect Western Himalayan Region from 16<sup>th</sup> January, 2024. Under its influence; Light rainfall/snowfall at isolated places very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand during 16<sup>th</sup>-18<sup>th</sup> January

### **Dense fog and Cold day warning:**

- ❖ **Dense to very dense fog** conditions very likely to prevail for a few hours in morning in some parts of Punjab and in isolated pockets over Haryana, Chandigarh & Delhi during 12<sup>th</sup>-16<sup>th</sup> January.
- ❖ **Dense to very dense fog** conditions very likely to prevail for a few hours in morning in some parts of East Uttar Pradesh and in isolated pockets over West Uttar Pradesh on 12<sup>th</sup> & 13<sup>th</sup> and dense fog for subsequent 3 days.
- ❖ **Dense fog** conditions very likely to prevail for a few hours in morning in isolated pockets of Gangetic West Bengal, Odisha, Jammu division on 12<sup>th</sup>; over Himachal Pradesh, Uttarakhand, Bihar, Sub-Himalayan West Bengal & Sikkim, north Madhya Pradesh on 12<sup>th</sup> & 13<sup>th</sup> and Assam & Meghalaya, Mizoram & Tripura during 12<sup>th</sup>-16<sup>th</sup> January.
- ❖ **Cold Day to Severe Cold Day** conditions very likely to continue in some parts of Punjab, Haryana-Chandigarh on 12<sup>th</sup> and in isolated pockets of Punjab during 13<sup>th</sup>-16<sup>th</sup> January, 2024.
- ❖ **Cold Day** conditions very likely to continue in isolated pockets of Uttarakhand on 12<sup>th</sup> January, 2024 and abate thereafter.

### **Temperatures Forecast and Cold wave warning:**

- ❖ Gradual fall by 2-3°C in minimum temperatures likely over many parts of Central and East India during next 2 days and no significant change thereafter.
- ❖ **Cold wave to Severe Cold wave** conditions very likely to continue in isolated pockets of Rajasthan on 12<sup>th</sup> & 13<sup>th</sup> and cold wave conditions in isolated pockets on 14<sup>th</sup> January, 2024.
- ❖ **Cold wave** conditions very likely in isolated pockets of Punjab and Haryana-Chandigarh-Delhi on 12<sup>th</sup> & 13<sup>th</sup> January, 2024.
- ❖ **Ground frost conditions** very likely over Uttarakhand and Rajasthan on 12<sup>th</sup> & 13<sup>th</sup> January, 2024.

### **Fishermen warning:**

**12<sup>th</sup> Jan:** Squally Weather with Wind Speed 40-45 Kmph gusting to 55 Kmph likely to prevail over Gulf of Mannar, Comorin Area and adjoining Maldives area. Fishermen are advised not to venture into these areas.

**13<sup>th</sup>-14<sup>th</sup> Jan:** Squally Weather with Wind Speed 40-45 Kmph gusting to 55 Kmph likely to prevail over southern parts of Southwest & Southeast Arabian Sea. Fishermen are advised not to venture into these areas.

## Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of Yesterday): at isolated places over Andaman & Nicobar Islands, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Significant rainfall amount recorded** (from 0830 hours IST to 1730 hours IST of yesterday): (1 cm or more): Nil.
- ❖ **Fog conditions observed** (at 0530 hours IST of today, 12.01.2024): **Very Dense fog** reported in isolated pockets of Punjab, Delhi and East Uttar Pradesh; **Dense fog** in isolated pockets over Chandigarh, West Uttar Pradesh, Bihar, Assam; **Moderate fog** in isolated pockets over Haryana, Rajasthan and **shallow fog** in isolated pockets over West Madhya Pradesh, Gangetic West Bengal
- ❖ **Visibility recorded** (at 0530 hours IST of today, 12.01.2024) ( $\leq 500$ metres): **Punjab**: Amritsar-25, Patiala-500; **Haryana-Chandigarh-Delhi**: Chandigarh-50, Ambala & Hissar-200 each, Palam (Delhi)-0 & Safdarjung (Delhi)-500; **Rajasthan**: Ganganagar-200; **Uttar Pradesh**: Lucknow & Varanasi-25 each, Bareilly-50, Jhansi & Sultanpur-500 each; **Bihar**- Pura-50; **West Madhya Pradesh**: Gwalior-500; **Gangetic West Bengal**: Malda-500; **Assam**: Tezpur-50 & Guwahati-500
- ❖ Yesterday, **cold day to severe cold day conditions** prevailed in many parts of Punjab and in isolated pockets over East Uttar Pradesh. **Cold day conditions** prevailed in some parts of Haryana and West Uttar Pradesh and in isolated pockets over northwest Rajasthan, Chandigarh and Delhi.
- ❖ **Minimum Temperature Departures (as on 11-01-2024)**: Minimum temperatures were **markedly above normal (5.1°C or more)** at isolated places over Chhattisgarh, Madhya Maharashtra and Konkan & Goa; **appreciably above normal (3.1°C to 5.0°C)** at many places over Vidarbha; at a few places over Gujarat Region, Marathwada and Gangetic West Bengal; at isolated places over Rayalaseema; **above normal (1.6°C to 3.0°C)** at most places over Tamil Nadu, Puducherry & Karaikal; at many places over Bihar, Jharkhand, Odisha, Coastal Andhra Pradesh & Yanam, Karnataka, Sub-Himalayan West Bengal & Sikkim and Kerala & Mahe; at a few places over Assam & Meghalaya and Madhya Pradesh; at isolated places over Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura. They were **below normal (-1.6°C to -3.0°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttar Pradesh, Rajasthan and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature** of **-0.5°C** was reported at **Sikar (East Rajasthan)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 11-01-2024)**: Maximum temperatures were **markedly above normal (5.1°C or more)** at most places over Arunachal Pradesh and Himachal Pradesh; at many places over Assam & Meghalaya and Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; at isolated places over Sub-Himalayan West Bengal & Sikkim and Nagaland, Manipur, Mizoram & Tripura; **above normal (1.6°C to 3.0°C)** at most places over Coastal Karnataka, South Interior Karnataka and Kerala & Mahe; at many places over West Rajasthan, Bihar, Chhattisgarh and Saurashtra & Kutch; at a few places over Gujarat Region, North Interior Karnataka and Tamil Nadu, Puducherry & Karaikal; at isolated places over East Madhya Pradesh and Gangetic West Bengal. They were **appreciably below normal (-3.1°C to -5.0°C)** at a few places over Punjab and East Uttar Pradesh; **below normal (-1.6°C to -3.0°C)** at many places over West Uttar Pradesh; at isolated places over Haryana-Chandigarh-Delhi and West Madhya Pradesh and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature** of **36.4°C** was reported at **Karwar (Coastal Karnataka)**.

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

- ❖ Conditions are becoming favourable for cessation of Northeast Monsoon rains over Tamilnadu, Puducherry & Karaikal, Kerala & Mahe and adjoining areas of Coastal Andhra Pradesh & Yanam, Rayalaseema and South Interior Karnataka around 15<sup>th</sup> January, 2024.
- ❖ The **Western Disturbance** as a trough in middle tropospheric westerlies with its axis at 5.8 km above mean sea level roughly along Long. 55°E to the north of Lat. 32°N persists.
- ❖ A fresh Western Disturbance is likely to affect Western Himalayan Region from 16<sup>th</sup> January, 2024.

### Weather Forecast for next 7 days (Upto 0830 hours IST of 19<sup>th</sup> January, 2024)

- ❖ Gradual fall by 2-3°C in minimum temperatures likely over many parts of Central and East India during next 2 days and no significant change thereafter.

### Weather Outlook for subsequent 2 days

- ❖ Light to moderate rainfall at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and East India.
- ❖ Mainly dry weather likely to prevail over rest parts of the country.

Table-1

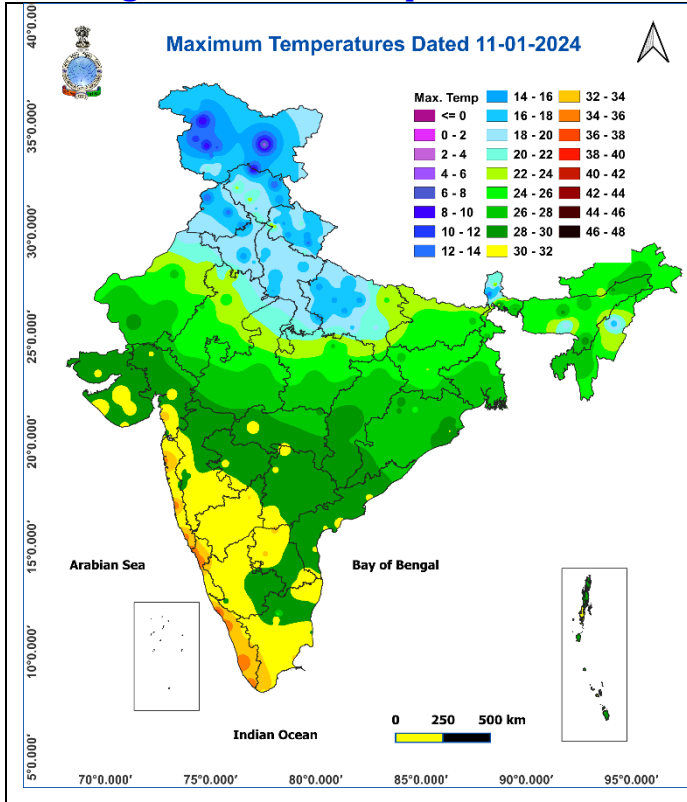
7 Days Rainfall Forecast

S. No.	Subdivision	12-Jan	13-Jan	14-Jan	15-Jan	16-Jan	17-Jan	18-Jan
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
2	ARUNACHAL PRADESH	DRY	DRY	DRY	ISOL	SCT	SCT	SCT
3	ASSAM & MEGHALAYA	DRY	DRY	DRY	ISOL	ISOL	ISOL	ISOL
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	DRY	DRY	DRY	DRY	ISOL	ISOL	ISOL
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	DRY	DRY	DRY	ISOL	ISOL	SCT	SCT
6	GANGETIC WEST BENGAL	DRY	DRY	DRY	DRY	ISOL	SCT	SCT
7	ODISHA	DRY	DRY	DRY	DRY	DRY	ISOL	ISOL
8	JHARKHAND	DRY	DRY	DRY	DRY	DRY	ISOL	ISOL
9	BIHAR	DRY	DRY	DRY	DRY	DRY	ISOL	ISOL
10	EAST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
11	WEST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
12	UTTARAKHAND	DRY	DRY	DRY	DRY	ISOL	ISOL	ISOL
13	HARYANA CHANDIGARH & DELHI	DRY	DRY	DRY	DRY	DRY	DRY	DRY
14	PUNJAB	DRY	DRY	DRY	DRY	DRY	DRY	DRY
15	HIMACHAL PRADESH	ISOL	ISOL	DRY	DRY	ISOL	ISOL	ISOL
16	JAMMU & KASHMIR AND LADAKH	ISOL	ISOL	DRY	DRY	ISOL	ISOL	ISOL
17	WEST RAJASTHAN	DRY	DRY	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	DRY	DRY	DRY	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	DRY	DRY	DRY	DRY	DRY	DRY	DRY
33	NORTH INTERIOR KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
34	SOUTH INTERIOR KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
35	KERALA & MAHE	DRY	DRY	DRY	DRY	DRY	DRY	DRY
36	LAKSHADWEEP	DRY	DRY	DRY	DRY	DRY	DRY	DRY

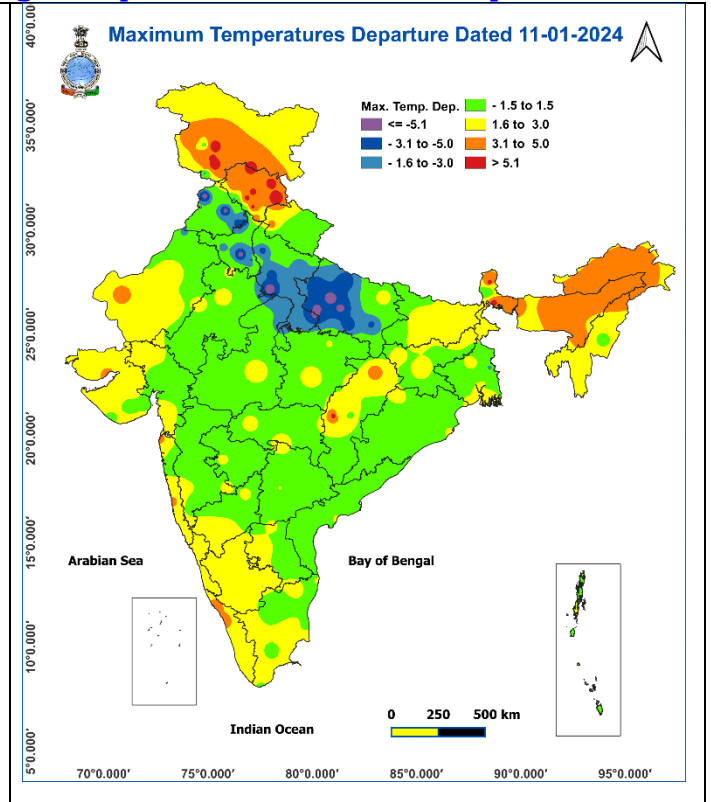
Legend	Category	% Stations
WS	Widespread/Most Places	76-100
FWS	Fairly Widespread/Many Places	51-75
SCT	Scattered/ A Few Places	26-50
ISOL	Isolated Places	1-25
DRY	No Rain	0

\* 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)

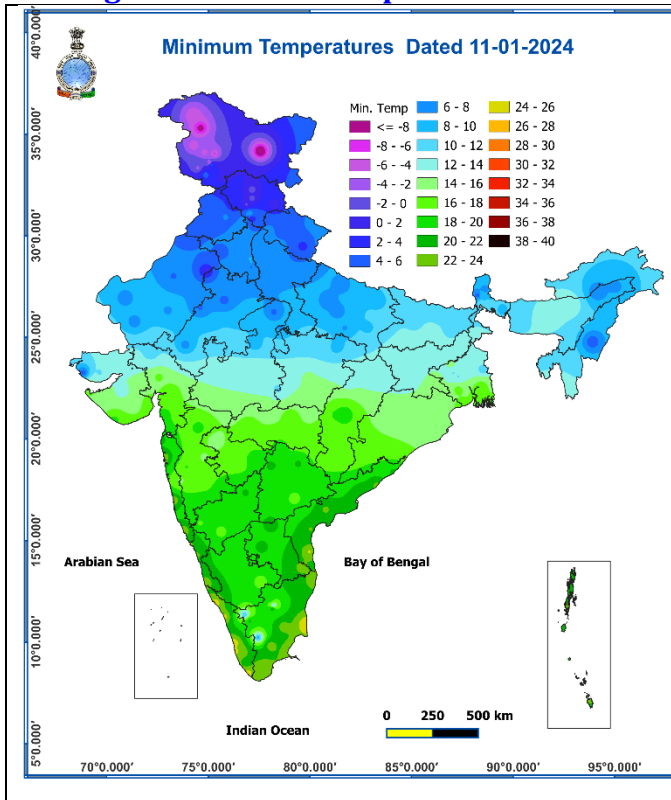
**Fig. 1: Maximum Temperatures**



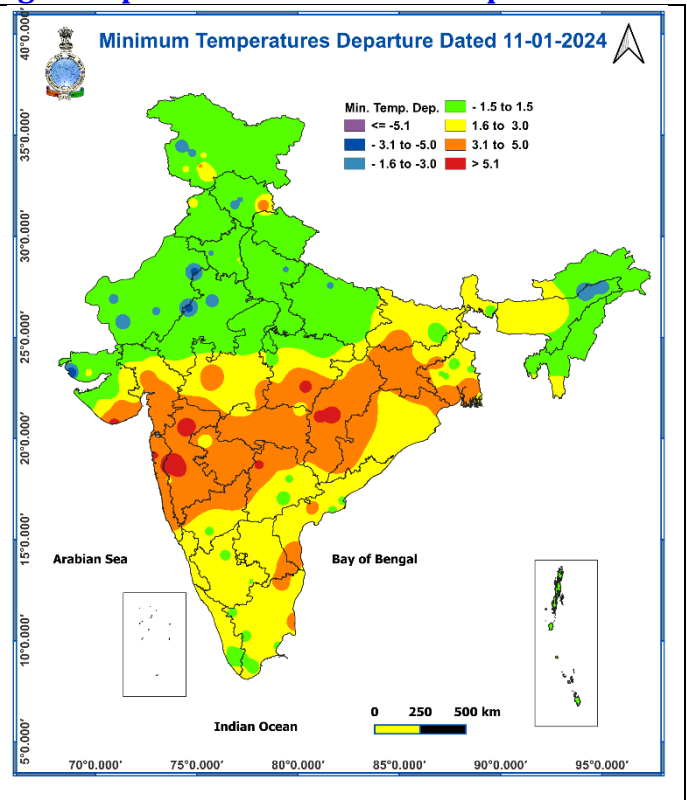
**Fig. 2: Departure of Maximum Temperatures**



**Fig. 3: Minimum Temperatures**



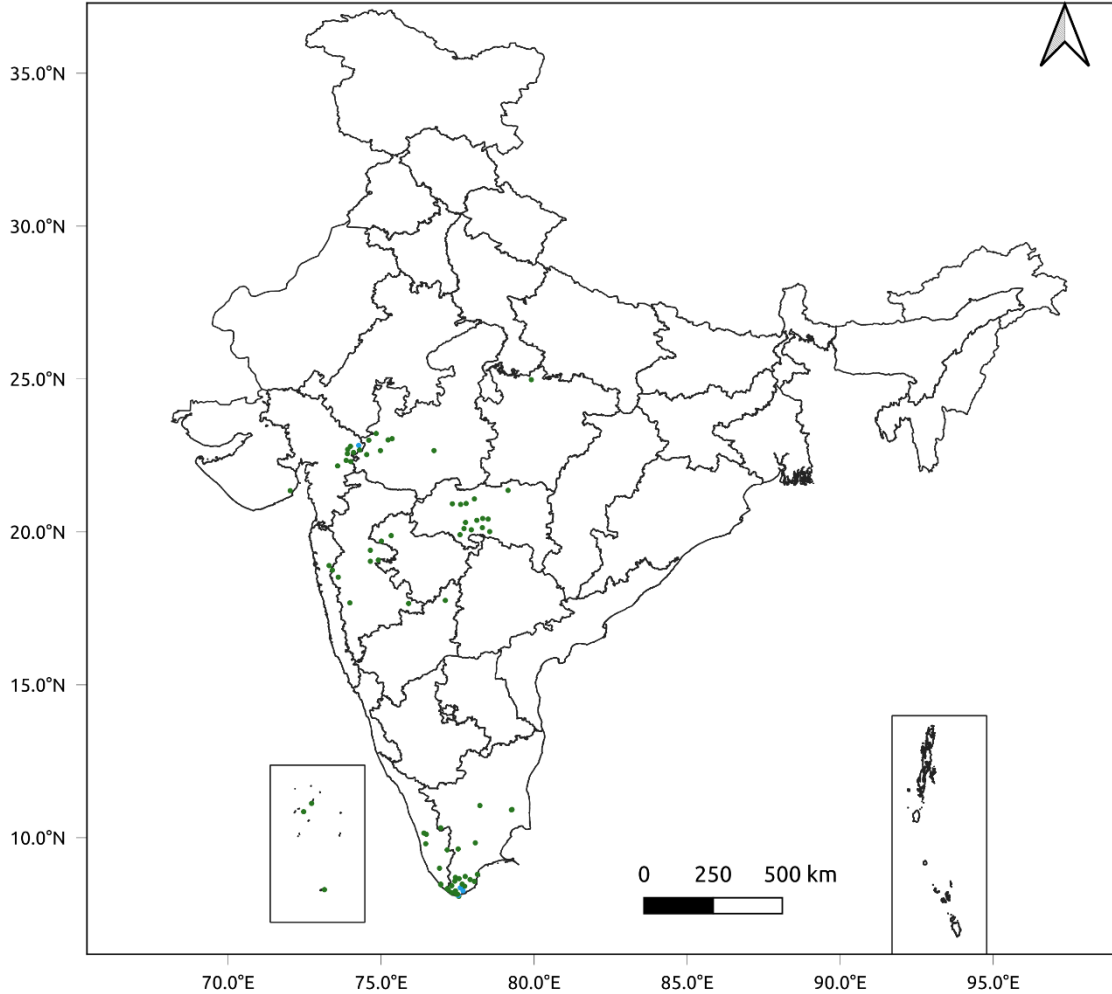
**Fig. 4: Departure of Minimum Temperatures**



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

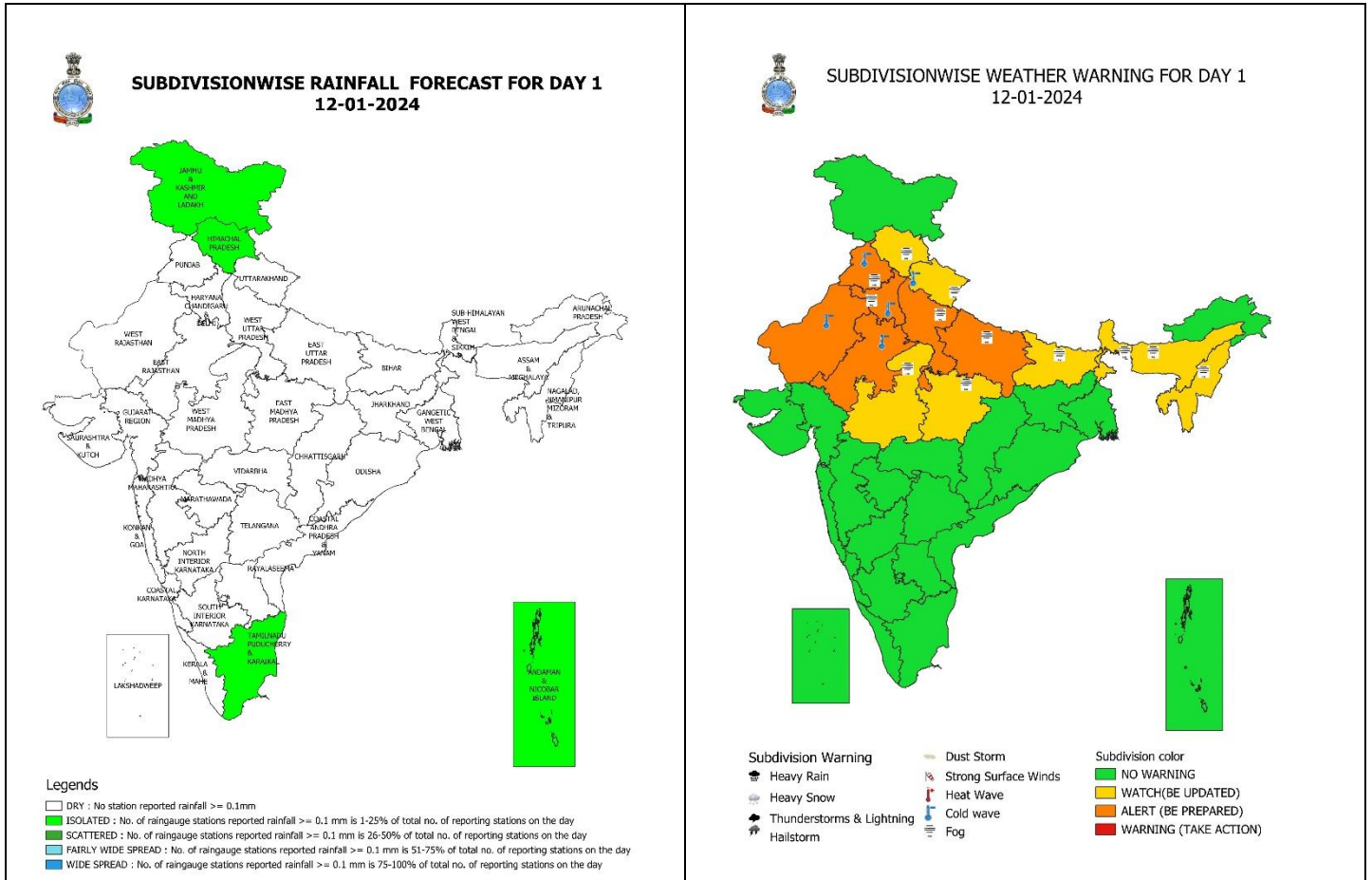


24 Hr cumulative rainfall recorded over different stations during 0830 IST of 10-1-2024 to 0830 IST of 11-1-2024



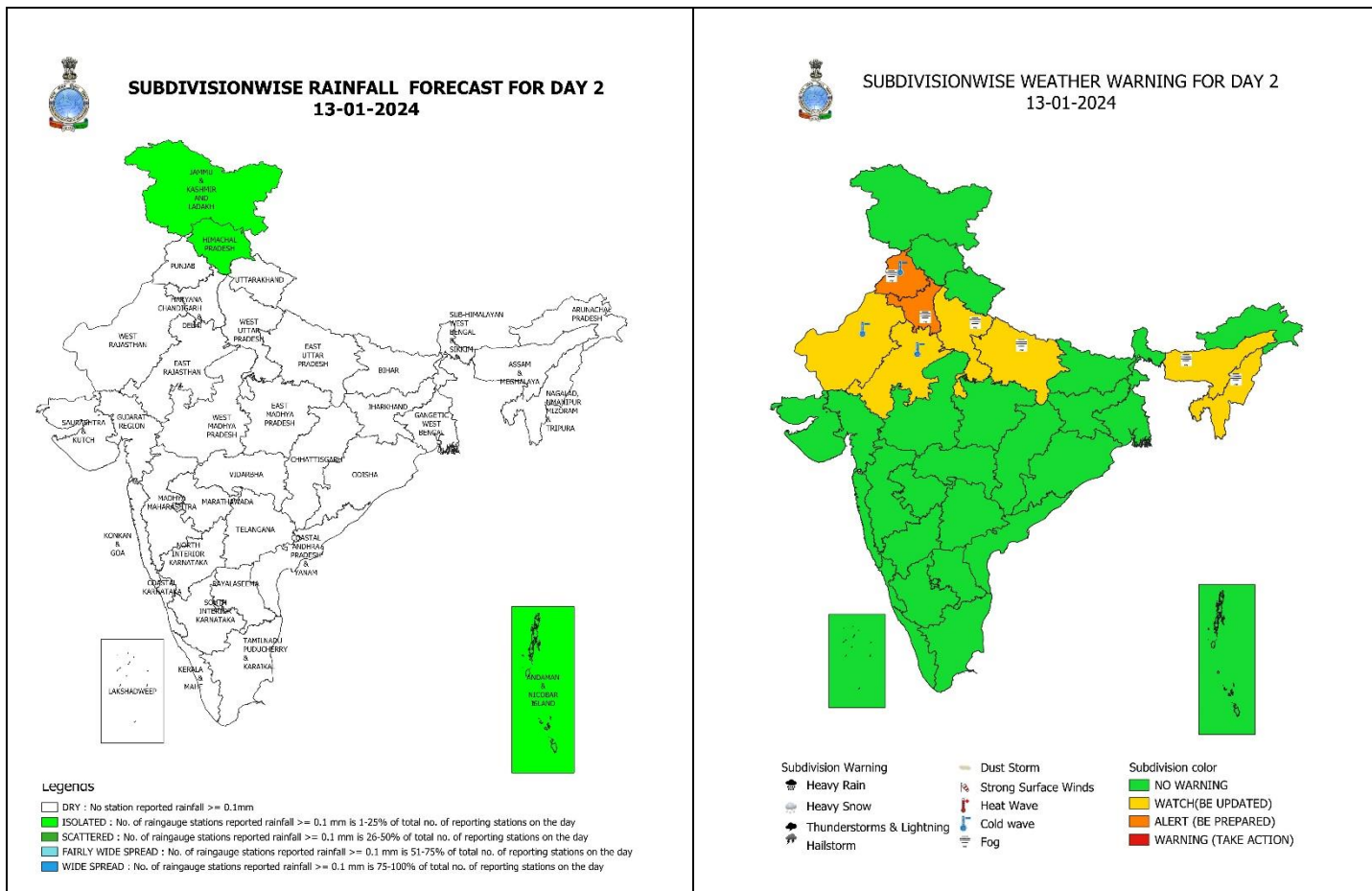
### Legends

- 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)



## 12 January (Day 1):

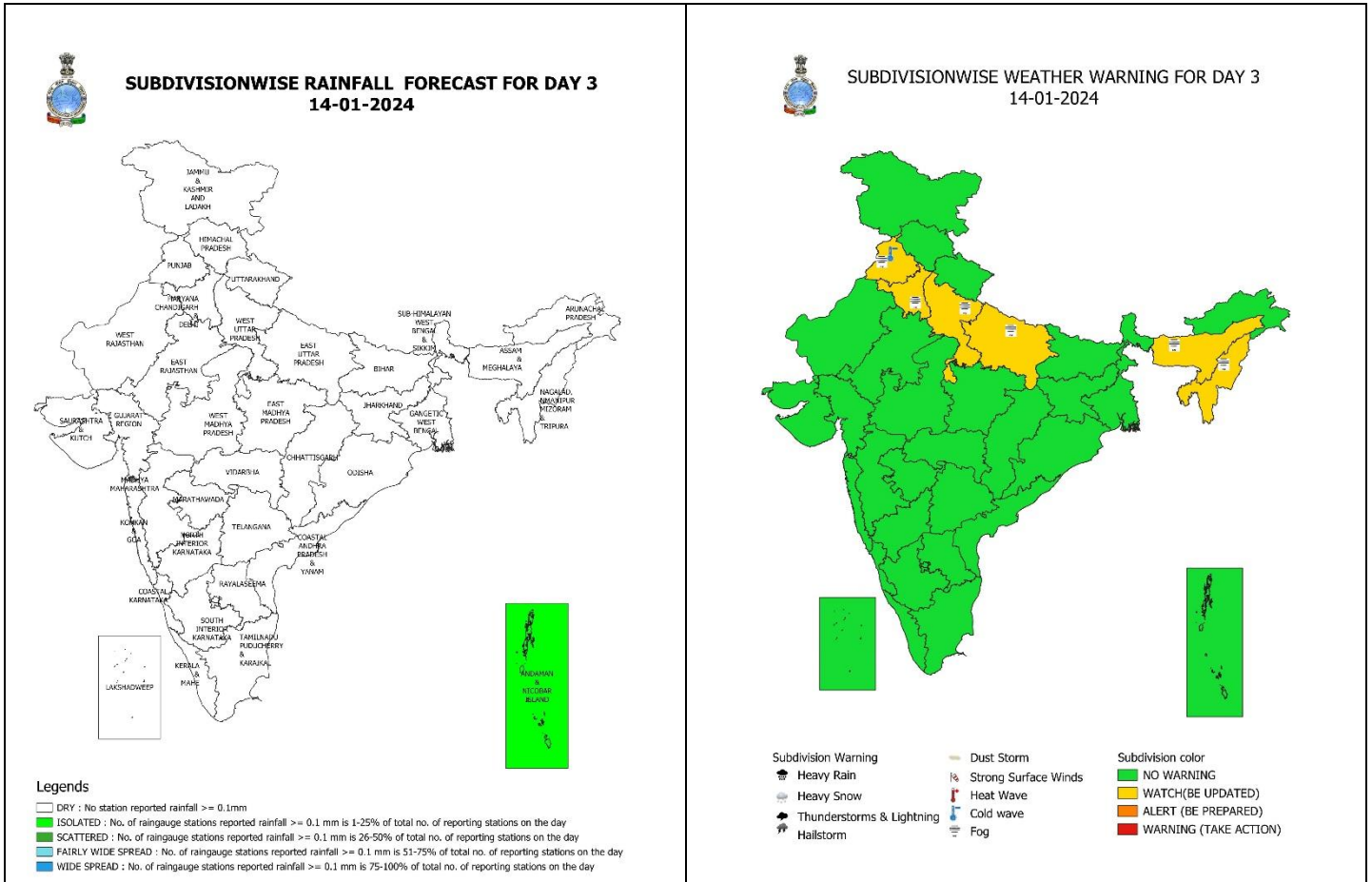
- ❖ **Dense to very dense fog** very likely in some parts over Punjab, East Uttar Pradesh; in isolated pockets over Haryana, Chandigarh & Delhi, West Uttar Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; **Dense fog** in isolated pockets over Himachal Pradesh, Uttarakhand, Madhya Pradesh, Bihar and Sub-Himalayan West Bengal.
- ❖ **Cold day to severe cold day** conditions very likely in some parts over Punjab; in isolated pockets over Haryana, Chandigarh; **Cold day** conditions in isolated pockets over Uttarakhand.
- ❖ **Cold wave to severe cold wave** conditions very likely in isolated pockets over Rajasthan and **cold wave** conditions in isolated pockets over Punjab, Haryana, Chandigarh and Delhi.
- ❖ **Ground frost** conditions very likely in isolated pockets over Uttarakhand and Rajasthan.
- ❖ **Squally weather with wind speed 40-45 kmph gusting to 55 kmph** very likely to prevail over Comorin area, Maldives area and adjoining Southeast Arabian Sea. Fishermen are advised not to venture into these areas.



## 13 January (Day 2):

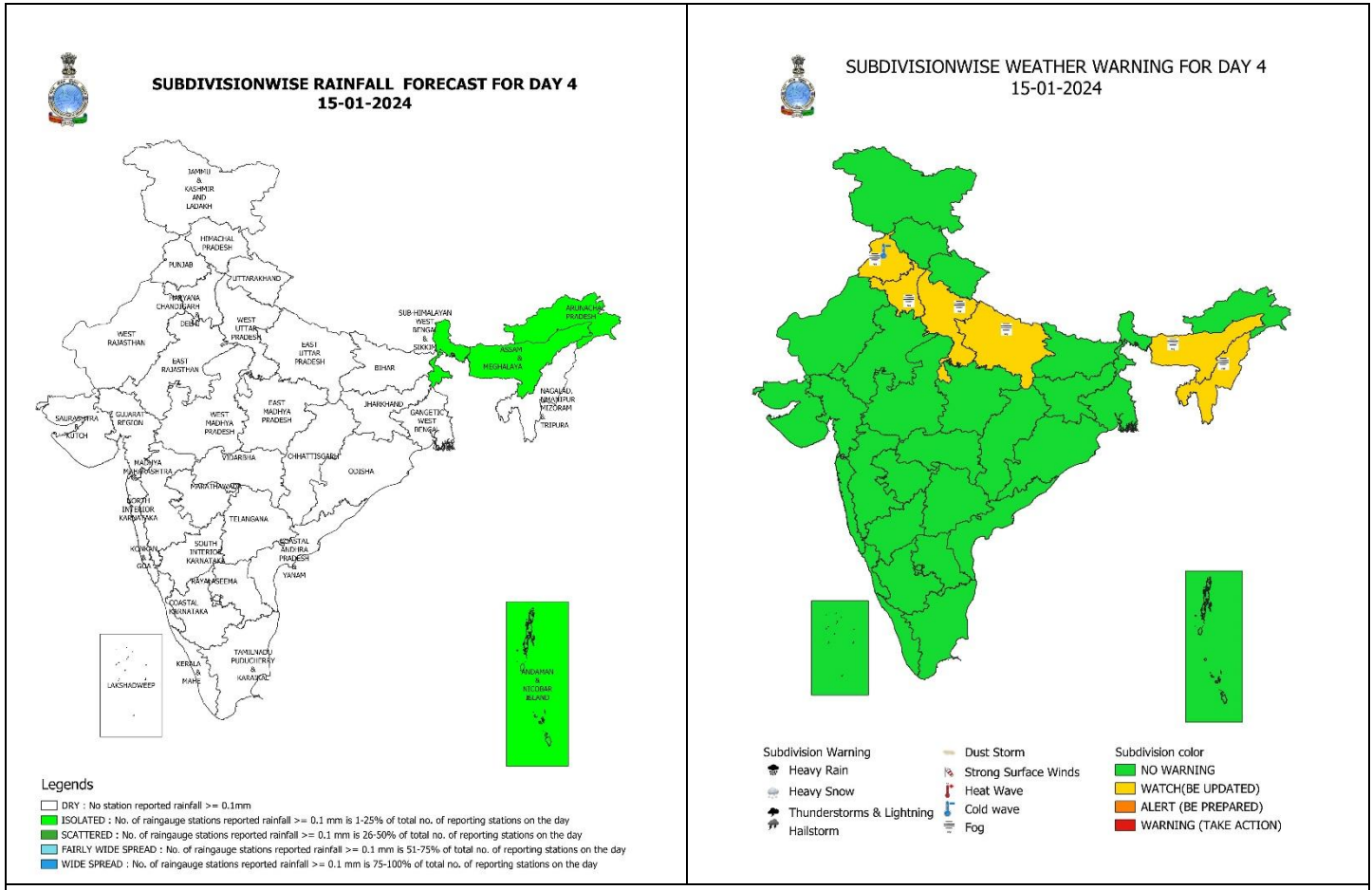
- ❖ **Dense to very dense fog** very likely in some parts over Punjab, in isolated pockets over Haryana and Chandigarh; **dense fog** in isolated pockets over Uttar Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Cold day to severe cold day** conditions very likely in isolated pockets over Punjab.
- ❖ **Cold wave** conditions very likely in isolated pockets over Rajasthan.
- ❖ **Squally weather with wind speed 40-45 kmph gusting to 55 kmph** very likely to prevail over southern parts of Southeast and adjoining Southwest Arabian Sea. Fishermen are advised not to venture into these areas.





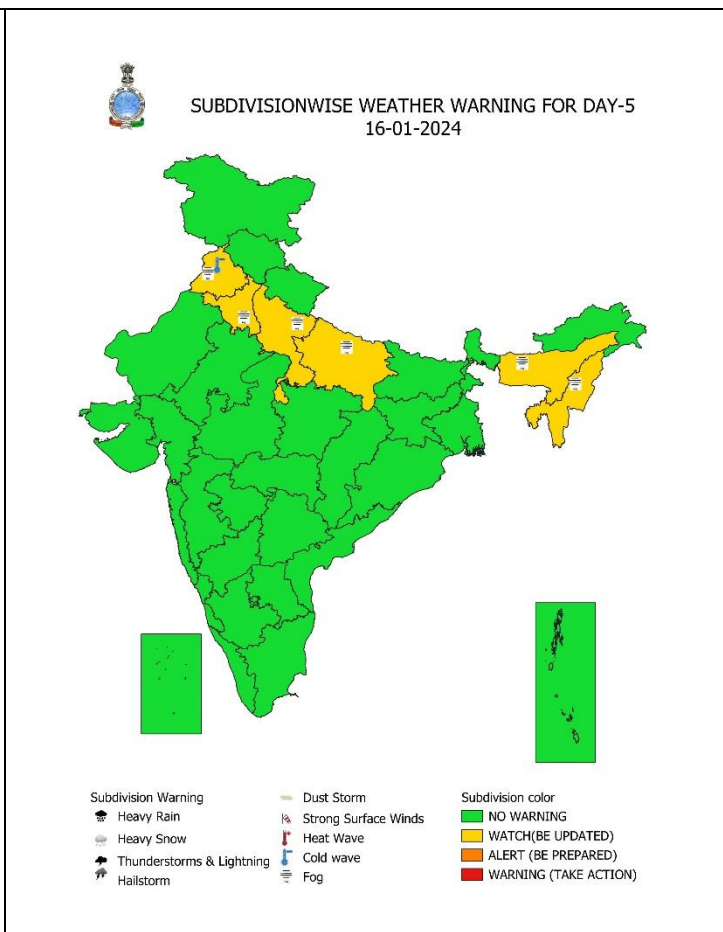
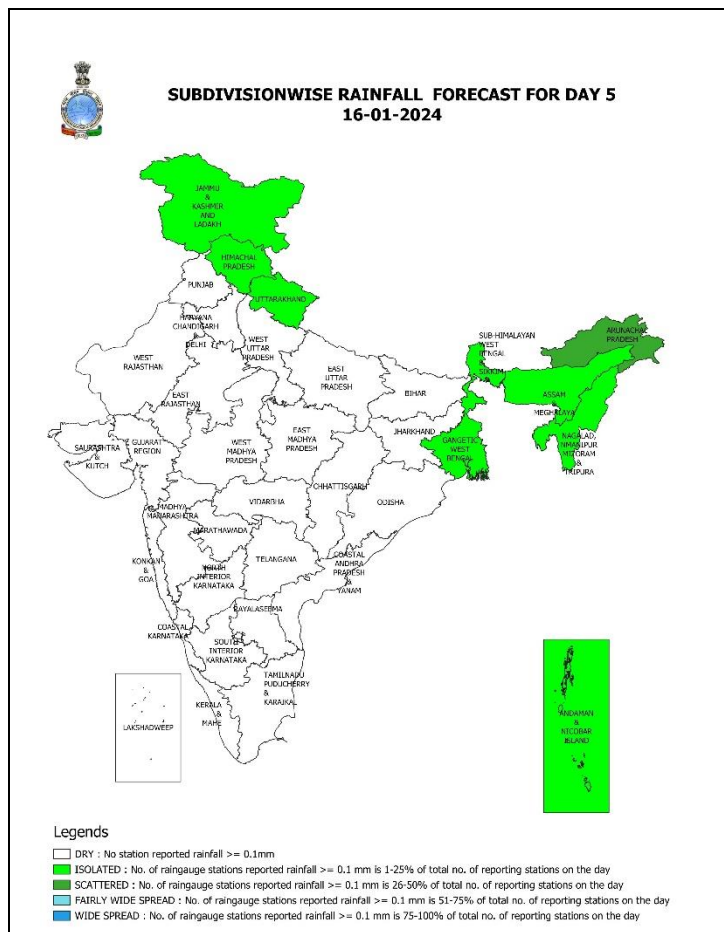
**14 January (Day 3):**

- ❖ **Dense to very dense fog** likely in some parts over Punjab, in isolated pockets over Haryana and Chandigarh; **dense fog** in isolated pockets over Uttar Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Cold day to severe cold day** conditions likely in isolated pockets over Punjab.
- ❖ **Squally weather with wind speed 40-45 kmph gusting to 55 kmph** likely to prevail over southern parts of Southwest and adjoining Southeast Arabian Sea. Fishermen are advised not to venture into these areas.



**15 January (Day 4):**

- ❖ **Dense to very dense fog** likely in some parts over Punjab, in isolated pockets over Haryana and Chandigarh; **dense fog** in isolated pockets over Uttar Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Cold day to severe cold day** conditions likely in isolated pockets over Punjab.

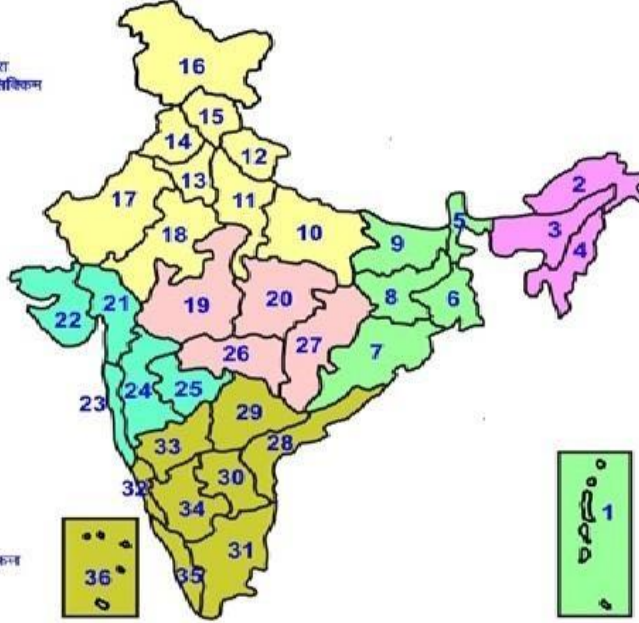


## 16 January (Day 5):

- ❖ **Dense to very dense fog** likely in some parts over Punjab, in isolated pockets over Haryana and Chandigarh; **dense fog** in isolated pockets over Uttar Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Cold day to severe cold day** conditions likely in isolated pockets over Punjab.

## LEGENDS

- 1 अंडमान और निकोबार द्वीप समूह
- 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 चंडीगढ़ एवं दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू एवं कश्मीर एवं लद्दाख
- 17 पश्चिम राजस्थान
- 18 पूर्वी राजस्थान
- 19 पश्चिम मध्य प्रदेश
- 20 पूर्वी मध्य प्रदेश
- 21 गुजरात क्षेत्र
- 22 सौराष्ट्र एवं कच्छ
- 23 कोंकण एवं गोवा
- 24 मध्य महाराष्ट्र
- 25 महाराष्ट्र
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 तटीय आंध्र प्रदेश एवं यनम
- 29 तेलंगाना
- 30 रायलसीमा
- 31 तमिलनाडु, पुदुचेरी एवं कराईकल
- 32 तटिय कर्नाटक
- 33 अंतरिक उत्तरी कर्नाटक
- 34 अंतरिक दक्षिणी कर्नाटक
- 35 केरल एवं माहे
- 36 लक्षद्वीप



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

## 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 \*



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  $\geq 37^{\circ}\text{C}$



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  $> 6.4^{\circ}\text{C}$ .



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  $\leq 15^{\circ}\text{C}$



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  $\leq -6.5^{\circ}\text{C}$



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



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



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



Ice deposits on ground

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



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



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



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

(Service to the Nation since 1875)