

Friday, January 24, 2025
Time of Issue: 0800 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems, Forecast and warning

- ❖ A cyclonic circulation lies over East Bangladesh and neighbourhood in lower tropospheric levels. Under its influence,
 - ✓ Thunderstorm activity at isolated places likely over Arunachal Pradesh and northeast Assam on 24th January.

Temperature, Cold Day and Fog Forecast:

Temperature Conditions during past 24 hours till 0830 hours IST of 23.01.2025

- ❖ Minimum temperatures were **below 0°C** over isolated places of Jammu, Kashmir & Ladakh; **1-5°C** over some parts of Himachal Pradesh & Uttarakhand; **6-10°C** over many parts of plains of Northwest & some parts of East India; **10-18°C** in many parts of Central, West and East India. Yesterday, the lowest minimum temperature of **6.1°C** was reported at **Amritsar (Punjab)** over the plains of the country.
- ❖ During the past 24 hours, there had been **fall in minimum temperatures by 1-3°C** in some parts of Saurashtra & Kutch; in isolated places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, West Rajasthan and **rise by 1-3°C** in most parts of Odisha; in many parts of East Madhya Pradesh, Coastal Andhra Pradesh & Yanam, Kerala & Mahe, Tamilnadu Puducherry & Karaikal; in some parts of Chhattisgarh, Uttar Pradesh, West Madhya Pradesh and in isolated places of West Bengal & Sikkim, Assam & Meghalaya, Madhya Maharashtra, Marathwada, Vidarbha, Telangana and Karnataka.

Forecast of temperature:

- ❖ Gradual fall in minimum temperatures by 2-4°C likely over Northwest India during next 2 days and no significant change thereafter.
- ❖ Gradual fall in minimum temperatures by 2-3°C likely over Central India during next 4-5 days.
- ❖ No significant change in minimum temperatures likely over East India during next 24 hours and gradual fall by 2-4°C thereafter.
- ❖ No significant change in minimum temperatures likely over rest parts of the country.

Cold Wave Warnings:

Cold Wave conditions very likely in isolated pockets of Himachal Pradesh on 24th January.

Dense Fog Warnings:

Dense fog conditions very likely to continue to prevail during night/early morning hours in isolated pockets of Himachal Pradesh, East Uttar Pradesh, West Bengal & Sikkim, Bihar, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura till 25th January.

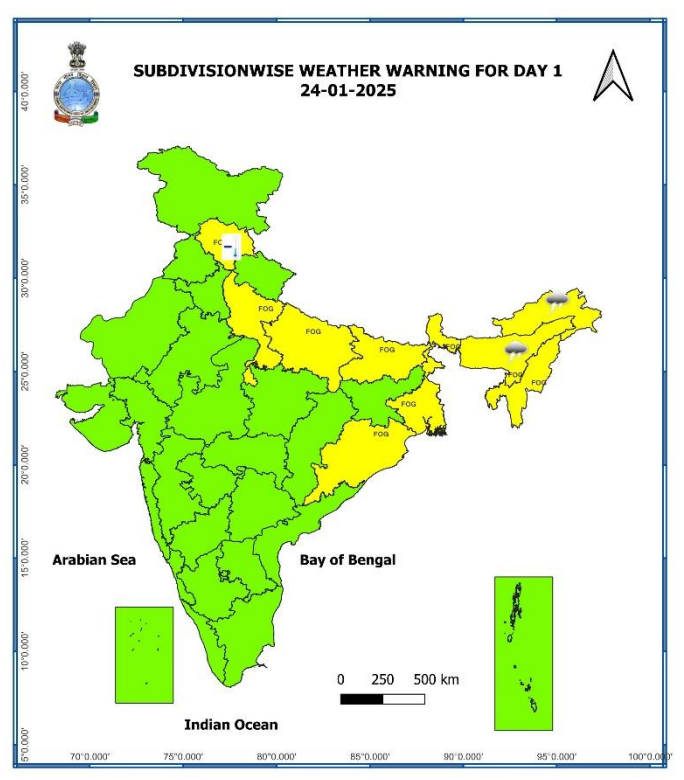
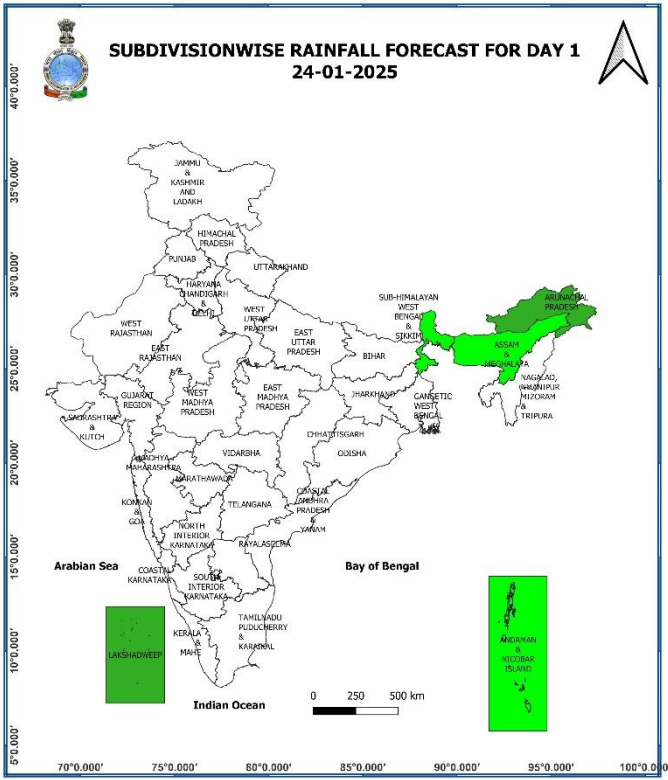
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): at a few places over Lakshadweep; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and West Uttar Pradesh.
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): **Lakshadweep**: Minicoy - 5.
- ❖ **Fog reported** (at 0530 hours IST of today): **Dense to very dense fog** reported in isolated pockets of East Uttar Pradesh, west Bengal, Assam, Tripura and Odisha and **shallow fog** in isolated pockets of Bihar and Coastal Andhra Pradesh.
- ❖ **Visibility reported** (at 0530 hours IST of today) (≤ 500 m): **East Uttar Pradesh**: Varanasi-0, Bahraich & Sulatanpur-200 each, Gorakhpur-500; **Odisha**: Bhubaneshwar, Paradip & Puri-0 each; Balasore-200; **West Bengal**: Kolkata (Dum Dum)-0, Bankura-200, Diamond Harbour, Digha & Malda-500 each; **Assam**: Tezpur & North Lakhimpur-0, Mohanbari-200, Guwahati-500; **Tripura**: Agartala & Kailashahar-0 each; **Bihar**: Patna, Bhagalpur & Purnea-500 each; **Coastal Andhra Pradesh**: Bapatla, Vijaywada & Amrawati-500 each.
- ❖ Yesterday, **Cold Wave conditions** observed in isolated pockets of Himachal Pradesh.
- ❖ Yesterday, **Ground frost conditions** recorded in isolated pockets of Himachal Pradesh.
- ❖ **Minimum Temperature Departures (as on 23-01-2025)**: Minimum temperatures were **markedly above normal (5.1°C or more)** at isolated places over West Rajasthan, Madhya Maharashtra; **appreciably above normal (3.1°C to 5.0°C)** at a few places over East Rajasthan, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, Himachal Pradesh, Punjab, Uttar Pradesh, Bihar, West Madhya Pradesh, Saurashtra & Kutch; **above normal (1.6°C to 3.0°C)** at most places over Haryana-Chandigarh-Delhi, Gujarat Region; at a few places over Saurashtra & Kutch, East Madhya Pradesh, Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura; at isolated places over Jharkhand, Kerala & Mahe. These were **below normal (-1.6°C to -3.0°C)** at few places over Telangana, North Interior Karnataka; at isolated places over Coastal Andhra Pradesh & Yanam, South Interior Karnataka, Rayalaseema and near normal over rest parts of the country (**Fig. 4**). Yesterday, the **lowest minimum temperature** of 6.1°C was reported at **Amritsar (Punjab)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 23-01-2025)**: Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at many places over Delhi; at a few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; at isolated places over Punjab, Haryana-Chandigarh, West Uttar Pradesh; **above normal (1.6°C to 3.0°C)** at a few places over West Madhya Pradesh, Madhya Maharashtra, North Interior Karnataka; at isolated places over Marathwada, Coastal Andhra Pradesh & Yanam, Odisha, Vidarbha, Rajasthan, Gangetic West Bengal. These were **markedly below normal (-5.1°C or less)** at isolated places over Bihar; **below normal (-1.6°C to -3.0°C)** at isolated places over East Uttar Pradesh, Kerala & Mahe, Andaman & Nicobar Islands and near normal over rest parts of the country (**Fig. 2**). Yesterday, the **highest maximum temperature** of 36.6°C was reported at **Kannur Airport (Kerala)** over the plains of the country.

Meteorological Analysis (Based on 0530 hours IST)

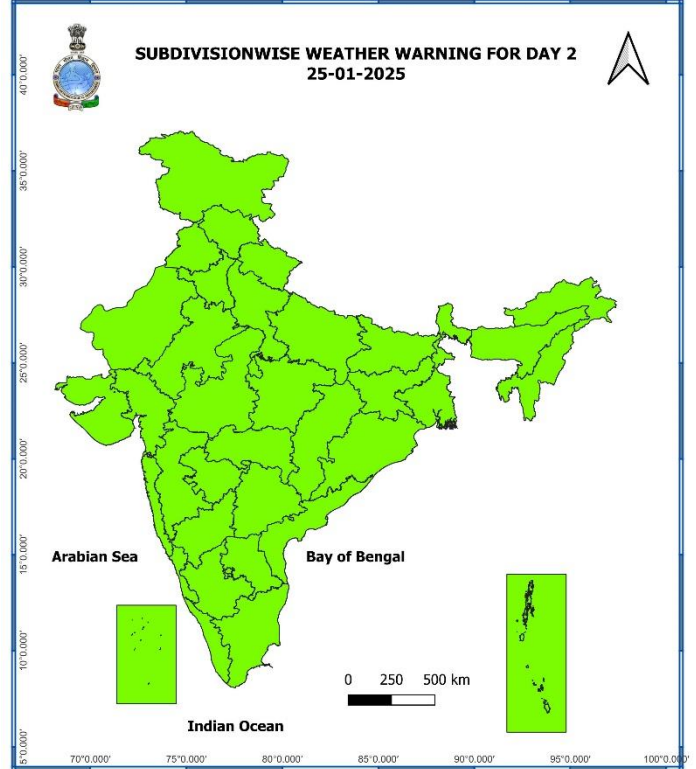
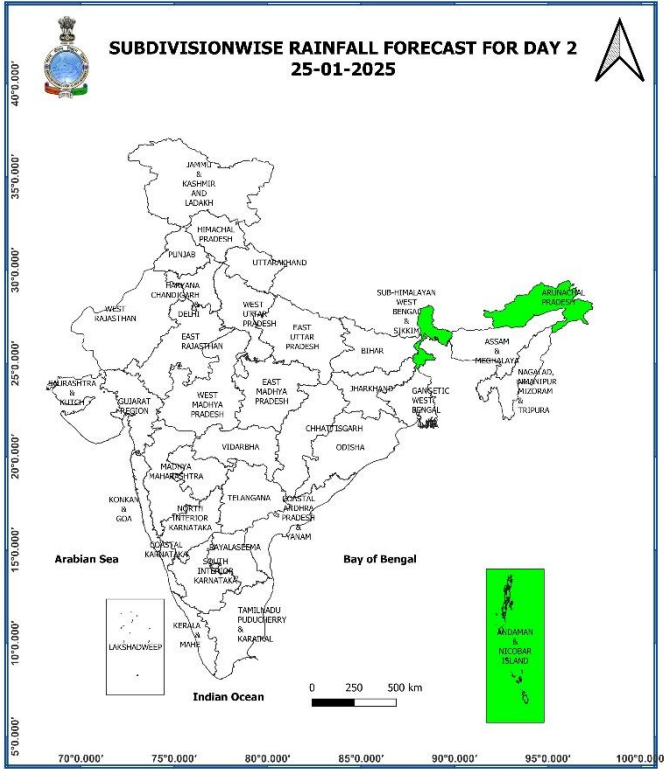
- ❖ The **cyclonic circulation** over southwest Madhya Pradesh & neighbourhood at 0.9 km above mean sea level persists.
- ❖ The **cyclonic circulation** over East Bangladesh & neighbourhood extending upto 1.5 km above mean sea level persists.
- ❖ The cyclonic **circulation** over southeast Arabian Sea off south Kerala coast at 0.9 km above mean sea level persists.
- ❖ Subtropical **westerly Jet Stream** with core winds of the order upto 125 knots at 12.6 km above mean sea level continues to prevail over Northwest India.
- ❖ The **Western Disturbance** as a cyclonic circulation over north Pakistan & neighbourhood at 3.1 km above mean sea level with a trough aloft in middle & upper tropospheric levels with its axis at 5.8 km above mean sea level roughly along Long. 73°E to the north of Lat. 30°N has moved away east-northeastwards.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 31st January, 2025)



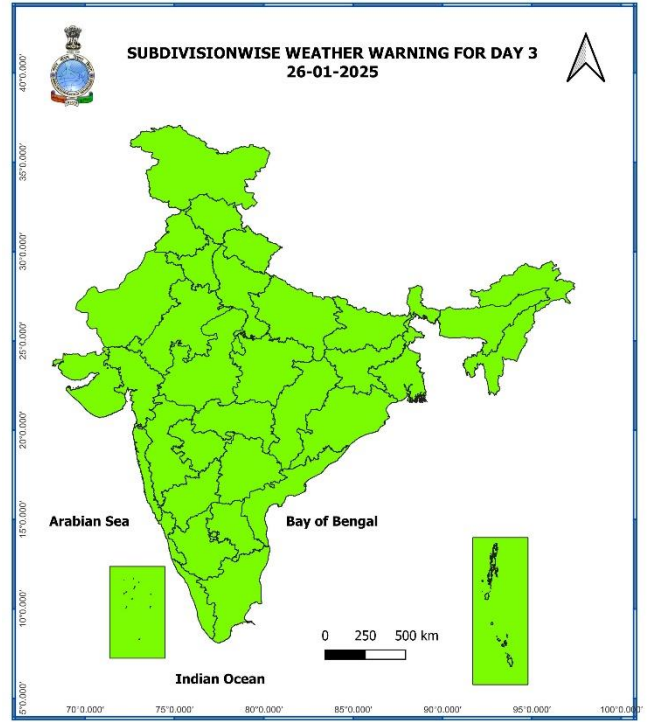
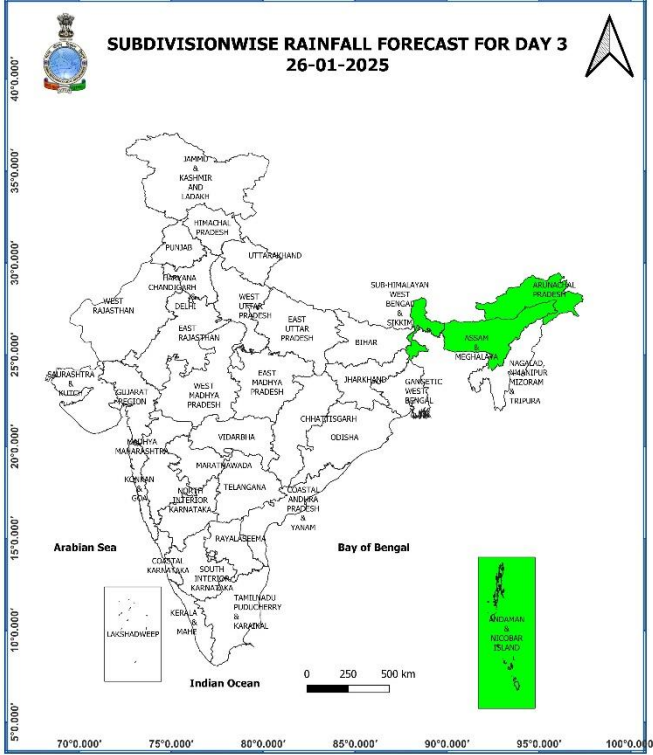
24th January (Day 1):

- ❖ **Dense fog conditions** very likely in isolated pockets of Himachal Pradesh, Uttar Pradesh, West Bengal & Sikkim, Bihar, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Cold wave** conditions very likely in isolated pockets of Himachal Pradesh.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Arunachal Pradesh, northeast Assam.



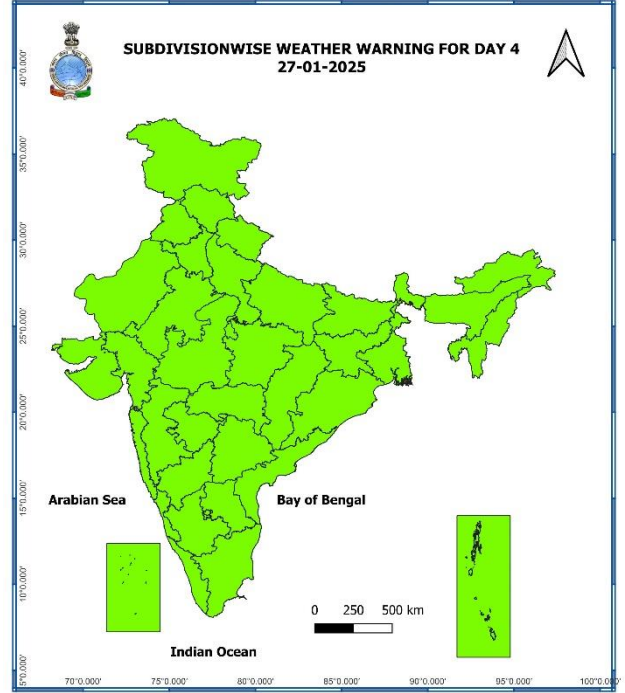
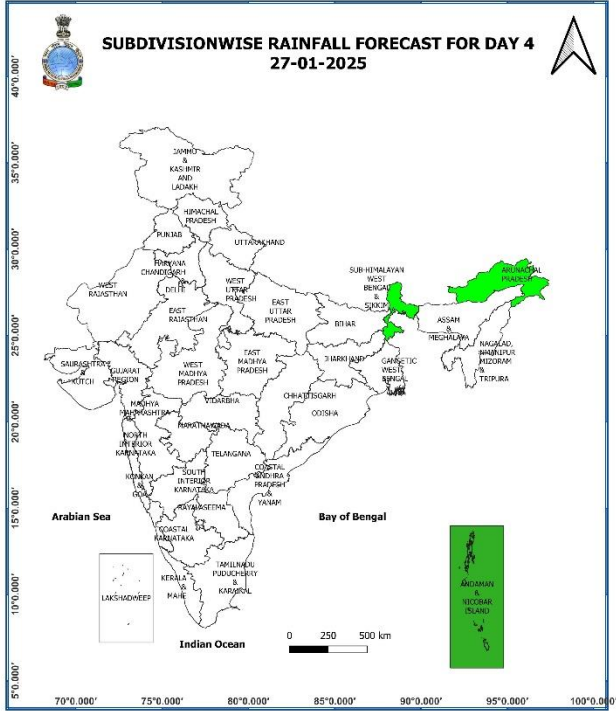
25th January (Day 2):

❖ **No Weather Warning.**



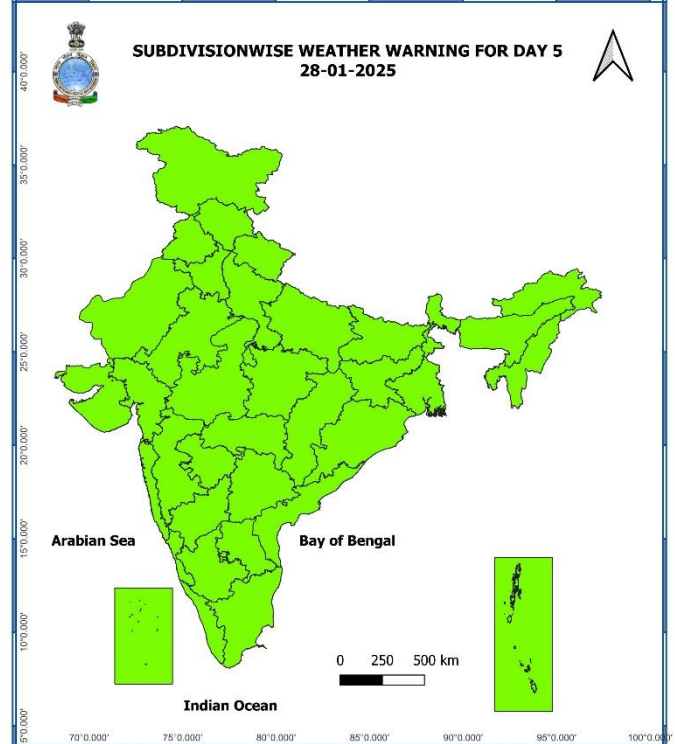
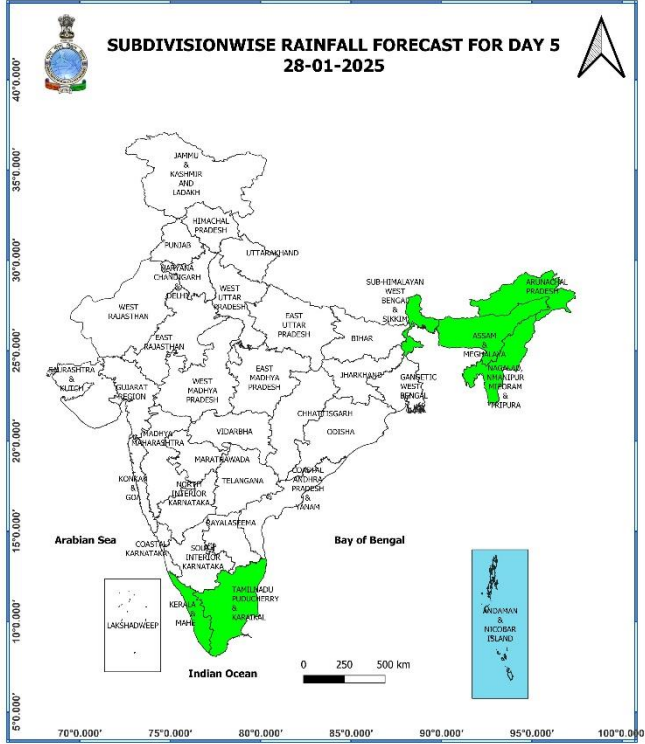
26th January (Day 3):

❖ **No Weather Warning.**



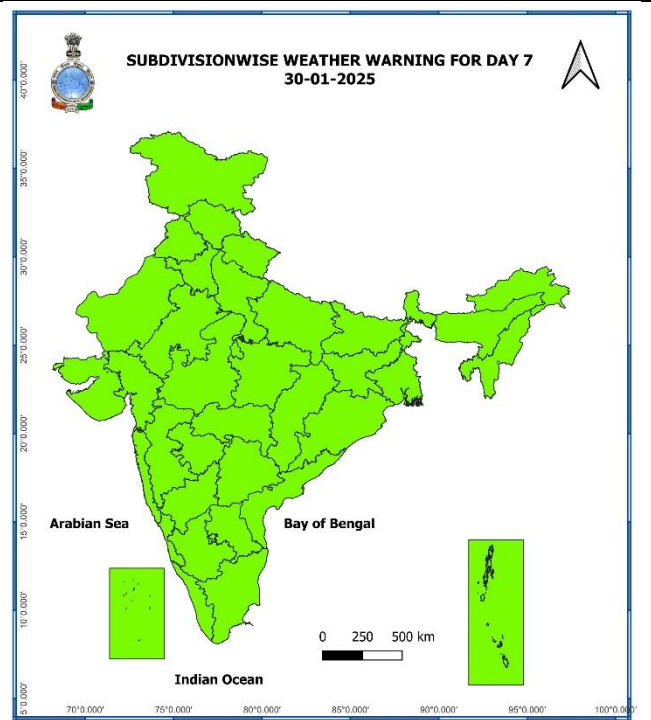
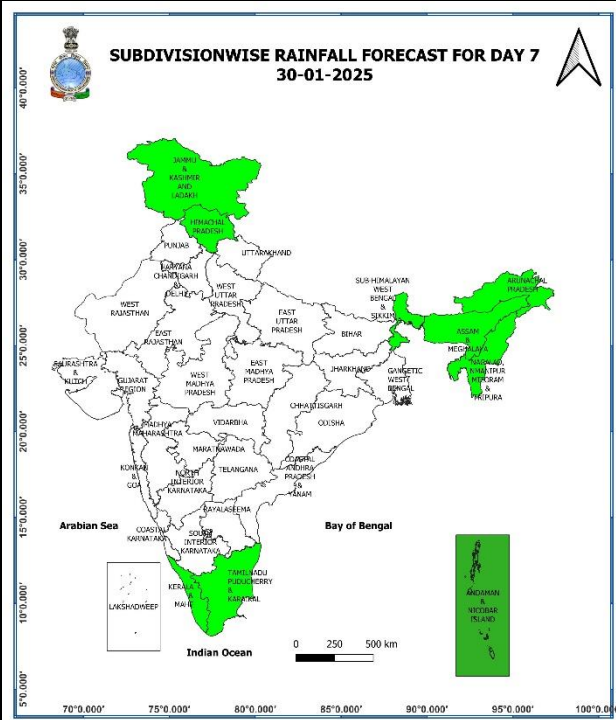
27th January (Day 4):

❖ **No Weather Warning.**



28th January (Day 5):

❖ **No Weather Warning.**



30th January (Day 7):

❖ **No Weather Warning.**

Weather Outlook for subsequent 3 days (During 31st January- 02nd February, 2025)

- ❖ Isolated to scattered rainfall over Tamil Nadu & South Kerala and scattered to fairly widespread rainfall over Nicobar Islands.
- ❖ Scattered to Fairly widespread rainfall/snowfall over Arunachal Pradesh.

Action may be taken based on **ORANGE AND RED** COLOUR warnings.

- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

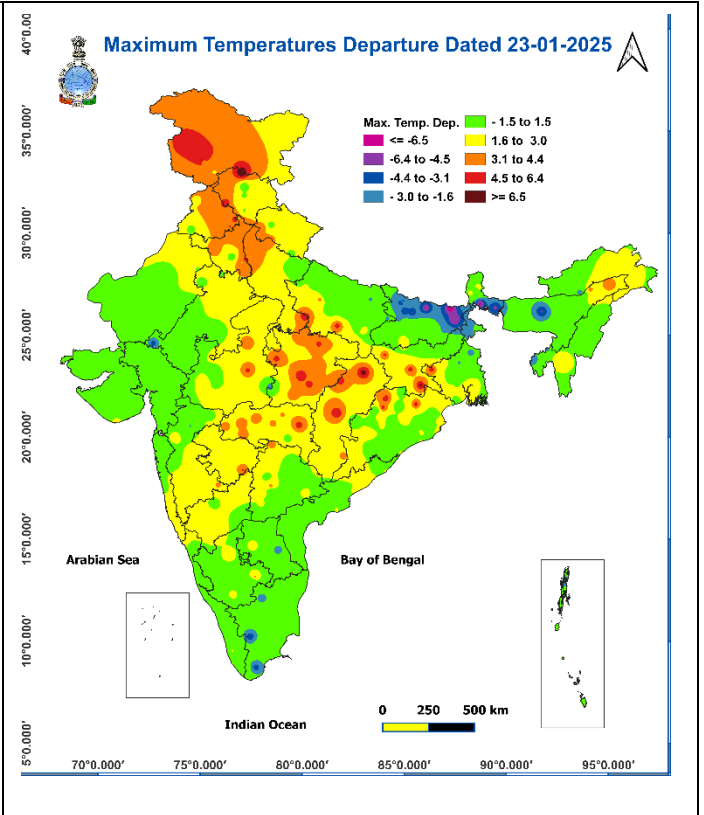
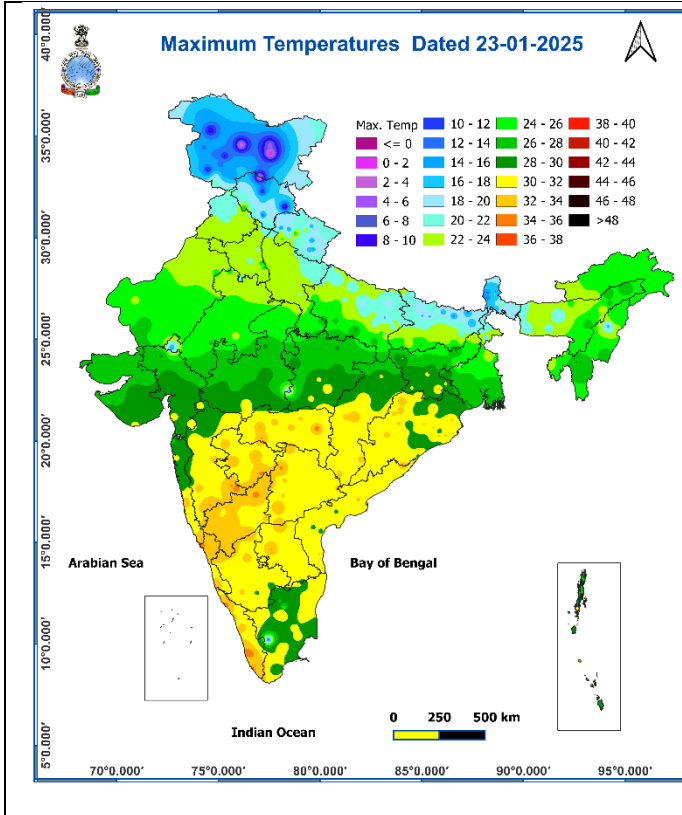
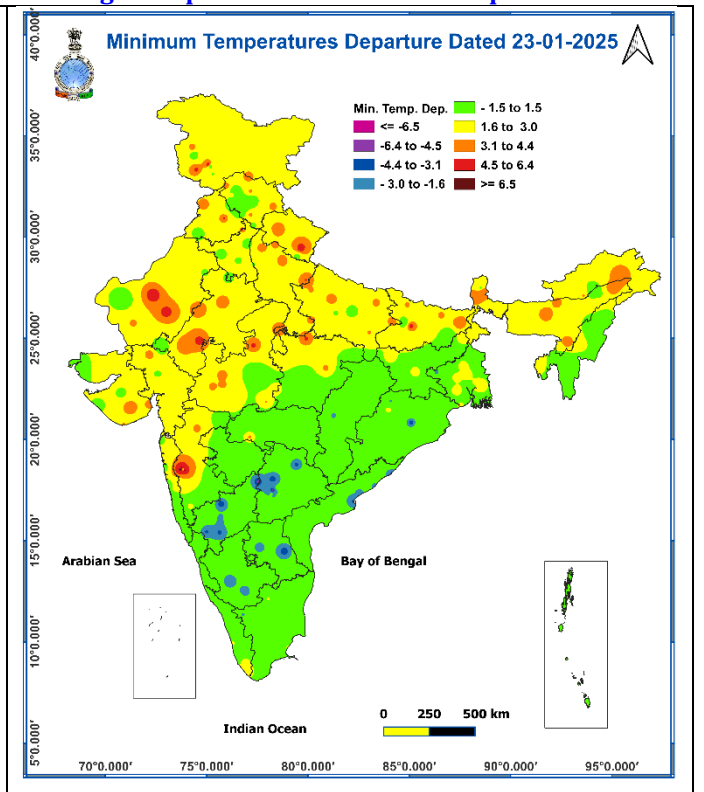
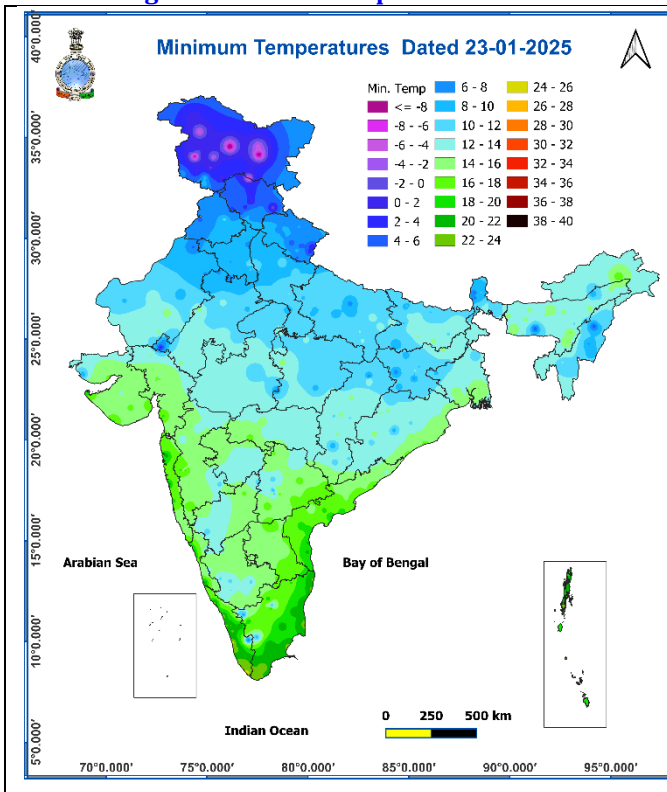


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures



Impact expected due to dense fog in the night /morning hour:

❖ Transport and Aviation:

- May affect some airports, highways and railway routes in the areas of met- sub-division.
- Difficult driving conditions with slower journey times.
- Unless taken precautionary measures, it may lead to some road traffic collisions.

❖ Power Sector:

- Chances of Tripping of Power lines in the very dense fog routes.

❖ Human Health:

- Lung related health impacts: Dense fog contains particulate matter and other pollutants and in case exposed it gets lodged in the lungs, clogging them and decreasing their functional capacity which increases episodes of wheezing, coughing and shortness of breath.
- Impact on people having asthma bronchitis: Long time exposure to dense fog may cause respiratory problem for people having asthma bronchitis and other lung related health problems.
- Eye Irritation: Dense fog contains pollutions of various types and these Pollutants in the air if exposed may tend to irritate the membranes of the eye causing various infections leading to redness or swelling of the eye.

Action suggested:

❖ Transport and Aviation:

- Be careful while driving or outing through any transport.
- Use fog lights during driving.
- Be in touch with airlines, railways and state transport for schedule of your journey.

❖ Power Sector:

- To keep ready Maintenance Team.
- Human Health: To avoid outing until unless emergency and to cover the face.

Impact expected due to Cold Day conditions

- ❖ An increased likelihood of various illnesses like flu, running/ stuffy nose or nosebleed, which usually set in or get aggravated due to prolonged exposure to cold.
- ❖ Do not ignore shivering. It is the first sign that the body is losing heat. Get Indoors.
- ❖ Frostbite can occur due to prolonged exposure to cold. The skin turns pale, hard and numb and eventually black blisters appear on exposed body parts such as fingers, toes, nose and or earlobes. Severe frostbite needs immediate medical attention and treatment.
- ❖ Impact on agriculture, crop, livestock, water supply, transport and power sector at some places.

Action suggested:

- ❖ Wear several layers of loose fitting, light weight; warm woollen clothing.
- ❖ Cover your head, neck, hands and toes adequately as majority of heat loss occurs through these body parts. Wear several layers of loose fitting, light weight; warm Woolen clothing rather than one layer of heavy cloth.
- ❖ Eat vitamin-C rich fruits & vegetable and drink sufficient fluids preferably warm fluids to maintain adequate immunity.
- ❖ Avoid or limit outdoor activities.
- ❖ Keep dry, if wet, change cloths immediately to prevent loss of body heat. Wear insulated/waterproof shoes.
- ❖ Warm the affected area of the body slowly with lukewarm water; do not rub the skin vigorously.
- ❖ If the affected skin area turns black, immediately consult a doctor.
- ❖ Maintain ventilation while using Heaters to avoid inhaling toxic fumes.
- ❖ Take safety measures while using electrical and gas heating devices.
- ❖ Extreme care needed for vulnerable people.
- ❖ Seek medical attention as soon as possible for someone suffering from frostbite/ Hypothermia.
- ❖ Protect livestock from cold weather.

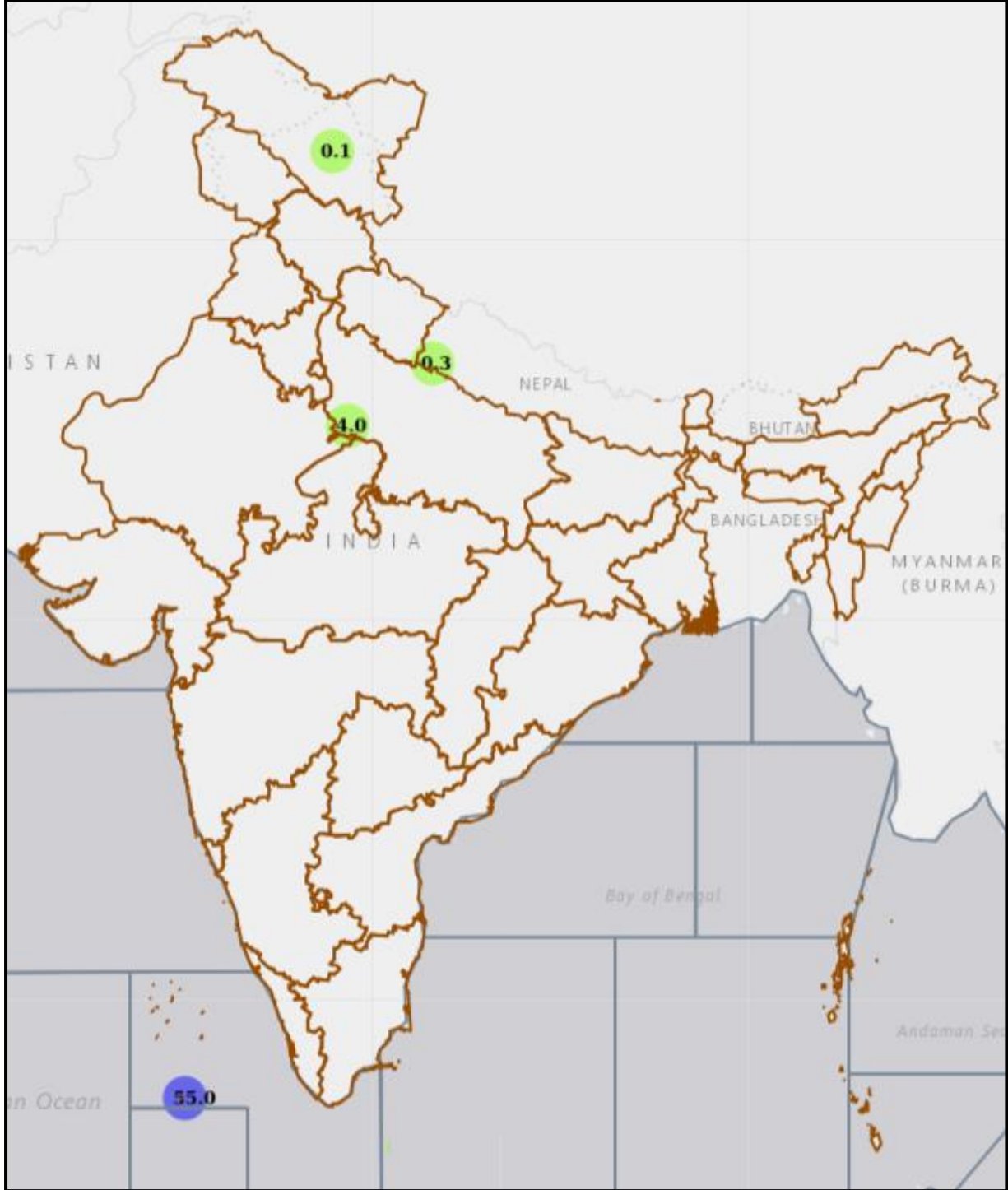
Agromet advisories for likely impact of Heavy Rainfall over Tamil Nadu and Kerala

- Drain out excess water from rice, sugarcane, cotton, turmeric, vegetables, and other standing crop fields, as well as coconut and banana orchards in **Tamil Nadu** and from rice, coffee, banana, coconut, areca nut, ginger, pepper, cardamom and other standing crops in **Kerala**.
- Keep the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields.
- Provide mechanical support to horticultural crops and staking to vegetables.

Livestock

- Keep the animals inside the shed during heavy rainfall period and provide them balanced feed.
- Store feed and fodder in a safe place to prevent spoilage.
- Check and disinfect poultry houses to prevent disease outbreaks due to dampness.

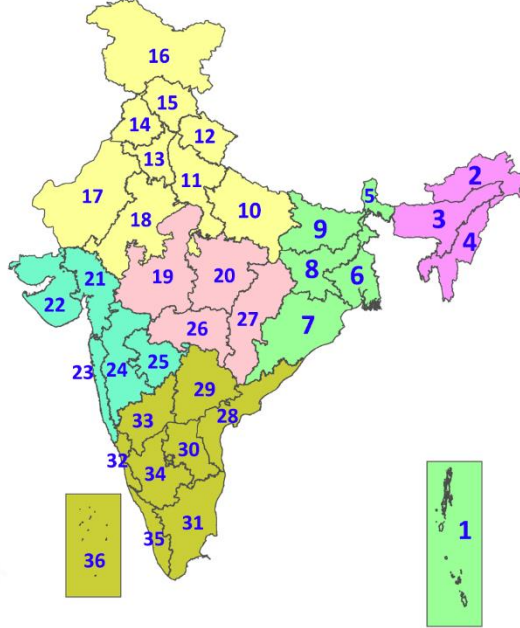
Rainfall over India from 0830 hours IST to 1730 Hours IST of yesterday i.e. 23.01.2025



* 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)

LEGENDS

1. अंडमान और निकोबार द्वीपसमूह
2. अरुणाचल प्रदेश
3. असम और मेघालय
4. नागालैंड, मणिपुर, मिजोरम और त्रिपुरा
5. उप-हिमालयी पश्चिम बंगाल और सिक्किम
6. गंगीय पश्चिम बंगाल
7. ओडिशा
8. झारखंड
9. बिहार
10. पूर्वी उत्तर प्रदेश
11. पश्चिम उत्तर प्रदेश
12. उत्तराखंड
13. हरियाणा, चंडीगढ़ और दिल्ली
14. पंजाब
15. हिमाचल प्रदेश
16. जम्मू और कश्मीर और लद्दाख
17. पश्चिम राजस्थान
18. पूर्वी राजस्थान
19. पश्चिम मध्य प्रदेश
20. पूर्वी मध्य प्रदेश
21. गुजरात
22. सौराष्ट्र
23. कोंकण और गोवा
24. मध्य महाराष्ट्र
25. मराठवाड़ा
26. विदर्भ
27. छत्तीसगढ़
28. तटीय आंध्र प्रदेश और यनम
29. तेलंगाना
30. रायलसीमा
31. तमिलनाडु, पुडुचेरी और कराईकल
32. तटीय कर्नाटक
33. आंतरिक उत्तरी कर्नाटक
34. आंतरिक दक्षिणी कर्नाटक
35. केरल और 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, Chandigarh & 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. Vidarbha
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)

- | | | |
|----------------------|----------------------|--------------|
| Fog | Heavy Snow | Cold Wave |
| Heavy Rain | Dust Storm | Cold Day |
| Very Heavy Rain | Heat Wave | Ground Frost |
| Extremely Heavy Rain | Warm Night | |
| Thunder & Lightning | Hot Day | |
| Hailstorm | Hot & Humid | |
| Dust Raising Winds | Strong Surface Winds | |

COLOUR CODED WARNING

No Warning (No Action)
Watch (Be Aware)
Alert (Be Prepared To Take Action)
Warning (Take Action)

Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75

DEFINITION/CRITERIA

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°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)