



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 24th January, 2024

Time of Issue: 1215 hours IST

Subject:

- i. **Dense to very dense fog conditions likely to continue to prevail over North India during next 5 days.**
- ii. **Cold day to severe cold day conditions likely to continue to prevail over North India during next 2 days and decrease in intensity thereafter.**
- iii. **Light rainfall/snowfall is likely over Western Himalayan Region from 25th to 30th January, 2024.**

Realized weather during past 24 hours till 0830 hours IST of today: (Details given in Annexure I)

- ❖ **Minimum temperatures:** Minimum temperatures are in the range of 3-6°C over most parts of Punjab; in isolated pockets of north Haryana, northwest Uttar Pradesh; 7-10°C over many parts of Delhi, Uttar Pradesh, Rajasthan, Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim and Bihar. These are below normal by 2-4°C over many parts of Punjab, north Haryana; some parts of Madhya Pradesh, East Uttar Pradesh and in isolated pockets of Rajasthan and Bihar. **Today, the lowest minimum temperature of 3.4°C reported at Ambala (Haryana).**
- ❖ **Fog conditions observed (at 0530 & 0830 hours IST of today):** **Dense to very Dense Fog** over most parts of Punjab; in many parts of Haryana-Chandigarh-Delhi, Uttar Pradesh and Bihar; in isolated pockets of West Madhya Pradesh, Rajasthan, Assam & Meghalaya, Tripura; **Dense Fog** in isolated pockets of East Madhya Pradesh, Odisha and Uttarakhand.
- ❖ **Today, Cold wave condition** observed in many parts of Punjab; in isolated pockets of Himachal Pradesh and Haryana.
- ❖ Yesterday, **Cold day to severe cold day conditions** prevailed in many parts of Punjab, Haryana-Chandigarh, Uttar Pradesh and Bihar; in some parts of West Rajasthan; in isolated pockets of Uttarakhand. **Cold day conditions** observed in isolated pockets of north Madhya Pradesh.

Weather Systems and Forecast & Warnings during next 5 days:

- ❖ Under the influence of two feeble Western Disturbances, light isolated rainfall/snowfall likely over Western Himalayan Region from 25th to 30th January 2024.
- ❖ Due to anti-cyclonic circulation over Northwest Bay of Bengal and cyclonic circulation over east Vidarbha & neighbourhood and a **trough** runs from South Interior Karnataka to interior Odisha in the lower levels, light rainfall at isolated to scattered places likely over Vidarbha, Chhattisgarh, Telangana, Coastal Andhra Pradesh, Odisha, West Bengal & Sikkim and northeast India during next 2 days.
- ❖ Isolated **hailstorm** likely over Sikkim today.
- ❖ Light to moderate rainfall at many places likely over Andaman & Nicobar Islands during 24th-28th January.

Dense fog and Cold day warning: (graphics in Annexure II)

- ❖ **Dense to very dense fog** conditions very likely to prevail for a few hours in night/morning over some/many parts of Punjab, Haryana, Chandigarh and Uttar Pradesh during 24th night to 28th morning. **Dense Fog** conditions very likely in isolated places over Delhi on 25th January morning.
- ❖ **Dense to very dense fog** conditions very likely to prevail for a few hours in night/morning in some parts of Bihar during 24th night to 28th January morning.
- ❖ **Dense fog** conditions very likely to prevail in morning hours in isolated pockets of north Rajasthan, north Madhya Pradesh during 24th-26th; over Uttarakhand, West Bengal, Odisha, Assam & Meghalaya and Mizoram & Tripura on 24th & 25th January and over Jammu division & Himachal Pradesh on 24th January.
- ❖ **Cold Day to Severe Cold Day** conditions very likely to continue in many parts of Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh on 24th; in some parts on 25th & 26th and **cold day** conditions in isolated pockets on 27th & 28th January, 2024.
- ❖ **Cold Day to Severe Cold Day** conditions very likely to continue in isolated pockets of West Rajasthan on 24th & 25th January.
- ❖ **Cold Day to Severe Cold Day** conditions very likely to continue in some parts of Bihar on 24th & 25th January and **cold day** conditions in isolated pockets for subsequent 3 days.
- ❖ **Cold Day** conditions very likely to continue in isolated pockets of over Madhya Pradesh on 24th & 25th January; over Uttarakhand on 24th January.

Minimum Temperature Forecast and Cold wave warning: (graphics in Annexure II)

- ❖ **Northwest India:** No significant change in minimum temperatures very likely over many parts during next 2 days and rise by 2-3°C thereafter for subsequent 3 days.
- ❖ **Cold wave to severe cold wave** conditions very likely in isolated pockets of Punjab, Haryana and Chandigarh on 24th and cold wave condition in isolated pockets for subsequent 2 days.
- ❖ **Cold wave to severe cold wave** conditions very likely in isolated pockets of Himachal Pradesh on 24th January.
- ❖ **Ground frost conditions** very likely at isolated places over Himachal Pradesh and Uttarakhand 24th & 25th January, 2024.

For more details kindly refer: https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php

Realized weather during past 24 hours till 0830 hours IST of today:

- ❖ Yesterday, **Maximum temperatures** were in the range of 10-15°C over many parts of Punjab, Haryana-Chandigarh and West Uttar Pradesh; in isolated pockets of East Uttar Pradesh and Bihar; which were below normal by 7-10°C over some parts of Punjab, Bihar, Uttar Pradesh; below normal by 4-6°C over many parts of Haryana-Chandigarh, West Rajasthan, Gangetic West Bengal, Jharkhand and interior Odisha.
- ❖ **Visibility recorded** (at 0530 hours IST of today) (≤ 200 metres): **Jammu Division:** Jammu-25; **Punjab:** Amritsar 0 and Patilala-25; **Haryana:** Hisar-50; **West Uttar Pradesh:** Bareilly-25, Jhansi-200; **East Uttar Pradesh:** Varanasi, Gorakhpur, Prayagraj-25 each, Bahraich-50; **Delhi:** Palam-700, Safdarjung-500; **West Rajasthan:** Jaisalmer, Bikaner-25 each; Ganganagar-200; **Bihar:** Gaya and Purnea-25 each, Patna-50; Bhagalpur-200; **Tripura:** Agartala-50; **West Madhya Pradesh:** Gwalior-50.
- ❖ **Visibility recorded** (at 0830 hours IST of today) (≤ 200 metres): **Punjab:** Patilala-25, Amritsar, Ludhiana-50 each; **East Uttar Pradesh:** Varanasi, Gorakhpur, Varanasi, Bahraich-25 each; Churk, Lucknow, Fursatganj – 50 each and Sultanpur- 200; **West Uttar Pradesh:** Aligarh- 25, Bareilly-50, Jhansi-200; **West Rajasthan:** Jaisalmer, Phalodi, Pilani, Bikaner-25 each; Churu-200; **East Rajasthan-** Sikar-25, Ajmer- 200; **Bihar:** Purnea-25, Patna, Muzaffarpur, Supaul-50 each; Gaya-200; **Haryana:** Chandigarh, Ambala-25; Karnal and Hisar-50; **Jammu Division:** Jammu- 50; **Delhi-** Safdarjung, Ridge, Ayanagar- 50 each; Palam-200; **West Madhya Pradesh:** Gwalior-50; Datia- 200; **East Madhya Pradesh-** Rewa- 50; **Tripura:** Kailashahar, Agartala-50 each; **Assam-** Dhubri- 50; **West Bengal-** Cooch Behar- 200.

Impact expected due to dense to very dense fog in the night/morning hours over Punjab, Haryana-Chandigarh, Uttar Pradesh, Bihar during 24th to 28th January and Delhi, north Rajasthan, north Madhya Pradesh on 24th & 25th January, 2024.

❖ **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:**

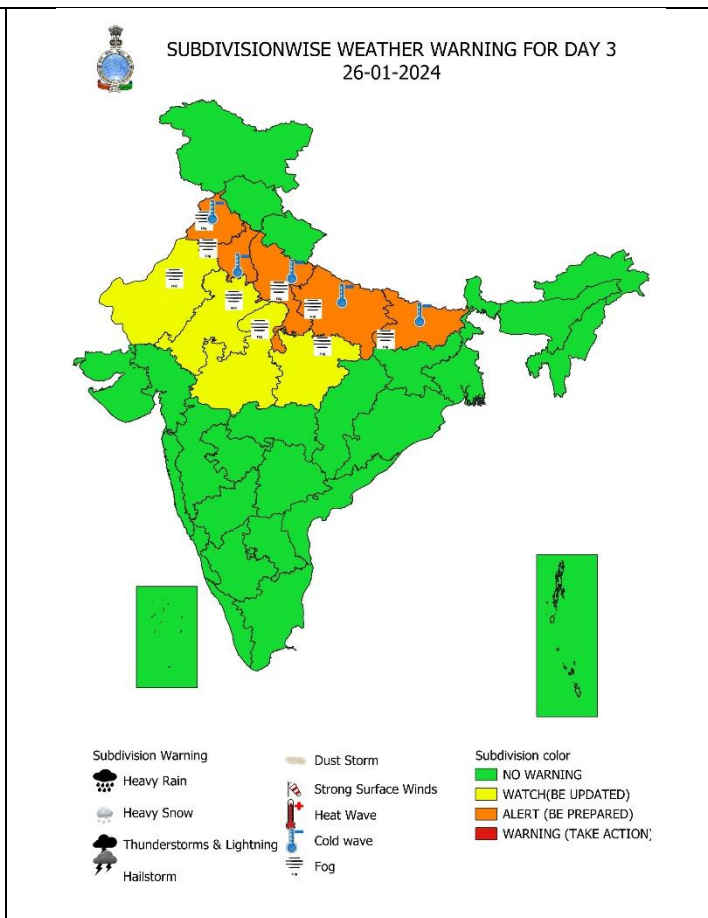
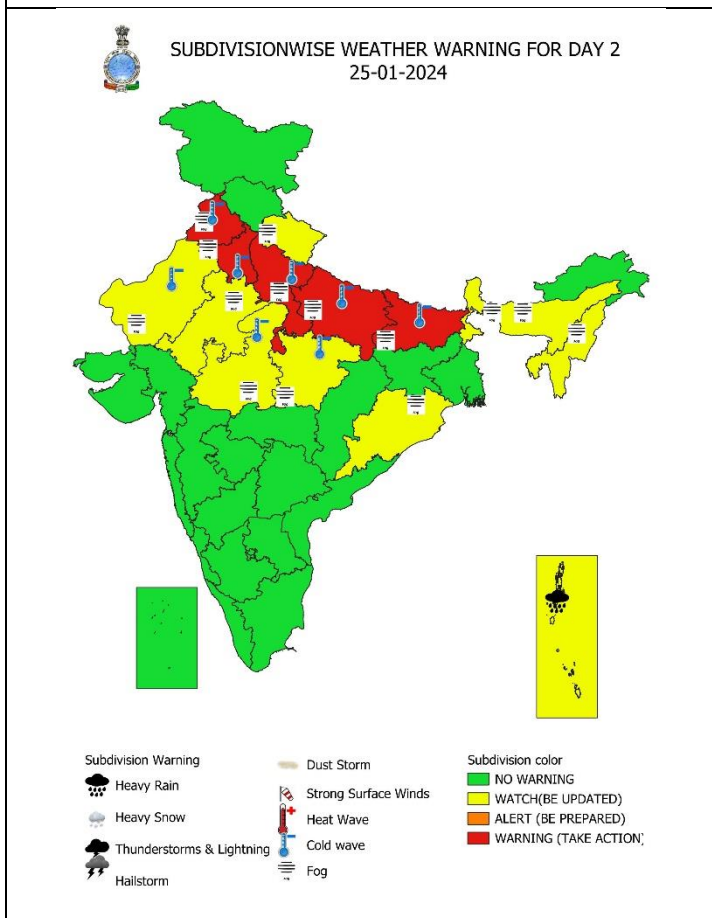
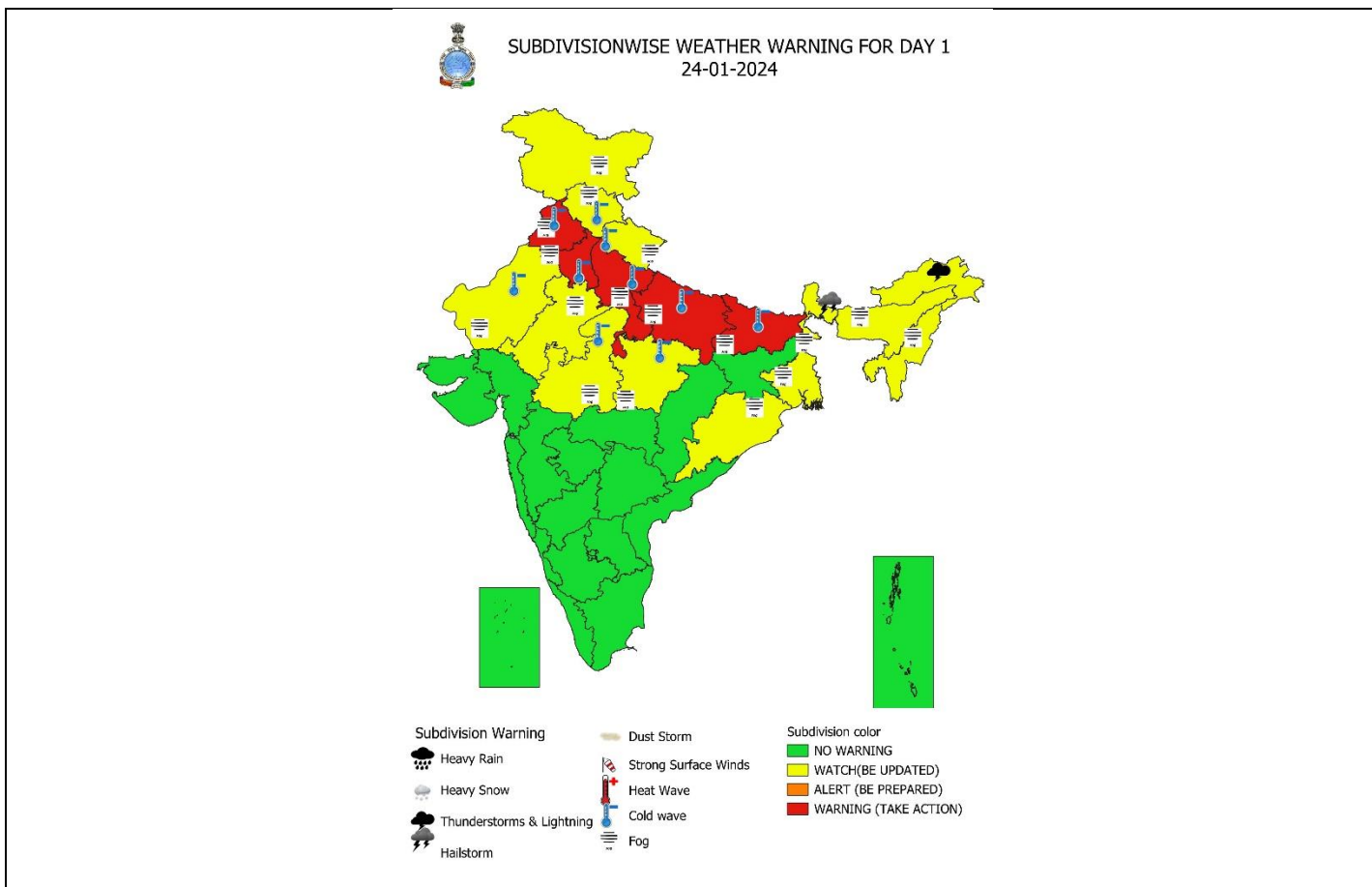
- ❖ To keep ready Maintenance Team
- ❖ Human Health: To avoid outing until unless emergency and to cover the face.

Impact expected due to Cold Day/Severe Cold Day conditions over Punjab, Haryana-Chandigarh, Uttar Pradesh, Bihar during 24th-28th; northwest Rajasthan on 24th & 25th January, 2024.

- ❖ 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.

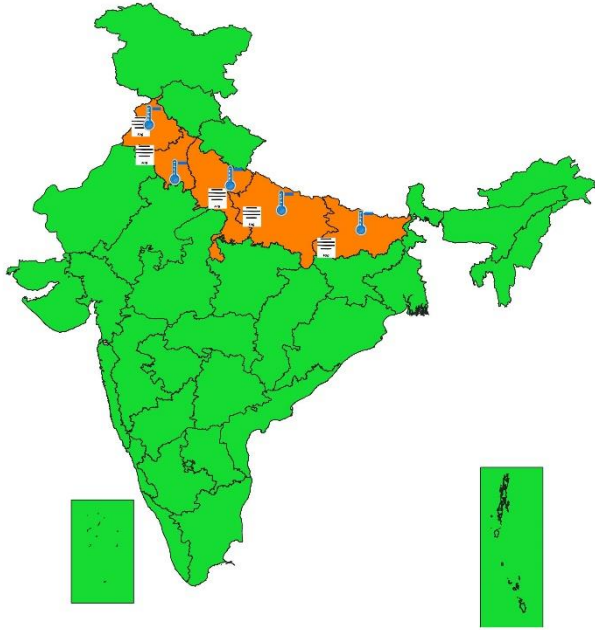
Action suggested:

- ❖ 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 woollen 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.





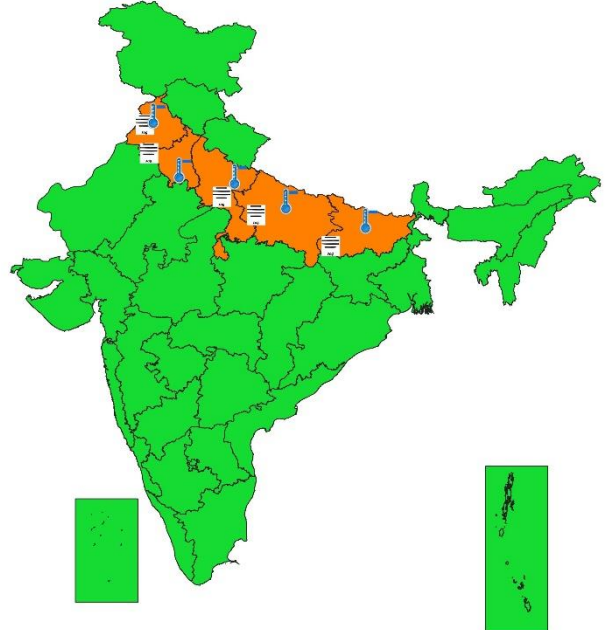
SUBDIVISIONWISE WEATHER WARNING FOR DAY 4
27-01-2024



| | | |
|----------------------------|----------------------|--------------------------|
| Subdivision Warning | Dust Storm | Subdivision color |
| Heavy Rain | Strong Surface Winds | NO WARNING |
| Heavy Snow | Heat Wave | WATCH(BE UPDATED) |
| Thunderstorms & Lightning | Cold wave | ALERT (BE PREPARED) |
| Hailstorm | Fog | WARNING (TAKE ACTION) |



SUBDIVISIONWISE WEATHER WARNING FOR DAY 5
28-01-2024



| | | |
|----------------------------|----------------------|--------------------------|
| Subdivision Warning | Dust Storm | Subdivision color |
| Heavy Rain | Strong Surface Winds | NO WARNING |
| Heavy Snow | Heat Wave | WATCH(BE UPDATED) |
| Thunderstorms & Lightning | Cold wave | ALERT (BE PREPARED) |
| Hailstorm | Fog | WARNING (TAKE ACTION) |

Legends:

- ❖ **Heavy Rain:** 64.5 to 115.5 mm; **Very Heavy Rain:** 115.6 to 204.4 mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; **AWS:** Automatic Weather Station; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation
- ❖ **Region wise classification of meteorological Sub-Divisions:**
 - **Northwest India:** Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand); Punjab, Haryana-Chandigarh-Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.
 - **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
 - **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
 - **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
 - **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathwada.
 - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and 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) |

| | | |
|---------------------------|----------------------|-----------------------|
| Subdivision Warning | Dust Storm | Subdivision color |
| Heavy Rain | Strong Surface Winds | NO WARNING |
| Heavy Snow | Heat Wave | WATCH(BE UPDATED) |
| Thunderstorms & Lightning | Cold wave | ALERT (BE PREPARED) |
| Hailstorm | Fog | WARNING (TAKE ACTION) |

| Probabilistic Forecast | | Flash Flood Risk | |
|------------------------|-------------------------------|------------------|-----------------------------|
| Terms | Probability of Occurrence (%) | | |
| Unlikely | < 25 | | High Risk (Take Action) |
| Likely | 25 - 50 | | Moderate Risk (Be Prepared) |
| Very Likely | 50 - 75 | | Low Risk (Be Updated) |
| Most Likely | > 75 | | |

Definition of Cold wave, Cold Day and Fog Conditions:

| | |
|--|--|
| | 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 $\leq 15^{\circ}\text{C}$ |
| | 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 $\leq -6.5^{\circ}\text{C}$ |
| | 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 |