**Government of India**
**Ministry of Earth Sciences**
**India Meteorological Department**

**Press Release**
**Date: 26th January, 2024**
**Time of Issue: 1330 hours IST**

**Subject:**

i. **Dense to very dense fog conditions likely to continue over Punjab, Haryana & Chandigarh during next 3 days, Uttar Pradesh during next 5 days and improve gradually thereafter.**
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.**

## 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 plains of Uttarakhand, Punjab, Haryana-Chandigarh-Delhi; in many parts of Uttar Pradesh; in isolated pockets of northwest Rajasthan & Madhya Pradesh; 7-10°C over remaining parts of Rajasthan & Madhya Pradesh; in most parts of Bihar, Jharkhand and Sub-Himalayan West Bengal. These are below normal by 2-4°C over many parts of plains of Uttarakhand, Haryana-Chandigarh-Delhi, Uttar Pradesh & Madhya Pradesh and in isolated pockets of Bihar and Sub-Himalayan West Bengal. **Today, the lowest minimum temperature of 2.7°C reported at Hisar (Haryana).**
- **Fog conditions observed** (at 0530 & 0830 hours IST of today): **Very dense fog** in most parts of Punjab and Uttar Pradesh, in many parts of Haryana; in some parts of Bihar and in isolated pockets of Uttarakhand, Rajasthan, West Madhya Pradesh and **Dense fog** in isolated pockets of Delhi, Tripura, Assam & Meghalaya.
- **Today, Cold wave conditions** observed in isolated pockets of Uttarakhand, Punjab, Haryana, West Rajasthan, Jharkhand.
- Yesterday, **Cold day to severe cold day conditions** prevailed in many parts of Uttar Pradesh; in some parts of Punjab, Bihar; in isolated pockets over Uttarakhand, Rajasthan. **Cold day conditions** observed in some parts of Haryana-Chandigarh; in isolated pockets of West Madhya Pradesh.
- **Ground frost** observed at isolated places over Uttarakhand.

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

- A Western Disturbance as a trough in middle tropospheric westerlies runs along Long. 70°E to the north of Lat. 32°N and a fresh Western Disturbance likely to affect Western Himalayan Region from the night of 27th January, 2024. Under these systems, light isolated rainfall/snowfall very likely over Western Himalayan Region during next 2 days and moderate scattered to fairly widespread rainfall/snowfall during subsequent 3-4 days.
- Light to moderate rainfall likely at some/many places over Andaman & Nicobar Islands during 26th-29th January with **isolated heavy rainfall on 26th January** and decrease thereafter.

## 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 many/most parts of Uttar Pradesh, some parts of Punjab, Haryana, Chandigarh and in isolated pockets of Bihar during 26th night to 31st morning.
- **Dense Fog** conditions very likely to prevail for a few hours in morning in isolated pockets of Rajasthan during 27th-29th January; Uttarakhand, West Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura on 27th & 28th January.
- **Cold Day to Severe Cold Day** conditions very likely to continue in some/many parts of Uttar Pradesh and Bihar during 26th-30th January and in isolated pockets of West Rajasthan during 26th-28th January.
- **Cold Day** conditions very likely to continue in isolated pockets of over Punjab, Haryana, Chandigarh, East Rajasthan on 26th & 27th January; over Uttarakhand on 26th;

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

- **Northwest & Central India**: Gradual rise in minimum temperatures by 2-3°C likely for next 4-5 days.
- **West India**: Gradual rise in minimum temperatures by 2-3°C over Maharashtra likely for next 3 days and no significant change thereafter.
- **Cold wave** conditions very likely in isolated pockets of Uttarakhand, Punjab, Haryana, West Uttar Pradesh and Odisha on 27th & 28th and over Bihar on 27th January.
- **Ground frost conditions** very likely at isolated places over Uttarakhand during 26th night to 28th morning and over West Uttar Pradesh during 26th night to 27th Morning.

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

## Annexure I

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

- Yesterday, **Maximum temperatures** were in the range of 12-16°C over many parts of Punjab, Haryana-Chandigarh and Uttar Pradesh; in isolated pockets of north Rajasthan and Bihar; which were below normal by 4-8°C over some parts of Punjab, Haryana, Uttar Pradesh, Bihar and in isolated pockets of north Rajasthan, north Madhya Pradesh, Gangetic West Bengal, Jharkhand and Odisha.

- **Visibility recorded** (at 0530 hours IST of today) (≤200 metres): Punjab: Patiala-25, Amritsar-200; Delhi: Safdarjung & Palam-200 each; West Rajasthan: Ganganagar-25, Churu & Jaisalmer-200 each; Uttar Pradesh: Bareilly, Bahraich, Jhansi, Varanasi & Lucknow-25 each, Gorakhpur-50, Sultanpur-200; West Madhya Pradesh: Gwalior-50; Bihar: Gaya & Purnea-25 each, Bhagalpur-50; West Bengal: Haldia-200; Tripura: Agartala-50.

- **Visibility recorded** (at 0830 hours IST of today) (≤200 metres): Uttar Pradesh: Bareilly, Lucknow, Bahraich, Prayagraj, Varanasi, Jhansi – 25 each, Uttarakhand: Pantnagar-25; Haryana-Chandigarh: Ambala-25, Hissar-50; Punjab: Amritsar, Patiala, Ludhiana- 25 each; Rajasthan: Ganganagar, Jaisalmer-25 each; Madhya Pradesh: Gwalior, Satna-50 each; Delhi: Palam-100, Safdarjung-400; Bihar: Bhagalpur-50, Patna & Gaya- 200 each; Sub-Himalayan West Bengal & Sikkim: Cooch Behar: 50; Tripura: Agartala-200; Assam: Dhubri- 200.

**Impact expected due to dense to very dense fog in the night/morning hours** over Uttar Pradesh, Punjab, Haryana, Chandigarh and Bihar during 26th night to 31st morning.

- **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.

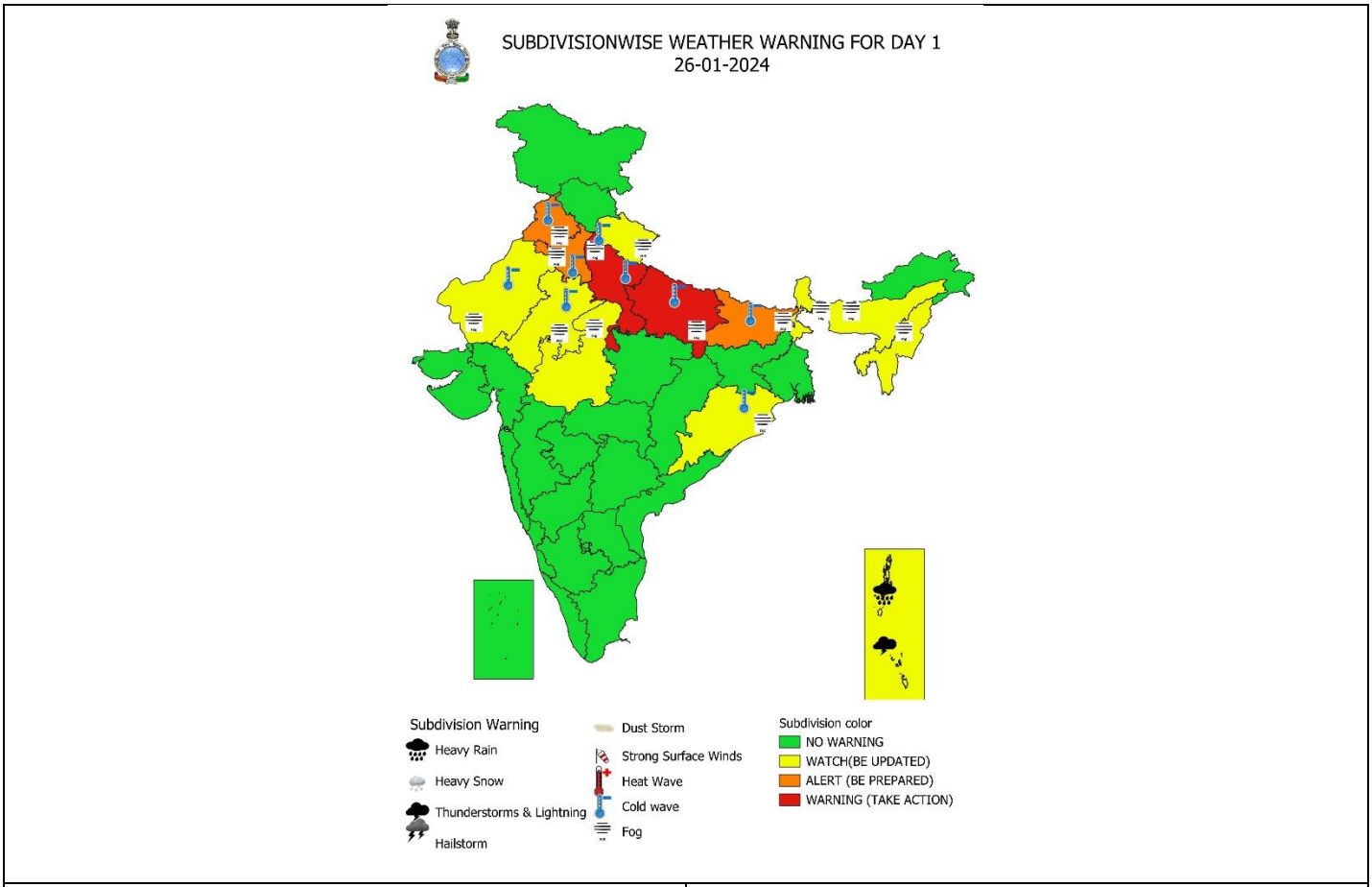
**Impact expected due to Cold Day/Severe Cold Day conditions** over Uttar Pradesh and Bihar during 26th-30th January and over West Rajasthan during 26th-28th January.

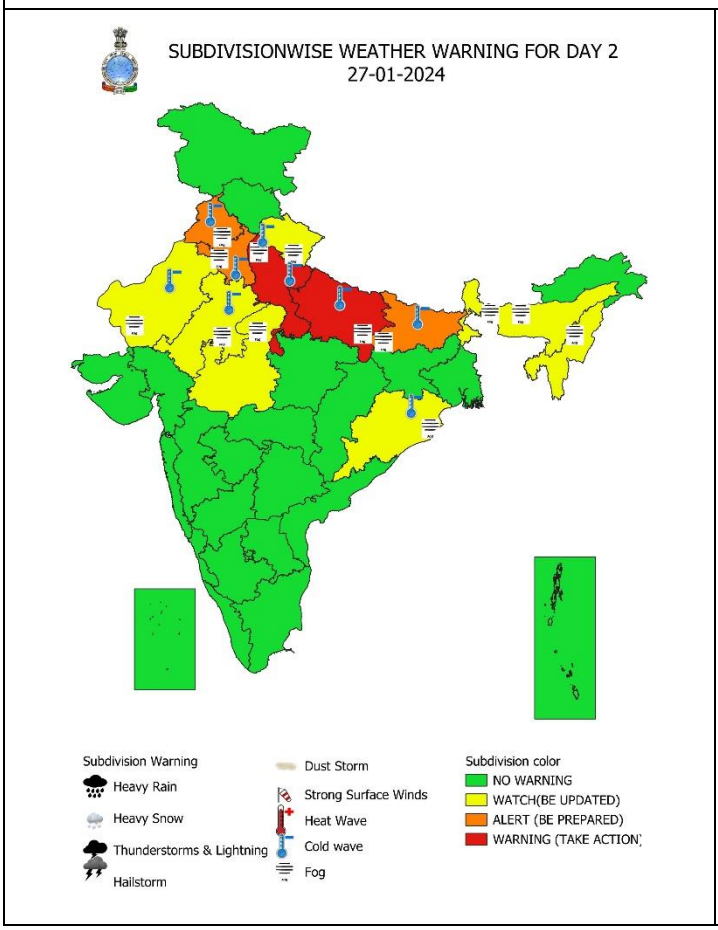
- An increased likelihood of various illnesses like flu, running/ stuffy nose or nosebleed, which usually set in or get aggravated due to prolonged exposure to cold.
- Do not ignore shivering. It is the first sign that the body is losing heat. Get Indoors.
- Frostbite can occur due to prolonged exposure 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.

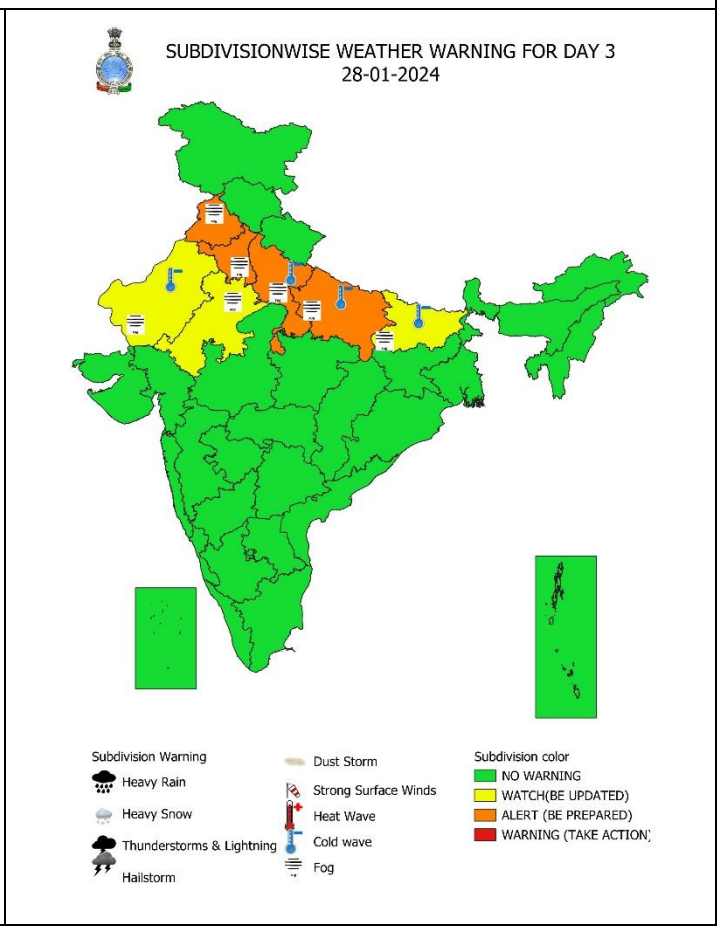
**Action suggested:**

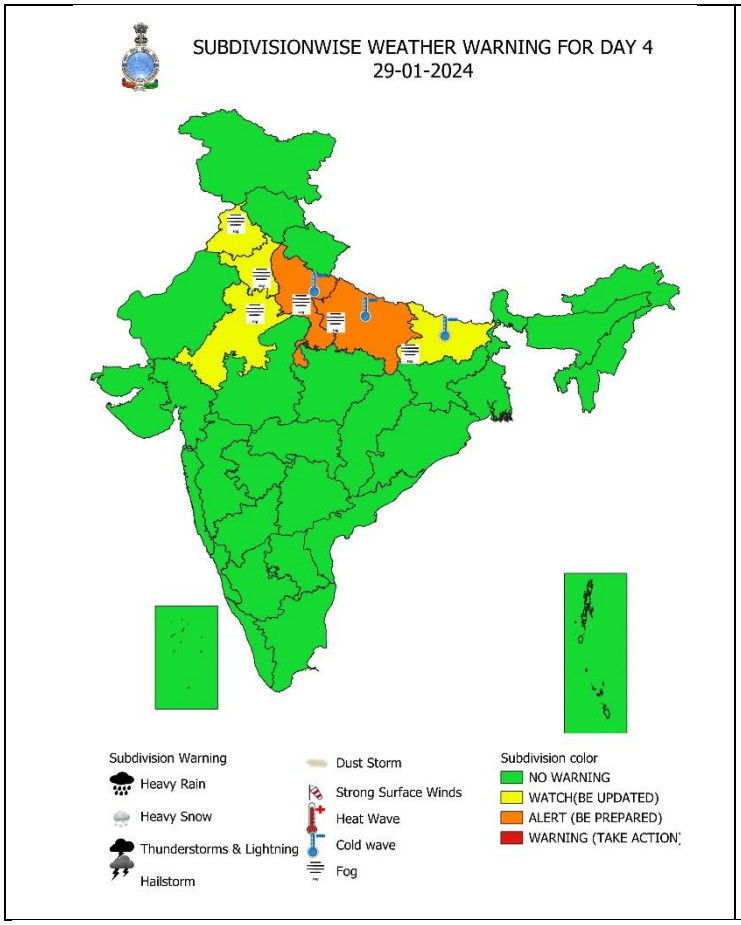
- Wear several layers of loose fitting, light weight; warm woollen clothing.
- Cover your head, neck, hands and toes adequately as majority of heat loss occurs through these body parts. Wear several layers of loose fitting, light weight; warm woollen clothing rather than one layer of heavy cloth.
- Eat 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.

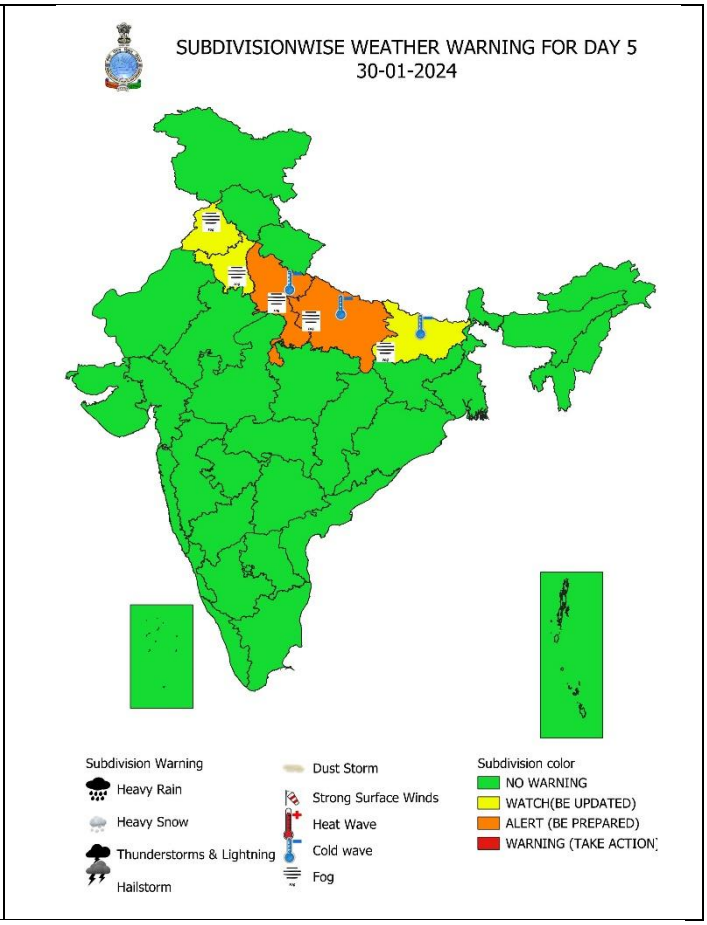
## Annexure II


SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
26-01-2024
Subdivision Warning
Heavy Rain
Heavy Snow
Thunderstorms & Lightning
Hailstorm
Dust Storm
Strong Surface Winds
Heat Wave
Cold wave
Fog
Subdivision color
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)


SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
27-01-2024
Subdivision Warning
Heavy Rain
Heavy Snow
Thunderstorms & Lightning
Hailstorm
Dust Storm
Strong Surface Winds
Heat Wave
Cold wave
Fog
Subdivision color
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)


SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
28-01-2024
Subdivision Warning
Heavy Rain
Heavy Snow
Thunderstorms & Lightning
Hailstorm
Dust Storm
Strong Surface Winds
Heat Wave
Cold wave
Fog
Subdivision color
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)


SUBDIVISIONWISE WEATHER WARNING FOR DAY 4
29-01-2024
Subdivision Warning
Heavy Rain
Heavy Snow
Thunderstorms & Lightning
Hailstorm
Dust Storm
Strong Surface Winds
Heat Wave
Cold wave
Fog
Subdivision color
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)


SUBDIVISIONWISE WEATHER WARNING FOR DAY 5
30-01-2024
Subdivision Warning
Heavy Rain
Heavy Snow
Thunderstorms & Lightning
Hailstorm
Dust Storm
Strong Surface Winds
Heat Wave
Cold wave
Fog
Subdivision color
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
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 Widespred (FWS/ Many Places) | 1-25 | Isolated (ISOL) |

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

**Probabilistic Forecast**

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

| Flash Flood Risk |
|---|
| High Risk (Take Action) |
| Moderate Risk (Be Prepared) |
| Low Risk (Be Updated) |

## Definition of Cold wave, Cold Day and Fog Conditions:

**Cold Wave**

When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C

(b) Based on actual Minimum Temperature (for Plains only)

- **Cold Wave :** When Minimum Temperature is ≤ 4.0 °C
- **Severe Cold Wave:** When Minimum Temperature is ≤ 2.0 °C

( c) For Coastal Stations

When Minimum Temperature departure is ≤-4.5 °C & actual Minimum Temperature is ≤ 15 °C

**Cold Day**

When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C

**Fog**

Phenomenon of small droplets suspended in air and the horizontal visibility < 1km

- **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