



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

**Press Release
Date: 10th January, 2023
Time of Issue: 1300 hours IST**

**Subject: i) Cold Wave conditions abated from plains of northwest India and no cold wave conditions likely over north India during next 4 days.
ii) Dense to very dense fog and cold day conditions over many parts of Punjab, Haryana, Chandigarh, Delhi and Uttar Pradesh during next 24 hours and abate gradually thereafter.**

Weather observed during past 24 hours ending at 0830 hrs IST of today:

- ❖ **The minimum temperature** has risen by 1-3°C in many parts of north India. As a result, **Cold Wave conditions have abated from plains of northwest India.**
- ❖ The minimum temperatures are in range of 5-8°C over most parts of northern plains & adjoining areas of North Madhya Pradesh. **The Lowest Minimum Temperature of 1.5°C observed over Churu (West Rajasthan).**
- ❖ **Dense to Very dense fog** observed over many parts of Punjab, Uttar Pradesh, Haryana, Chandigarh & Delhi; some areas of Bihar; isolated pockets over Jammu division, Uttarakhand & north Rajasthan.
- ❖ **Severe Cold Day conditions** prevailed in most parts of East Uttar Pradesh; in some areas over Haryana, West Uttar Pradesh and Bihar. **Cold Day conditions** prevailed in isolated pockets over Punjab and northwest Rajasthan.
- ❖ **Cold wave** conditions observed in isolated pockets over Bihar and East Madhya Pradesh.

Weather Forecast and Warnings (Annexure I & II):

Weather Systems and associated rainfall/snowfall

- A Western Disturbance as a trough in middle tropospheric westerly winds runs along Long. 70°E to the north of 32°N. Another fresh Western Disturbance as a trough in middle tropospheric westerly winds runs along Long. 50°E to the north of 30°N. Under its influence, an induced cyclonic circulation likely to form over central Pakistan by tomorrow, the 11th January, 2023.
- These systems are very likely to cause scattered to fairly widespread rainfall/snowfall likely over Western Himalayan Region during 10th-14th January and isolated light rainfall over Punjab, Haryana and adjoining area of west Uttar Pradesh during 11th -13th January, 2023.
- **Isolated heavy rainfall/snowfall with isolated thunderstorm/lightning is also likely over Jammu & Kashmir on 11th-12th and over Himachal Pradesh on 12th January, 2023.**

Minimum Temperature Forecast & Cold Wave Warning:

- ❖ **Due to the current fresh Western Disturbance, minimum temperatures are very likely to rise by 2-4°C over plains of Northwest India during next 3 days. As a result, no Cold wave conditions very likely over Northwest India during next 4 days.**

- ❖ No significant change in minimum temperatures very likely over many parts of East India during next 24 hours and gradual rise by 2-4°C thereafter. Rise in minimum temperatures by 2-3°C very likely over most parts of Central India during next 2 days and no significant change thereafter. No significant change in minimum temperatures very likely over Gujarat state during next 48 hours and gradual fall by 2-4°C thereafter.
- ❖ **Cold wave conditions** very likely in isolated pockets over Bihar, Madhya Maharashtra and Interior Karnataka during next 24 hours.

Fog and Cold Day Warning:

- ❖ Due to continuation of prevailing light winds and high moisture near surface over Indo-Gangetic plains, **dense to very dense fog** very likely to continue in some/many parts during night & morning hours over Punjab, Haryana, Chandigarh, Delhi, Uttar Pradesh and Bihar during next 24 hours and abate gradually thereafter. **Dense fog** in isolated pockets likely to reappear over these areas from 14th morning.
- ❖ **Dense fog** very likely in some areas during night & morning hours over Uttarakhand and in isolated pockets over Jammu Division, Himachal Pradesh, Rajasthan during next 24 hours and abate gradually thereafter. **Dense fog** very likely to continue in isolated pockets over Assam & Meghalaya and Tripura during next 48 hours.
- ❖ **Cold Day to severe cold day conditions** very likely in some parts of Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh and Bihar on 10th and **cold day conditions** in isolated pockets on 11th January. **Cold day conditions** also very likely in isolated pockets over Uttarakhand on 10th January, 2023. **Cold day conditions are very likely to abate over the above areas from tomorrow.**

For more details kindly refer:

https://mausam.imd.gov.in/imd_latest/contents/all_india_forecast_bulletin.php

Impact expected and action suggested due to dense to very dense fog in the night/morning hours in some/many parts of Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh and Bihar during next 24 hours.

Impact expected:

- **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.
 - 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.
 - Causes 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:**
 - Careful while driving or outing through any transport.
 - Use fog lights during driving.
 - Be in touch with airlines and Railway 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 and action suggested due to Severe Cold Day/ Cold day conditions in some parts over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh and Bihar during next 24 hours.

Impact expected:

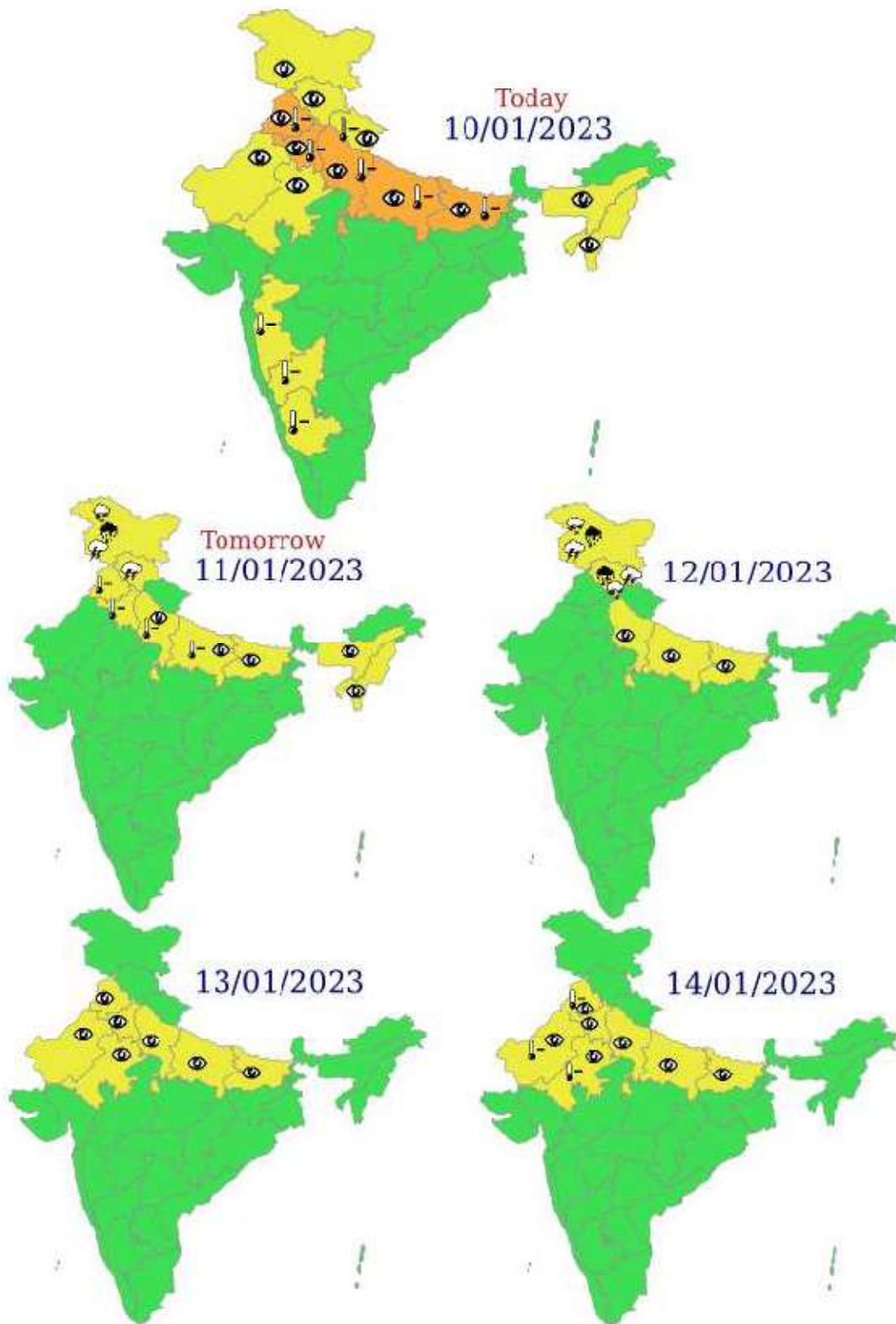
- An increased likelihood of various illnesses like flu, running/ stuffy nose or nosebleed, which usually set in or get aggravated due to prolonged exposure to cold.
- Do not ignore shivering. It is the first sign that the body is losing heat. Get Indoors.
- Frostbite can occur due to prolonged exposure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

(For details kindly refer NDMA guidelines:

https://ndma.gov.in/Resources/awareness/Cold_Wave)



Legends:

Heavy Rain: 64.5 to 115.5 mm; **Very Heavy Rain:** 115.6 to 204.4 mm; **Extremely Heavy Rain:** >204.4 mm.

Region wise classification of meteorological Sub-Divisions:

- 1) **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.
- 2) **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
- 3) **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
- 4) **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- 5) **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathwada.
- 6) **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)

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 Rain	 Heavy Snow	 Thunderstorm	 Dust Storm
 Strong Winds	 Visibility	 Cyclone	 Squall/ Hail
 Frost	 Cold Wave	 Heat Wave	 Sea State