



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

**Press Release
Date: 14th January, 2023
Time of Issue: 1300 hours IST**

Subject: A fresh spell of dense to very dense fog and cold wave conditions very likely over Northwest India during 15th-18th January, 2023.

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

- ❖ **Rainfall/Snowfall observed:** Light to moderate rainfall/snowfall at most places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad and Himachal Pradesh; at a few places over Uttarakhand.
- ❖ **Rainfall observed:** Light rainfall at a few places over Arunachal Pradesh and at isolated places over Punjab, Haryana, Chandigarh, Uttar Pradesh, West Bengal & Sikkim, Assam and Andaman & Nicobar Islands.
- ❖ **The minimum temperatures** are in the range of 7-10°C over many parts of Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh and Bihar; in some parts over East Rajasthan and West Madhya Pradesh. They are in the range of 3-7°C over many parts of West Rajasthan. **The Lowest Minimum Temperature of -0.7°C observed over Churu (West Rajasthan).**
- ❖ **Minimum Temperatures** have fallen by 3-6°C over many parts of West Rajasthan & Gujarat and some areas of East Rajasthan & West Madhya Pradesh. They have risen by 2-3°C over some parts of Uttar Pradesh and East Madhya Pradesh in isolated pockets over Bihar.
- ❖ **Dense to very dense fog** in isolated pockets over Uttarakhand and East Uttar Pradesh; **Dense fog** in isolated pockets over Punjab, West Uttar Pradesh, Assam, Gangetic West Bengal and Odisha.
- ❖ **Cold wave conditions** observed in isolated pockets over North Interior Karnataka.

Weather Forecast and Warnings (Annexure I):

Weather Systems and associated rainfall/snowfall

- ❖ A Western Disturbance as a trough in middle tropospheric westerly winds runs along Long. 75°E to the north of 32°N. Under its influence, light isolated rainfall/snowfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan- Muzaffarabad, Himachal Pradesh and Uttarakhand today, the 14th January, 2023.
- ❖ A fresh **Western Disturbance** is likely to affect Western Himalayan Region from the night of 18th January, 2023. Under its influence, light/moderate isolated/scattered rainfall/snowfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan- Muzaffarabad, Himachal Pradesh and Uttarakhand during 18th-20th January, 2023.
- ❖ Another **Western Disturbance** in succession is likely to affect Northwest India from the night of 20th January, 2023.

Minimum Temperature Forecast & Cold Wave Warning:

- ❖ Gradual fall in minimum temperatures by 4-6°C very likely over many parts of Northwest India during next 3 days and no significant change thereafter. Gradual fall in minimum temperatures by 3-5°C very likely over Madhya Pradesh during next 3 days and no significant change thereafter. Fall in minimum temperatures by 2-4°C very likely over many parts of East India during next 3 days and no significant change thereafter. No significant change in minimum temperatures very likely over Gujarat state during next 2 days and rise by 3-4°C thereafter.
- ❖ **Cold Wave to severe cold wave conditions** very likely over some/many parts of Rajasthan during 15th-18th and over Punjab and Haryana-Chandigarh on 16th & 17th and over Delhi during 16th-18th. **Cold wave condition** in isolated pockets also very likely over Himachal Pradesh and Uttarakhand during 15th-18th; Punjab and Haryana-Chandigarh on 15th & 18th; West Madhya Pradesh on 16th & 17th; West Uttar Pradesh on 17th & 18th; Saurashtra & Kutch on 15th & 16th and Interior Karnataka on 15th January, 2023.

Fog and Cold Day Warning:

- ❖ **Dense to very dense fog** very likely in isolated/some parts during night & morning hours over Punjab, Haryana & Delhi and Uttar Pradesh during next 5 days. **Dense fog** very likely in isolated pockets during night & morning hours over Bihar during next 5 days; Jammu & Kashmir, Himachal Pradesh, Uttarakhand during next 4 days and Gangetic West Bengal, Odisha, north Madhya Pradesh, Assam & Meghalaya and Tripura during next 2 days.
- ❖ **Cold Day conditions** very likely in isolated pockets over Punjab and Haryana-Chandigarh during next 5 days; Uttarakhand and Rajasthan during next 2-3 days and Uttar Pradesh during 16th-18th January 2023.

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 parts of Punjab, Haryana, Chandigarh & Delhi and Uttar Pradesh during 15th-18th January, 2023.

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 wave/Cold wave conditions in some parts of north Rajasthan during 15th-18th and over Punjab and Haryana, Chandigarh & Delhi on 16th & 17th January, 2023.

Impact expected:

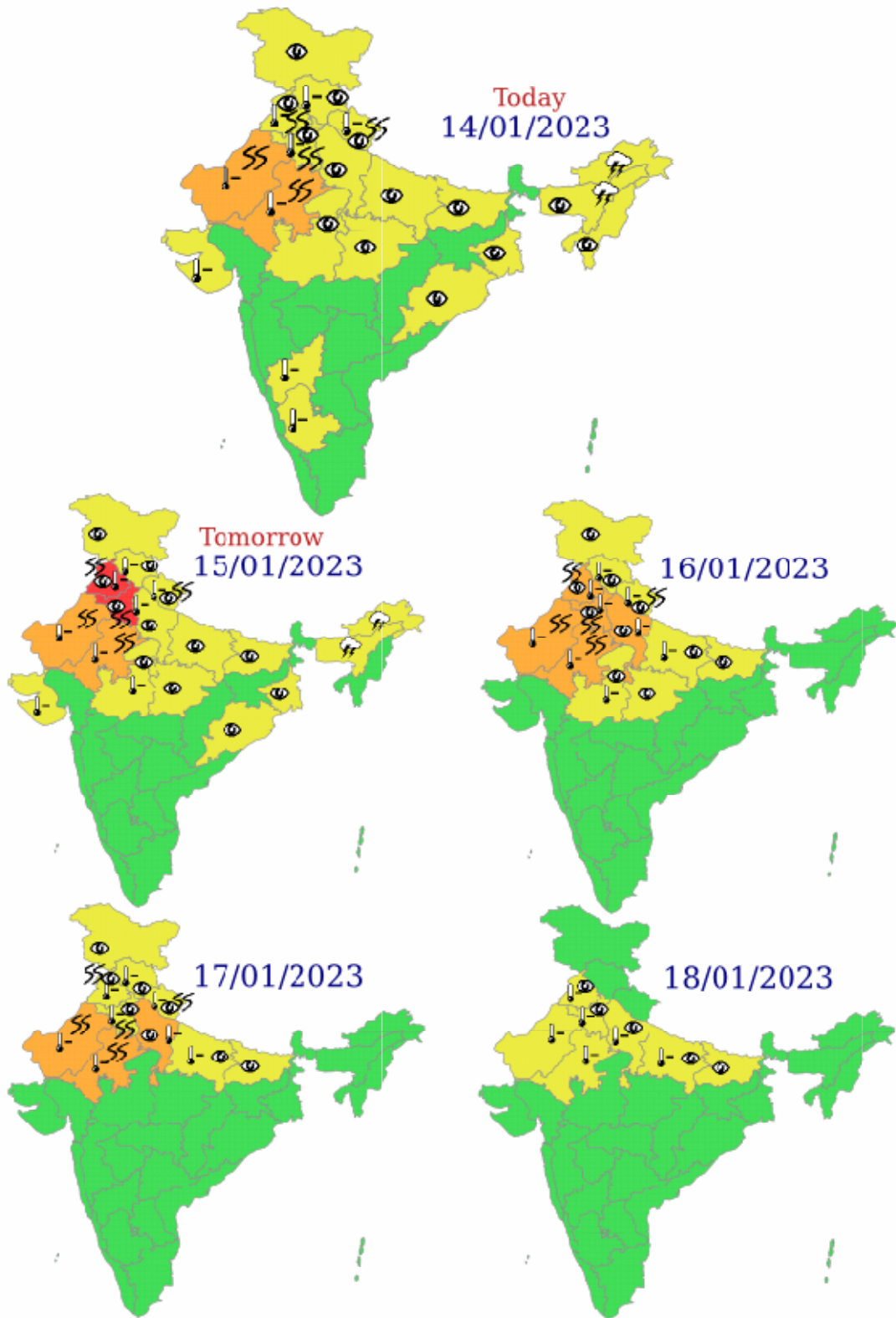
- An increased likelihood of various illnesses like flu, running/ stuffy nose or nosebleed, which usually set in or get aggravated due to prolonged exposure to cold.
- Do not ignore shivering. It is the first sign that the body is losing heat. Get Indoors.
- Frostbite can occur due to prolonged exposure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