



Government of India
Ministry of Earth Sciences
India Meteorological Department

Press Release
Date: 13th January, 2023
Time of Issue: 1330 hours IST

Subject: i) A fresh spell of dense to very dense fog very likely over north India from 14th January and isolated/scattered cold wave conditions from 15th January, 2023.
ii) Scattered to fairly widespread rainfall/snowfall over Western Himalayan Region and isolated rainfall over adjoining plains on 13th January, 2023.

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

- ❖ **Snowfall/Rainfall observed:** light to moderate rainfall/snowfall at most places over Jammu & Kashmir, Ladakh; at many places over Himachal Pradesh and Uttarakhand.
- ❖ **Rainfall observed:** light rainfall at isolated places over Punjab, Haryana, Chandigarh & Delhi and West Uttar Pradesh.
- ❖ **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 Rajasthan and East Madhya Pradesh and in isolated pockets over West Madhya Pradesh. **The Lowest Minimum Temperature of 5.4°C observed over Naliya (Saurashtra & Kutch).**
- ❖ **Minimum Temperatures** have fallen by 3-5°C over most parts of Rajasthan & Gujarat and risen by 2-3°C over some parts of north Madhya Pradesh and central parts of Uttar Pradesh.
- ❖ **Dense to very dense fog** occurred in some parts of Bihar and in isolated pockets over Rajasthan, East Uttar Pradesh and Haryana; Dense fog in isolated pockets over West Uttar Pradesh, Odisha, west Assam and Tripura.
- ❖ **Cold Day to Severe Cold Day conditions** prevailed in some parts of Bihar.
- ❖ **Cold wave conditions** observed in isolated pockets over 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. 70°E to the north of 32°N and an induced cyclonic circulation lies over northeast Rajasthan in lower tropospheric levels. Jet stream winds of order upto 120 knots in upper tropospheric levels (12-14 Km above mean sea level) are prevailing along latitude 30° N over Indian region.
- ❖ These systems are very likely to cause light/moderate scattered/fairly widespread rainfall/snowfall over Jammu & Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad and Himachal Pradesh and Uttarakhand today the 13th January, 2023.
- ❖ Isolated light rainfall likely over northern parts of Punjab, Haryana and adjoining area of west Uttar Pradesh today the 13th January, 2023.

Minimum Temperature Forecast & Cold Wave Warning:

- ❖ Gradual fall in minimum temperatures by 3-5°C very likely over many parts of Northwest India by 16th January and no significant change thereafter. No significant change in minimum temperatures very likely over Madhya Pradesh during next 24 hours and fall by 3-5°C thereafter. Rise in minimum temperatures by 2-3°C very likely over many parts of East India by 16th January and gradual fall by 2-4°C thereafter. Fall in minimum temperatures by 2-3°C very likely over Gujarat state during next 3 days and no significant change thereafter. No significant change in minimum temperatures over the rest parts of country during next 5 days.
- ❖ **Cold Wave to severe cold wave conditions** likely over some parts of north Rajasthan on 14th-17th and **Cold wave condition** in isolated pockets likely over Interior Karnataka during 14th-15th; over Himachal Pradesh during 15th-17th; over Punjab, Haryana & Chandigarh during 16th-18th; over Uttar Pradesh and Madhya Pradesh during 17th-18th January, 2023.

Fog and Cold Day Warning:

- ❖ **Dense to very dense fog** very likely to continue in isolated/some parts during night & morning hours over Punjab, Haryana & Delhi, Uttar Pradesh, Bihar during next 5 days and **Dense fog** very likely in isolated pockets during night & morning hours over north Rajasthan, West Bengal & Sikkim, Odisha, Assam & Meghalaya and Tripura during next 2 days; over Jammu & Kashmir, Himachal Pradesh, Uttarakhand during 15th-18th; over north Madhya Pradesh during 16th-18th January 2023.
- ❖ **Cold Day conditions** very likely in isolated/some pockets over Bihar during next 5 days; in isolated pockets over Rajasthan on 13th; over Uttarakhand during 14th-15th; over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh during 15th-17th 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 and Haryana, Chandigarh & Delhi on 16th & 17th 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 on 16th & 17th January, 2023.

Impact expected:

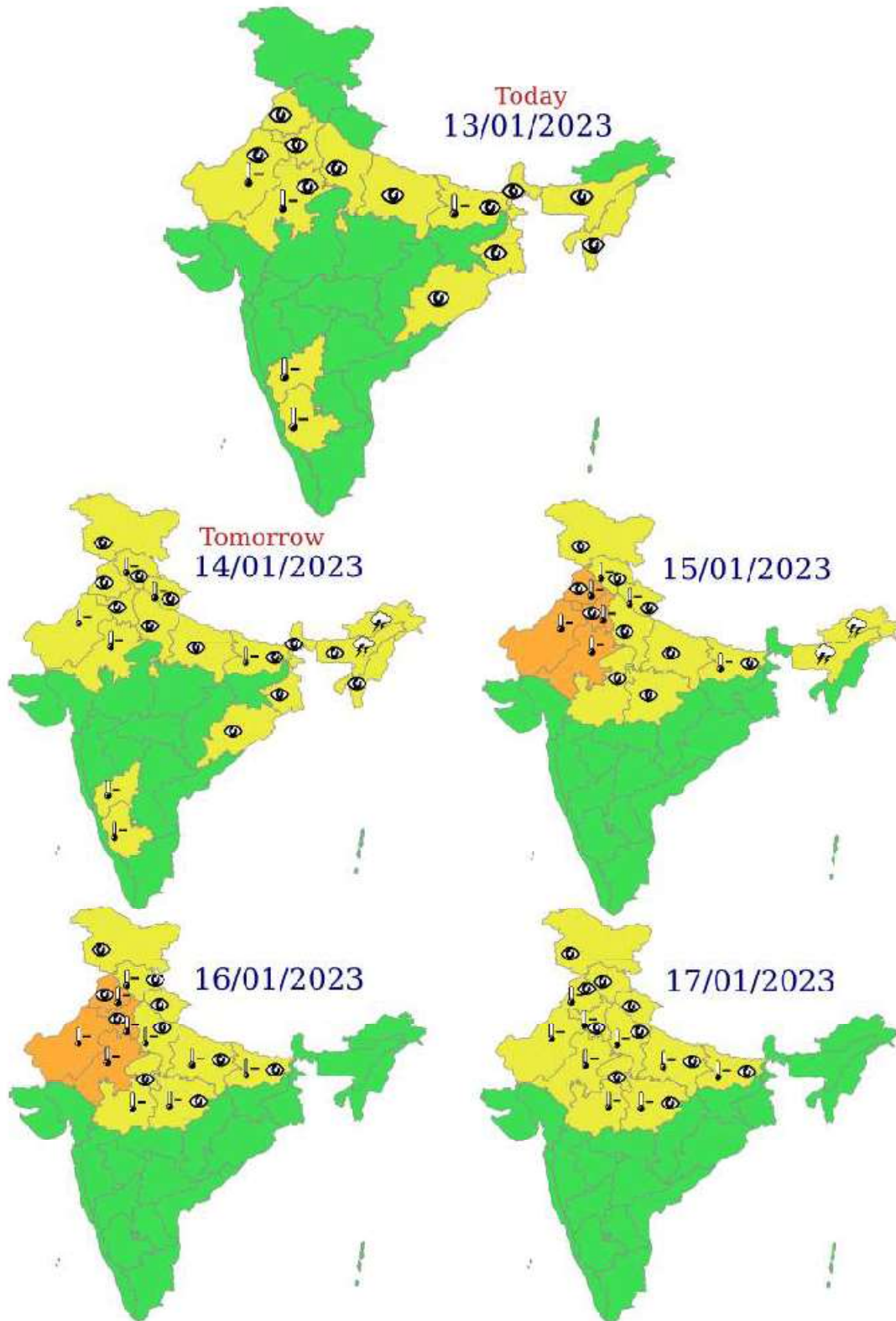
- An increased likelihood of various illnesses like flu, running/ stuffy nose or nosebleed, which usually set in or get aggravated due to prolonged exposure to cold.
- Do not ignore shivering. It is the first sign that the body is losing heat. Get Indoors.
- Frostbite can occur due to prolonged exposure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