



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



**Press Release**

**Date: 25<sup>th</sup> January, 2024**

**Time of Issue: 1330 hours IST**

**Subject:**

- i. Dense to very dense fog conditions likely to continue to prevail over many places of North India during next 2 days and improve thereafter with reduction in intensity and duration.**
- 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 3.0°C reported at Kanpur (West Uttar Pradesh).**
- ❖ **Fog conditions observed (at 0530 & 0830 hours IST of today):** **Very dense fog** in most parts of Punjab; in many parts of Uttar Pradesh, Haryana-Chandigarh; in isolated pockets of Sub-Himalayan West Bengal, Uttarakhand, Rajasthan, West Madhya Pradesh & Chhattisgarh and **Dense fog** in isolated pockets of Delhi, Tripura, Odisha & Bihar.
- ❖ **Today, Cold wave conditions** observed in isolated pockets of Himachal Pradesh, Uttarakhand, Punjab and Haryana.
- ❖ Yesterday, **Cold day to severe cold day conditions** prevailed in most parts of Punjab, Haryana-Chandigarh; in many parts of East Uttar Pradesh & Bihar; in some parts of West Uttar Pradesh; in isolated pockets of Rajasthan. **Cold day conditions** observed in isolated pockets of Uttarakhand & southwest Madhya Pradesh.
- ❖ **Ground frost** observed at isolated places over Himachal Pradesh, Uttarakhand and East Madhya Pradesh.
- ❖ **Hailstorm** observed at isolated places over Sub-Himalayan West Bengal & Sikkim.

**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 25<sup>th</sup> to 31<sup>st</sup> January.
- ❖ Due to a trough from South Interior Karnataka to south Odisha coast in the lower levels; light rainfall at isolated to some places likely over north Coastal Andhra Pradesh & Odisha during next 24 hours.

- ❖ Strong jet core winds of the order of 120-130 kmph are seen at 4.5 km above mean sea level over Bangladesh and adjoining Tripura. Under its influence; light rainfall is likely over Sub-Himalayan West Bengal & Sikkim and northeast India during next 2 days.
- ❖ Light to moderate rainfall likely at many places over Andaman & Nicobar Islands during 25<sup>th</sup>-27<sup>th</sup> 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 some/many parts of Punjab, Haryana, Chandigarh and Uttar Pradesh during 25<sup>th</sup> night to 30<sup>th</sup> morning. **Dense Fog** conditions very likely in some parts of Delhi on 25<sup>th</sup> night & 26<sup>th</sup> January morning.
- ❖ **Dense to very dense fog** conditions very likely to prevail for a few hours in night/morning in isolated pockets of Uttarakhand and Rajasthan during 25<sup>th</sup> night to 27<sup>th</sup> morning.
- ❖ **Dense fog** conditions very likely to prevail for a few hours in night/morning over isolated pockets of Bihar during 25<sup>th</sup> night to 30<sup>th</sup> morning; north Madhya Pradesh and Sub-Himalayan West Bengal during 25<sup>th</sup> night to 27<sup>th</sup> morning; Assam, Mizoram & Tripura and Odisha during 25<sup>th</sup> night to 26<sup>th</sup> morning.
- ❖ **Cold Day to Severe Cold Day** conditions very likely to continue in many parts of East Uttar Pradesh on 25<sup>th</sup> & 26<sup>th</sup>; in some parts on 27<sup>th</sup> and **cold day** conditions in isolated pockets on 28<sup>th</sup> & 29<sup>th</sup> January.
- ❖ **Cold Day to Severe Cold Day** conditions very likely to continue in many parts of West Uttar Pradesh on 25<sup>th</sup> & 26<sup>th</sup> and **cold day** conditions in isolated pockets on 27<sup>th</sup> & 28<sup>th</sup> January.
- ❖ **Cold Day to Severe Cold Day** conditions very likely to continue in some parts of Punjab and Haryana-Chandigarh on 25<sup>th</sup> & 26<sup>th</sup> and **cold day** in isolated pockets on 27<sup>th</sup> January. **Cold day** in isolated pockets of Delhi on 25<sup>th</sup> January.
- ❖ **Cold Day to Severe Cold Day** conditions very likely to continue in isolated pockets of Bihar on 25<sup>th</sup> January and **cold day** conditions in isolated pockets during 26<sup>th</sup>-29<sup>th</sup> January.
- ❖ **Cold Day to Severe Cold Day** conditions very likely to continue in isolated pockets of West Rajasthan on 25<sup>th</sup> January and **cold day** conditions in isolated pockets on 26<sup>th</sup> January.
- ❖ **Cold Day** conditions very likely to continue in isolated pockets of over Uttarakhand & East Rajasthan on 25<sup>th</sup> & 26<sup>th</sup> January.

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

- ❖ **Northwest India:** Gradual rise in minimum temperatures by 2-3°C likely for next 4-5 days.
- ❖ **Central India:** No significant change in minimum temperatures likely during next 24 hours and rise by 2-3°C for subsequent 3 days.
- ❖ **West India:** Gradual rise in minimum temperatures by 2-3°C over Maharashtra likely for next 3 days and no significant change thereafter. No significant change in minimum temperatures likely over Gujarat during next 24 hours and rise by 2-3°C for subsequent 4 days.
- ❖ **Cold wave** conditions very likely in isolated pockets of Punjab, Haryana and Chandigarh during 25<sup>th</sup>-27<sup>th</sup>; West Uttar Pradesh on 25<sup>th</sup> & 26<sup>th</sup> and Himachal Pradesh and East Rajasthan on 25<sup>th</sup> January.
- ❖ **Ground frost conditions** very likely at isolated places over Himachal Pradesh, Uttarakhand, Uttar Pradesh and Rajasthan during 25<sup>th</sup> night to 26<sup>th</sup> morning.

For more details kindly refer: [https://mausam.imd.gov.in/responsive/all\\_india\\_forecast\\_bulletin.php](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 Uttar Pradesh; in isolated pockets of north Rajasthan and Bihar; which were below normal by 7-10°C over some parts of Punjab, Bihar, East Uttar Pradesh; below normal by 4-6°C over many parts of Haryana-Chandigarh, north Rajasthan, West Uttar Pradesh, Gangetic West Bengal, Jharkhand and interior Odisha.
- ❖ **Visibility recorded** (at 0530 hours IST of today) (**≤200 metres**): **Punjab:** Patiala-25, Amritsar-50; **Haryana-Chandigarh:** Ambala-25, Chandigarh-50, Hissar-200; **Delhi:** Palam-25, Safdarjung-50; **Rajasthan:** Churu, Bikaner, Jaipur-50 each; **Uttar Pradesh:** Bareilly, Baharaich-25 each, Lucknow, Sultanpur, Gorakhpur, Jhansi-200 each; **Madhya Pradesh:** Gwalior-50; **Bihar:** Bhagalpur, Purnea-200 each.
- ❖ **Visibility recorded** (at 0830 hours IST of today) (**≤200 metres**): **East Uttar Pradesh:** Lucknow, Bahraich & Prayagraj-25, Fursatganj-50 Sultanpur-200; **Uttarakhand:** Pantnagar-25; **Haryana-Chandigarh:** Ambala-25, Chandigarh & Karnal-50 each, Hissar-200; **West Uttar Pradesh:** Bareilly-25, Jhansi-50, Agra-150; **Punjab:** Ambala, Ludhiana & Patiala-50 each, Bhatinda-100; **north Rajasthan:** Churu & Jaipur-50 each, Bikaner-100, Ganganagar-200; **Sub-Himalayan West Bengal:** Jalpaiguri & Cooch Behar-50 each; **Tripura:** Agartala-50; **Jammu Division:** Jammu-200; **northwest Madhya Pradesh:** Gwalior & Datia-200 each; **Jharkhand:** Daltonganj-200.

**Impact expected due to dense to very dense fog in the night/morning hours over Punjab, Haryana-Chandigarh, Uttar Pradesh during 25<sup>th</sup> night to 30<sup>th</sup> morning; Rajasthan during 25<sup>th</sup> night to 27<sup>th</sup> 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.

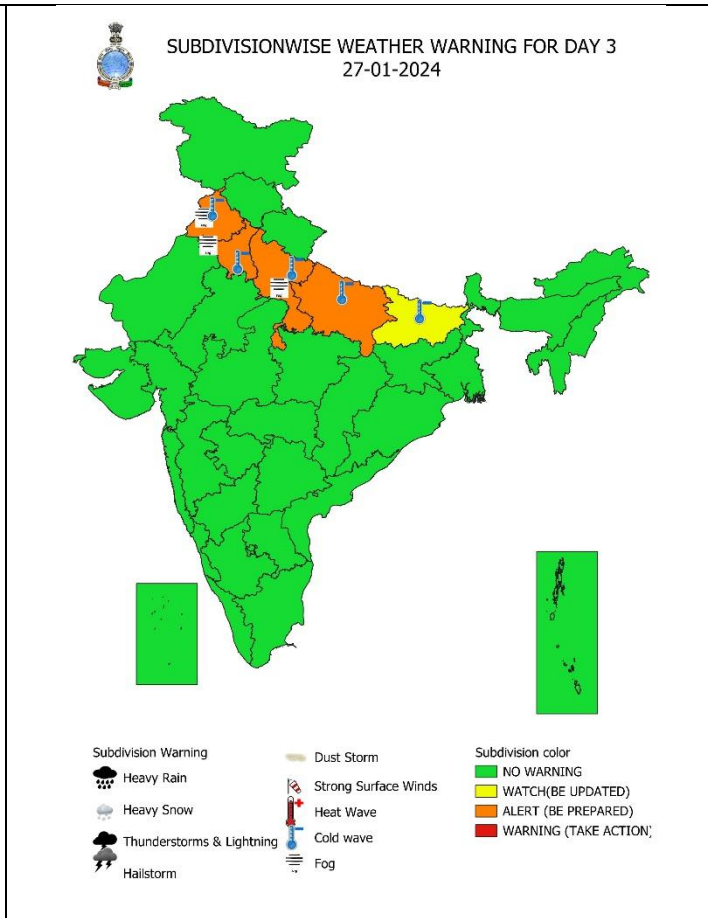
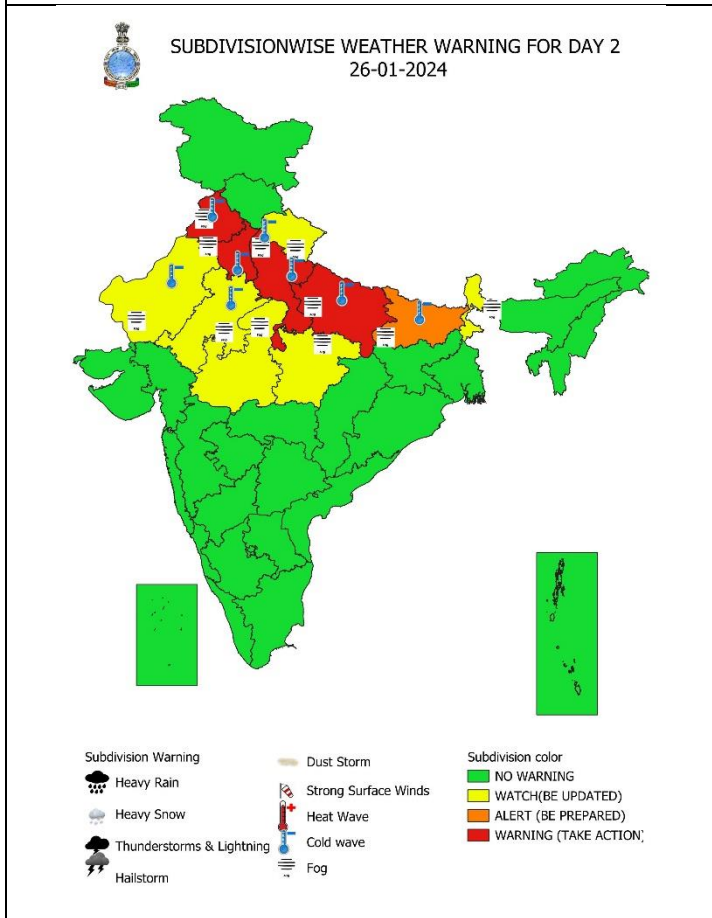
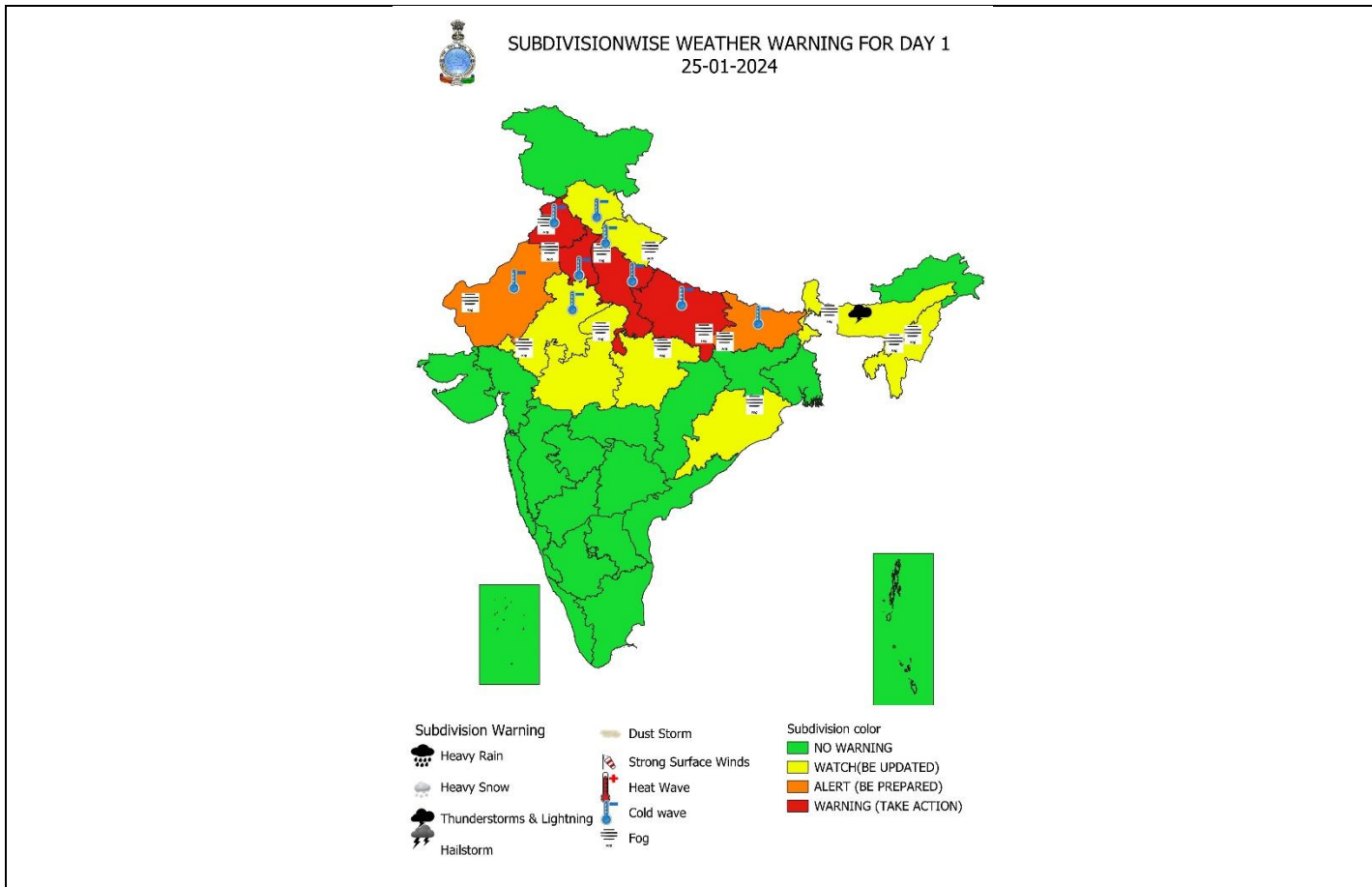
- ❖ Be in touch with airlines, railways and state transport for schedule of your journey.
- ❖ **Power Sector:**
  - ❖ To keep ready Maintenance Team
  - ❖ Human Health: To avoid outing until unless emergency and to cover the face.

**Impact expected due to Cold Day/Severe Cold Day conditions over Punjab, Haryana-Chandigarh, Uttar Pradesh on 25<sup>th</sup> & 26<sup>th</sup>; Bihar and northwest Rajasthan on 25<sup>th</sup> 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 earlobes. Severe frostbite needs immediate medical attention and treatment.
- ❖ Impact on agriculture, crop, livestock, water supply, transport and power sector at some places.

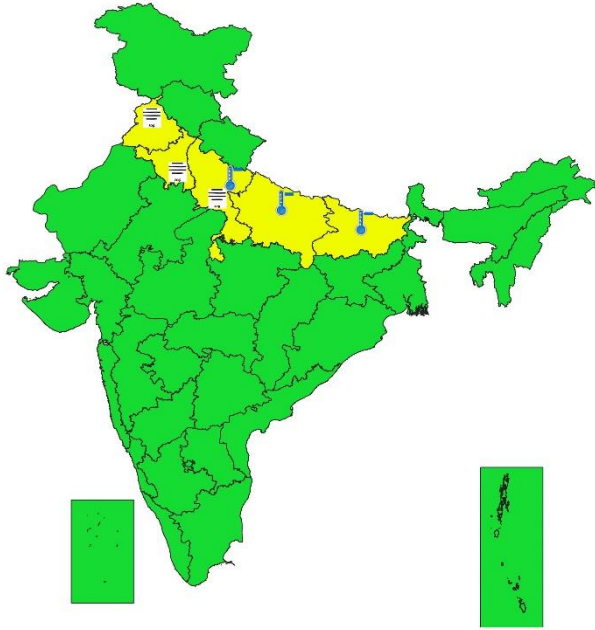
**Action suggested:**

- ❖ 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.





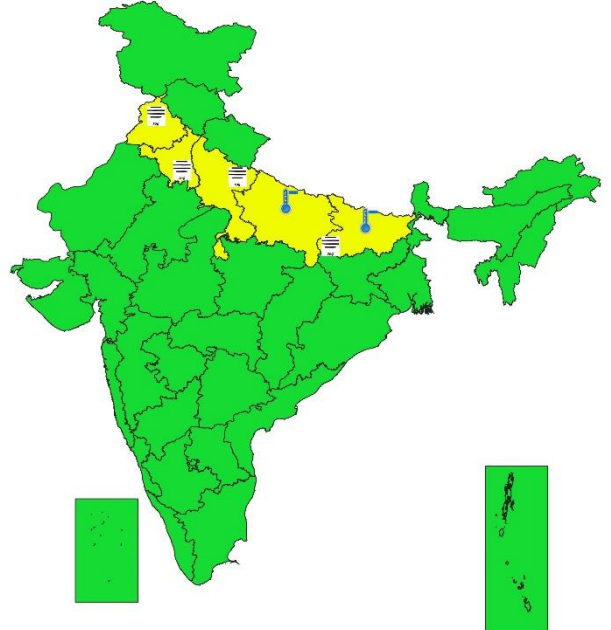
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 4**  
28-01-2024



<b>Subdivision Warning</b>	Dust Storm	<b>Subdivision color</b>
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**  
29-01-2024



<b>Subdivision Warning</b>	Dust Storm	<b>Subdivision color</b>
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	
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  $\leq 10^{\circ}\text{C}$  for plains and  $\leq 0^{\circ}\text{C}$  for hilly regions.

**(a) Based on departure**

Cold Wave: Minimum Temperature Departure from normal  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

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  $\leq 15^{\circ}\text{C}$

**Cold Day**

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  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

Severe Cold Day: Maximum Temperature Departure from normal  $\leq -6.5^{\circ}\text{C}$

**Fog**

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