



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

**Press Release**

**Date: 22<sup>nd</sup> December, 2023**

**Time of Issue: 1200 hours IST**

**Subject: No significant weather over most parts of the country during the next 5 days.**

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

- **Minimum temperatures** are in the range of 4-8°C over most parts of Punjab, Haryana-Chandigarh-Delhi, northwest Rajasthan; some parts of northwest Uttar Pradesh and 8-12°C over many parts of East Uttar Pradesh, south Rajasthan, Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand and interior Odisha. Minimum Temperature are **below normal** by 2-3°C at isolated places over Punjab, Haryana, Chhattisgarh, interior Odisha, Vidarbha and Telangana and normal to above normal over rest parts of the country.
- **Today in the morning hours, Dense to very dense fog** (visibility: 25-50m) observed in isolated pockets of Punjab; Moderate Fog (visibility: 200-500m) in isolated pockets of Haryana & Delhi; Shallow Fog (visibility 500-1000 meters) in some pockets of East Uttar Pradesh and in isolated pockets of West Uttar Pradesh, Bihar and Tripura.
- **Cold wave conditions** observed in isolated pockets over **Ludhiana and Adampur in Punjab.**

**Weather Systems and Forecast & Warnings during next 5 days: (graphics in Annexure I)**

**Weather Systems:**

- A Western Disturbance seen as a trough in middle & upper tropospheric levels between Lat. 42°N/Lon. 55°E and Lat. 20°N/Lon. 60°E.
- A Cyclonic Circulation lies over Equatorial Indian Ocean and adjoining Southwest Bay of Bengal in lower tropospheric levels.

**Forecast & Warnings:**

- **Isolated light rainfall/snowfall** likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 22<sup>nd</sup> & 23<sup>rd</sup>; over Himachal Pradesh & Uttarakhand on 22<sup>nd</sup> and **Isolated light rainfall** likely over Punjab on 22<sup>nd</sup> & 23<sup>rd</sup>; northwest Rajasthan, northwest Madhya Pradesh, Gujarat State on 22<sup>nd</sup> and Haryana on 23<sup>rd</sup> December.
- Light to moderate rainfall at isolated places very likely over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep area during next 5 days.

**Dense fog warning (Graphics in Annexure I):**

- **Dense to very dense fog** conditions very likely in morning hours at isolated pockets of Punjab during next 5 days. **Dense Fog** conditions very likely in morning hours in isolated pockets of Haryana on 24<sup>th</sup> & 25<sup>th</sup>; northwest Rajasthan on 24<sup>th</sup>; northwest Uttar Pradesh during 25<sup>th</sup>-27<sup>th</sup>; Assam & Meghalaya and Mizoram & Tripura and Odisha 23<sup>rd</sup> & 24<sup>th</sup> December.

**Minimum Temperatures Forecast:**

- **Northwest & Central India:** Rise by about 2°C in Minimum Temperatures during next 2 days and no significant change thereafter.
- **East India:** Rise by 2-3°C in Minimum Temperatures during next 3 days and no significant change thereafter.

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) and <https://mausam.imd.gov.in/responsive/cycloneinformation.php>

**Impact expected and action suggested due to dense to very dense fog in the night/morning hours in isolated pockets over Punjab on 24<sup>th</sup> & 25<sup>th</sup> December, 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:**

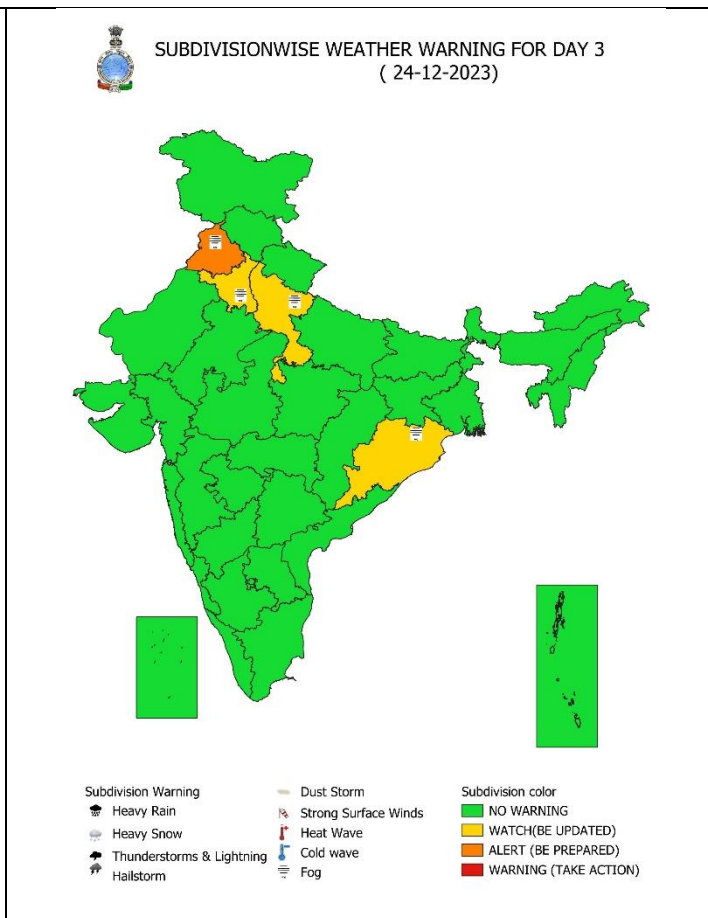
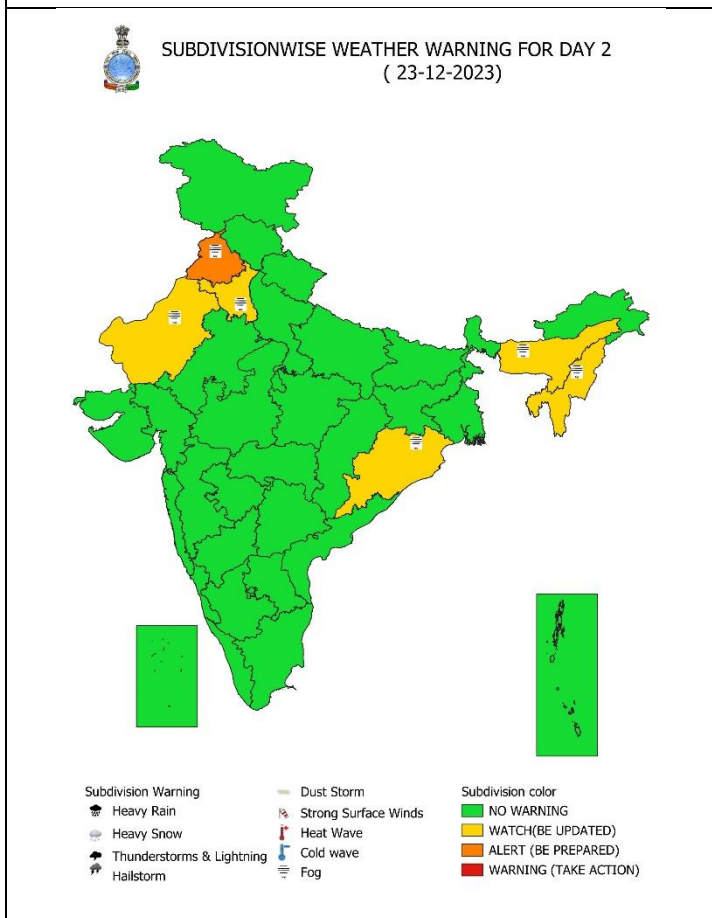
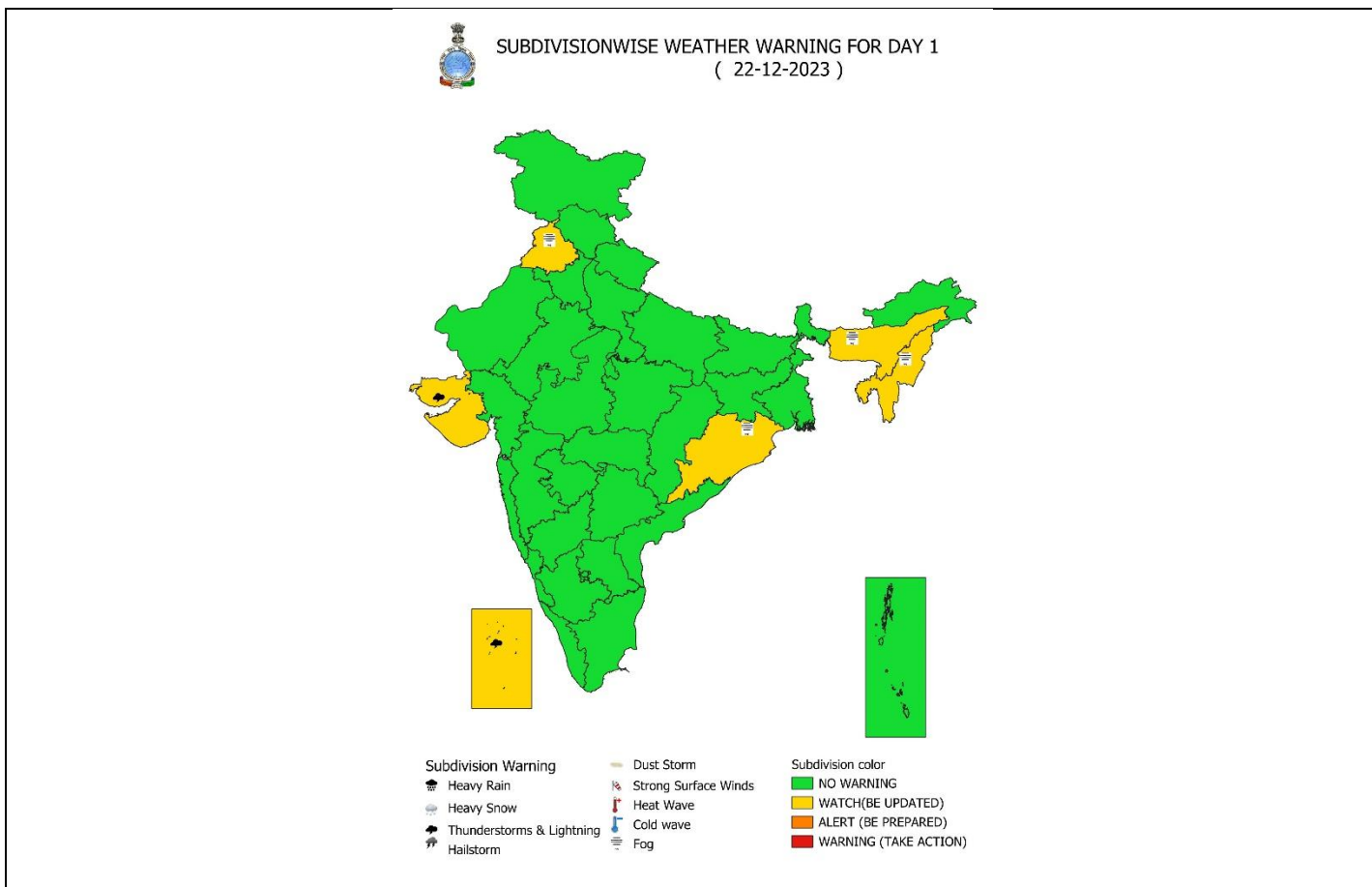
➤ **Transport and Aviation:**

- 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:**

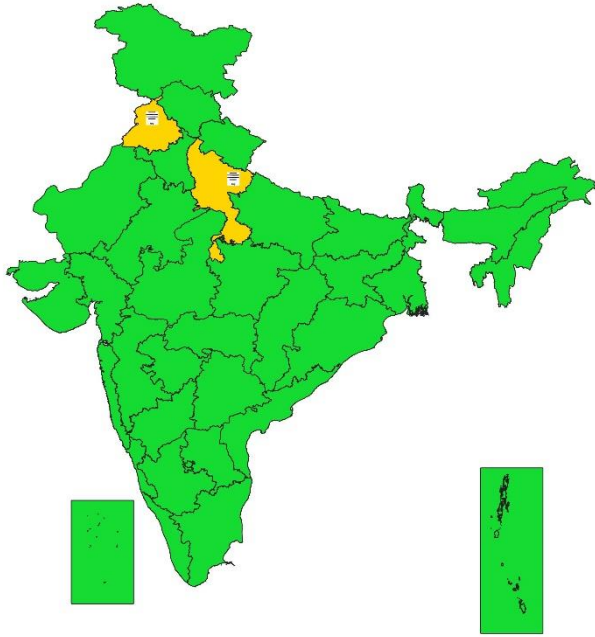
- To keep ready Maintenance Team

- **Human Health:** To avoid outing until unless emergency and to cover the face.





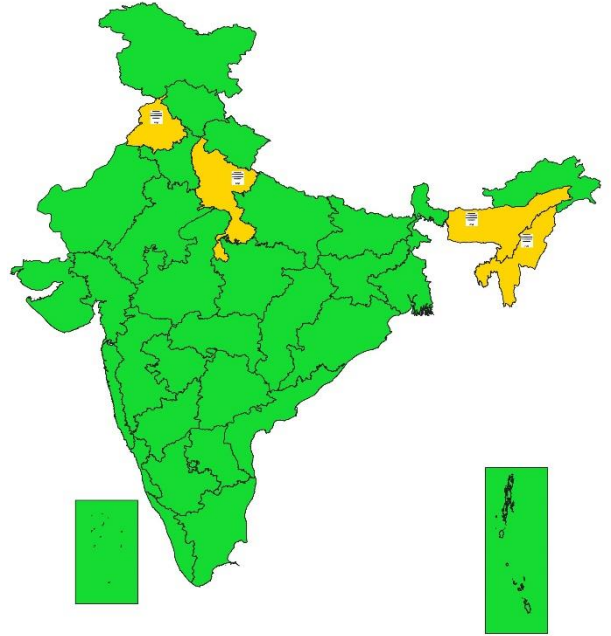
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 4  
( 25-12-2023)**



- |                            |                      |                          |
|----------------------------|----------------------|--------------------------|
| <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  
( 26-12-2023)**



- |                            |                      |                          |
|----------------------------|----------------------|--------------------------|
| <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	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:



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



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  $\leq -6.5^{\circ}\text{C}$



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