Government of India
Ministry of Earth Sciences
India Meteorological Department

Press Release
Date: 26th December, 2023
Time of Issue: 1200 hours IST

Subject: Dense to very dense fog likely to continue over Northwest & parts of adjoining Central India during next 3-4 days.

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

- **Minimum temperatures** are in the range of 6-10°C over most parts of Punjab, Haryana-Chandigarh-Delhi & West Uttar Pradesh and 11-12°C over most parts of Rajasthan, East Uttar Pradesh, Madhya Pradesh and some parts of north Chhattisgarh & Jharkhand. These are 2-3°C above normal over some parts of Punjab, Delhi, West Rajasthan, Uttar Pradesh, Jharkhand and over many parts of Bihar, Jharkhand, Gangetic West Bengal Gujarat and northeast India.
- **Fog Observed (at 0830 hours IST of today): Very dense fog** (visibility: 0-50 meters) in isolated pockets over Punjab, Haryana, Delhi, Uttar Pradesh, East Madhya Pradesh and **Dense fog** (visibility: 50-200 meters) over many parts of Punjab; in some parts of Haryana-Chandigarh-Delhi, Uttar Pradesh and in isolated pockets of north Rajasthan, Madhya Pradesh and Odisha.
- **Visibility Recorded (at 0830 IST of today) (<200 meters): Punjab:** Amritsar, Ludhiana & Patiala-25 each; **Haryana:** Ambala, Hissar, Karnal-25 each; Bhiwani-50; **Delhi:** Palam-50; **Uttar Pradesh:** Jhansi & Varanasi-25 each; Meerut & Lucknow-50 each; **East Madhya Pradesh:** Satna-25; Tikamgarh, Rewa, Khajuraho-50; **Odisha:** Rourkela-50.

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

Dense fog warning:

- **Dense to very dense fog** conditions very likely to continue in early hours/morning hours in many parts of Punjab during 27th-31st; some parts of Haryana, Chandigarh, Delhi and Uttar Pradesh during 27th-29th and over isolated pockets of north Rajasthan & north Madhya Pradesh on 27th December.
- **Dense Fog** conditions very likely to continue in early hours/morning hours in isolated pockets over Odisha, Uttarakhand on 27th & 28th; Haryana, Chandigarh, Delhi and Uttar Pradesh on 30th & 31st and over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during 27th-31st December.

Rainfall Forecast:

- A fresh Western Disturbance is likely to affect Northwest India from 30th December. Under its the influence and its interaction with lower level easterly winds, light isolated rainfall likely over Northwest & adjoining Central India during 30th December-02nd January, 2024.

Minimum Temperatures Forecast:

- No significant change in Minimum Temperatures likely over northern parts of the country during next 5 days.

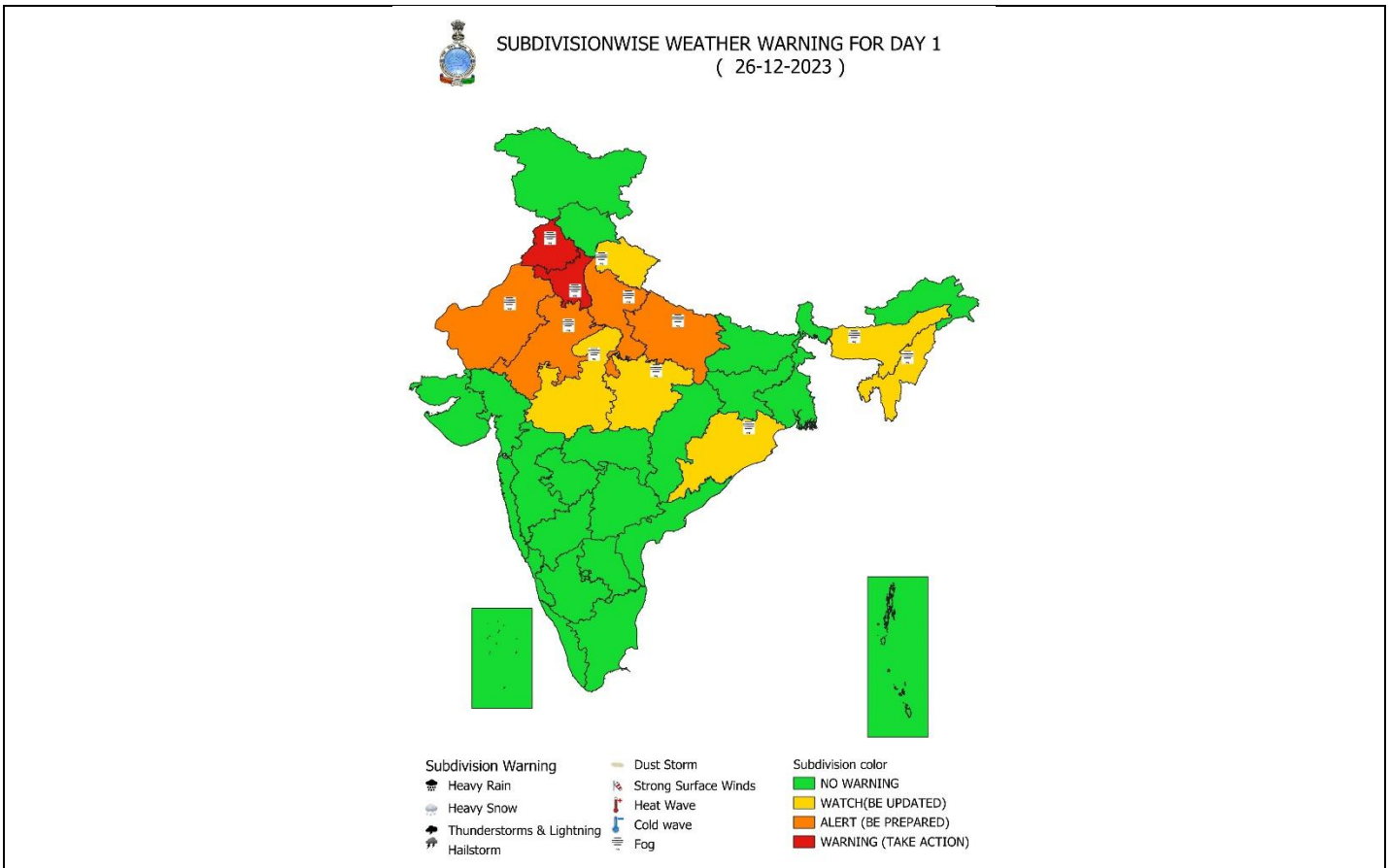
For more details kindly refer: https://mausam.imd.gov.in/responsive/all_india_forcast_bulletin.php

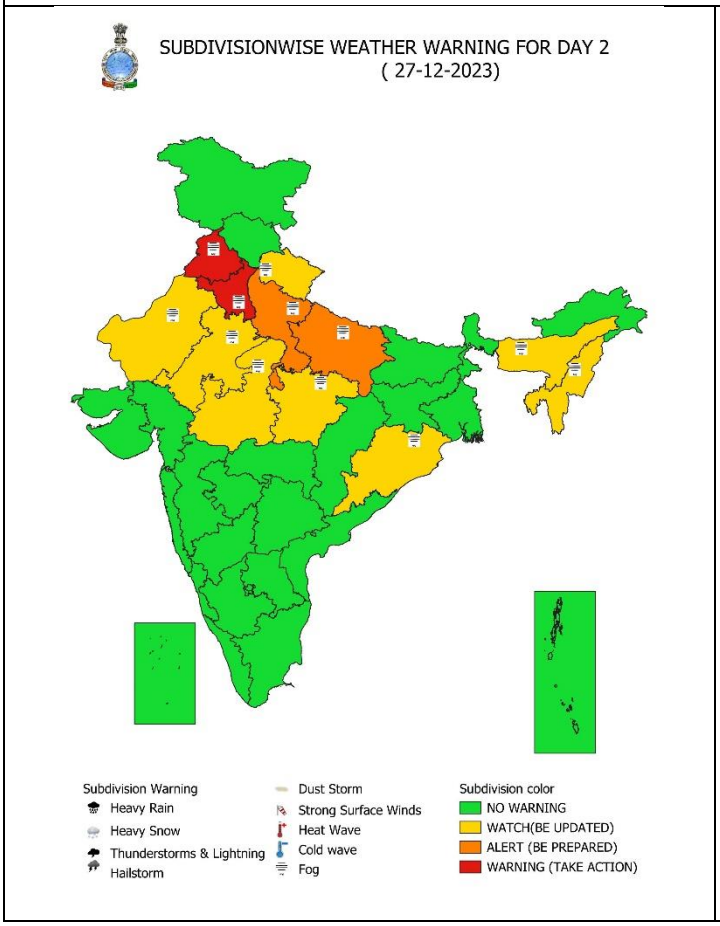
Impact expected due to dense to very dense fog in the early hours/morning hours over Punjab during 27th-31st; Haryana, Chandigarh, Delhi during 27th-29th ; Uttar Pradesh on 27th & 28th and over north Rajasthan & north Madhya Pradesh 27th December, 2023.

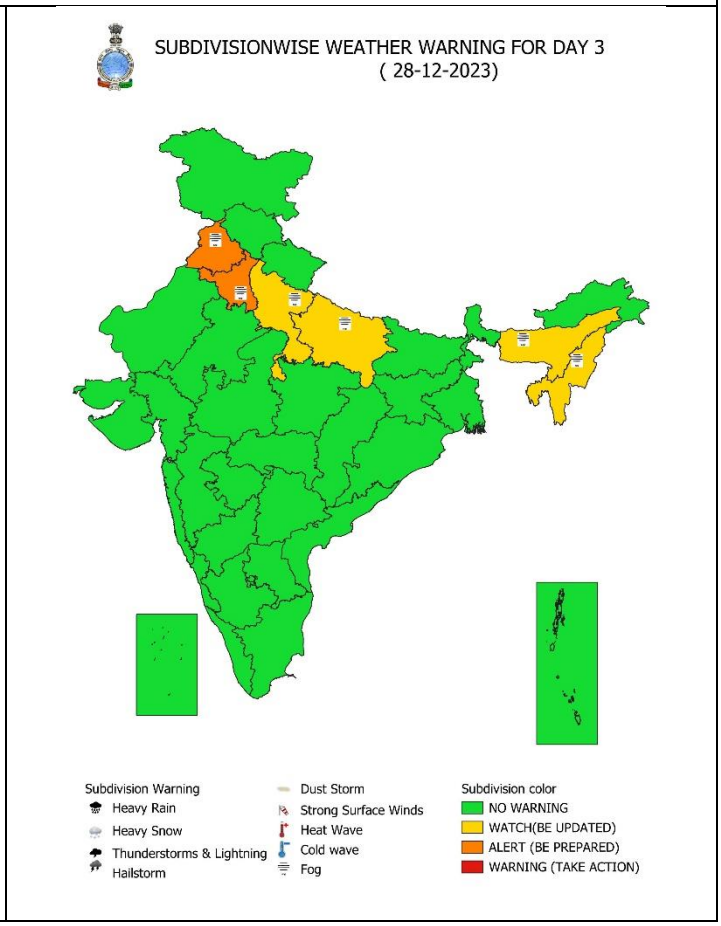
- **Transport and Aviation:**
  - May affect some airports, highways and railway routes in the areas of met- sub-division.
  - Difficult driving conditions with slower journey times.
  - Unless taken precautionary measures, it may lead to some road traffic collisions.
- **Power Sector:**
  - Chances 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:

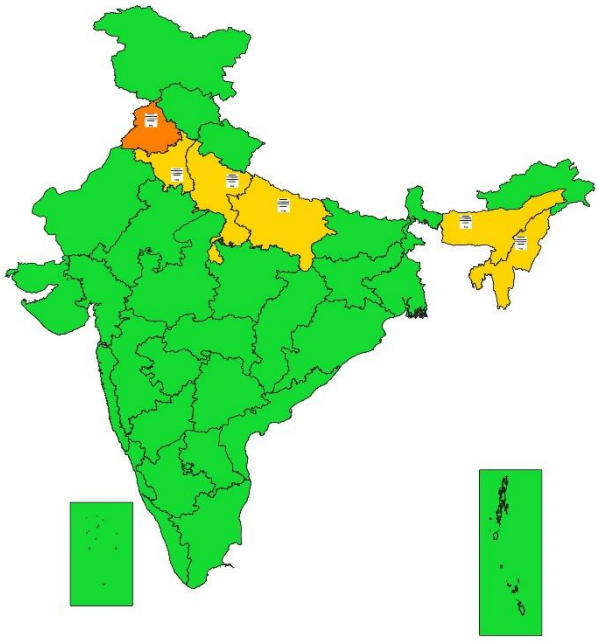
- **Transport and Aviation:**
  - Be careful while driving or outing through any transport.
  - Use fog lights during driving.
  - Be in touch with airlines, railways and state transport for schedule of your journey.
- **Power Sector:**
  - To keep ready Maintenance Team
  - Human Health: To avoid outing until unless emergency and to cover the face.


SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
(26-12-2023)
Subdivision Warning
Heavy Rain
Heavy Snow
Thunderstorms & Lightning
Hailstorm
Dust Storm
Strong Surface Winds
Heat Wave
Cold wave
Fog
Subdivision color
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)


SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
(27-12-2023)
Subdivision Warning
Heavy Rain
Heavy Snow
Thunderstorms & Lightning
Hailstorm
Dust Storm
Strong Surface Winds
Heat Wave
Cold wave
Fog
Subdivision color
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)


SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
(28-12-2023)
Subdivision Warning
Heavy Rain
Heavy Snow
Thunderstorms & Lightning
Hailstorm
Dust Storm
Strong Surface Winds
Heat Wave
Cold wave
Fog
Subdivision color
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)

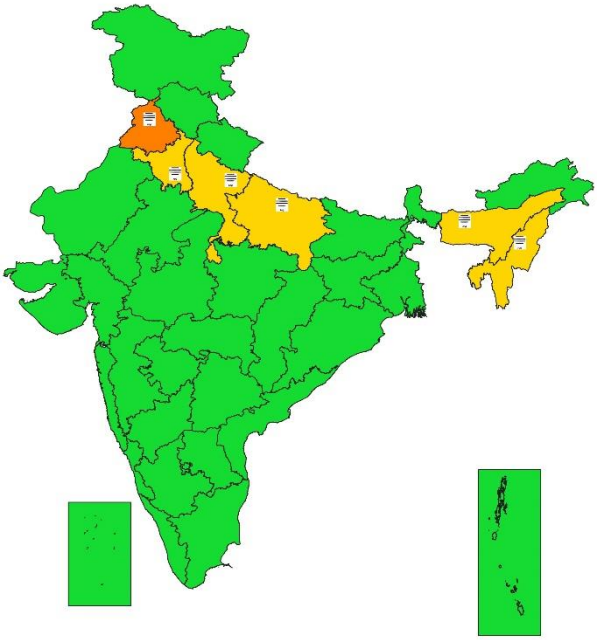
SUBDIVISIONWISE WEATHER WARNING FOR DAY 4
(29-12-2023)



Subdivision Warning
- Heavy Rain
- Heavy Snow
- Thunderstorms & Lightning
- Hailstorm
- Dust Storm
- Strong Surface Winds
- Heat Wave
- Cold wave
- Fog

Subdivision color
- NO WARNING
- WATCH(BE UPDATED)
- ALERT (BE PREPARED)
- WARNING (TAKE ACTION)

SUBDIVISIONWISE WEATHER WARNING FOR DAY 5
(30-12-2023)



Subdivision Warning
- Heavy Rain
- Heavy Snow
- Thunderstorms & Lightning
- Hailstorm
- Dust Storm
- Strong Surface Winds
- Heat Wave
- Cold wave
- Fog

Subdivision color
- NO WARNING
- WATCH(BE UPDATED)
- ALERT (BE PREPARED)
- 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 Widespred (FWS/ Many Places)	1-25	Isolated (ISOL)

Subdivision Warning		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:

Cold Wave

When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions.

(a). Based on departure

- **Cold Wave:** Minimum Temperature Departure from normal -4.5 °C to -6.4 °C.
- **Severe Cold Wave:** Minimum Temperature Departure from normal ≤ -6.5 °C

(b) Based on actual Minimum Temperature (for Plains only)

- **Cold Wave :** When Minimum Temperature is ≤ 4.0 °C
- **Severe Cold Wave:** When Minimum Temperature is ≤ 2.0 °C

(c) For Coastal Stations

When Minimum Temperature departure is ≤-4.5 °C & actual Minimum Temperature is ≤ 15 °C

Cold Day

When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions

Based on departure

- **Cold Day:** Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.
- **Severe Cold Day:** Maximum Temperature Departure from normal ≤ -6.5 °C

Fog

Phenomenon of small droplets suspended in air and the horizontal visibility < 1km

- **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