



Government of India
Ministry of Earth Sciences
India Meteorological Department

Press Release

Date: 28th December, 2023

Time of Issue: 1345 hours IST

Subject: i) Dense to very dense fog at many parts likely to continue over Northwest India during next 2 days and gradually improve thereafter.

ii) Light isolated rainfall likely over Northwest & Central India during 30th December, 2023 to 02nd January, 2024.

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

- **Minimum temperatures** are in the range of 8-12°C over most parts of Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Madhya Pradesh, Rajasthan, Bihar and Jharkhand. **These are 2-4°C above normal** over many parts of Punjab, Haryana-Chandigarh-Delhi, Rajasthan, Uttar Pradesh, Bihar & Jharkhand.
- **Fog Observed (at 0830 hours IST of today):** Dense to very dense fog reported over most parts of Punjab & Haryana, Delhi and Uttar Pradesh and in isolated pockets over Jammu & Kashmir, Uttarakhand, West Rajasthan and north Madhya Pradesh.
- **Visibility Recorded (at 0830 IST of today) (≤200 meters):** **Jammu & Kashmir:** Srinagar-25; **Uttarakhand:** Pantnagar-25; **Punjab:** Bhatinda-0, Amritsar, Patiala-25; Ludhiana-50; **Haryana:** Chandigarh, Ambala-25; Hissar-50; **Delhi:** Ayanagar-25, Palam-50, Safdarjung-200; **West Rajasthan:** Pilani-25, Ganganagar, Chru-50; **West Uttar Pradesh:** Agra-0, Bareilly-25; Jhansi-50; **East Uttar Pradesh:** Lucknow, Barabanki, Varanasi-25; Fursatganj, Bahraich-50; **West Madhya Pradesh:** Gwalior, Datia-25; **East Madhya Pradesh:** Rewa-25.

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 during night/morning hours in many parts of Punjab, Haryana, Chandigarh, Delhi and some parts of Uttar Pradesh during 28th night to 30th morning and in some parts for subsequent 3 days. Dense fog conditions are likely to improve gradually from 31st December morning.
- **Dense Fog** conditions very likely to continue during morning hours in isolated pockets over north Rajasthan, north Madhya Pradesh on 29th & 30th; Odisha during 29th-31st; Bihar on 30th & 31st; Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura of 29th December, 2023 to 01st January, 2024.
- **Cold Day conditions** very likely in some parts over Punjab, Haryana-Chandigarh-Delhi and West Uttar Pradesh and in isolated pockets over East Uttar Pradesh on 28th & 29th December.

Rainfall Forecast:

- Under the influence of a fresh Western Disturbance, light rainfall/snowfall is very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand on 30th & 31st December, 2023.
- Due to lower level easterly winds from Bay of Bengal, light isolated rainfall likely over Uttar Pradesh, Madhya Pradesh and Chhattisgarh during 31st December, 2023 to 02nd January, 2024.
- Under the influence of a fresh easterly wave, light to moderate isolated/scattered rainfall very likely over south Tamil Nadu and Kerala from 31st December to 02nd January, 2024.
- Isolated **heavy rainfall** also likely over south Tamil Nadu on 31st December, 2023 & 01st January, 2024.

Minimum Temperatures Forecast:

- No significant change in Minimum Temperatures likely over Northwest & East India during next 5 days.
- No significant change in Minimum Temperatures likely over central India during next 24 hours and rise by 2-3°C thereafter.

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

Impact expected due to dense to very dense fog in the night/morning hours over Punjab, Haryana, Chandigarh, Delhi and Uttar Pradesh during 28th night to 30th 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:**

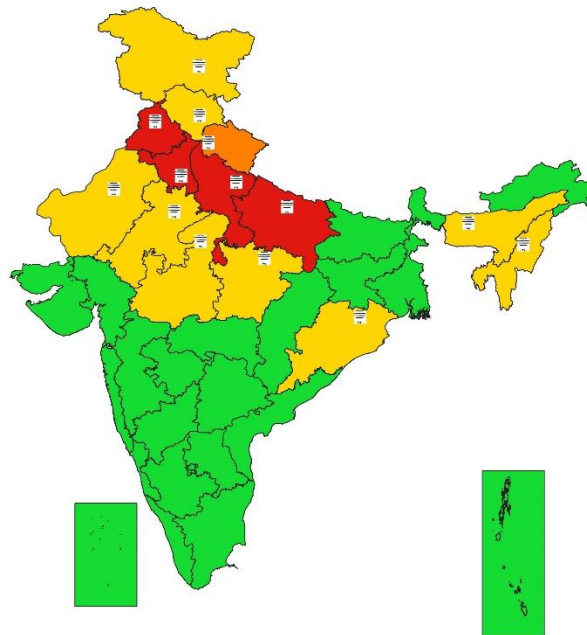
- Be careful while driving or outing through any transport.
- Use fog lights during driving.
- Be in touch with airlines, railways and state transport for schedule of your journey.

❖ **Power Sector:**

- To keep ready Maintenance Team
- Human Health: To avoid outing until unless emergency and to cover the face.



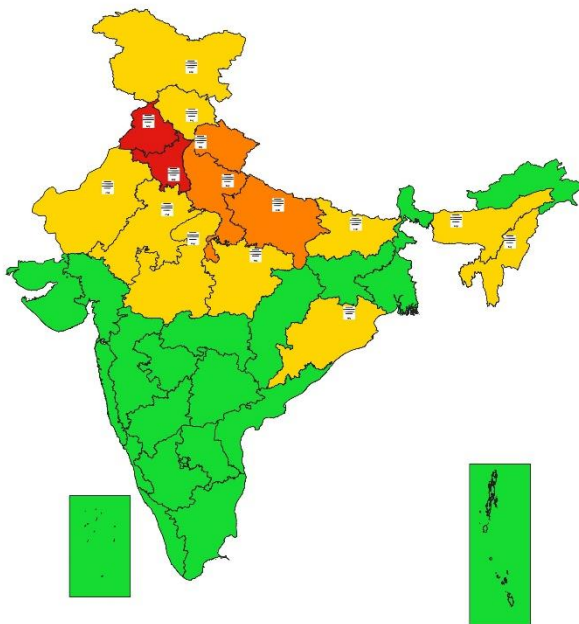
SUBDIVISIONWISE WEATHER WARNING FOR DAY 1 (28-12-2023)



- | | | |
|----------------------------|----------------------|--------------------------|
| 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) |



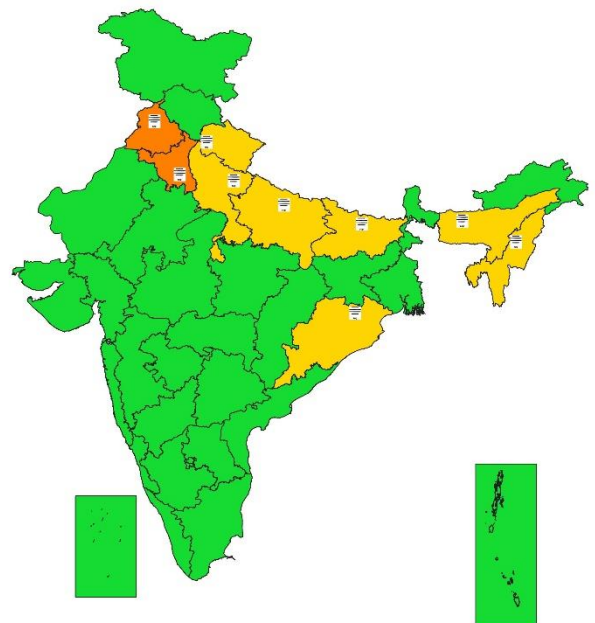
SUBDIVISIONWISE WEATHER WARNING FOR DAY 2 (29-12-2023)



- | | | |
|----------------------------|----------------------|--------------------------|
| 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) |



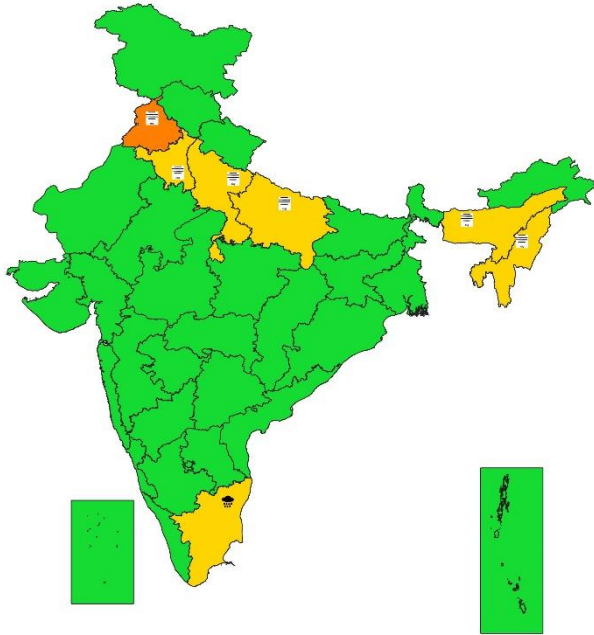
SUBDIVISIONWISE WEATHER WARNING FOR DAY 3 (30-12-2023)



- | | | |
|----------------------------|----------------------|--------------------------|
| 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) |



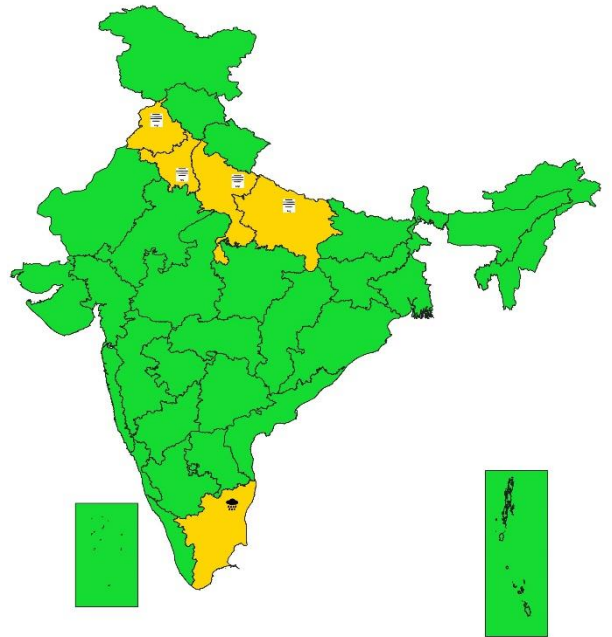
SUBDIVISIONWISE WEATHER WARNING FOR DAY 4
(31-12-2023)



- | | | |
|----------------------------|----------------------|--------------------------|
| 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) |



SUBDIVISIONWISE WEATHER WARNING FOR DAY-5
(1-1-2024)



- | | | |
|----------------------------|----------------------|--------------------------|
| 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) |

District wise Dense fog warning for Punjab, Haryana and Uttar Pradesh

भारत सरकार
पृथ्वी विज्ञान मंत्रालय
भारत मौसम विज्ञान विभाग
मौसम केंद्र चंडीगढ़

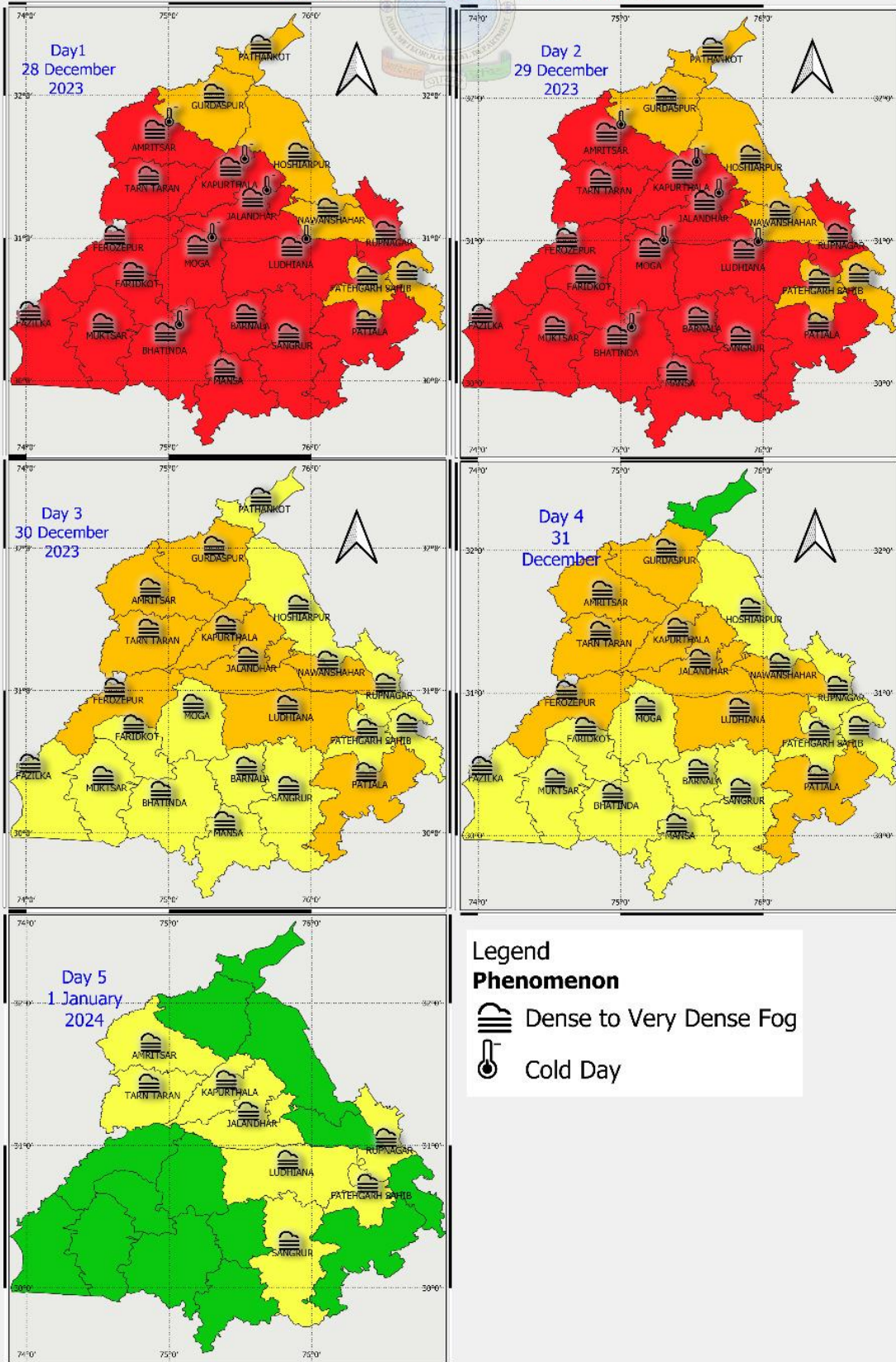
District wise weather warnings for Punjab

Date 28 December 2023

ਪੰਜਾਬ ਦੇ ਲਿਏ ਜ਼ਿਲੇਵਾਰ ਮੌਸਮ ਚੇਤਾਵਨੀ

Government of India
Ministry of Earth Sciences
India Meteorological Department
Meteorological Centre, Chandigarh

Note: Warning for any day is valid from 0830 hours IST of that day till 0830 hours IST of next day
ਨੋਟ: ਕਿਸੇ ਵੀ ਦਿਨ ਦੀ ਚੇਤਾਵਨੀ ਉਸ ਦਿਨ ਦੇ 0830 ਘੰਟੇ IST ਤੋਂ ਅਗਲੇ ਦਿਨ ਦੇ 0830 ਘੰਟੇ IST ਤੱਕ ਮਾਨ्य ਹੈ।

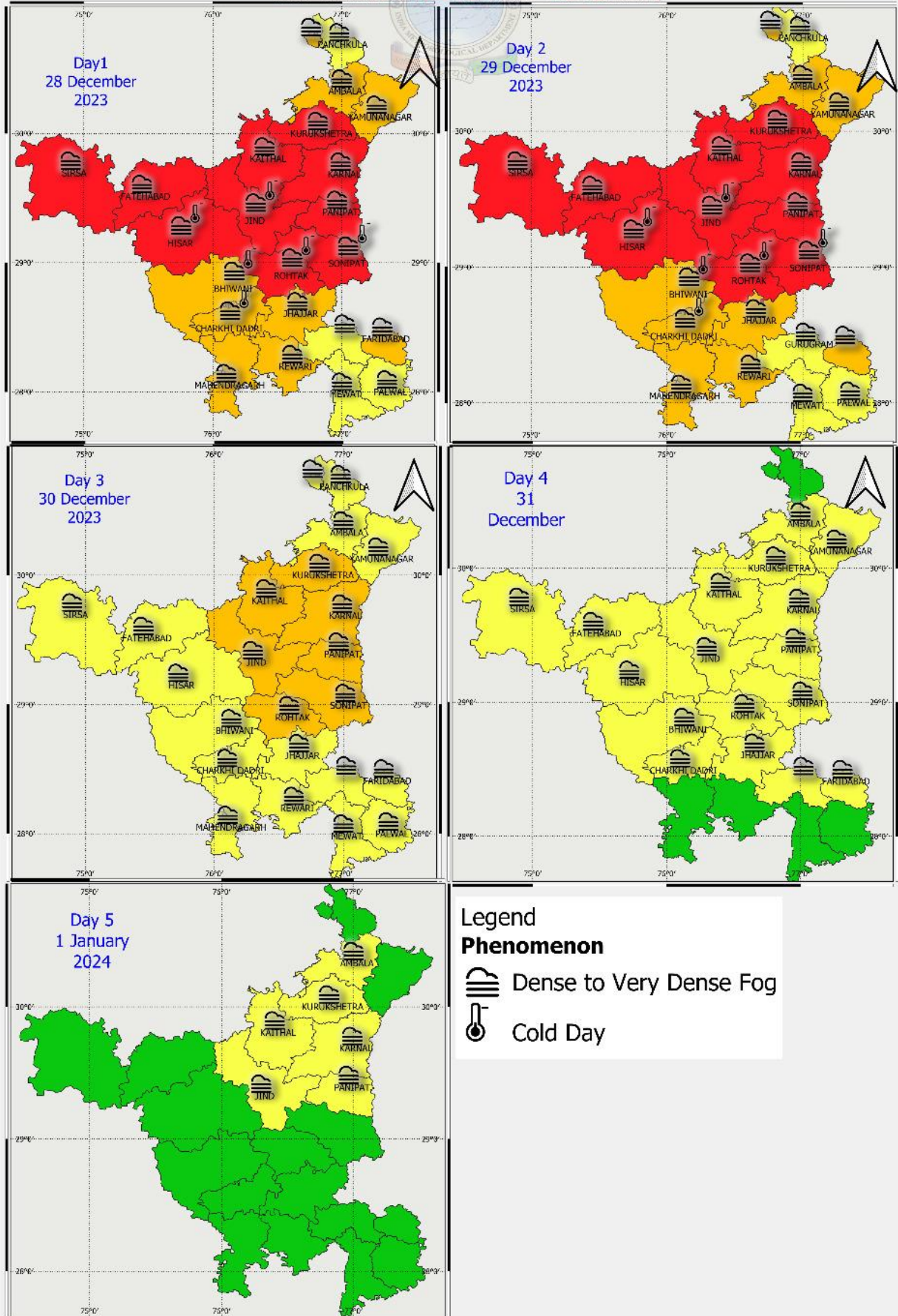


District wise weather warnings for Haryana

Dated 28 December 2023

हरियाणा के लिए जिलेवार मौसम चेतावनी

Note: Warning for any day is valid from 0830 hours IST of that day till 0830 hours IST of next day
बिना किसी दिन की चेतावनी इस दिन के 0830 बजे IST से अगले दिन के 0830 बजे IST तक मान्य है

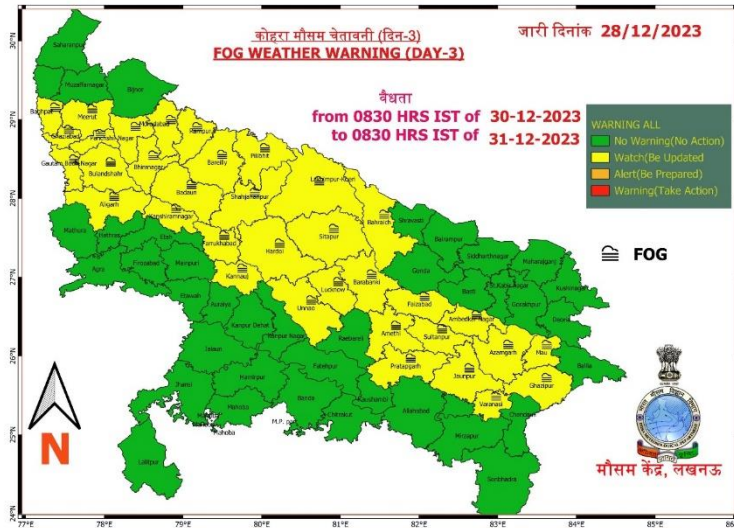
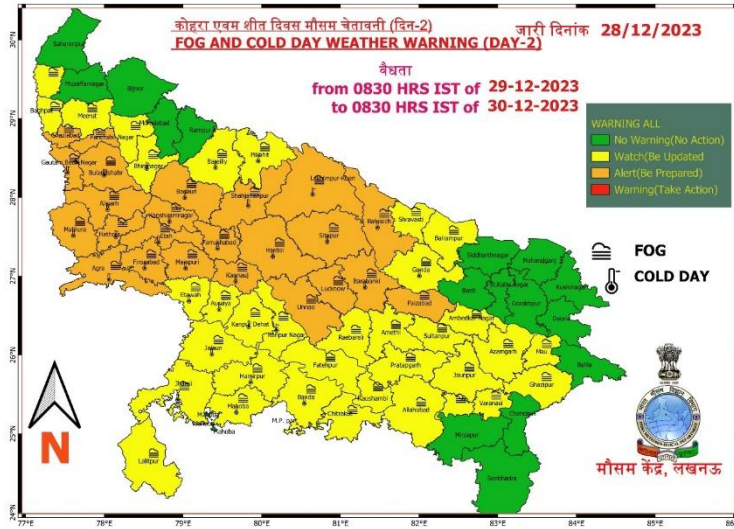
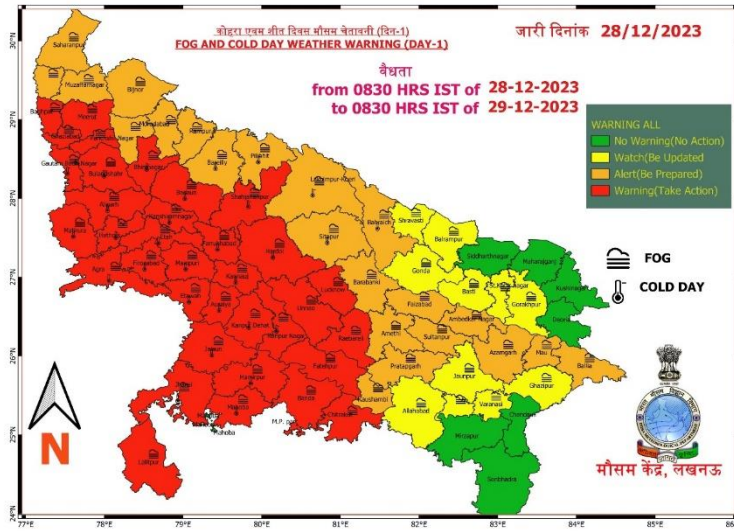


No Warning
कोई चेतावनी नहीं

Be Updated
निगरानी

Be Prepared
सचेत(तैयार रहे)

Take Action
चेतावनी(कार्रवाई करें)



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:

	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°C to -6.4°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°C to -6.4°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