



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 08th January, 2024

Time of Issue: 1300 hours IST

Subject: 1) Dense to very dense fog and Cold Day to Severe Cold Day conditions likely to continue over north India during next 24 hours and gradually decrease thereafter.

2) A fresh rainfall spell likely over Northwest & Central India (with isolated thunderstorm/hailstorm over East Rajasthan & West Madhya Pradesh) on 08th & 09th January.

3) Light to moderate rainfall spell likely over south Peninsular India with isolated heavy rainfall over Tamil Nadu during next 3 days and over Kerala during next 24 hours.

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

- **Minimum temperatures:** Minimum Temperatures are in the range of 4-8°C over Punjab, Haryana-Chandigarh-Delhi, West Uttar Pradesh and Rajasthan; 9-12°C over parts of East Uttar Pradesh and northwest Madhya Pradesh. It is above normal by 1-3°C over in isolated pockets over Punjab, Haryana-Chandigarh-Delhi, south Rajasthan and in many pockets over East Uttar Pradesh, Madhya Pradesh, Chhattisgarh and 4-7°C above normal over many parts of Bihar and Jharkhand. **Today, the lowest minimum temperature of 3.0°C reported at Alwar (East Rajasthan).**
- **Yesterday, Maximum temperatures** were in the range of 10-14°C over Punjab, north Rajasthan and Haryana-Chandigarh and in the range of 15-18°C over Delhi and West Uttar Pradesh. It were below normal by 4-9°C over many parts of Punjab, Haryana-Chandigarh, Rajasthan and Madhya Pradesh.
- Yesterday, **Cold day to severe cold day conditions** prevailed over some parts of Punjab, Haryana, Chandigarh & Delhi and in isolated pockets over East Rajasthan. **Cold day conditions** in isolated pockets of West Rajasthan and north Madhya Pradesh.
- **Fog conditions observed** (at 0530 & 0830 hours IST of today): **Very Dense fog (visibility < 50 metre)** in many parts of Punjab; in some parts of Uttarakhand, East Uttar Pradesh, Bihar; in isolated pockets of Haryana-Chandigarh, West Uttar Pradesh, Rajasthan; **Dense fog (visibility 50-200 metre)** in isolated pockets of Chandigarh, north Madhya Pradesh and Odisha.
- **Visibility recorded** (at 0530 hours IST of today) (in meters): **Punjab:** Patiala-25, Amritsar-50; **Uttar Pradesh:** Bareilly and Gorakhpur-25 each; Bahraich and Varanasi-50 each, Varanasi (Babatpur)-200, Sultanpur, Lucknow and Jhansi-500 each; **Haryana-Chandigarh:** Ambala-25, Chandigarh-50, Hissar-500; **Rajasthan:** Churu-25, Jaisalmer-200, Jaipur, Ajmer, Kota and Ganganagar-500 each; **Bihar:** Gaya-25; **Madhya Pradesh:** Jabalpur-50, Sagar-200, Gwalior, Indore and Bhopal-500 each; **Chhattisgarh:** Ambikapur-200
- **Visibility recorded** (at 0830 hours IST of today) (in meters): **Punjab:** Patiala-25, Amritsar-50; **Uttar Pradesh:** Allahabad- 25; Bareilly- 50; Sultanpur, Varanasi, Gorakhpur- 200 each; **Haryana-Chandigarh:** Chandigarh, Karnal-50 each, Ambala-200; **Rajasthan:** Churu, Jaisalmer, Ajmer, Phalodi- 25 each; Pilani, Jaipur -50 each; Sikar, Chittorgarh-200 each; **Chhattisgarh:** Ambikapur-25; **Bihar:** Patna, Purnea- 200 each; **Madhya Pradesh:** Satna-50, Sagar, Raisen, Mandla-200 each; **Odisha:** Rowkela-200; **Sub-Himalayan West Bengal & Sikkim:** Cooch Behar- 200; **Assam:** Dhubri- 200;
- **Heavy to very heavy rainfall at a few places with extremely heavy falls** at isolated places recorded over Tamil Nadu, Puducherry & Karaikal. **(Refer Annexure I)**

Weather Systems and Forecast & Warnings during next 5 days:

- Under the influence of a trough runs from south Sri Lanka coast to north coastal Tamil Nadu in lower tropospheric levels:
 - ✓ Light to moderate rainfall at some places very likely over Tamil Nadu, Kerala and Lakshadweep during next 4-5 days. Isolated **heavy rainfall** very likely over coastal Tamil Nadu, Puducherry & Karaikal during 08th-10th; over Kerala and Rayalaseema on 08th January.
 - ✓ **Isolated very heavy rainfall also very likely over coastal Tamil Nadu, Puducherry & Karaikal on 08th January.**
- A Western Disturbance as a trough in middle tropospheric westerlies runs roughly along Long. 63°E to the north of Lat. 25°N. Under its the influence and its interaction with lower-level easterly winds:
 - ✓ Light isolated rainfall/snowfall likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand on 09th January and isolated rainfall over plains of Northwest India and Central India on 09th January.
 - ✓ Light to moderate rainfall accompanied with thunderstorms and lightning very likely at some places over Maharashtra during 08th-10th January and over Gujarat on 08th & 09th January.
 - ✓ Isolated **hailstorm** also likely over East Rajasthan on 08th & 09th January and over West Madhya Pradesh on 09th January.

Dense fog and Cold day warning: (graphics in Annexure II)

- **Dense to very dense fog** conditions very likely to prevail in night/morning hours in some parts of Punjab and in isolated pockets of Haryana-Chandigarh on 08th & 09th January and **Dense fog** in isolated pockets for subsequent 4 days.
- **Dense to very dense fog** conditions very likely to prevail for a few hours in night/morning hours in some parts of Uttar Pradesh, Uttarakhand and Bihar on 08th & 09th and **Dense fog** in isolated pockets for subsequent 24 hours.
- **Dense fog** conditions very likely to prevail for a few hours in morning in isolated pockets over Jammu division on 09th; over Himachal Pradesh, north Madhya Pradesh, Jharkhand on 09th & 10th and over Odisha, West Bengal & Sikkim, Assam & Meghalaya, Mizoram & Tripura during 10th-12th January.
- **Cold Day to Severe Cold Day** conditions very likely to continue in some parts over Punjab on 08th & 09th and over Haryana-Chandigarh-Delhi on 08th January, 2024 and abate thereafter.
- **Cold Day** conditions in isolated pockets of Rajasthan on during 08th-10th January and over West Uttar Pradesh on 08th January.

Temperatures Forecast and Cold wave warning:

- No significant change in minimum temperatures likely over northern parts of the country during next 5 days.
- **Cold wave conditions** very likely in isolated pockets of north Rajasthan on 12th & 13th January, 2024.

Fishermen warning:

08th-10th Jan: Squally Weather with Wind Speed 40-45 Kmph gusting to 55 Kmph likely to prevail over along & off Tamil Nadu coast, adjoining Southwest Bay of Bengal, Gulf of Mannar & adjoining Comorin Area and along & off Sri Lanka coast. Fishermen are advised not to venture into these areas.

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

Realized Rainfall (in cm) during past 24 hours ending at 0830 hours IST of today:

Tamil Nadu and Puducherry: Sirkali (dist Mayiladuthurai) 24, Chidambaram (dist Cuddalore) 23, Velankanni (dist Nagapattinam) 22, Tiruvarur (dist Thiruvarur), Nagapattinam (dist Nagapattinam) 21 each, Kollidam (dist Mayiladuthurai), Bhuvanagiri (dist Cuddalore) 19 each, Nannilam (dist Thiruvarur) 17, Sethiathope (dist Cuddalore), Annamalai Nagar (dist Cuddalore) 15 each, Tirupoondi (dist Nagapattinam), K.M.Koil (dist Cuddalore), Karaikal (dist Karaikal), Cuddalore (dist Cuddalore) 14 each, Kodavasal (dist Thiruvarur), Marakkanam (dist Villupuram), Kothavacherry (dist Cuddalore), Puducherry (dist Puducherry) 13 each, Lalpet (dist Cuddalore), Vanur (dist Villupuram), Cuddalore Collector Office (dist Cuddalore) 12 each, Thiruvidaimaruthur (dist Thanjavur), Manalmedu (dist Mayiladuthurai), Valangaiman (dist Thiruvarur), Mayiladuthurai (dist Mayiladuthurai), Kumbakonam (dist Thanjavur) 11 each, Pandavaiyar Head (dist Thiruvarur), Lower Anaicut (dist Thanjavur), Satyabama Uty ARG (dist Kancheepuram), Parangipettai (dist Cuddalore), Kurinjipadi (dist Cuddalore), Cheyyur (dist Chengalpattu), Maduranthagam (dist Chengalpattu), Puducherry KVK (dist Puducherry), Thalaignayer (dist Nagapattinam) 10 each, Ennore AWS (dist Chennai), Vadakuthu (dist Cuddalore), Tindivanam (dist Villupuram), Tarangambadi (dist Mayiladuthurai), Srimushnam (dist Cuddalore), Jayamkondam (dist Ariyalur), Manjalaru (dist Thanjavur), RSCL Vallam (dist Villupuram), Needamangalam (dist Thiruvarur), RSCL-2 Kanjanur (dist Villupuram), Thirukalukundram (dist Chengalpattu), Vilupuram (dist Villupuram), RSCL-2 Nemoor (dist Villupuram), RSCL-2 Koliyanur (dist Villupuram), RSCL-2 Soorapattu (dist Villupuram) 9 each, RSCL-2 Valavanur (dist Villupuram), Vanamadevi (dist Cuddalore), Ponneri (dist Tiruvallur), VIT_Chennai AWS (dist Chengalpattu), Keelambakkam (dist Chengalpattu), Suthamalli Dam (dist Ariyalur) 8 each,

Impact expected due to dense to very dense fog in the night/morning hours over Bihar, Sub-Himalayan West Bengal & Sikkim on 09th & 10th and Punjab, Haryana, Chandigarh, Uttar Pradesh on 09th January.

❖ **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 to Severe Cold day conditions over Punjab, Haryana, Chandigarh, Delhi and Rajasthan on 08th 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 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.

EXPECTED IMPACT & ACTION SUGGESTED due to very heavy rainfall over coastal Tamil Nadu on 08th January, 2024.

Impact Expected

- Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
- Occasional reduction in visibility due to heavy rainfall.
- Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- Minor damage to kutchra roads.
- Possibilities of damage to vulnerable structure.
- Localized Landslides/Mudslides
- Damage to horticulture and standing crops in some areas due to inundation.
- It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

Action Suggested

- Check for traffic congestion on your route before leaving for your destination.
- Follow any traffic advisories that are issued in this regard.
- Avoid going to areas that face the water logging problems often.
- Avoid staying in vulnerable structure.

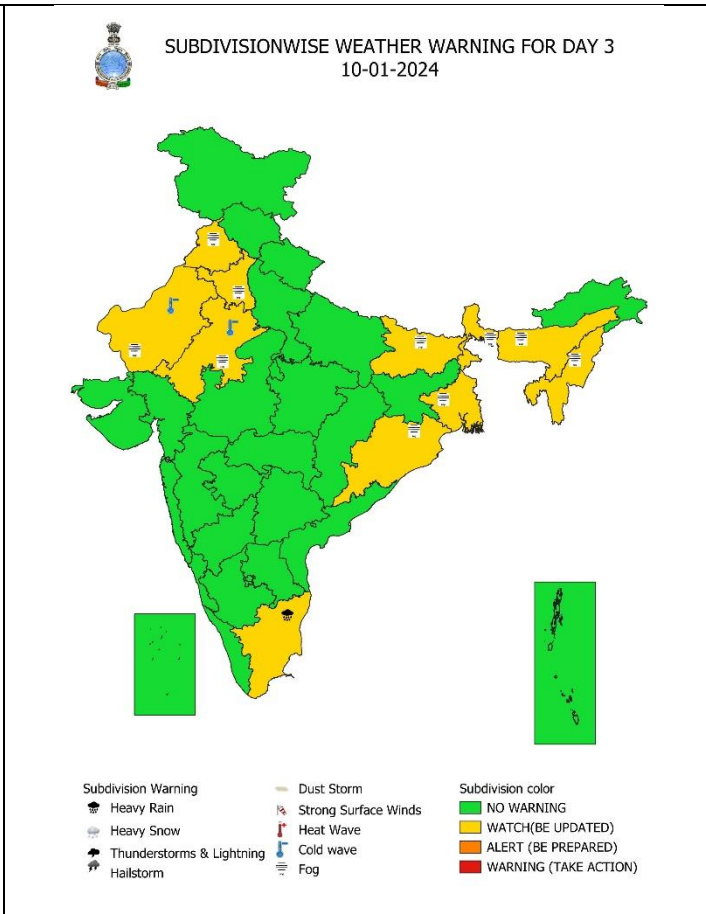
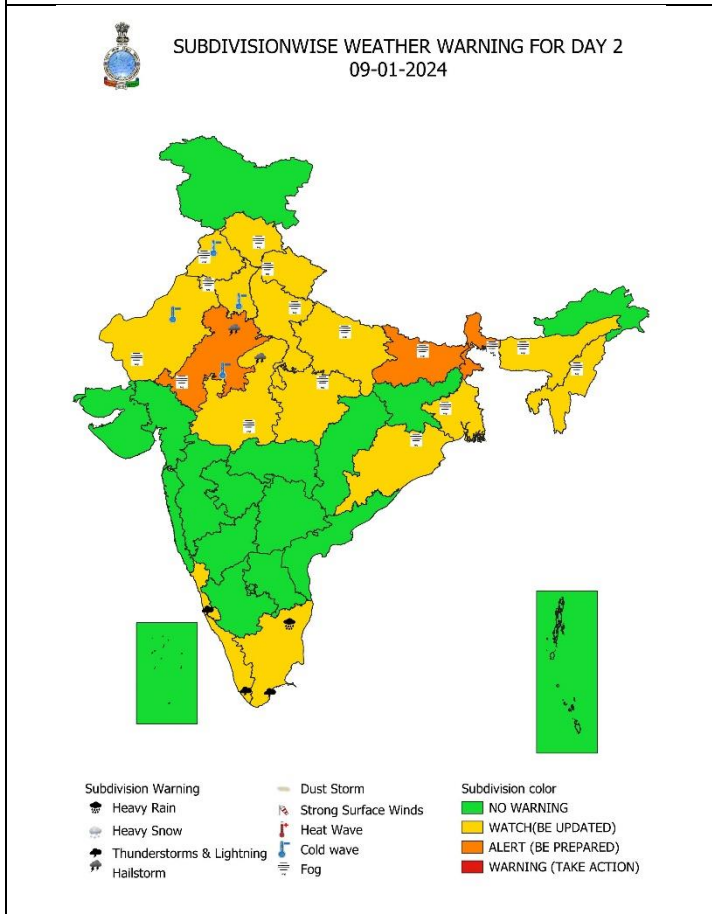
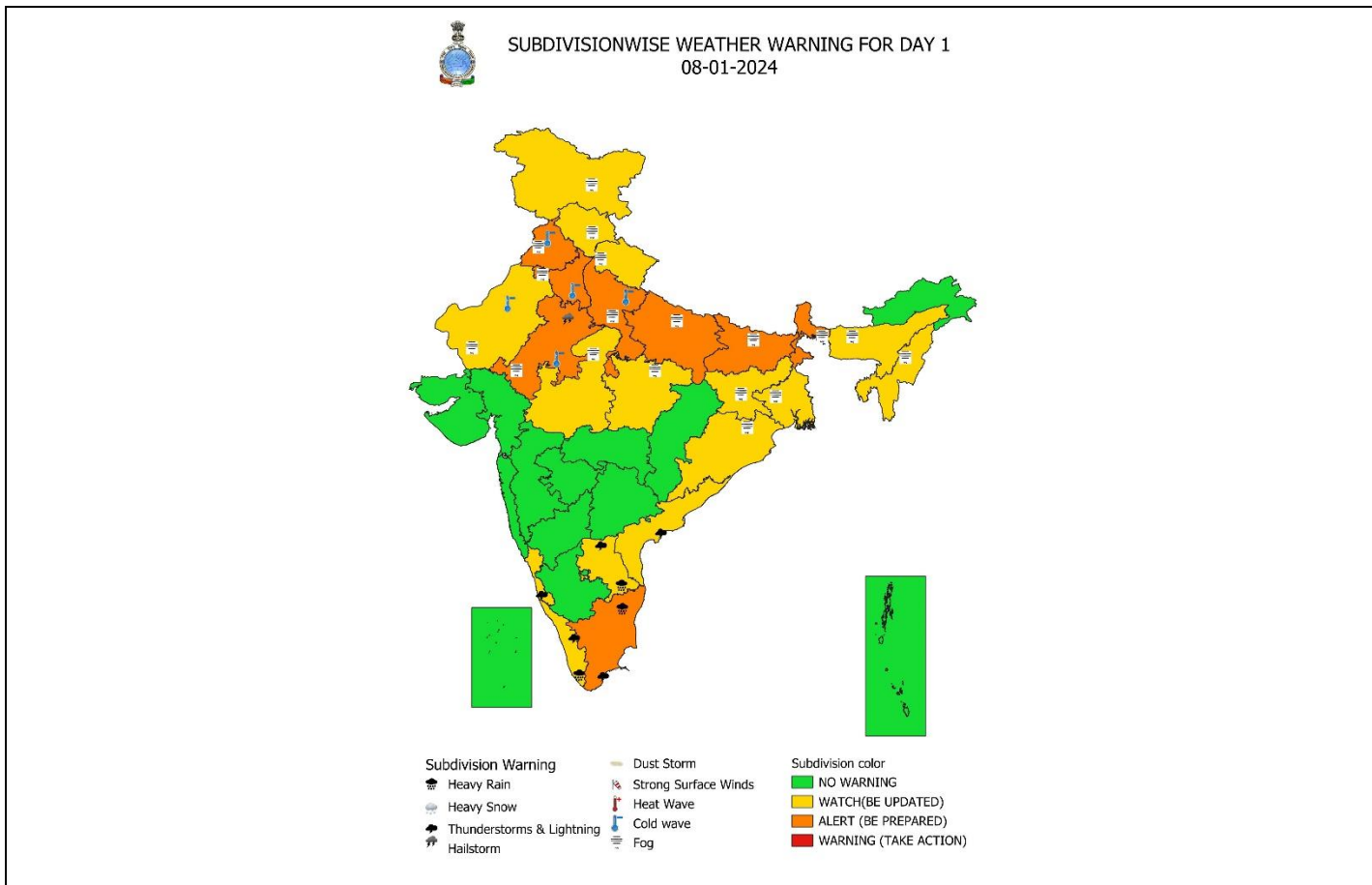
Impact expected and action suggested due to isolated thunderstorm with lightning/gusty winds & Hailstorm over East Rajasthan on 08th & 09th; West Madhya Pradesh on 09th January.

Impact expected:

- Strong wind/hail may damage plantation, horticulture and standing crops.
- Hail may injure people and cattle at open places.
- Partial damage to vulnerable structures due to strong winds.
- Minor damage to kutcha houses/walls and huts.
- Loose objects may fly.

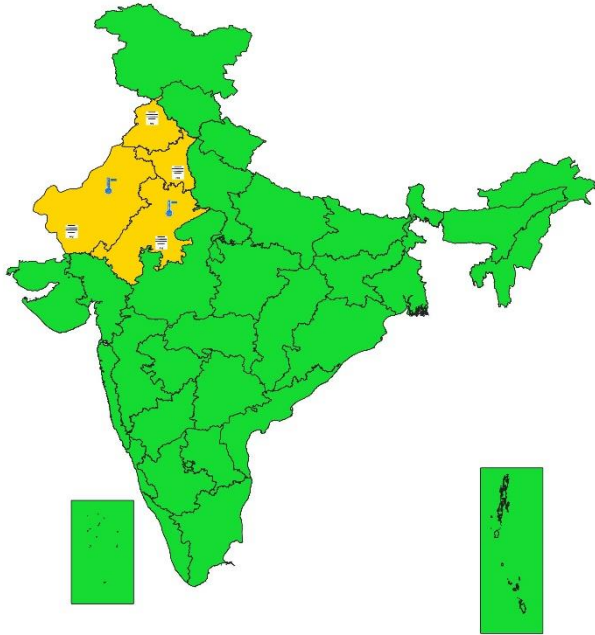
Action suggested:

- Stay indoors, close windows & doors and avoid travel if possible.
- Take safe shelters; do not take shelter under trees.
- Do not lie on concrete floors and do not lean against concrete walls.
- Unplug electrical/ electronic appliances.
- Immediately get out of water bodies.
- Keep away from all the objects that conduct electricity.





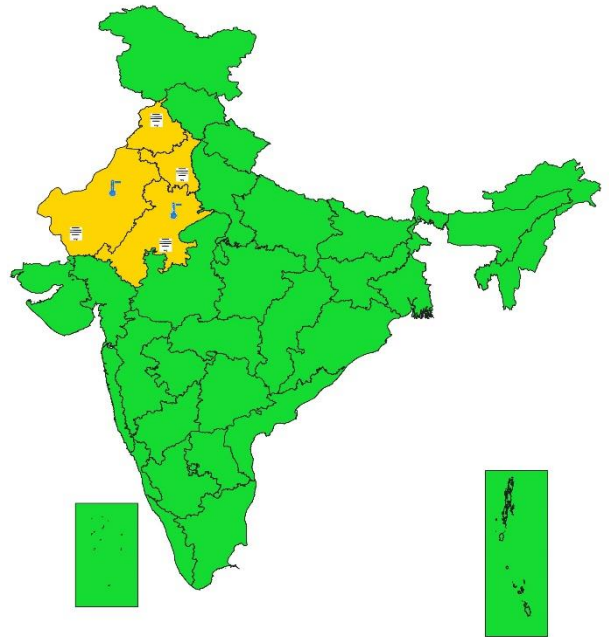
SUBDIVISIONWISE WEATHER WARNING FOR DAY 4
11-01-2024



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



SUBDIVISIONWISE WEATHER WARNING FOR DAY-5
12-01-2024



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

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°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 $\leq 15^{\circ}\text{C}$

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°C to -6.4°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