Government of India
Ministry of Earth Sciences
India Meteorological Department

Press Release
Date: 31st January, 2024
Time of Issue: 1330 hours IST

Subject: Wet spell over Western Himalayan Region & over adjoining plains likely to continue till 04th February, 2024 with peak intensity on 31st January & 01st February, 2024.

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 7-12°C over many parts of Punjab, Haryana, Chandigarh, Delhi, Uttar Pradesh, Bihar and Jharkhand and Sub-Himalayan West Bengal & Sikkim. These are below normal by 1-3°C over isolated pockets of Bihar, East Uttar Pradesh and normal to above normal over rest parts of the country. **Today, the lowest minimum temperature of 7.0 °C reported at Najibabad (East Uttar Pradesh).**
- **Fog** conditions observed (at 0530 & 0830 hours IST of today): **Dense to very Dense fog** in some parts of Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh; in isolated pockets of Odisha; **Dense fog** in isolated pockets of Bihar and northwest Madhya Pradesh.
- Yesterday, **Cold day to severe cold day** conditions prevailed over isolated pockets of south Haryana.

Weather Systems and Forecast & Warnings during next 5 days:

- **Two Western Disturbances in quick succession are likely to affect northwest India during next 5 days**. Under the influence of these systems:
  - Light/moderate fairly widespread to widespread rainfall/snowfall very likely over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh and Uttarakhand during next 5 days (31st January to 04th February) and decrease significantly thereafter.
  - Isolated **heavy rainfall/snowfall** also likely over Kashmir valley, Himachal Pradesh on 31st January & 01st February and over Uttarakhand on 01st February, 2024.
  - Light/moderate scattered to fairly widespread rainfall very likely over Punjab, Chandigarh, Haryana, Delhi and isolated to scattered rainfall over Uttar Pradesh, East Rajasthan during 31st January & 01st February. Light isolated rainfall very likely over the above regions on 03rd & 04th February, 2024.
  - Isolated **hailstorm** also likely over Punjab, Haryana on 31st January and over Uttarakhand on 31st January & 01st February, 2024.
  - **Strong and chilly surface winds of the order of 30-40 kmph** very likely over Punjab and Haryana-Chandigarh-Delhi on 31st January & 01st February.
  - Light/moderate scattered to fairly widespread rainfall/snowfall very likely over Arunachal Pradesh during next 7 days (31st January to 06th February) and isolated to scattered rainfall over West Bengal & Sikkim, Assam & Meghalaya and Nagaland, Mizoram, Manipur & Tripura during 31st January to 02nd February).
  - Isolated **heavy rainfall/snowfall** also likely over Arunachal Pradesh on 02nd February.

- Isolated **hailstorm** likely over Arunachal Pradesh on 31st January & 01st February; over Sub-Himalayan West Bengal & Sikkim on 31st January & 02nd February, 2024.

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

- ❖ **Dense to very dense fog** conditions very likely to prevail in morning hours over some parts of Punjab, Haryana-Chandigarh-Delhi on 02nd February and in isolated pockets on 03rd February, 2024.
- ❖ **Dense to very dense fog** conditions very likely to prevail in morning hours over isolated pockets of Uttar Pradesh during 01st-03rd February.
- ❖ **Dense Fog** conditions in isolated pockets very likely to prevail for a few hours in morning over Odisha on 01st & 02nd February; over north Madhya Pradesh and Bihar on 01st February, 2024.
- ❖ **No Cold Day** conditions very likely over any part of the country during next 5 days.

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

- ❖ No significant change in minimum temperatures likely over most parts of the country during next 5 days.
- ❖ **No Cold wave conditions** very likely over any part of the country during next 5 days.

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

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

- Yesterday, **Maximum temperatures** were in the range of 15-20°C over some parts of south Haryana and Uttarakhand. They were below normal by 4-6°C over some parts of south Haryana and Delhi.
- **Visibility recorded (at 0530 hours IST of today)** (≤500 metres): **Punjab:** Bhatinda-0; **Haryana-Chandigarh-Delhi:** Palam-0, Ambala-25, Hissar-50, Chandigarh-200; **East Uttar Pradesh:** Varanasi/babatpur-50, Sultanpur-200; **Bihar**: Purnea-50, Patna & Gaya-200 each; **Odisha**: Chandbali-50; **West Uttar Pradesh:** Bareilly-200; **Coastal Andra Pradesh**: Vijayawada/Gannavaram-200.
- **Visibility recorded (at 0830 hours IST of today) (≤500 metres): Delhi:** Palam-25, Ridge, Safdarjung, Ayanagar- 50 each; **Haryana**- Ambala, Bhiwani-25 each; Karnal, Hisar- 50 each; Rohtak-200; **Uttar Pradesh**: Meerut, Bareilly-25 each; Varanasi-200; **Bihar**: Sabaur- 200; **Punjab**: Ludiana-200.
- Light to moderate rainfall occurred **at most places over** Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; **at many places over** Himachal Pradesh, Punjab and Sub-Himalayan West Bengal & Sikkim; **at a few places** over Arunachal Pradesh; **at isolated places** over Haryana-Chandigarh-Delhi, West Rajasthan, Gangetic West Bengal, Assam & Meghalaya and Kerala & Mahe.
- **Significant rainfall amount recorded** (in cm): **Gangetic West Bengal:** Kalyani SMO (dist. Nadia) 6; **Jammu-Kashmir**: Gulmarg (dist Baramula) 3, Batote (dist Ramban) 1, **Himachal Pradesh**: Udaipur (dist. Lahaul & Spiti) 3, Saloni (dist. Chamba) 3, Kothi (dist. Kullu) 2; **Punjab**: Madhopur (dist Pathankot) 1, Jagraon (dist Ludhiana) 1
- Isolated **hailstorm** observed over Sikkim.

Impact & Action Suggested due to heavy rainfall/snowfall over:

1. **Jammu-Kashmir, Himachal Pradesh on 31st January & 01st February.**
2. **Uttarakhand on 01st February**

Impacts Expected for Rain/Snow

- Disruption of Electricity.
- Landslide, rock fall and mudslides, Blocking/washout of roads/highways/bridges Nallahs.
- Disruption of traffic flow.
- Damage to Kuccha and unsecured structures.

Suggested Actions

- Avoid roadway underpasses, drainage ditches, low lying areas and areas where water collects – they can unexpectedly flood or overflow.
- Stay away from power lines or electrical wires.
- Don't stay in kuchha houses during heavy rainfall as it may collapse anytime soon
- Drive carefully.

Impact expected and action suggested due to thunderstorm with lightning/gusty winds & Hailstorm:

- **31st January:** Uttarakhand, Punjab, Haryana, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh
- **01st February:** Uttarakhand, Arunachal Pradesh
- **02nd February:** Sub-Himalayan West Bengal & Sikkim

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:

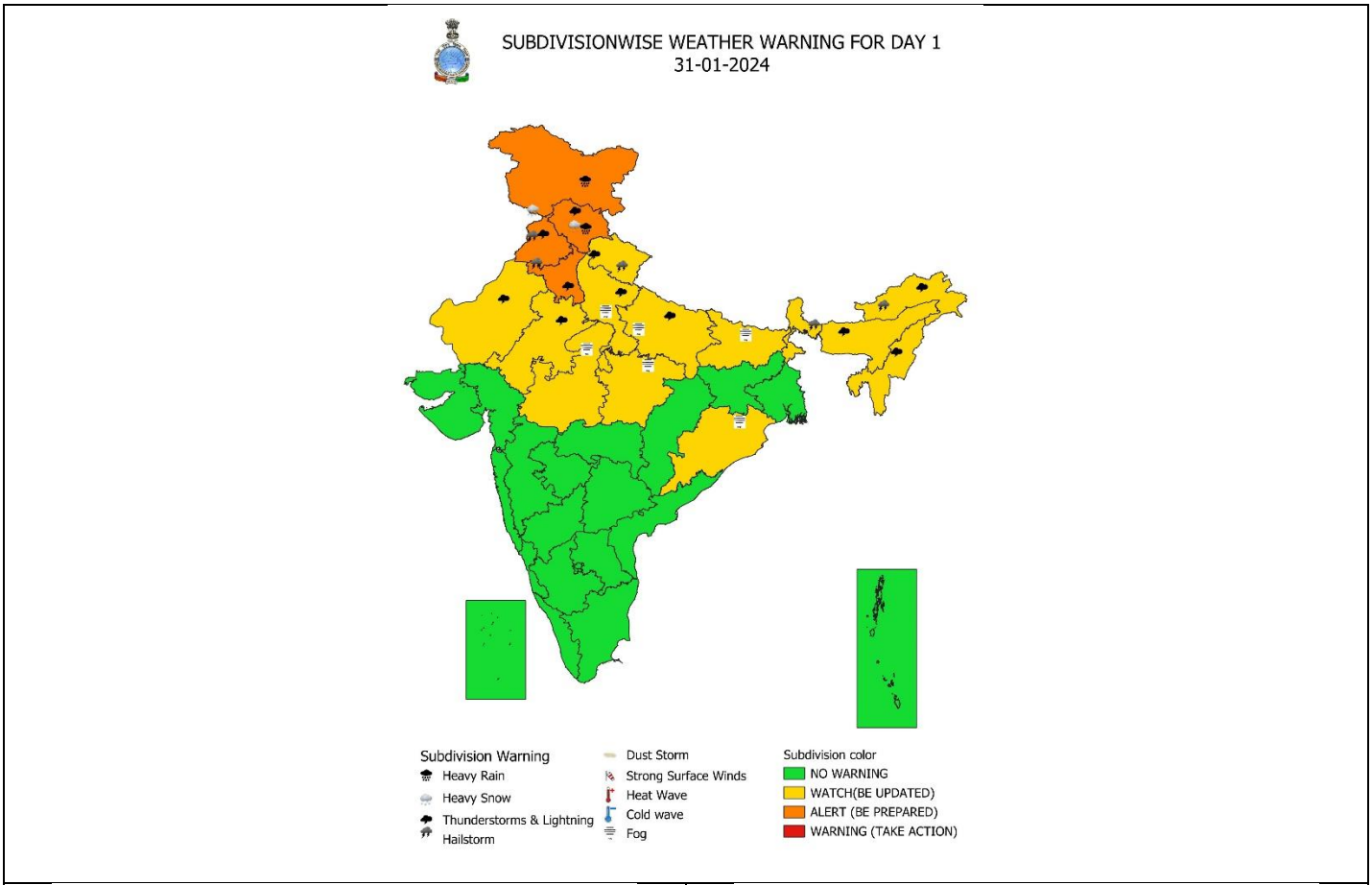
- Stay indoors, close windows & doors and avoid travel if possible.
- Take safe shelters; do not take shelter under trees.
- Do not lie on concrete floors and do not lean against concrete walls.
- Unplug electrical/ electronic appliances.
- Immediately get out of water bodies.
- Keep away from all the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

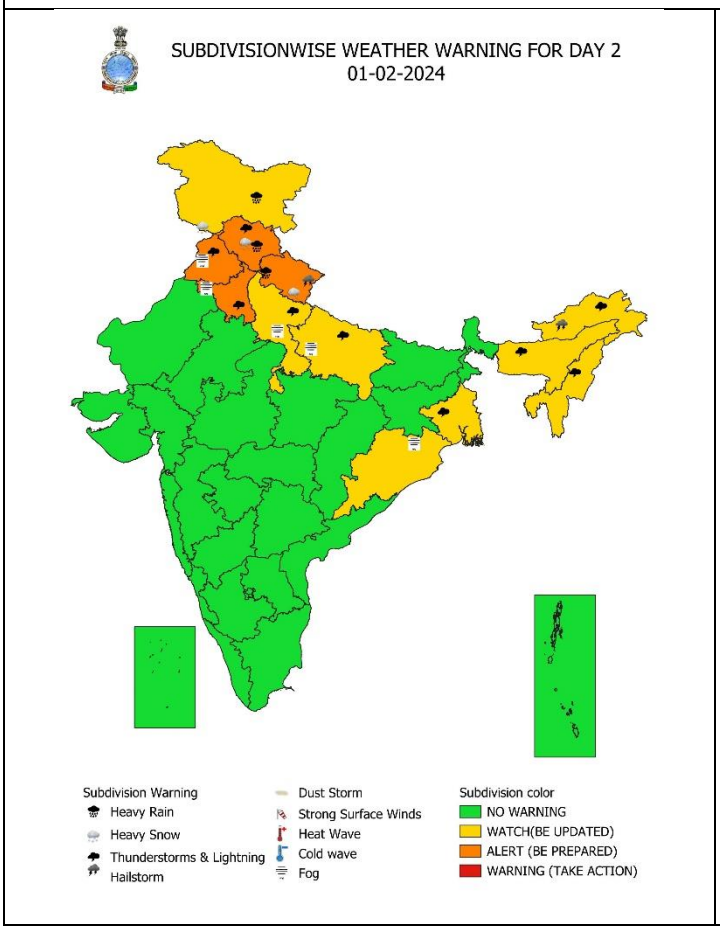
Impact expected due to dense to very dense fog in the morning hours over Punjab, Haryana-Chandigarh-Delhi on 02nd February, 2024.

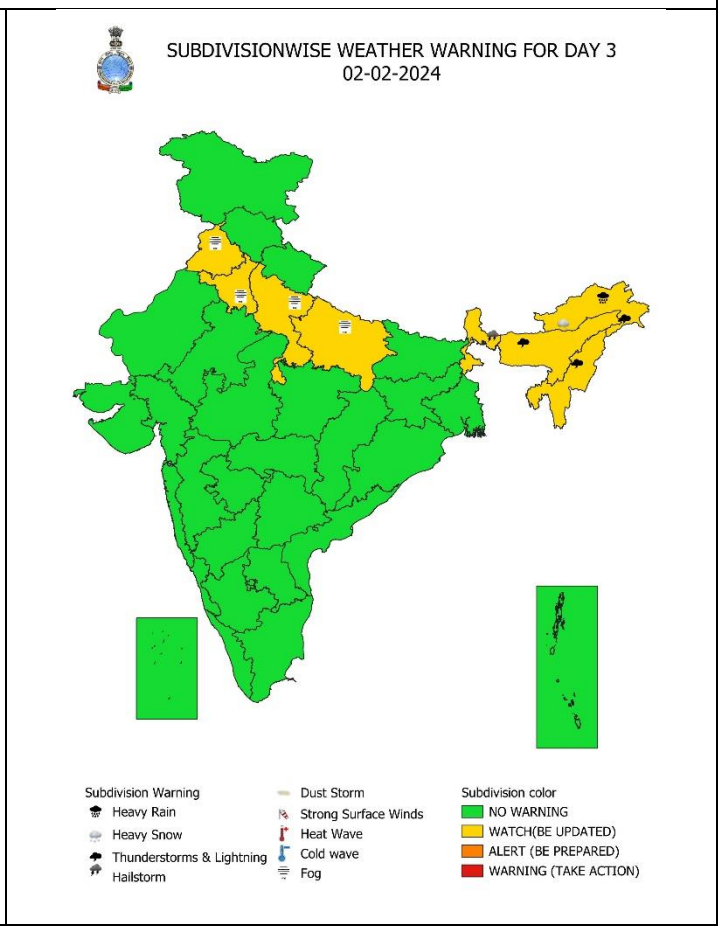
- **Transport and Aviation:**
  - May affect some airports, highways and railway routes in the areas of met- sub-division.
  - Difficult driving conditions with slower journey times.
  - Unless taken precautionary measures, it may lead to some road traffic collisions.
- **Power Sector:**
  - Chances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

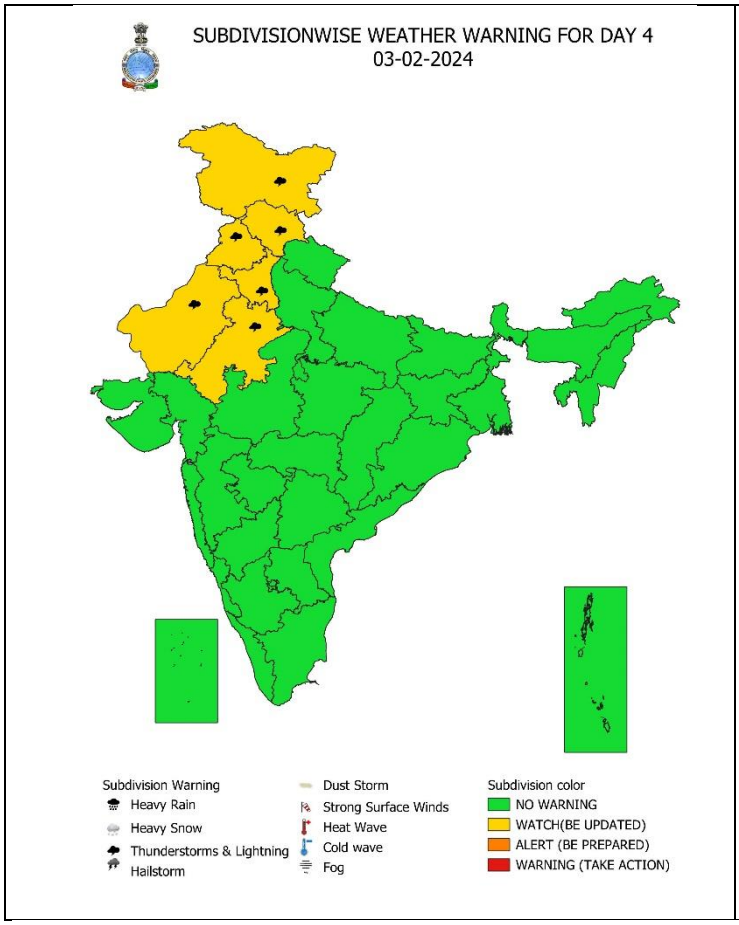
Action suggested:

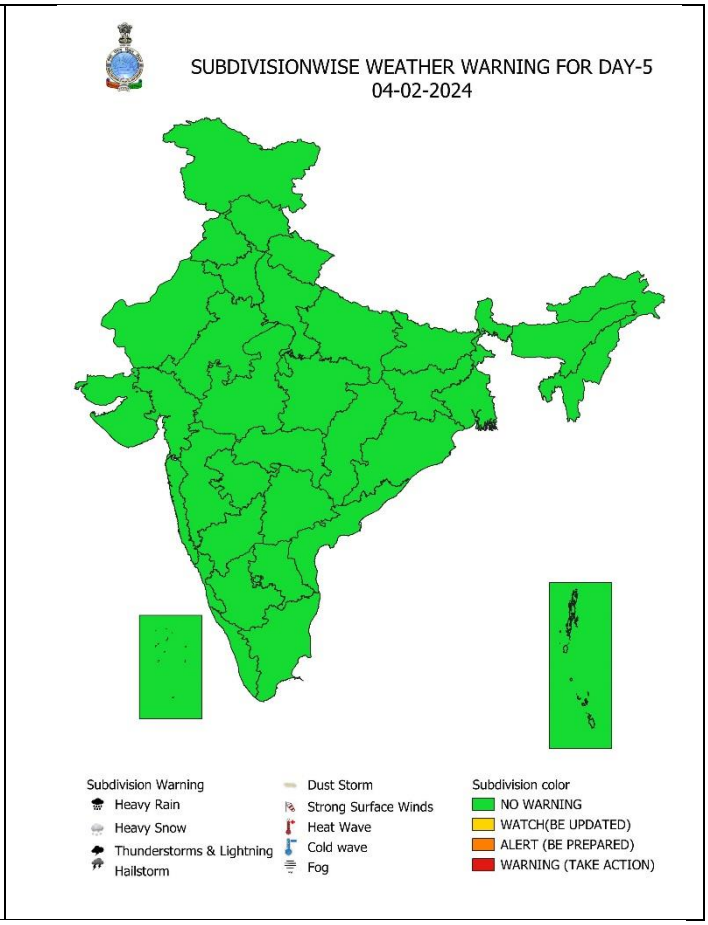
- **Transport and Aviation:**
  - Be careful while driving or outing through any transport.
  - Use fog lights during driving.
  - Be in touch with airlines, railways and state transport for schedule of your journey.
- **Power Sector:**
  - To keep ready Maintenance Team
  - Human Health: To avoid outing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


SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
31-01-2024
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
01-02-2024
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
02-02-2024
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
03-02-2024
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
04-02-2024
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