



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 30<sup>th</sup> January, 2024

Time of Issue: 1300 hours IST

**Subject: Wet spell over Western Himalayan Region and over adjoining plains till 04<sup>th</sup> February, 2024 with peak intensity on 31<sup>st</sup> January & 01<sup>st</sup> 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 6-10°C over many parts of Punjab, Haryana, Chandigarh, Uttar Pradesh, Bihar and 8-12°C over many parts of Delhi, Jharkhand, north Rajasthan, north Madhya Pradesh and Sub-Himalayan West Bengal & Sikkim. These are below normal by 2-4°C over some parts of Bihar; in isolated pockets of East Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim and normal to above normal over rest parts of the country. **Today, the lowest minimum temperature of 5.0 °C reported at Motihari (Bihar).**
- ❖ **Fog conditions observed (at 0530 & 0830 hours IST of today): Dense to very Dense fog** in most parts of Punjab, Haryana-Chandigarh-Delhi; in some parts of Uttar Pradesh; in isolated pockets of north Rajasthan; **Dense fog** in isolated pockets of Bihar, Gangetic West Bengal, Odisha, Meghalaya and northwest Madhya Pradesh.
- ❖ Yesterday, **Cold day to severe cold day** conditions prevailed over isolated pockets of East Uttar Pradesh and **cold day** conditions in 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 5-6 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 6 days (30<sup>th</sup> January to 04<sup>th</sup> February) and decrease significantly thereafter.
  - Isolated **heavy rainfall/snowfall** also likely over Kashmir valley, Himachal Pradesh on 31<sup>st</sup> January & 01<sup>st</sup> February, Uttarakhand on 31<sup>st</sup> January, 2024.
  - Light/moderate scattered to fairly widespread rainfall very likely over Punjab, Chandigarh, Haryana, Delhi and isolated to scattered rainfall over Uttar Pradesh during 31<sup>st</sup> January & 01<sup>st</sup> February, 2024.
  - Isolated **hailstorm** also likely over Jammu-Kashmir, Himachal Pradesh, Punjab, Haryana on 31<sup>st</sup> January and over Uttarakhand on 31<sup>st</sup> January & 01<sup>st</sup> February, 2024.
  - **Strong and chilly surface winds of the order of 30-40 kmph** very likely over Punjab and Haryana-Chandigarh-Delhi on 31<sup>st</sup> January.
  - Light/moderate scattered to fairly widespread rainfall/snowfall very likely over Arunachal Pradesh during next 7 days (30<sup>th</sup> January to 05<sup>th</sup> February) and isolated to scattered rainfall over West Bengal & Sikkim, Assam & Meghalaya and Nagaland, Mizoram, Manipur & Tripura during 31<sup>st</sup> January to 02<sup>nd</sup> February).

- Isolated **heavy rainfall/snowfall** also likely over Arunachal Pradesh on 02<sup>nd</sup> February and Isolated **hailstorm** likely over Sub-Himalayan West Bengal & Sikkim on 31<sup>st</sup> January & 02<sup>nd</sup> 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 isolated pockets of Punjab, Haryana-Chandigarh-Delhi on 31<sup>st</sup> January, 02<sup>nd</sup> February and dense fog in isolated pockets on 03<sup>rd</sup> February, 2024.
- ❖ **Dense to very dense fog** conditions very likely to prevail in morning hours over isolated pockets of East Uttar Pradesh on 31<sup>st</sup> January & 01<sup>st</sup> February and over West Uttar Pradesh on 31<sup>st</sup> January.
- ❖ **Dense Fog** conditions in isolated pockets very likely to prevail for a few hours in morning over Odisha during 31<sup>st</sup> January-02<sup>nd</sup> February; over north Rajasthan, Gangetic West Bengal and Bihar on 31<sup>st</sup> January, 2024.
- ❖ **Cold Day** conditions very likely to continue in isolated pockets of Punjab, Haryana and Uttar Pradesh 30<sup>th</sup> January and abate thereafter.

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

- ❖ Rise by 2-4°C in minimum temperatures very likely over many parts of Northwest & Central India during next 3 days and no significant change thereafter.
- ❖ **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\\_forecast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php)

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

- ❖ Yesterday, **Maximum temperatures** were in the range of 14-17°C over some parts of south Punjab and south Haryana. They were below normal by 4-6°C over some parts of south Punjab and south Haryana, Delhi and by 2-4°C over some parts of Uttar Pradesh and Bihar.
- ❖ **Visibility recorded (at 0530 hours IST of today) (≤500 metres):** **Punjab:** Amritsar & Patiala-25 each; **Haryana:** Ambala-25, Hissar-200; **northwest Rajasthan:** Ganganagar-25, Churu-50; **Delhi:** Palam & Safdarjung-50 each; **West Uttar Pradesh:** Bareilly-200; **East Uttar Pradesh:** Varanasi-25, Gorakhpur-50, Bahraich-200, Lucknow & Sultanpur-500 each; **northwest Madhya Pradesh:** Gwalior-500; **Bihar:** Purnea-50, Gaya, Patna & Bhagalpur-500 each; **Odisha:** Chandbali & Bhubaneswar-50 each; **Coastal Andhra Pradesh:** Vijaywada-500; **Meghalaya:** Barapani-100
- ❖ **Visibility recorded (at 0830 hours IST of today) (≤500 metres):** **Punjab:** Amritsar & Ludhiana-25; **Haryana:** Ambala & Karnal-25; Chandigarh-50, Hissar-50; **West Uttar Pradesh:** Meerut & Bareilly-25 each; **Delhi:** Safdarjung, Palam, Ridge & Ayanagar-50 each; **West Rajasthan:** Churu-50 & Bikaner-500; **Odisha:** Chandbali-50; Raurkela-500; **East Uttar Pradesh:** Lucknow, Bahraich & Sultanpur-500 each; **Bihar:** Patna-500; **Sub-Himalayan West Bengal & Sikkim:** Gangtok-500.
- ❖ Isolated **hailstorm** observed over Sikkim (Gangtok).

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

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

**A. 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 kutcha roads.
- ❖ Possibilities of damage to vulnerable structure.
- ❖ Localized Landslides/Mudslides in the hilly areas.
- ❖ 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).

**B. 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 thunderstorm with lightning/gusty winds & Hailstorm:**

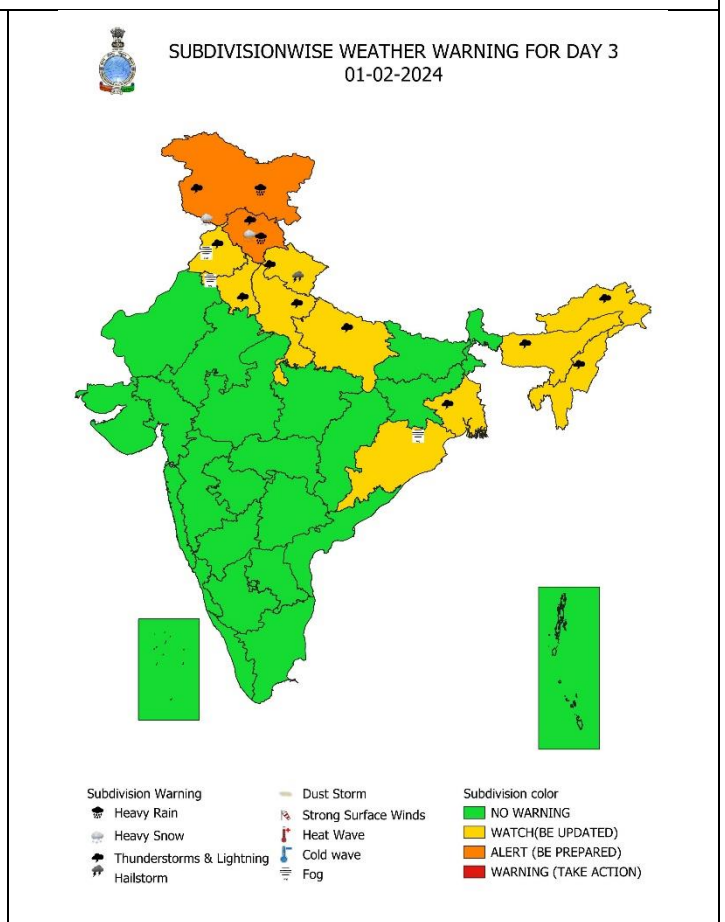
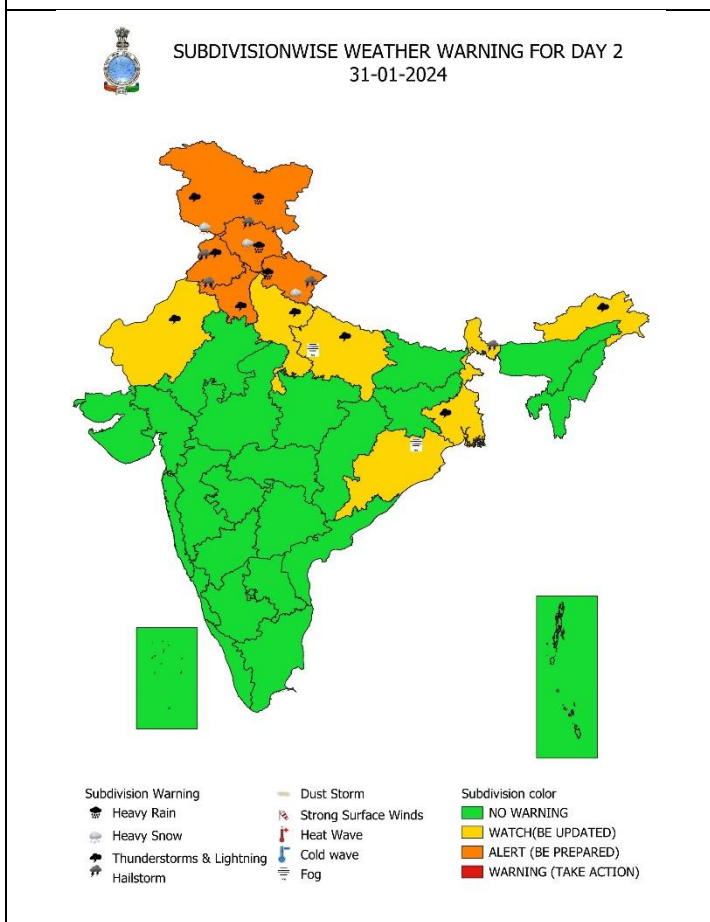
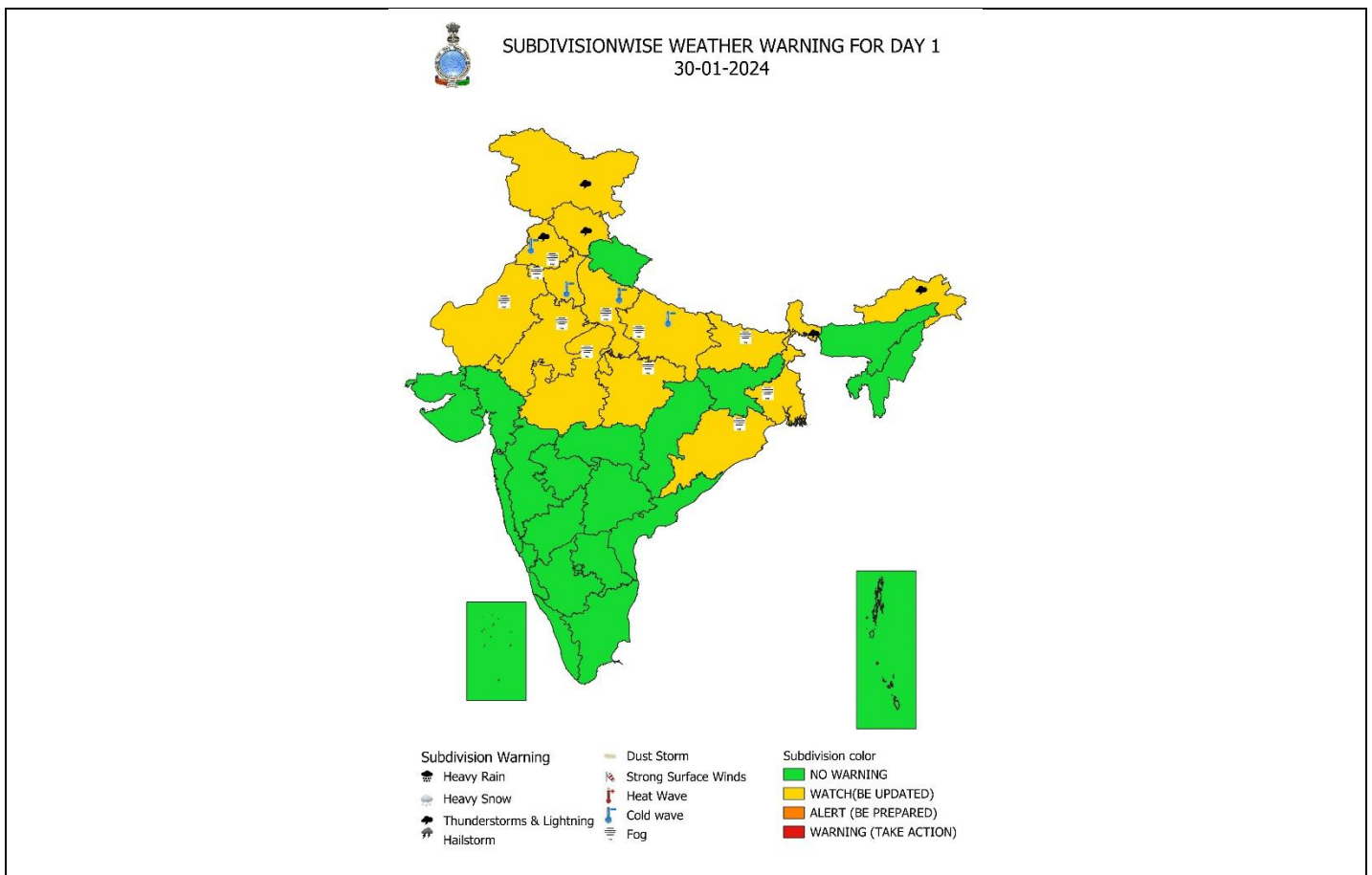
- ❖ **31<sup>st</sup> January:** Jammu-Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Sub-Himalayan West Bengal & Sikkim
- ❖ **01<sup>st</sup> February:** Uttarakhand
- ❖ **02<sup>nd</sup> February:** Sub-Himalayan West Bengal & Sikkim

**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.

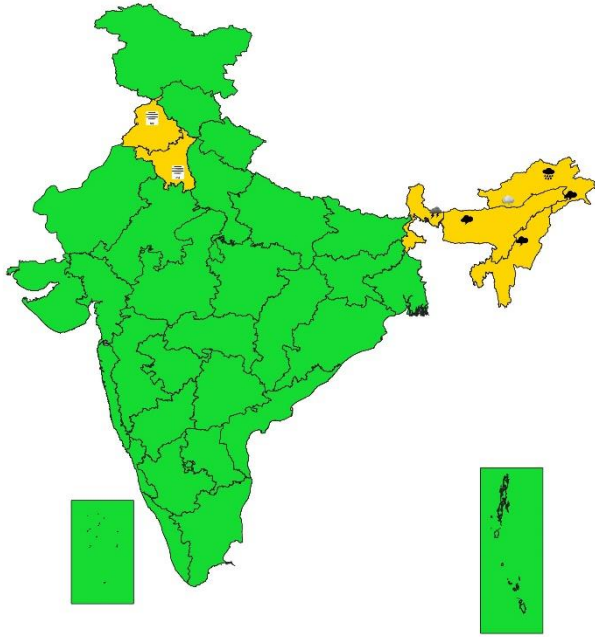
**Action suggested:**

- ❖ 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.





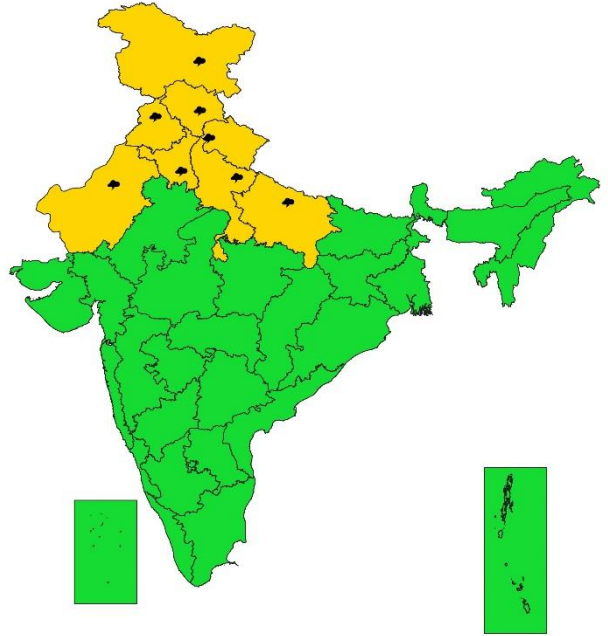
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 4**  
02-02-2024



- |                            |                      |                          |
|----------------------------|----------------------|--------------------------|
| <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**  
03-02-2024



- |                            |                      |                          |
|----------------------------|----------------------|--------------------------|
| <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.

<b>SPATIAL DISTRIBUTION</b> (% 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		Flash Flood Risk	
Terms	Probability of Occurrence (%)		
Unlikely	< 25		High Risk (Take Action)
Likely	25 - 50		Moderate Risk (Be Prepared)
Very Likely	50 - 75		Low Risk (Be Updated)
Most Likely	> 75		

## Definition of Cold wave, Cold Day and Fog Conditions:

	<b>When minimum temperature of a station <math>\leq 10^{\circ}\text{C}</math> for plains and <math>\leq 0^{\circ}\text{C}</math> for hilly regions.</b>
	<b>(a) Based on departure</b>
	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>(b) Based on actual Minimum Temperature (for Plains only)</b>
	Cold Wave: When Minimum Temperature is $\leq 4.0^{\circ}\text{C}$
	Severe Cold Wave: When Minimum Temperature is $\leq 2.0^{\circ}\text{C}$
	<b>(c) For Coastal Stations</b>
	When Minimum Temperature departure is $\leq -4.5^{\circ}\text{C}$ & actual Minimum Temperature is $\leq 15^{\circ}\text{C}$
	<b>When minimum temperature of a station <math>\leq 10^{\circ}\text{C}</math> for plains and <math>\leq 0^{\circ}\text{C}</math> for hilly regions</b>
	<b>Based on departure</b>
	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 $\leq -6.5^{\circ}\text{C}$
	<b>Phenomenon of small droplets suspended in air and the horizontal visibility <math>&lt; 1\text{km}</math></b>
	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