



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 07<sup>th</sup> January, 2024

Time of Issue: 1400 hours IST

**Subject: 1) Dense to very dense fog and Cold Day to Severe Cold Day conditions likely to continue over plains of Northwest 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 08<sup>th</sup> & 09<sup>th</sup> January.**

**3) Light to moderate rainfall spell likely over south Peninsular India with isolated heavy rainfall over Tamil Nadu during next 4 days and over Kerala during next 2 days.**

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

- **Minimum temperatures:** Minimum Temperatures are in the range of 6-9°C over Punjab, Haryana-Chandigarh-Delhi, West Uttar Pradesh and north Rajasthan; 10-12°C over parts of East Uttar Pradesh, rest parts of Rajasthan and northwest Madhya Pradesh. It is above normal by 1-3°C over in isolated pockets over Punjab, Haryana-Chandigarh-Delhi, Rajasthan and in many pockets over West Uttar Pradesh, West Madhya Pradesh and 4-7°C above normal over many parts of East Uttar Pradesh, East Madhya Pradesh, Bihar and Jharkhand. **Today, the lowest minimum temperature of 3.8°C reported at Alwar (East Rajasthan).**
- **Maximum temperatures** are in the range of 14-15°C over Punjab and Haryana-Chandigarh-Delhi and in the range of 16-18°C over north Rajasthan and West Uttar Pradesh. It is below normal by 4-9°C over many parts of Punjab, Haryana-Chandigarh-Delhi, Rajasthan and Madhya Pradesh.
- Yesterday, **Cold day to severe cold day conditions** prevailed over some parts of East Rajasthan, northwest Rajasthan & Haryana and in isolated pockets over Punjab. Cold day conditions also prevailed at isolated pockets over Delhi.
- **Fog conditions observed** (at 0530 & 0830 hours IST of today): **Very Dense fog (visibility < 50 metre)** in isolated pockets over Jammu Division, Punjab, north Haryana, Chandigarh, West Uttar Pradesh, Bihar, West Rajasthan, north Chhattisgarh; **Dense fog (visibility 50-200 metre)** in some parts over Bihar, north Madhya Pradesh, East Rajasthan and in isolated pockets over East Uttar Pradesh, East Madhya Pradesh & Tripura.
- **Visibility recorded** (at 0530 hours IST of today) (in metres): **Jammu Division:** Jammu-25; **Punjab:** Amritsar, Patiala-25 each; **Haryana-Chandigarh:** Ambala & Chandigarh-25 each; **West Uttar Pradesh:** Bareilly-25; **Bihar:** Purnea-25, Bhagalpur-50; **East Uttar Pradesh:** Bahraich-50; **East Madhya Pradesh:** Sagar-50; **Tripura:** Agartala-50.
- **Visibility recorded** (at 0830 hours IST of today) (in metres): **Punjab:** Amritsar, Ludhiana and Patiala-50 each; **Haryana:** Ambala-25; **West Uttar Pradesh:** Bareilly-50; **East Uttar Pradesh:** Bahraich-50, Sultanpur & Gorakhpur-200 each; **Bihar:** Patna, Purnea, Supaul -50 each; **Madhya Pradesh:** Guna-50, Tikamgarh, Rewa-200 each; **West Rajasthan:** Jaisalmer-25, Bikaner-50, Ganganagar-200; **East Rajasthan:** Sikar, Bhilwara, Chittorgarh-25 each, Alwar-200; **north Chhattisgarh:** Ambikapur-25.
- **Heavy rainfall** observed at isolated places over South Interior Karnataka and Tamil Nadu.
  - **Tamil Nadu:** Sivakasi (dist Virudhunagar) 11, Sirkali (dist Mayiladuthurai), Nalumukku (dist Tirunelveli) 7 each
  - **South Interior Karnataka:** Konanur (dist Hassan) 8, C R Patna (dist Hassan) 5

## Weather Systems and Forecast & Warnings during next 5 days:

### Weather Systems:

- A trough at mean sea level runs from south Sri Lanka to westcentral Bay of Bengal off south Andhra Pradesh coast.
- A cyclonic circulation lies over southwest Uttar Pradesh and a trough runs from this cyclonic circulation to north Gujarat in lower tropospheric levels.

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

- **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 during 07<sup>th</sup>-09<sup>th</sup> January and **Dense fog** in isolated pockets for subsequent 24 hours.
- **Dense to very dense fog** conditions very likely to prevail for a few hours in morning in some parts over West Uttar Pradesh and in isolated pockets over Bihar on 08<sup>th</sup> January and **Dense fog** in isolated pockets for subsequent 2 days.
- **Dense fog** conditions very likely to prevail for a few hours in morning in isolated pockets over East Uttar Pradesh during 08<sup>th</sup>-10<sup>th</sup> January; over Uttarakhand, Madhya Pradesh, Jharkhand, Odisha, Assam & Meghalaya, Mizoram & Tripura on 08<sup>th</sup> & 09<sup>th</sup> January; over north Rajasthan during 08<sup>th</sup>-12<sup>th</sup> January.
- **Cold Day to Severe Cold Day** conditions very likely to continue in some parts over Punjab, Haryana-Chandigarh-Delhi on 07<sup>th</sup> & 08<sup>th</sup> and **Cold Day** conditions in isolated pockets over Rajasthan on 08<sup>th</sup> January.

### Temperatures Forecast and Cold wave warning:

- No significant change in minimum temperatures likely over northern parts of the country during next 5 days.
- No Cold wave conditions are likely during next 5 days.

### Rainfall Forecast and heavy rainfall warning:

- 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 Tamil Nadu during 07<sup>th</sup>-10<sup>th</sup>; over Kerala on 07<sup>th</sup>, 08<sup>th</sup> & 10<sup>th</sup> and over Andhra Pradesh on 08<sup>th</sup> January. Isolated **very heavy rainfall** also very likely over coastal Tamil Nadu on 07<sup>th</sup> & 08<sup>th</sup> January.
- A Western Disturbance as a trough in middle tropospheric westerlies with its axis at 5.8 km above mean sea level now runs roughly along Long. 56°E to the north of Lat. 28°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 09<sup>th</sup> January and over plains of Northwest India and Central India on 08<sup>th</sup> & 09<sup>th</sup> January.
  - ✓ Light to moderate rainfall accompanied with thunderstorms and lightning very likely at some places over Maharashtra during 07<sup>th</sup>-09<sup>th</sup> January and over Gujarat on 08<sup>th</sup> & 09<sup>th</sup> January.
  - ✓ Isolated **hailstorm** also likely over East Rajasthan on 08<sup>th</sup> & 09<sup>th</sup> January and over West Madhya Pradesh on 08<sup>th</sup> January.
- Light rainfall at isolated places over Vidarbha, Chhattisgarh, Bihar, Jharkhand, West Bengal & Sikkim on 06<sup>th</sup> January.

### Fishermen warning:

**07<sup>th</sup>-10<sup>th</sup> 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. 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](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, north Madhya Pradesh, north Rajasthan, West Uttar Pradesh and Bihar during next 2 days.

❖ **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 and action suggested due to isolated thunderstorm with lightning/gusty winds & Hailstorm** over East Rajasthan on 08<sup>th</sup> & 09<sup>th</sup>; Madhya Pradesh on 09<sup>th</sup> 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.

**Impact expected due to Cold Day to Severe Cold day conditions over Punjab, Haryana, Chandigarh and East Rajasthan during next 2 days.**

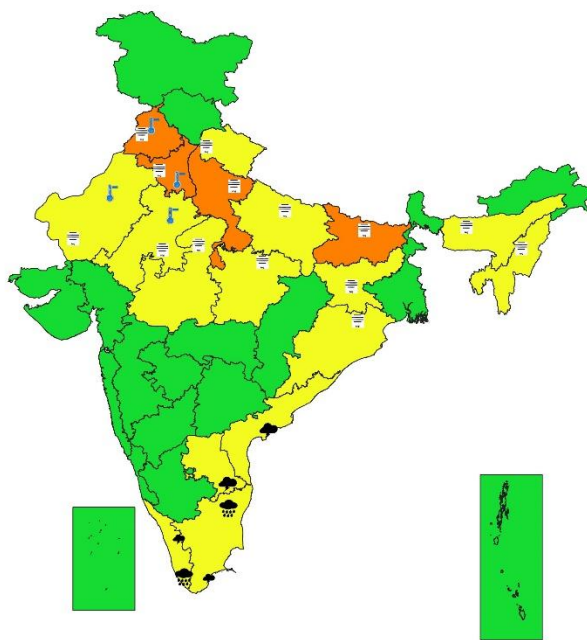
- An increased likelihood of various illnesses like flu, running/ stuffy nose or nosebleed, which usually set in or get aggravated due to prolonged exposure to cold.
- Do not ignore shivering. It is the first sign that the body is losing heat. Get Indoors.
- Frostbite can occur due to prolonged exposure 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.



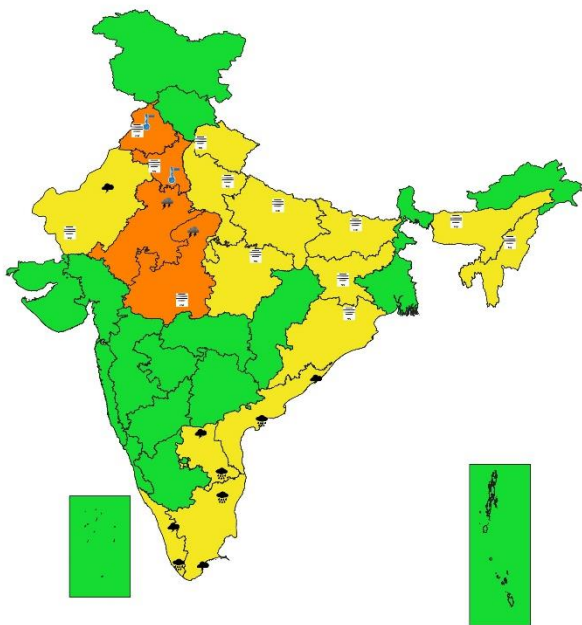
SUBDIVISIONWISE WEATHER WARNING FOR DAY 1  
07-01-2024



- |                           |                      |                       |
|---------------------------|----------------------|-----------------------|
| Subdivision Warning       | Dust Storm           | WATCH (BE UPDATED)    |
| Heavy Rain                | Strong Surface Winds | ALERT (BE PREPARED)   |
| Heavy Snow                | Heat Wave            | WARNING (TAKE ACTION) |
| Thunderstorms & Lightning | Cold wave            |                       |
| Hailstorm                 | Fog                  |                       |
|                           | Subdivision color    |                       |



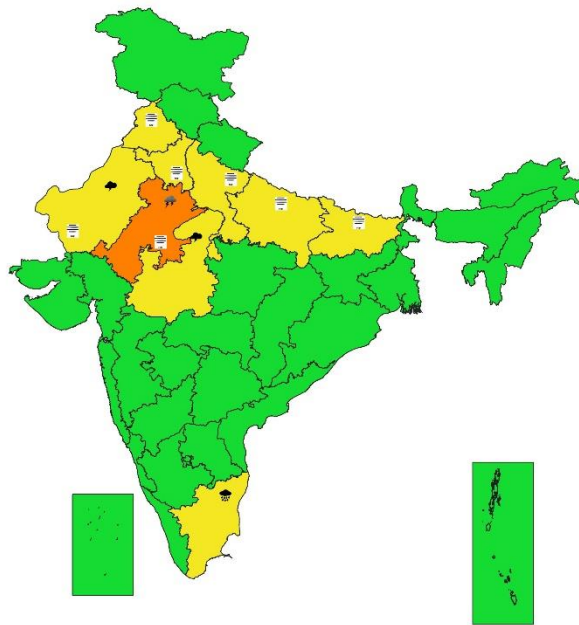
SUBDIVISIONWISE WEATHER WARNING FOR DAY 2  
08-01-2024



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



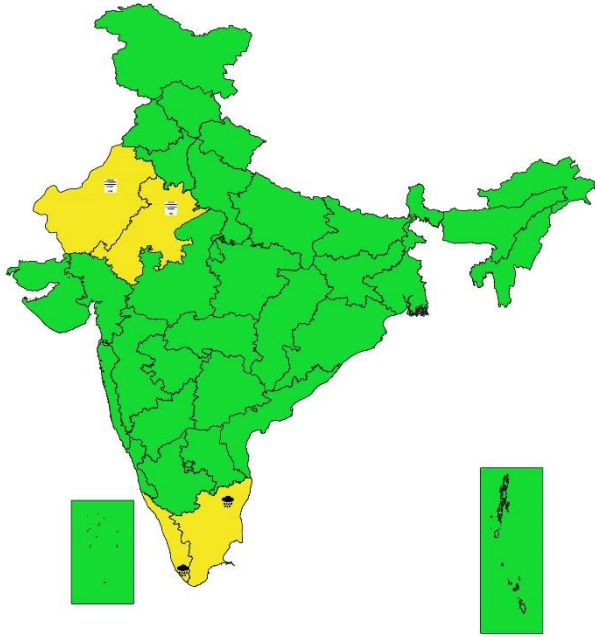
SUBDIVISIONWISE WEATHER WARNING FOR DAY 3  
09-01-2024



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



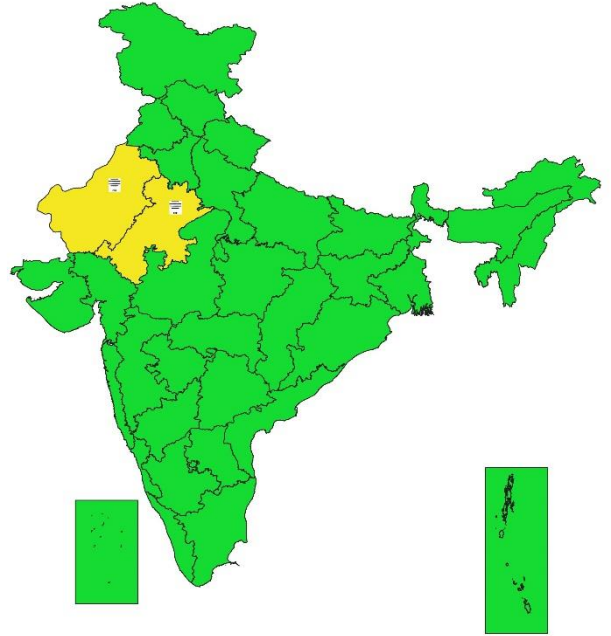
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 4**  
10-01-2024



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|----------------------------|----------------------|--------------------------|
| <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**  
11-01-2024



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

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  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

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  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

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