



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 05<sup>th</sup> April, 2024.

Time of Issue: 1330 hours IST

**Subject: i) Enhanced rainfall/thunderstorm activity likely to continue over Northeast India till 09<sup>th</sup> April, 2024.**

**ii) Heat wave conditions likely to prevail over parts of east & peninsular India during next 2 days.**

**Realised weather during past 24 hours till 0830 hours IST of today: (details in Annexure I)**

- ❖ **Heat wave conditions** prevailed in isolated pockets over North Interior Karnataka, Rayalaseema and Coastal Andhra Pradesh & Yanam.
- ❖ **Light/Moderate rainfall/snowfall** accompanied with **thunderstorm** occurred at many places over Arunachal Pradesh; at isolated places over Sub-Himalayan West Bengal & Sikkim; **light rainfall/snowfall** at isolated places over Himachal Pradesh and Uttarakhand.
- ❖ **Light/Moderate rainfall** accompanied with **thunderstorm and gusty wind** occurred at a few places over Assam & Meghalaya; at isolated places over Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal, Odisha, Jharkhand, Bihar, West Rajasthan, Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka and Kerala.

**Weather Systems and Forecast & Warnings: (Annexure II)**

- ❖ The Western Disturbance as a cyclonic circulation over north Pakistan & neighbourhood with a trough aloft in middle & upper tropospheric westerlies roughly along long. 70°E to the north of lat. 28°N. Another Western Disturbance is likely to affect Western Himalayan Region from 10<sup>th</sup> April, 2024. Under the influence of these systems:
  - ✓ Isolated light rainfall/snowfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh on 05<sup>th</sup>, 06<sup>th</sup>, 10<sup>th</sup> & 11<sup>th</sup> April; and over Uttarakhand during next 7 days.
  - ✓ Isolated light to moderate rainfall very likely over Rajasthan on 05<sup>th</sup>, 06<sup>th</sup>, 10<sup>th</sup> & 11<sup>th</sup> April, 2024.
- ❖ The cyclonic circulation over north Bangladesh persists, another cyclonic circulation lies over east Assam & neighbourhood in lower tropospheric levels. Under the influence of these systems:
  - ✓ Fairly widespread to widespread light/moderate rainfall/snowfall with isolated **thunderstorms & lightning** very likely over Arunachal Pradesh; scattered to fairly widespread light to moderate rainfall with isolated **thunderstorms, lightning & gusty winds (40-50 kmph)** over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during next 7 days.
  - ✓ **Isolated heavy rainfall/snowfall very likely over Arunachal Pradesh during 05<sup>th</sup>-09<sup>th</sup> April with possibility of very heavy falls on 05<sup>th</sup>, 06<sup>th</sup> April, 2024.**
  - ✓ **Isolated heavy rainfall over Assam & Meghalaya on 05<sup>th</sup> & 06<sup>th</sup>; over Odisha on 07<sup>th</sup> & 08<sup>th</sup> April.**
  - ✓ Scattered to Fairly widespread light/moderate rainfall/snowfall with isolated **thunderstorms & lightning very likely** over Sub-Himalayan West Bengal & Sikkim during next 7 days.
  - ✓ Isolated light/moderate rainfall with **thunderstorms & lightning** very likely over Jharkhand during 06<sup>th</sup>-09<sup>th</sup> April; over Bihar on 07<sup>th</sup> & 08<sup>th</sup> April, 2024.

- ✓ Isolated light rainfall very likely over Gangetic West Bengal, Odisha on 05<sup>th</sup> and scattered to fairly widespread light/moderate rainfall with isolated **thunderstorms, lightning & gusty winds (40-50 kmph)** during 06<sup>th</sup>-08<sup>th</sup> April, 2024.
- ✓ *Hailstorm activity also very likely at isolated places over Sub-Himalayan West Bengal & Sikkim on 05<sup>th</sup> and Odisha on 07<sup>th</sup> April, 2024.*
- ❖ The trough/wind discontinuity runs from East Vidarbha to Comorin area across interior Karnataka and interior Tamil Nadu in lower tropospheric levels. Under its influence;
  - ✓ Isolated light/moderate rainfall very likely over Madhya Pradesh, Chhattisgarh, Vidarbha, Madhya Maharashtra, Marathwada, Telangana during 06<sup>th</sup> – 11<sup>th</sup> with **thunderstorms, lightning & gusty winds (30-40 kmph)** likely during 06<sup>th</sup> -09<sup>th</sup> April, 2024.
  - ✓ Isolated light/moderate rainfall very likely over Kerala & Mahe during 05<sup>th</sup> – 11<sup>th</sup>; over Lakshadweep on 05<sup>th</sup>; over Rayalaseema on 09<sup>th</sup> & 10<sup>th</sup>; over Tamil Nadu, Puducherry & Karaikal during 07<sup>th</sup> -09<sup>th</sup>; over Coastal Andhra Pradesh & Yanam on 08<sup>th</sup> & 09<sup>th</sup> April, 2024.
  - ✓ *Hailstorm activity also very likely at isolated places East Madhya Pradesh, Chhattisgarh, Marathwada, Vidarbha on 07<sup>th</sup> & 08<sup>th</sup>; over Madhya Maharashtra on 08<sup>th</sup> April, 2024.*

#### Maximum temperature observation and forecast for next 5 days:

- ❖ Yesterday, Maximum temperatures were in the range of 40-42°C over many parts of Vidarbha, Telangana and Rayalaseema, some parts of East Uttar Pradesh, Jharkhand, Odisha, Marathwada, Coastal Andhra Pradesh & Yanam and North Interior Karnataka and at isolated pockets over Gangetic West Bengal, Madhya Pradesh, Chhattisgarh, Madhya Maharashtra, Tamil Nadu and Kerala. Maximum temperatures departures are above normal by 3-4°C at isolated pockets over Uttar Pradesh, Haryana, East Madhya Pradesh, Odisha, Vidarbha, Jharkhand, Chhattisgarh, Gangetic West Bengal, Rayalaseema, Kerala and Tamil Nadu.
- ❖ Yesterday, the maximum temperature exceeded 98<sup>th</sup> percentile over isolated pockets over north Uttar Pradesh, Rayalaseema, Karnataka and Kerala.
- ❖ The maximum temperature likely to exceed 98<sup>th</sup> percentile at isolated pockets over Karnataka, south Kerala & Rayalaseema during 05<sup>th</sup> - 07<sup>th</sup> and north interior Tamil Nadu on 06<sup>th</sup> & 07<sup>th</sup> April, 2024.
- ❖ Today, Minimum temperatures are above normal by 3-5°C at many places over Bihar; at a few places over Jharkhand; at isolated places over Marathwada, North Interior Karnataka, West Bengal & Sikkim and Nagaland, Manipur, Mizoram & Tripura.
- ❖ No significant change in maximum temperatures very likely over many parts of East & Central India during next 2 days and gradual fall by 2-3°C thereafter.
- ❖ No significant change in maximum temperatures very likely over rest parts of the country.

#### Heat wave, Warm Night and Hot & Humid weather warning for next 5 days:

- ❖ **Heat wave conditions** very likely in isolated pockets over Odisha, Gangetic West Bengal, Jharkhand, Vidarbha, North Interior Karnataka, Coastal Andhra Pradesh & Yanam, Rayalaseema and Telangana on 05<sup>th</sup> & 06<sup>th</sup> April, 2024.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over Odisha, Jharkhand, Bihar, Marathwada and North Interior Karnataka on 05<sup>th</sup> & 06<sup>th</sup> April, 2024.
- ❖ **Hot and humid weather** very likely to prevail over Kerala & Mahe, Tamil Nadu and Puducherry & Karaikal during 05<sup>th</sup>-09<sup>th</sup>; over Coastal Karnataka and Konkan & Goa on 05<sup>th</sup> & 06<sup>th</sup>; over Telangana on 07<sup>th</sup> and over Coastal Andhra Pradesh & Yanam and Rayalaseema during 07<sup>th</sup>-09<sup>th</sup> April, 2024.

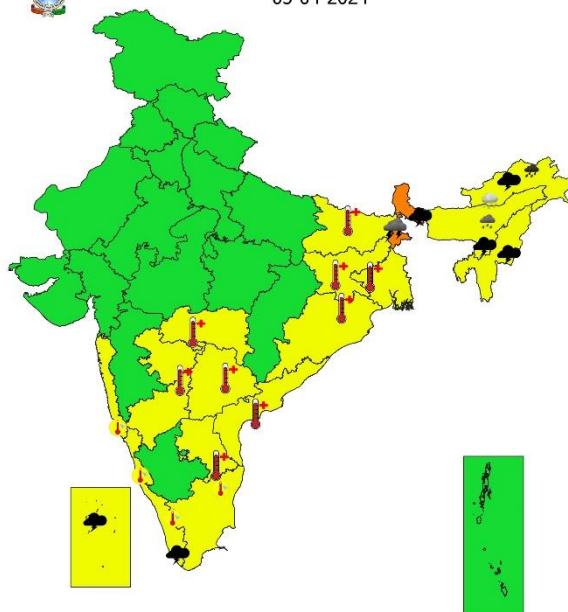
For more details, kindly refer: [https://mausam.imd.gov.in/responsive/all\\_india\\_forecast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php)

**Significant amount of rainfall (in cm):**

- ❖ **Tamil Nadu, Puducherry & Karaikal:** Chittar-I (dist Kanniyakumari) 4, Sivalogam (Chittar-II), Thirparappu (dist Kanniyakumari) 3 each, Suralacode (dist Kanniyakumari), Pechiparai (dist Kanniyakumari) 2 each, Perunchani Dam (dist Kanniyakumari), Mambzhathuraiyar (dist Kanniyakumari), Anaikedanku (dist Kanniyakumari), Sholayar (dist Coimbatore), Puthan Dam (dist Kanniyakumari), Thuckalay (dist Kanniyakumari) 1 each.
- ❖ **Kerala & Mahe:** Thiruvananthapuram Airport, Kanjirappally (Kottayam district), Perumbavur (Ernakulam district), Palode AWS & Pirappancode AWS (both in Thiruvananthapuram district) & Kottarakkara AWS (Kollam district) 2 each and Alappuzha, Ernakulam South, Kalamassery AWS & Aluva AWS (both in Ernakulam district), Airport Chacka ARG, Perumkadavila ARG & Peringamala ARG (all in Thiruvananthapuram district) & Neryamangalam ARG (Ernakulam district) 1 each.
- ❖ **Assam & Meghalaya:** Cherrapunji(rkm) (dist East Khasi Hills) 6, Shella (dist East Khasi Hills) 5, Cherrapunji (dist East Khasi Hills) 5, Mawsynram (dist East Khasi Hills) 4, Sonari\_arg (dist Sibsagar) 2,
- ❖ Bihubar (dist Sibsagar) 2, B P Ghat (dist Karimganj) 1, Iasst Kamrup Arg (dist Kamrup Metropolitan) 1, Margherita (dist Tinsukia) 1, Dillighat (dist Dibrugarh) 1, Guwahati Ap (dist Kamrup Metropolitan) 1, Sivasagar (dist Sibsagar) 1, Golaghat\_pto (dist Golaghat) 1, Guwahati\_aws (dist Kamrup Metropolitan) 1, Naharkatia Arg (dist Dibrugarh) 1, Silchar (dist Cachar) 1
- ❖ **Nagaland, Manipur, Mizoram & Tripura:** Mon Sadar Nsdma\_aws (dist Mon) 4, Longleng Nsdma\_aws (dist Longleng) 2, Ongpangkong Nsdma\_aws (dist Mokokchung) 1, Tuli Nsdma\_aws (dist Mokokchung) 1, Tamenglong (dist Tamenglong) 1, Mokokchang (dist Mokokchung) 1, Mangkolemba (dist Mokokchung) 1, Mokokchung\_Aws (dist Mokokchung) 1
- ❖ **Arunachal Pradesh:** Deomali\_aws (dist Tirap) 1, Geku Arg (dist West Siang) 1, Tawang Chamgbu Kvk Aws (dist Tawang) 1, Tawang\_Aws (dist Tawang) 1
- ❖ **Odisha:** Gudvela ((dist Bolangir) 2, Deogaon (dist Bolangir) 1
- ❖ **Gangetic West Bengal:** KANSABATI DAM (dist Bankura) 1, Kharidwar (dist Purulia) 1



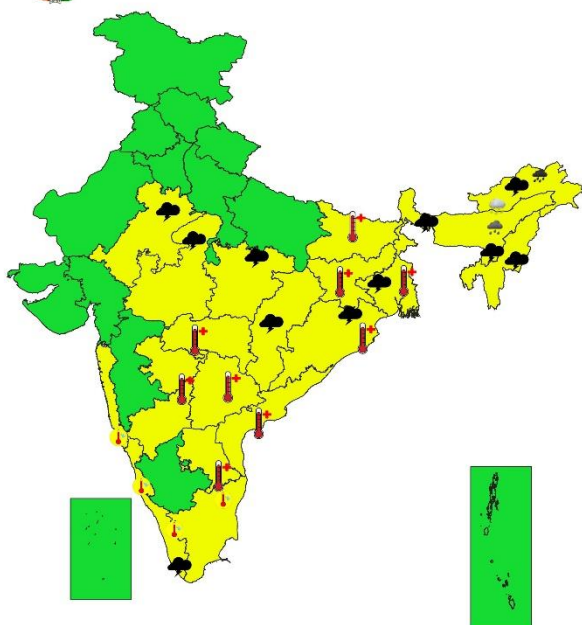
### SUBDIVISIONWISE WEATHER WARNING FOR DAY 1 05-04-2024



#### Subdivision Warning



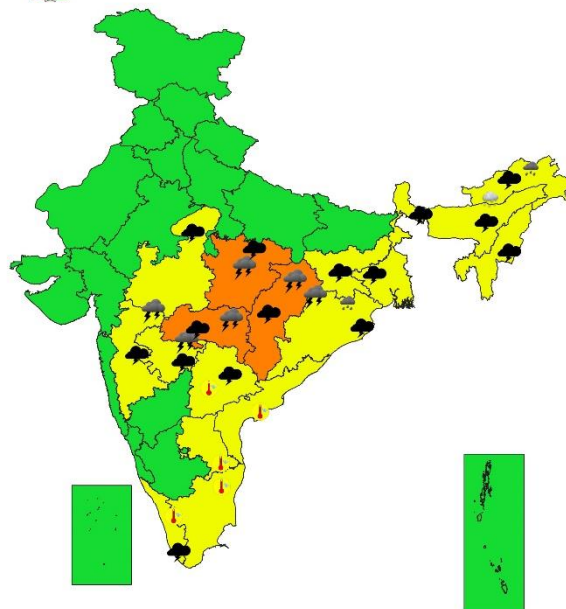
### SUBDIVISIONWISE WEATHER WARNING FOR DAY 2 06-04-2024



#### Subdivision Warning

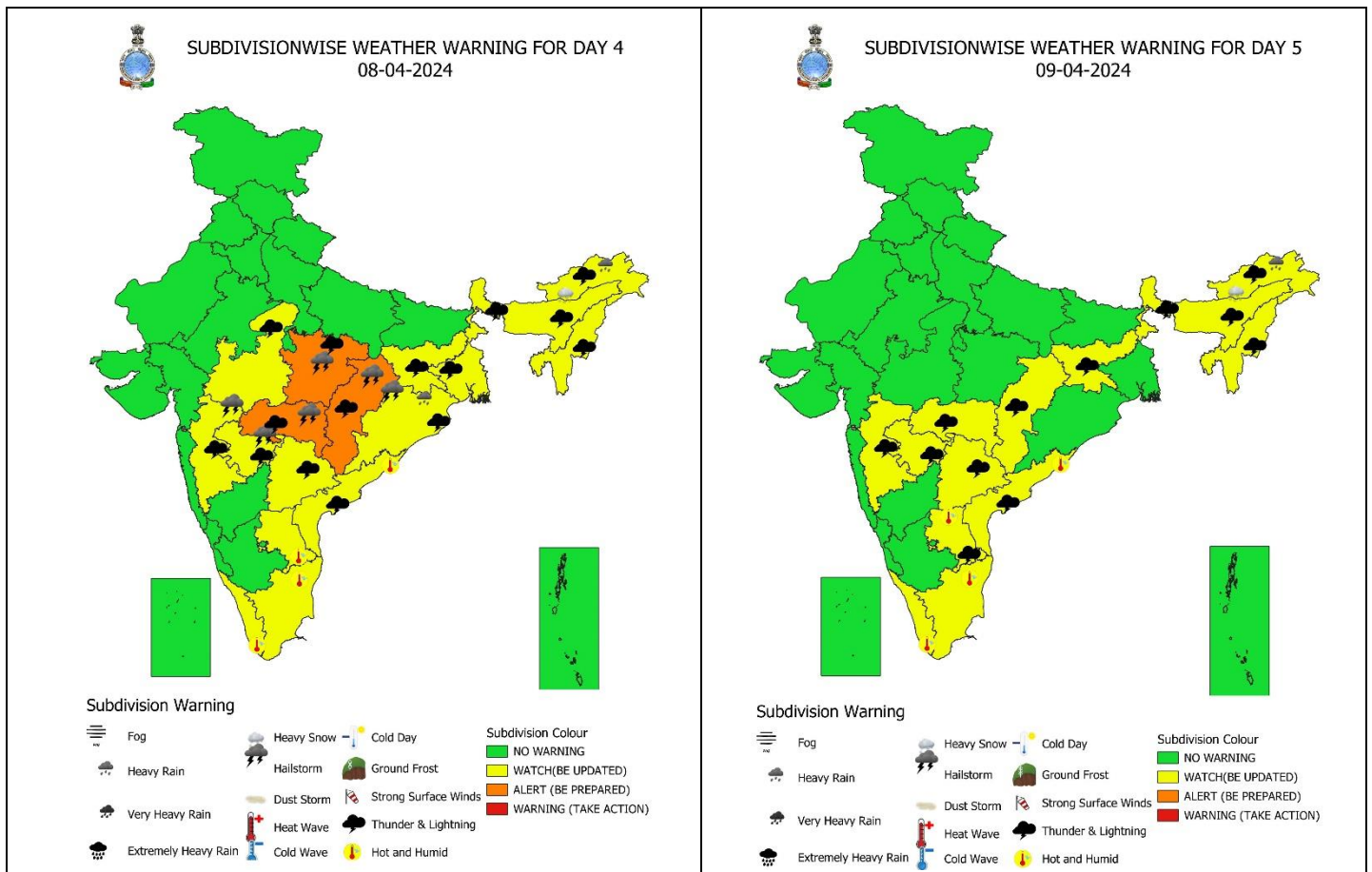


### SUBDIVISIONWISE WEATHER WARNING FOR DAY 3 07-04-2024



#### Subdivision Warning





**Impact & Action Suggested due to heavy/very heavy rainfall/snowfall over Arunachal Pradesh during 05<sup>th</sup> -09<sup>th</sup> April,2024, Assam & Meghalaya on 05<sup>th</sup>&06<sup>th</sup>; over Odisha on 07<sup>th</sup> & 08<sup>th</sup> April.**

#### **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 kuchcha 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 over Sub-Himalayan West Bengal & Sikkim on 05<sup>th</sup>; over Odisha on 07<sup>th</sup>; over East Madhya Pradesh, Chhattisgarh, Marathwada, Vidarbha on 07<sup>th</sup> & 08<sup>th</sup>; over Madhya Maharashtra on 08<sup>th</sup> April,2024.**

**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 & ACTION SUGGESTED due to Heat Wave Conditions:**














**Yellow alert Areas:**

- ❖ Moderate temperature, Heat is tolerable for general public but moderate health concern for vulnerable people e.g. infants, elderly, people with chronic diseases.
- ❖ Avoid heat exposure, Wear lightweight, light colour, loose, cotton clothes, Cover your head, use a cloth, hat or umbrella.

## Legends & abbreviations:

- ❖ **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; **AWS:** Automatic Weather Station; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; PTO: Part Time Office.
- ❖ **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

## LEGENDS

### WARNING

WARNING (TAKE ACTION)
ALERT ( BE PREPARED)
WATCH (BE UPDATED)
NO WARNING ( NO ACTION)

### Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75



**Rain/ Snow \***

Heavy: 64.5 to 115.5 mm/cm \*  
 Very Heavy: 115.6 to 204.4 mm/cm \*  
 Extremely Heavy: > 204.4 mm/cm \*



**Heat Wave**

When maximum temperature of a station reaches  $\geq 40^{\circ}\text{C}$  for plains and  $\geq 30^{\circ}\text{C}$  for hilly regions  
 (a) Based on Departure from normal

Heat Wave: Maximum Temperature Departure from normal  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .  
 Severe Heat Wave: Maximum Temperature Departure from normal  $\geq 6.5^{\circ}\text{C}$

(b). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature  $\geq 45^{\circ}\text{C}$ .  
 Severe Heat Wave: When actual maximum temperature  $\geq 47^{\circ}\text{C}$

(c). Criteria for heat wave for coastal stations

When maximum temperature departure is  $> 4.5^{\circ}\text{C}$  from normal. Heat Wave may be described provided maximum temperature  $\geq 37^{\circ}\text{C}$



**Warm Night**

When maximum temperature remains  $40^{\circ}\text{C}$

Warm Night: When minimum temperature departure  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .  
 Severe Warm Night: When minimum temperature departure  $> 6.4^{\circ}\text{C}$ .



**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



**Thunderstorm**

Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)



**Dust/Sand Storm**

An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.



**Frost**

Ice deposits on ground

Air temperature  $\leq 4^{\circ}\text{C}$  ( over Plains)



**Squall**

A strong wind that rises suddenly, lasts for atleast 1 minute.

Moderate: Wind speed 52-61 kmph  
 Severe: Wind speed 62-87 kmph  
 Very Severe: Wind speed  $> 87$  kmph



**Sea State**

Effect of various waves in the sea over specific area

Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre  
 High to very high: Wind speed 63-117 kmph ( 34-63 knots) & Wave height 6-14 metre  
 Phenomenal: Wind speed  $> 117$  kmph ( $> 63$  knots) & Wave height  $> 14$  metre



**Cyclone**

Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)

Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)

Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)

Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)

Super Cyclone Strom: Wind speed  $> 220$  kmph ( $> 119$  knots)