



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 04th April, 2024.

Time of Issue: 1230 hours IST

Subject: i) Enhanced rainfall/thunderstorm activity likely to continue over Northeast India till 07th April, 2024.

ii) Heat wave conditions likely to prevail over parts of east & peninsular India during next 3 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.
- ❖ **Light/Moderate rainfall/snowfall** occurred at many places over Arunachal Pradesh; Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; at isolated places over Himachal Pradesh.
- ❖ **Light/Moderate rainfall** accompanied with **thunderstorm and gusty wind** occurred at a few places over Assam & Meghalaya, Nagaland, Manipur, Mizoram; at isolated places over Sikkim and **Light/Moderate rainfall** at isolated places over Haryana, West Uttar Pradesh, Rajasthan, Odisha, South Interior Karnataka, Tamil Nadu and Kerala.

Weather Systems and Forecast & Warnings: (Annexure II)

- ❖ A Western Disturbance as a trough in middle tropospheric westerlies runs roughly along long. 65°E to the north of lat. 30°N. A cyclonic circulation lies over northeast Rajasthan & neighbourhood in lower tropospheric level. Under their influence:
 - ✓ Isolated to scattered light to moderate rainfall/snowfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh during next 3 days and Uttarakhand during next 7 days.
- ❖ 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 over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during next 7 days.
 - ✓ **Isolated heavy rainfall/snowfall very likely over Arunachal Pradesh during 04th-07th April with possibility of very heavy falls on 06th April, 2024.**
 - ✓ **Isolated heavy rainfall over Assam & Meghalaya on 05th April.**
 - ✓ Isolated light rainfall very likely over Sub-Himalayan West Bengal & Sikkim during next 2 days and scattered to fairly widespread light to moderate rainfall with isolated **thunderstorms & lightning** during 06th-10th April, 2024.

- ✓ Isolated to scattered light/moderate rainfall with **thunderstorms & lightning** very likely over Gangetic West Bengal, Odisha, Jharkhand during 06th-09th April; over Bihar on 07th & 08th April, 2024.
- ❖ The trough/wind discontinuity run from south Tamil Nadu to southeast Madhya Pradesh in lower tropospheric levels. Under its influence; Isolated light rainfall likely over Madhya Maharashtra during 05th-09th April; over Konkan & Goa, Marathwada, Madhya Pradesh, Vidarbha, Chhattisgarh, Karnataka, Telangana, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe during 06th-10th April; over Coastal Andhra Pradesh & Yanam during 07th-09th 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, some parts of south Chhattisgarh, Marathwada, Telangana & adjoining north interior Karnataka, Rayalaseema and at isolated pockets over southeast Uttar Pradesh, North Interior Odisha, Madhya Maharashtra, coastal Andhra Pradesh & south interior Tamil Nadu. Maximum temperatures departures are above normal by 3-4°C at isolated pockets over Madhya Pradesh, Vidarbha & Telangana.
- ❖ Yesterday, the maximum temperature exceeded 98th percentile over some parts of Vidarbha and at isolated pockets over East Rajasthan, southwest Rajasthan, northwest Madhya Pradesh, East Madhya Pradesh, Marathwada, Odisha, Interior Karnataka, Telangana & Rayalaseema.
- ❖ The maximum temperature likely to exceed 98th percentile at isolated pockets over Karnataka & Rayalaseema during 04th-07th; south Kerala during 05th-07th and north interior Tamil Nadu on 06th & 07th April, 2024.
- ❖ Today, Minimum temperatures are **above normal by 3-5°C** at many places over Manipur, Tripura, Gujarat Region, East Rajasthan; at isolated places over North Interior Karnataka, Odisha, Vidarbha, southwest Rajasthan, central Madhya Pradesh, Madhya Maharashtra and Marathwada.
- ❖ Gradual rise in maximum temperatures by 2-3°C very likely over many parts of East India during next 3 days and gradual fall by 3-4°C thereafter.
- ❖ No significant change in maximum temperatures very likely over Maharashtra 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.

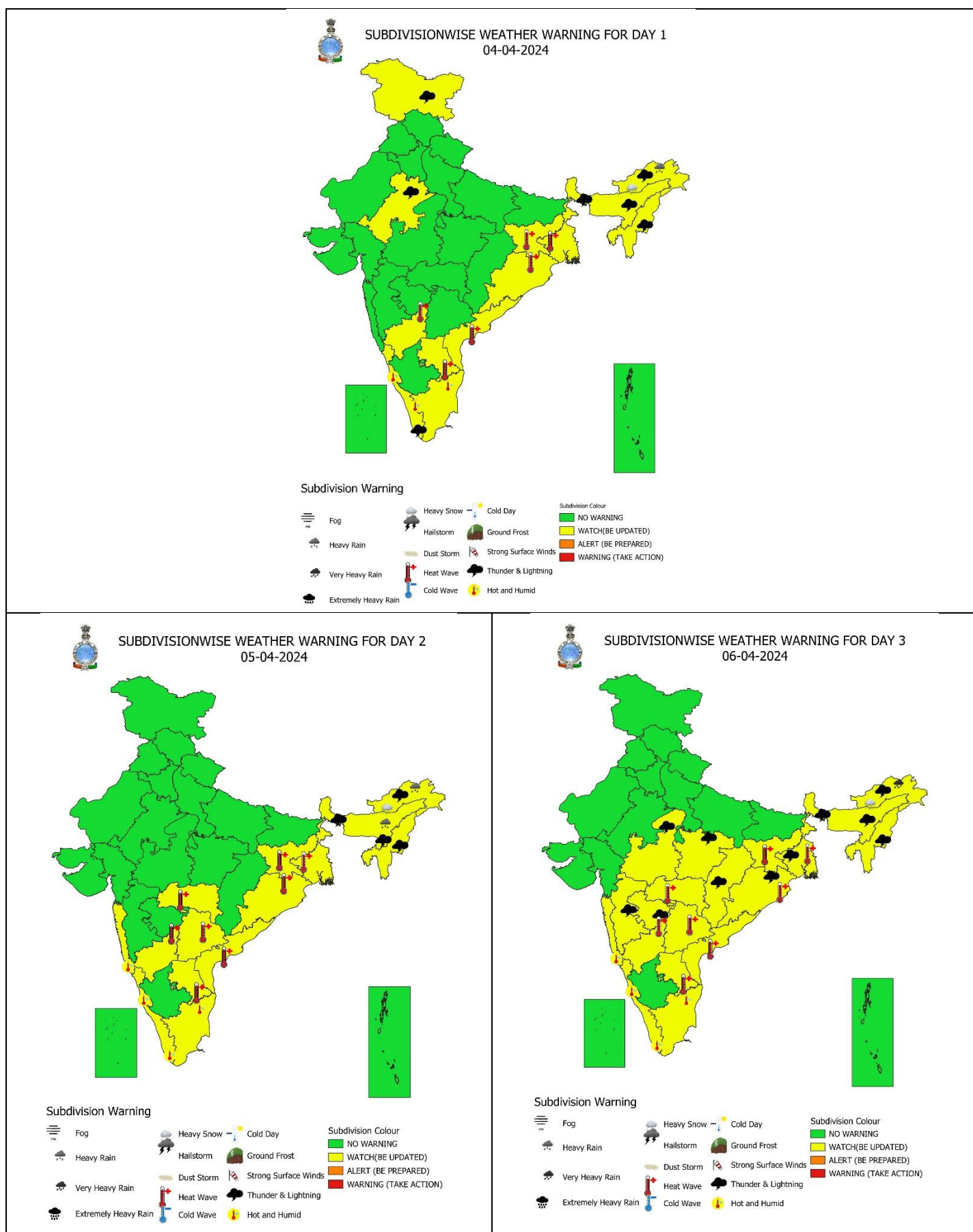
Heat wave, Warm Night and Hot & Humid weather warning for next 5 days:

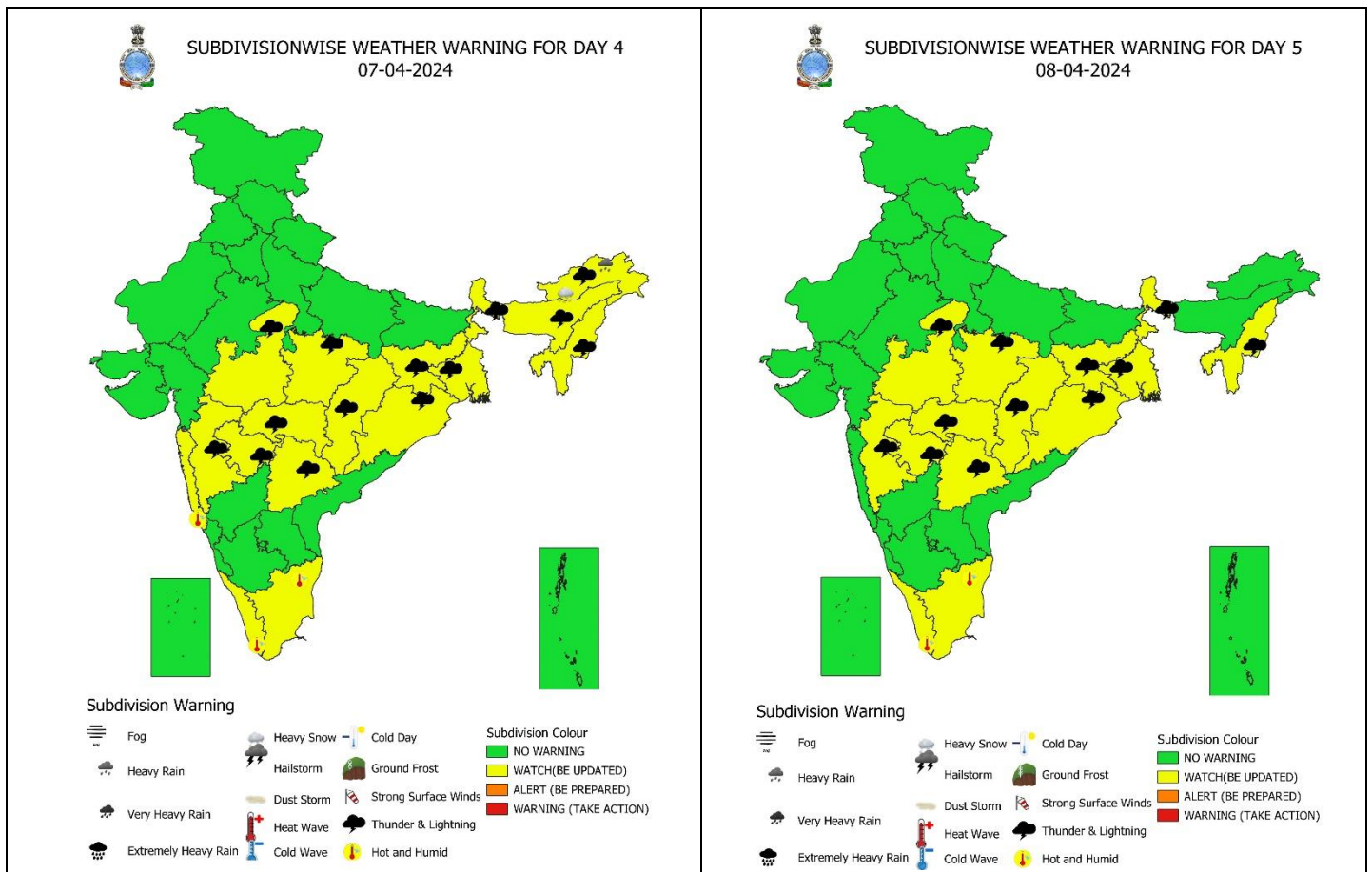
- ❖ **Heat wave conditions** very likely in isolated pockets over North Interior Karnataka, Odisha, Gangetic West Bengal, Jharkhand, Coastal Andhra Pradesh & Yanam, Rayalaseema during 04th-06th; Telangana and Vidarbha on 05th & 06th April, 2024.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over Odisha and North Interior Karnataka during 04th- 06th, Chhattisgarh on 04th & 05th and Vidarbha on 05th & 06th April, 2024.
- ❖ **Hot and humid weather** very likely to prevail over Kerala & Mahe, Tamil Nadu and Puducherry & Karaikal during 04th-08th; over Coastal Karnataka during 04th-06th and over Konkan & Goa during 05th-07th April, 2024.

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

Significant amount of rainfall (in cm):

- ❖ **Nagaland, Manipur, Mizoram & Tripura:** Kadamtala Arg (dist North Tripura) 6, Kolasib_aws (dist Kolasib) 4, Kolasib Agri (dist Kolasib) 3, Ukhrul_ Aws (dist Ukhrul) 1, Tamenglong (dist Tamenglong) 1
- ❖ **Assam & Meghalaya:** Harinagar Arg (dist Karimganj) 3, Matijuri (dist Hailakandi) 3, Nahar Katia (dist Dibrugarh) 3, Naharkatia Arg (dist Dibrugarh) 2, Tinsukia (dist Tinsukia) 2, Khowang (dist Dibrugarh) 2, Udaipur (dist Tinsukia) 2, Dillighat (dist Dibrugarh) 2, Margherita (dist Tinsukia) 2, Moranhat (dist Dibrugarh) 2, Ranganadi Nt Xing (dist Lakhimpur) 2, Chouldhuwaghat Arg (dist Lakhimpur) 1, Chauldhowaghat (dist Lakhimpur) 1, B P Ghat (dist Karimganj) 1, Dholla Bazar (dist Tinsukia) 1, Dholai (dist Cachar) 1
- ❖ **Arunachal Pradesh:** Tuting (dist Upper Siang) 3, Miao (dist Changlang) 1, Kabu Basti (dist West Siang) 1, Ziro (dist Lower Subansiri) 1, Bameng Circle Aws (dist East Kameng) 1, Ziro_ Arg (dist Lower Subansiri) 1





Impact & Action Suggested due to heavy/very heavy rainfall/snowfall over Arunachal Pradesh during 04th-06th April, 2024.

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 kuccha houses during heavy rainfall as it may collapse anytime soon.
- ❖ Drive carefully.

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°C to 6.4°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°C

Warm Night: When minimum temperature departure 4.5°C to 6.4°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°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



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)