



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 06th April, 2024.

Time of Issue: 1330 hours IST

- Subject: i) A fresh spell of thunderstorms accompanied with rainfall, gusty winds and hail likely to start over East, Central & Peninsular India from 06th April, 2024.**
ii) Rainfall/thunderstorm activity likely to continue over Northeast India during next 7 days.
iii) Heat wave conditions likely to prevail over parts of east India today and over peninsular India during next 2 days and abate thereafter.

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

- ❖ **Heat wave to severe heat wave conditions** prevailed in some parts of Odisha and **heat wave conditions** in some parts of Gangetic West Bengal and south Jharkhand.
- ❖ **Warm night** prevailed in isolated pockets of southeast Madhya Pradesh and Madhya Maharashtra.
- ❖ **Light/Moderate rainfall/snowfall** accompanied with **thunderstorm** observed at most places over Arunachal Pradesh; at isolated places over Sub-Himalayan West Bengal & Sikkim; **light rainfall/snowfall** accompanied with **thunderstorm** at isolated places over Jammu-Kashmir and Himachal Pradesh.
- ❖ **Light/Moderate rainfall** accompanied with **thunderstorm and gusty wind** observed at a few places over Assam & Meghalaya; Lakshadweep; at isolated places over Nagaland, Manipur, Mizoram & Tripura, Haryana, Uttar Pradesh, Rajasthan and Telangana.

Weather Systems and Forecast & Warnings: (Annexure II)

- ❖ The cyclonic circulation over north Bangladesh and another cyclonic circulation over east Assam & neighbourhood persist 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 Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during next 7 days.
 - ✓ **Isolated heavy rainfall very likely over Arunachal Pradesh during 06th-08th and Assam & Meghalaya on 06th April, 2024.**
- ❖ The trough/wind discontinuity runs from south Chhattisgarh to Comorin area across interior Karnataka and interior Tamil Nadu in lower tropospheric levels. The low-level anticyclone over the east central Bay of Bengal is likely to gradually strengthen and move northwestwards towards northwest Bay of Bengal from today. Under their influence;
 - ✓ Scattered to fairly widespread light/moderate rainfall accompanied with **thunderstorms, lightning & gusty winds (30-50 kmph)** very likely over Jharkhand during 06th-10th; Gangetic West Bengal, Odisha and Bihar during 06th-08th; Madhya Pradesh, Chhattisgarh, Marathwada during 06th-12th and Vidarbha, Madhya Maharashtra, during 07th-12th April, 2024.
 - ✓ Isolated light/moderate rainfall accompanied with **thunderstorms, lightning & gusty winds (30-50 kmph)** very likely over Kerala & Mahe during 06th-12th; Coastal Andhra Pradesh & Yanam during 07th-

10th; Karnataka during 09th-12th; Tamil Nadu, Puducherry & Karaikal and Telangana during 08th-12th April, 2024.

✓ **Hailstorm activity also very likely at isolated places over Odisha on 07th; East Madhya Pradesh during 07th-10th; Vidarbha during 07th-09th; Chhattisgarh on 07th & 08th and Marathwada on 08th April, 2024.**

❖ The Western Disturbance as a cyclonic circulation lies over northwest Uttar Pradesh & neighbourhood with a trough aloft in middle & upper tropospheric westerlies roughly along long. 73°E to the north of lat. 28°N. Another Western Disturbance is likely to affect Western Himalayan Region from 10th April, 2024. Under the influence of these systems:

- ✓ Scattered light rainfall/snowfall with **thunderstorms, lightning** very likely over Jammu-Kashmir, Himachal Pradesh during 10th-12th; and isolated light rainfall/snowfall over Uttarakhand during next 7 days.
- ✓ Isolated light to moderate rainfall with **thunderstorms, lightning** very likely over East Rajasthan, East Uttar Pradesh on 06th & during 09th-12th; West Rajasthan on 11th & 12th and West Uttar Pradesh on 10th & 11th April, 2024.
- ✓ **Strong surface winds (20-30 kmph)** very likely to prevail over Uttar Pradesh and Delhi today.

Maximum temperature observation and forecast for next 5 days:

- ❖ Yesterday, Maximum temperatures were in the range of 40-43°C over most parts of Vidarbha and Odisha; many parts of Rayalaseema; some parts of Chhattisgarh, Jharkhand, Gangetic West Bengal, Madhya Maharashtra, Coastal Andhra Pradesh & Yanam, North Interior Karnataka, Telangana and Tamil Nadu and at isolated places over East Uttar Pradesh and southwest Madhya Pradesh, which are above normal by 2-4°C.
- ❖ Today, Minimum temperatures are above normal by 3-5°C at a few places over Uttar Pradesh; at isolated places over Bihar, Gujarat Region, Madhya Maharashtra, West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura.
- ❖ Gradual fall by 2-3°C in maximum temperatures very likely over many parts of Northwest India during next 4-5 days.
- ❖ No significant change in maximum temperatures very likely over many parts of Central India and interior Maharashtra during next 24 hours and gradual fall by 2-4°C thereafter.
- ❖ No significant change in maximum temperatures very likely over many parts of East India during next 24 hours; gradual fall by 3-4°C for subsequent 2 days and no significant change 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:

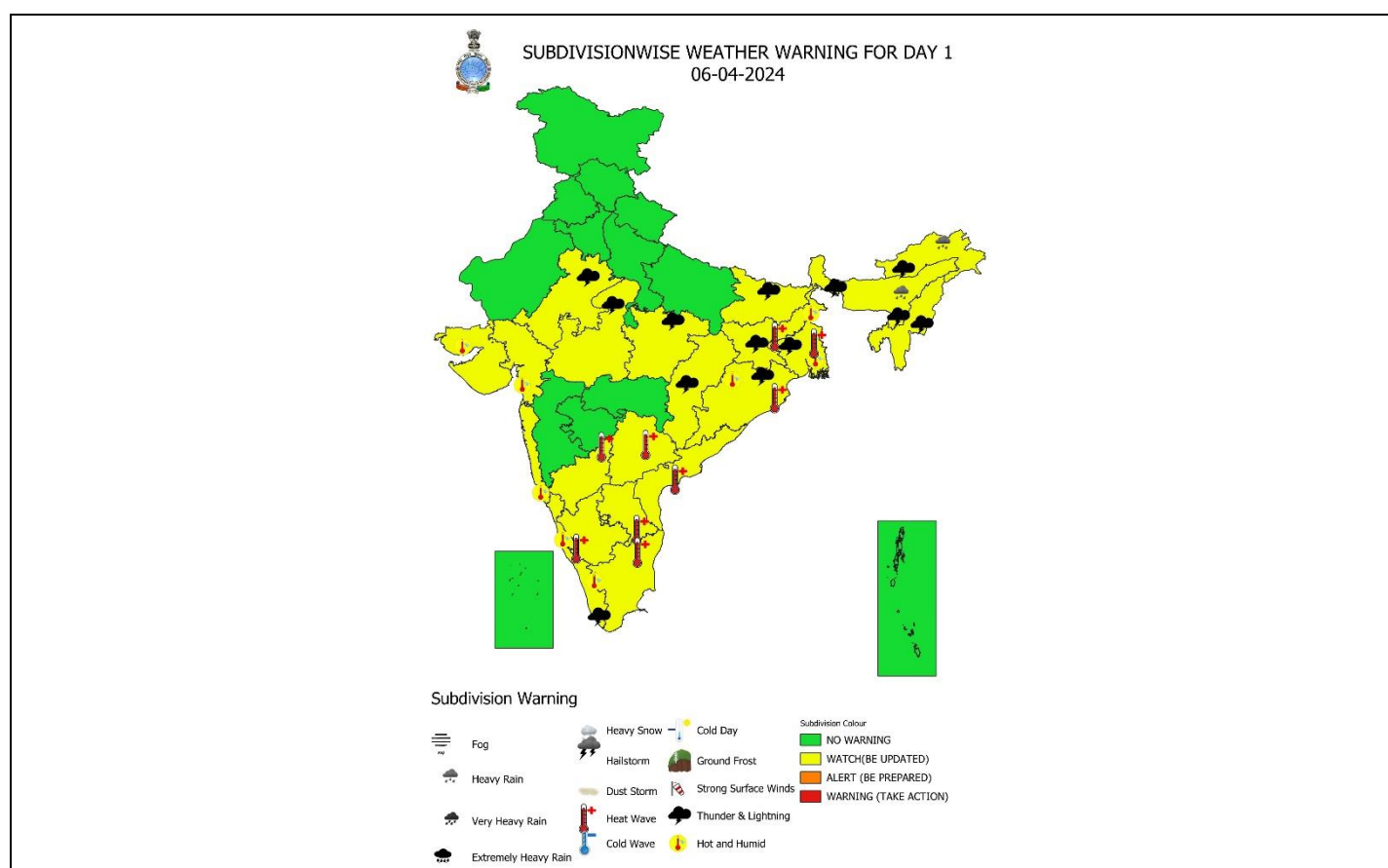
- ❖ **Heat wave conditions** very likely in isolated pockets over Tamil Nadu, interior Karnataka and Telangana on 06th & 07th and Odisha, Jharkhand, Gangetic West Bengal, Coastal Andhra Pradesh & Yanam and Rayalaseema on 06th April, 2024.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over North Interior Karnataka, Telangana on 06th & 07th and East Madhya Pradesh, Madhya Maharashtra, Marathwada and Odisha on 06th April, 2024.
- ❖ **Hot and humid weather** very likely to prevail over Kerala & Mahe, coastal areas of Saurashtra & Kutch during 06th-10th; Odisha, West Bengal on 06th; Coastal Karnataka and Konkan & Goa on 06th & 07th and Coastal Andhra Pradesh & Yanam and Rayalaseema during 07th-10th April, 2024.

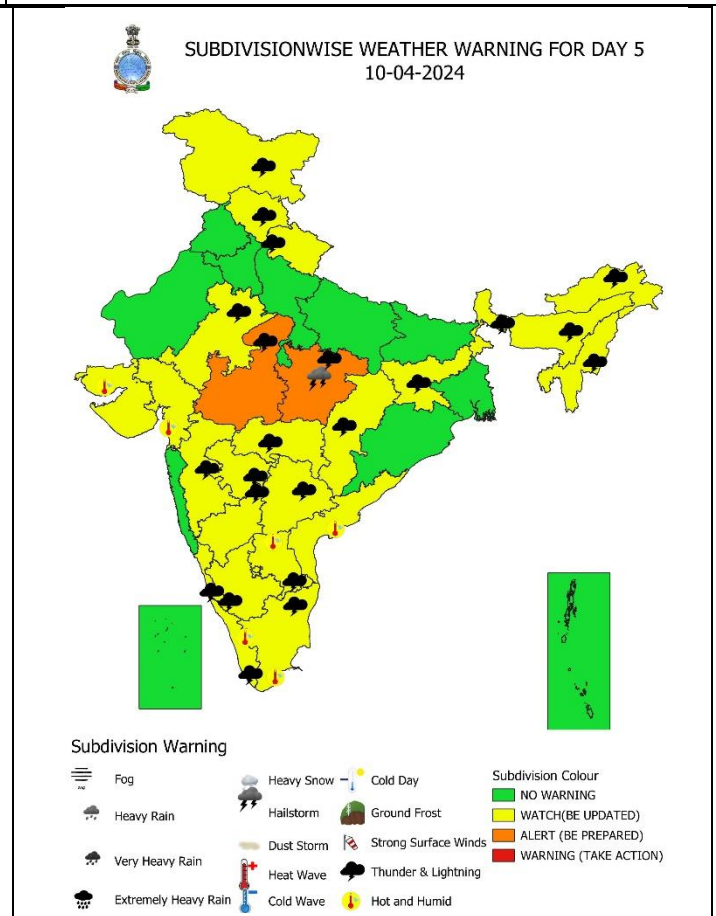
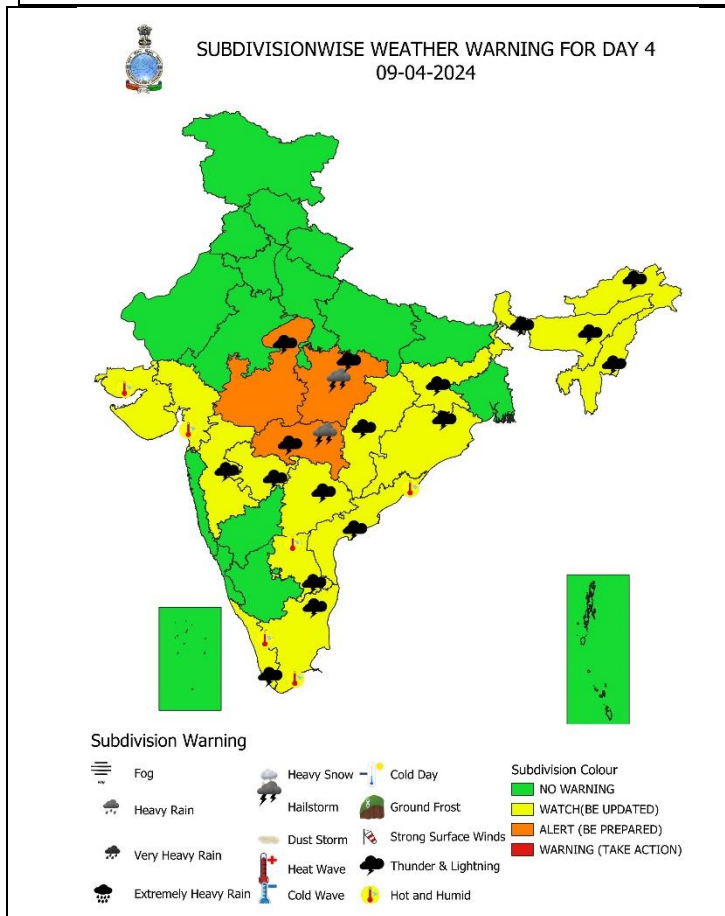
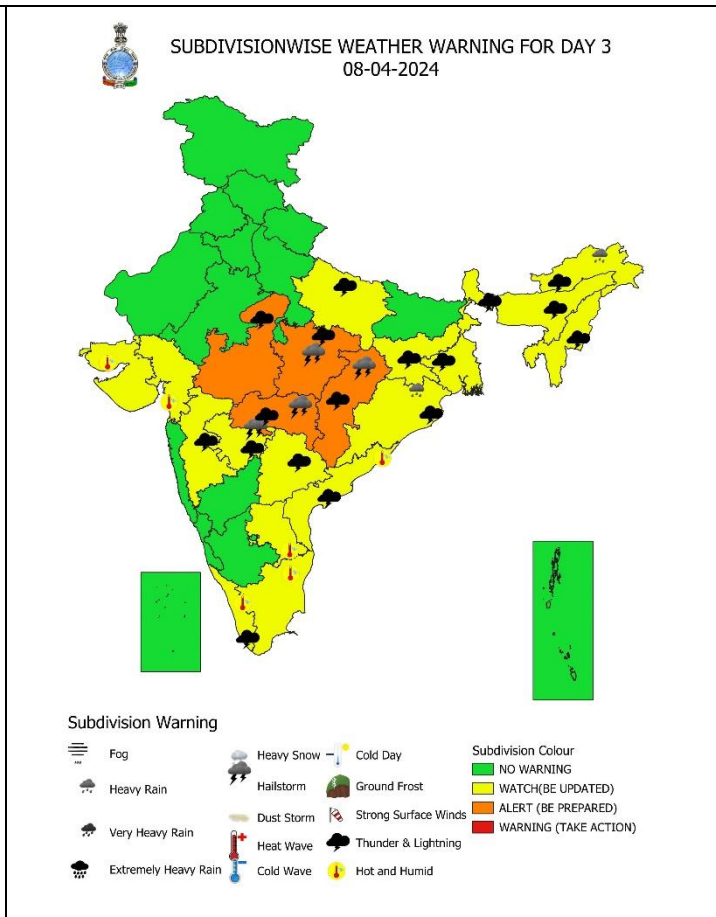
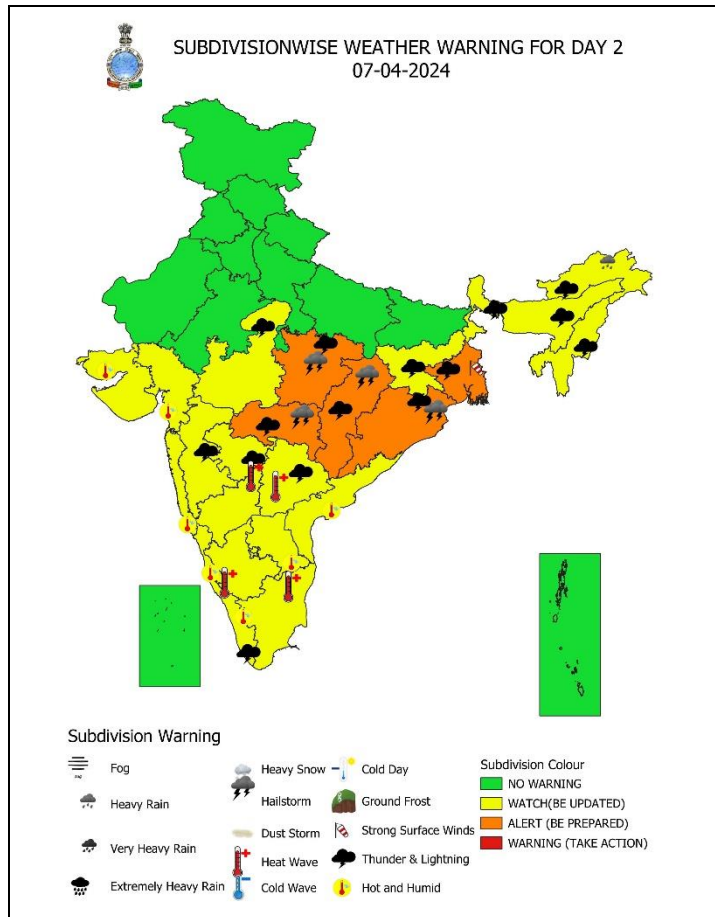
For more details, kindly refer: https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php

Significant amount of rainfall (in cm):

- ❖ **Arunachal Pradesh:** Kibithu (dist Anjaw) 4, Tawang_ Aws (dist Tawang) 4, Tawang Chamgbu Kvk Aws (dist Tawang) 4, Miao (dist Changlang) 3, Hawaii (dist Anjaw) 3, Tuting (dist Upper Siang) 3, Tawang (dist Tawang) 3;
- ❖ **Sikkim:** North Sikkim-4;
- ❖ **Assam & Meghalaya:** A P Ghat (dist Cachar) 3, Margherita (dist Tinsukia) 3, Shella (dist East Khasi Hills) 2, Matijuri (dist Hailakandi) 2, Amraghat (dist Cachar) 2, Naharkatia Arg (dist Dibrugarh) 2, B P Ghat (dist Karimganj) 2, Lakhipur (dist Cachar) 2;
- ❖ **Nagaland, Manipur, Mizoram & Tripura:** Kadamtala Arg (dist North Tripura) 1.

ANNEXURE II





Impact & Action Suggested due to heavy rainfall over Arunachal Pradesh during 06th -08th; Assam & Meghalaya on 06th and Odisha on 08th 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 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 Gangetic West Bengal, Odisha on 07th; East Madhya Pradesh during 07th-10th; West Madhya Pradesh during 08th-10th; Vidarbha during 07th-09th; Chhattisgarh on 07th & 08th and Marathwada on 08th 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 kuchcha 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 likely 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.














Agromet advisories for Heavy Rainfall, Gusty Winds, Hailstorm and Heat Wave likely over various parts of the country:

- ❖ Harvest the matured crops, fruits and vegetables at the earliest and keep the harvested produce at safer places or cover the heaps of harvested produce in the fields with tarpaulin sheets.
- ❖ Use hail nets or hail caps in fruit orchards to protect them from mechanical damage and provide mechanical support to horticultural crops & staking to vegetables in Odisha, East Madhya Pradesh, Chhattisgarh and Vidarbha.
- ❖ Drain out excess water from crop fields to avoid water stagnation in Arunachal Pradesh and Assam & Meghalaya.
- ❖ Postpone fresh sowing of rice, cowpea/ lobia, soybean, vegetables and maize in *Jhum* and cover the already-sown crops with farm residues or paddy straw in Arunachal Pradesh.
- ❖ Provide mechanical support to horticultural crops and staking to vegetables in Gangetic West Bengal, Sub-Himalayan West Bengal & Sikkim, Jharkhand, West Madhya Pradesh and North Eastern States.
- ❖ Apply light and frequent irrigation to standing crops to avoid heat stress; provide mulching to conserve soil moisture and minimize evaporation in Tamil Nadu, Interior Karnataka, Andhra Pradesh, Telangana, Gangetic West Bengal, Odisha and Jharkhand.

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 Storm: Wind speed > 220 kmph (> 119 knots)