



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 26th April, 2024

Time of Issue: 1330 hours IST

Subject:

- i. **Heat wave to severe heat wave conditions likely to continue over East and south Peninsular India during next 5 days.**
- ii. **A fresh spell of rainfall accompanied with thunderstorms/lightning and gusty winds likely over Western Himalayan Region during 26th-29th and plains of Northwest India during 26th-28th and adjoining Central India during 26th-27th April, 2024.**
- iii. **A spell of rainfall accompanied with isolated thunderstorms/lightning and heavy rainfall likely over Northeast India during 28th-30th April, 2024.**

Realised weather during past 24 hours till 0830 hours IST of today:

- ❖ **Heat Wave conditions in many places with severe heat wave in isolated pockets** prevailed over Gangetic West Bengal and **heat wave conditions** in isolated pockets over Sub-Himalayan West Bengal, Bihar, Jharkhand, Odisha, Interior Karnataka and Coastal Andhra Pradesh & Yanam. **Heat wave conditions have been prevailing over Odisha since 15th and Gangetic West Bengal since 17th April.**
- ❖ **Light to moderate rainfall** accompanied with isolated thunderstorm & lightning observed at many places over Arunachal Pradesh and at isolated places over East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Madhya Maharashtra, Marathwada, Gujarat Region, Sub-Himalayan West Bengal & Sikkim, Andaman & Nicobar Islands, Coastal Andhra Pradesh, Tamil Nadu, Kerala, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Hailstorm** observed at isolated places over Madhya Maharashtra and East Madhya Pradesh.

Weather Systems and Forecast & Warnings: (Annexure I)

- ❖ A Western Disturbance as a cyclonic circulation lies over south Iran & adjoining south Pakistan in lower & middle levels. An induced cyclonic circulation lies over West Rajasthan in lower tropospheric levels. Under their influence:
 - ✓ Fairly widespread to widespread light to moderate rainfall/snowfall accompanied with **thunderstorm, lightning** very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and isolated rainfall over Uttarakhand during 26th-29th April, 2024 with possibility of **hailstorm over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 26th and Himachal Pradesh during 26th-28th and Uttarakhand on 28th & 29th April, 2024.**
 - ✓ Isolated **Heavy rainfall** also likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad during 27th-29th April and over Himachal Pradesh on 29th April, 2024.
 - ✓ Isolated to scattered rainfall accompanied with **thunderstorm, lightning & gusty winds (40-50 kmph)** very likely over Punjab, Haryana-Chandigarh-Delhi during 26th-28th and over Rajasthan & West Uttar Pradesh on 26th April, 2024. **Duststorm** is also very likely over West Rajasthan today, the 26th April, 2024.
 - ✓ Isolated **Hailstorm** very likely over Punjab and Haryana on 26th & 27th; over East Rajasthan on 26th April, 2024.

- ✓ **Strong surface winds (25-35 kmph)** very likely to prevail over Uttar Pradesh, Bihar and south Rajasthan on 26th & 27th April.
- ❖ A trough/wind discontinuity runs from Marathwada to north Tamil Nadu in lower tropospheric levels. Under their influence:
 - ✓ Isolated light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** very likely over Madhya Maharashtra, Marathwada, Madhya Pradesh, Vidarbha, Chhattisgarh on 26th & 27th April, 2024.
 - ✓ Isolated **Hailstorm** very likely over Madhya Maharashtra, Marathwada on 26th; west Madhya Pradesh on 26th & 27th and over East Madhya Pradesh on 27th April, 2024.
 - ✓ Isolated light to moderate rainfall accompanied with isolated **thunderstorm & lightning** very likely over Kerala & Mahe and Coastal Andhra Pradesh & Yanam on 26th April, 2024.
- ❖ A cyclonic circulation lies over northeast Assam in lower tropospheric levels. Another cyclonic circulation lies over north Bangladesh and a trough runs from this to north Odisha in lower tropospheric levels. Under their influence:
 - ✓ Fairly widespread to widespread light to moderate rainfall/snowfall accompanied with isolated **thunderstorm & lightning & gusty winds (40-50 kmph)** very likely over Arunachal Pradesh and scattered to fairly widespread rainfall over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during 26th-30th April, 2024.
 - ✓ Isolated light to moderate rainfall accompanied with **thunderstorm & lightning** very likely over Sikkim on 28th April, 2024.
 - ✓ **Isolated heavy rainfall** very likely over Arunachal Pradesh and Assam & Meghalaya on 28th & 30th April, 2024.

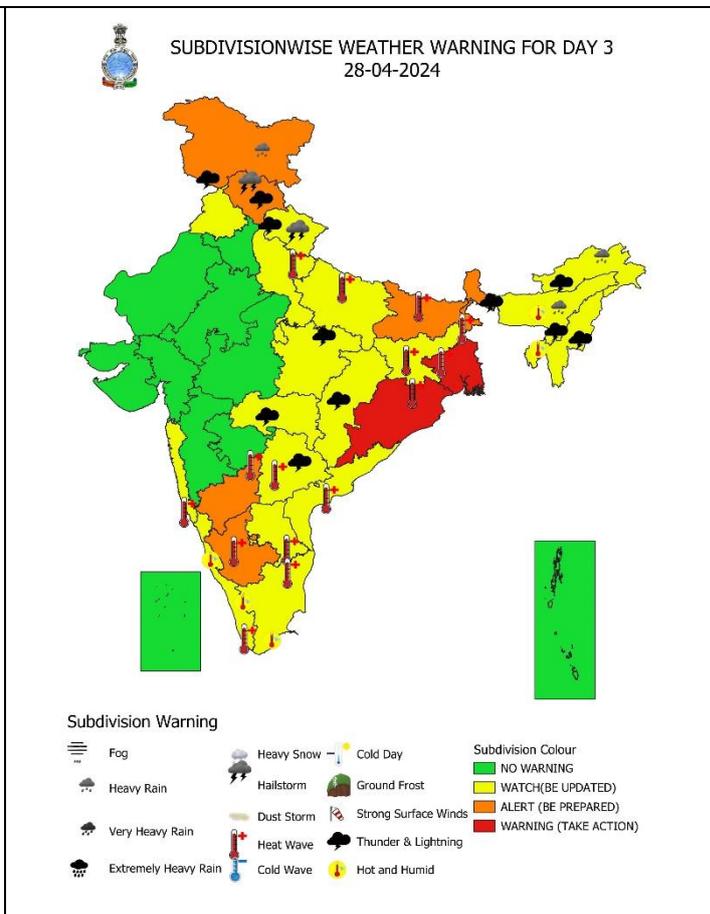
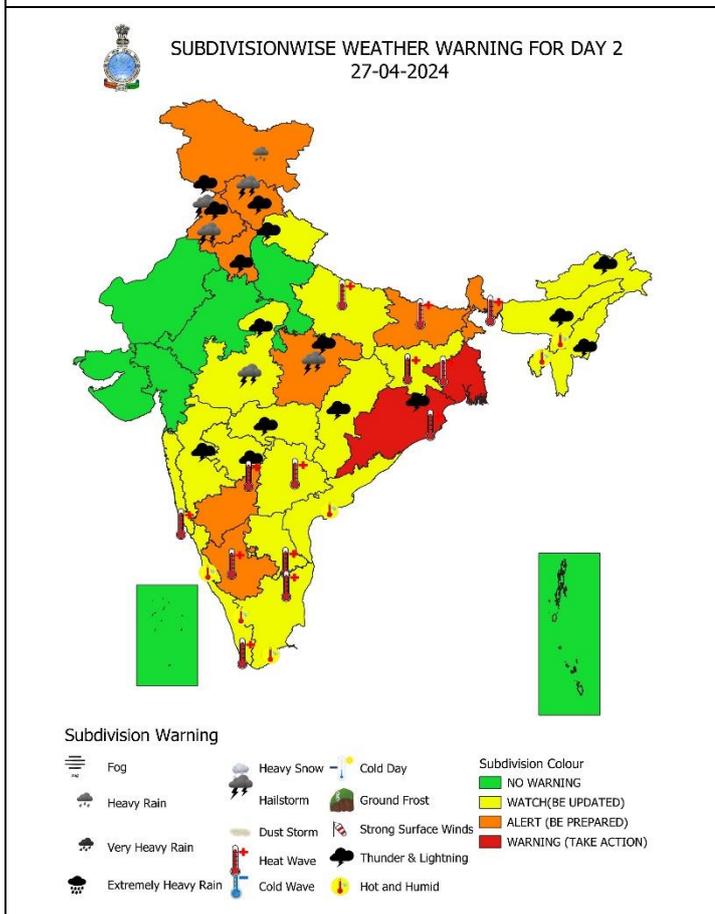
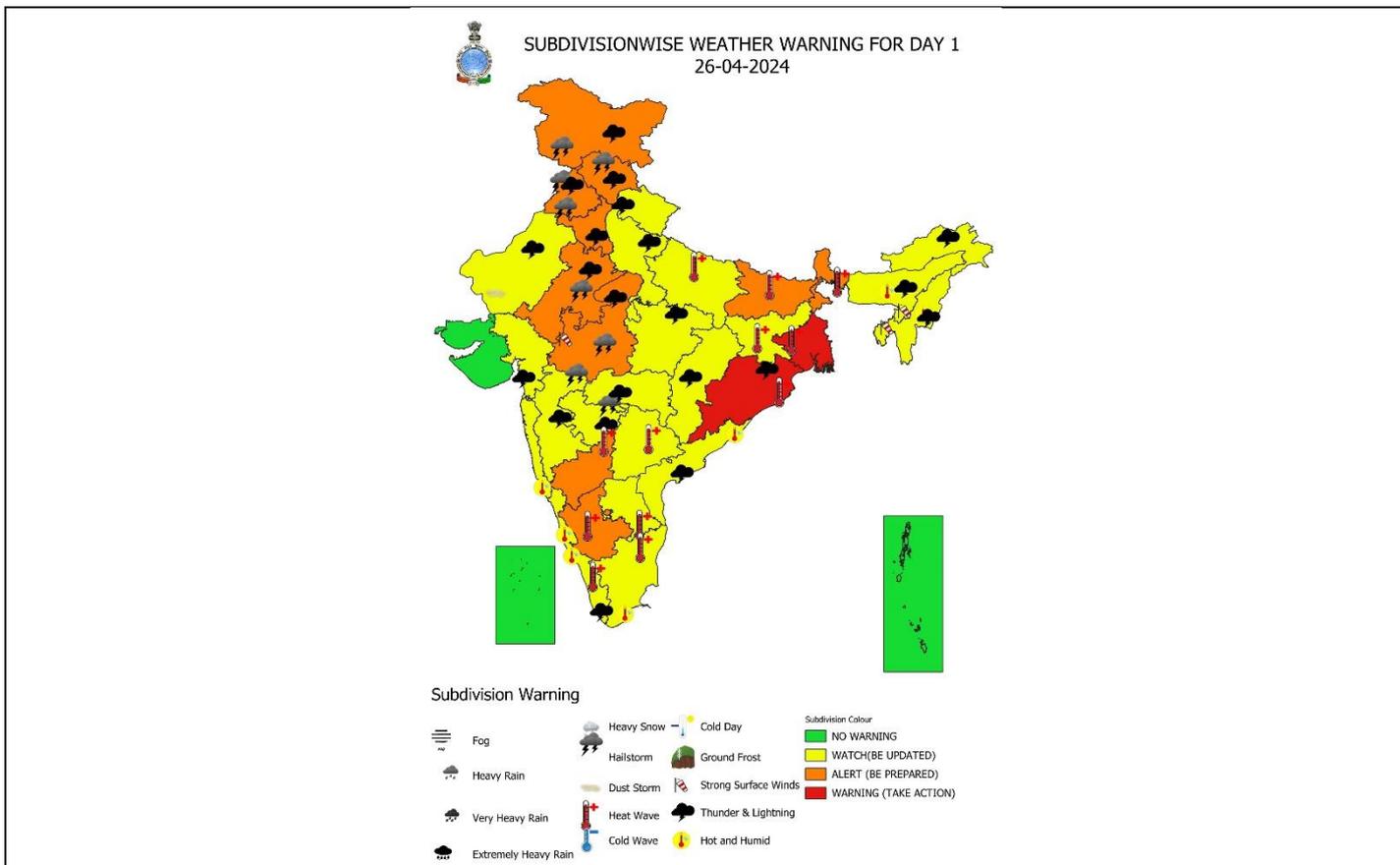
Maximum temperature observation and forecast for next 5 days:

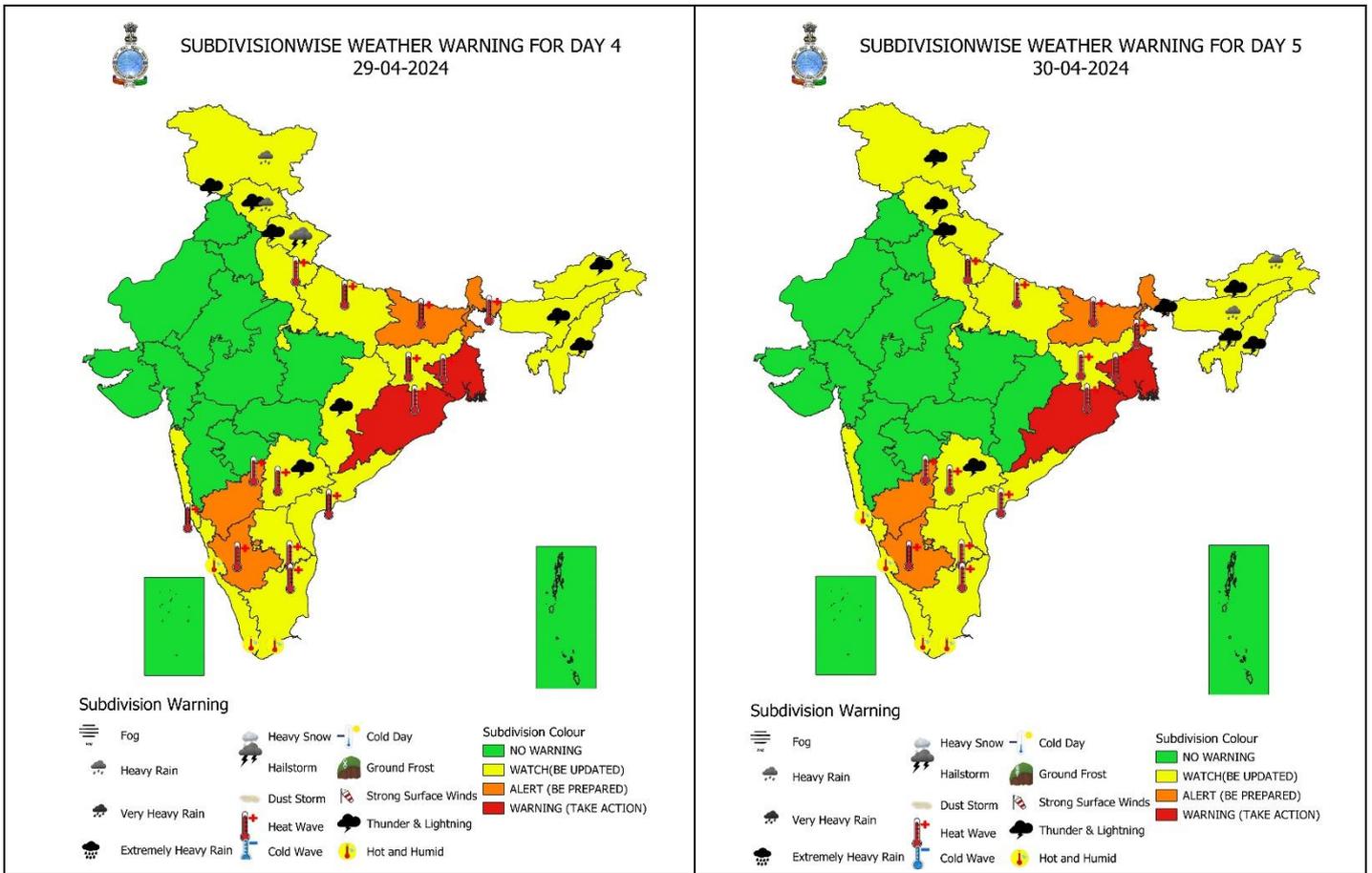
- ❖ Yesterday, **maximum temperatures** were in the range of **42-44°C** over many parts of Odisha & Rayalaseema; in some parts of Gangetic West Bengal, Vidarbha & Telangana and in isolated pockets over Chhattisgarh, East Uttar Pradesh, Madhya Pradesh & Madhya Maharashtra; **40-42°C** over many parts of Bihar, Rayalaseema, Jharkhand, Marathwada and Coastal Andhra Pradesh & Yanam; in some parts of Gujarat state and Tamil Nadu and in isolated pockets over Sub-Himalayan West Bengal, Haryana-Chandigarh-Delhi & West Uttar Pradesh. These were **above normal by 4-6°C** over many parts of West Bengal; at isolated pockets over Bihar, Odisha, Telangana and Tamil Nadu and **above normal by 2-4°C** over many parts of Andhra Pradesh; in some parts of East Uttar Pradesh & Chhattisgarh and in isolated pockets over Haryana-Chandigarh-Delhi, Rajasthan, Madhya Pradesh and Vidarbha.
- ❖ No significant change in maximum temperatures very likely over Central India during next 2 days and rise by about 2°C thereafter.
- ❖ Rise in maximum temperatures by 2-3°C very likely over East India during next 2 days and no significant change thereafter.
- ❖ Rise in maximum temperatures by 2-3°C very likely over Maharashtra and many parts of south peninsular India during next 5 days.
- ❖ 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 (Annexure I):

- ❖ **Heat Wave to severe heat wave conditions** very likely to prevail in many places over Gangetic West Bengal, in some parts over Odisha and in isolated pockets over Sub-Himalayan West Bengal during next 5 days. **Heat wave conditions** in isolated pockets over Bihar, Jharkhand, Telangana, Rayalaseema, Interior Karnataka, Tamil Nadu, East Uttar Pradesh during next 5 days; Kerala & Mahe during 26th-28th; Konkan during 27th-29th and West Uttar Pradesh, Coastal Andhra Pradesh & Yanam during 28th-30th April, 2024.
- ❖ **Hot and humid weather** very likely to prevail over Assam & Meghalaya, Tripura during 26th-28th; Kerala & Mahe, Coastal Karnataka, Tamil Nadu, Puducherry & Karaikal during 26th-30th; Coastal Andhra Pradesh & Yanam on 26th & 27th and Konkan & Goa on 26th April, 2024.

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





Impact expected and action suggested due to thunderstorm accompanied with lightning/gusty winds & Hailstorm over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Madhya Maharashtra and Marathwada on 26th; West Madhya Pradesh on 26th & 27th; Himachal Pradesh, Punjab and Haryana-Chandigarh during 26th-28th; Uttarakhand on 27th & 28th 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 heavy rainfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad during 27th-29th; Himachal Pradesh on 29th and Arunachal Pradesh and Assam & Meghalaya on 28th & 30th April, 2024.

Impacts Expected for Rainfall/Snowfall over above regions:

- 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 & ACTION SUGGESTED due to Heat Wave Conditions:

Red alert Areas (Gangetic West Bengal & Odisha)

- ❖ Very high likelihood of developing heat illness and heat stroke in all ages.
- ❖ Extreme care needed for vulnerable people.

Orange alert Areas (Sub-Himalayan West Bengal, Bihar & Interior Karnataka)

- ❖ High temperature & increased likelihood of heat illness symptoms in people who are either exposed to sun for a prolonged period or doing heavy work.
- ❖ High health concern for vulnerable people e.g. infants, elderly, people with chronic diseases.
- ❖ Avoid heat exposure– keep cool. Avoid dehydration.
- ❖ Drink sufficient water- even if not thirsty.
- ❖ Use ORS, homemade drinks like lassi, torani (rice water), lemon water, buttermilk, etc. to keep yourself hydrated.

Yellow alert Areas (East Uttar Pradesh, Jharkhand, Konkan, Telangana, Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu and Kerala & Mahe)

- ❖ 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, Hailstorm, Gusty Winds and Heat Wave likely over various parts of the country:

- Use hail nets or hail caps in fruit orchards to prevent mechanical damage and provide mechanical support to horticultural crops & staking to vegetables in Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, East Rajasthan, Madhya Pradesh and Marathwada. Keep the harvested produce at safer places or cover the heaps of harvested produce in the fields with tarpaulin sheets.
- In Jammu & Kashmir, withhold harvesting and threshing of wheat, mustard, late sown pea, chickpea and lentil; cover the already harvested produce with polythene sheet or tarpaulin; postpone transplanting of cucurbits and solanaceous vegetables and make necessary arrangements for draining out excess water from crop fields to avoid water stagnation.
- Apply light and frequent irrigation to standing crops to avoid heat stress; provide mulching to conserve soil moisture and minimise evaporation in West Bengal, Odisha, Bihar, Jharkhand, East Uttar Pradesh, Kerala, Interior Karnataka, Rayalaseema and Telangana.
- Provide mechanical support to horticultural crops & staking to vegetables to prevent damage from gusty winds.

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 Marathawada.
 - **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)



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)