



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release  
Date: 03<sup>rd</sup> May, 2024  
Time of Issue: 1230 hours IST

**Subject:**

- i. **Heat wave conditions likely to continue over East India till 05<sup>th</sup> and over south Peninsular India till 06<sup>th</sup> May and abate thereafter.**
- ii. **Heavy to very heavy rainfall spell accompanied with thunderstorms and gusty winds very likely over Northeast India on 05<sup>th</sup> & 06<sup>th</sup> May.**

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

- ❖ Yesterday, **Heat Wave to severe heat wave conditions** prevailed in some parts of Gangetic West Bengal and in isolated parts of Coastal Andhra Pradesh, Tamil Nadu and **Heat wave conditions** in isolated pockets of Sub-Himalayan West Bengal, Bihar, Odisha, Telangana, Interior Karnataka and Rayalaseema. **Heat wave to severe heat wave conditions have been prevailing over Odisha since 15<sup>th</sup>, Gangetic West Bengal since 17<sup>th</sup>, Jharkhand & Sub-Himalayan West Bengal, Rayalaseema since 24<sup>th</sup> and Bihar since 26<sup>th</sup> April, 2024.**
- ❖ Yesterday, **highest maximum temperature** of 46.2°C was reported at **Nandyal (Rayalaseema)** over the country.
- ❖ **Warm night conditions** prevailed in isolated places over Rayalaseema.
- ❖ **Heavy to very heavy rainfall with extremely heavy falls** occurred at isolated places over Arunachal Pradesh and **Heavy** rainfall at isolated places over Mizoram & Tripura.

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

- ❖ A cyclonic circulation lies over northeast Assam and another over Sub-Himalayan West Bengal & adjoining west Assam in lower tropospheric levels. Strong southwesterly winds from Bay of Bengal to northeast India are very likely to prevail at lower tropospheric levels on 05<sup>th</sup> & 06<sup>th</sup> May, 2024. Under their influence:
  - ✓ Fairly widespread to widespread, light to moderate rainfall accompanied with isolated **thunderstorm & lightning & gusty winds (40-50 kmph)** very likely over Arunachal Pradesh, Assam, Meghalaya, Sikkim, Nagaland, Manipur, Mizoram, Tripura during next 5 days.
  - ✓ **Isolated heavy to very heavy rainfall** very likely over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 05<sup>th</sup> & 06<sup>th</sup> May and isolated **heavy rainfall** over Sikkim on 05<sup>th</sup> May.
- ❖ A Western Disturbance seen as a cyclonic circulation over Iran & neighbourhood in lower tropospheric level with a trough aloft in middle & upper tropospheric westerlies roughly along Long. 55°E to the north of Lat. 25°N. Under its influence:
  - ✓ Isolated to scattered light to moderate rainfall accompanied with **thunderstorm and lightning** very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand and Himachal Pradesh during 03<sup>rd</sup>-05<sup>th</sup> May 2024.
  - ✓ Isolated very light/light rainfall very likely over West Rajasthan on 03<sup>rd</sup>; Haryana-Chandigarh and Punjab on 04<sup>th</sup> May, 2024.
  - ✓ **Strong surface winds (30-40 kmph)** very likely to prevail over Uttar Pradesh, south Rajasthan and Haryana & Delhi on 03<sup>rd</sup> & 04<sup>th</sup> May, 2024.

- ❖ Isolated light to moderate rainfall accompanied with **thunderstorm & lightning** likely over Odisha, Gangetic West Bengal during 03<sup>rd</sup>-06<sup>th</sup> and increase thereafter with scattered to fairly widespread rainfall accompanied with **thunderstorm, lightning & gusty winds (40-50 kmph)** during 07<sup>th</sup>-09<sup>th</sup> May. Isolated **heavy rainfall** likely over Gangetic West Bengal on 07<sup>th</sup> May.
- ❖ Isolated to scattered light to moderate rainfall accompanied with **thunderstorm & lightning** likely over East Uttar Pradesh, Bihar, Jharkhand during 06<sup>th</sup>-09<sup>th</sup> May, 2024.
- ❖ Isolated to scattered, light to moderate rainfall accompanied with **thunderstorm & lightning** over Andhra Pradesh, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe during 03<sup>rd</sup>-08<sup>th</sup>; over Telangana and Karnataka during 06<sup>th</sup>-08<sup>th</sup> May, 2024. Isolated **heavy rainfall** likely over Coastal Andhra Pradesh, South Interior Karnataka, Tamil Nadu and Kerala on 07<sup>th</sup> May.

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

- ❖ Yesterday, maximum temperatures were in the range of 43-46°C in some parts of Odisha and Rayalaseema; in isolated pockets of Telangana, Coastal Andhra Pradesh and Tamil Nadu; in the range of 40-43°C over many parts of Gangetic West Bengal; in some parts of Vidarbha, Madhya Maharashtra, Marathwada and Gujarat; in isolated pockets of Sub-Himalayan West Bengal, Jharkhand, Chhattisgarh, West Madhya Pradesh and North Interior Karnataka. These are above normal by 4-7°C in some parts of West Bengal and Tamil Nadu; in isolated pockets of Assam & Meghalaya, north Odisha, east Bihar, Coastal Andhra Pradesh, Telangana, Rayalaseema and South Interior Karnataka.
- ❖ Rise in maximum temperatures by 4-6°C very likely over many parts of Northwest India during next 4 days and no significant change thereafter.
- ❖ Rise in maximum temperatures by 2-3°C very likely over many parts of Central India during next 3 days and no significant change thereafter.
- ❖ No significant change in maximum temperatures very likely over East India during next 3 days and fall by 2-4°C thereafter.
- ❖ No significant change in maximum temperatures very likely over Gujarat State during next 3 days and rise by 2-4°C thereafter.
- ❖ Rise in maximum temperatures by 2-3°C very likely over Maharashtra during next 3 days and 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

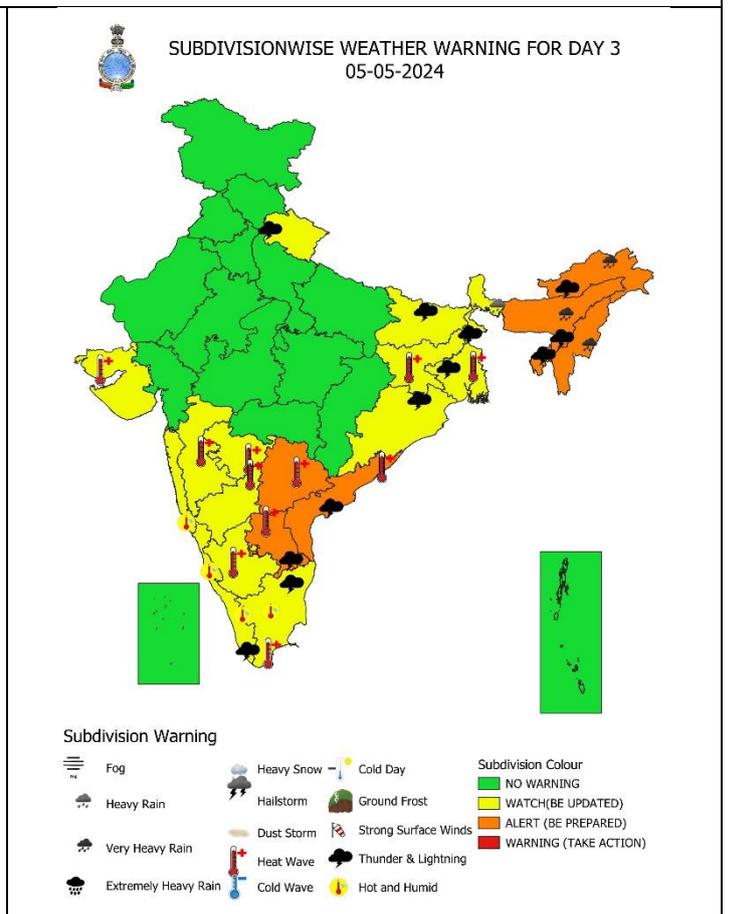
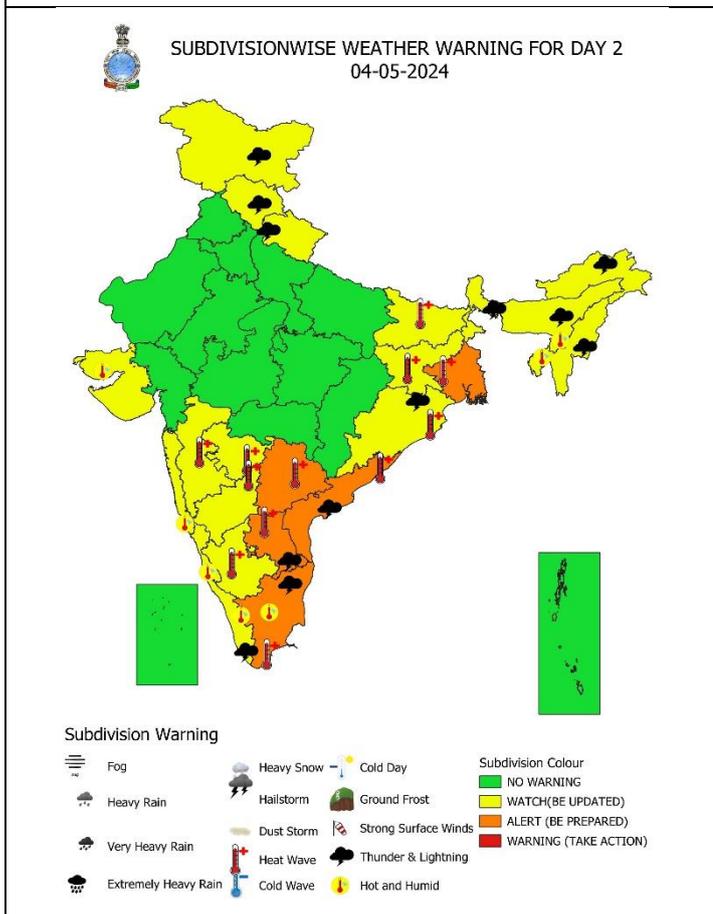
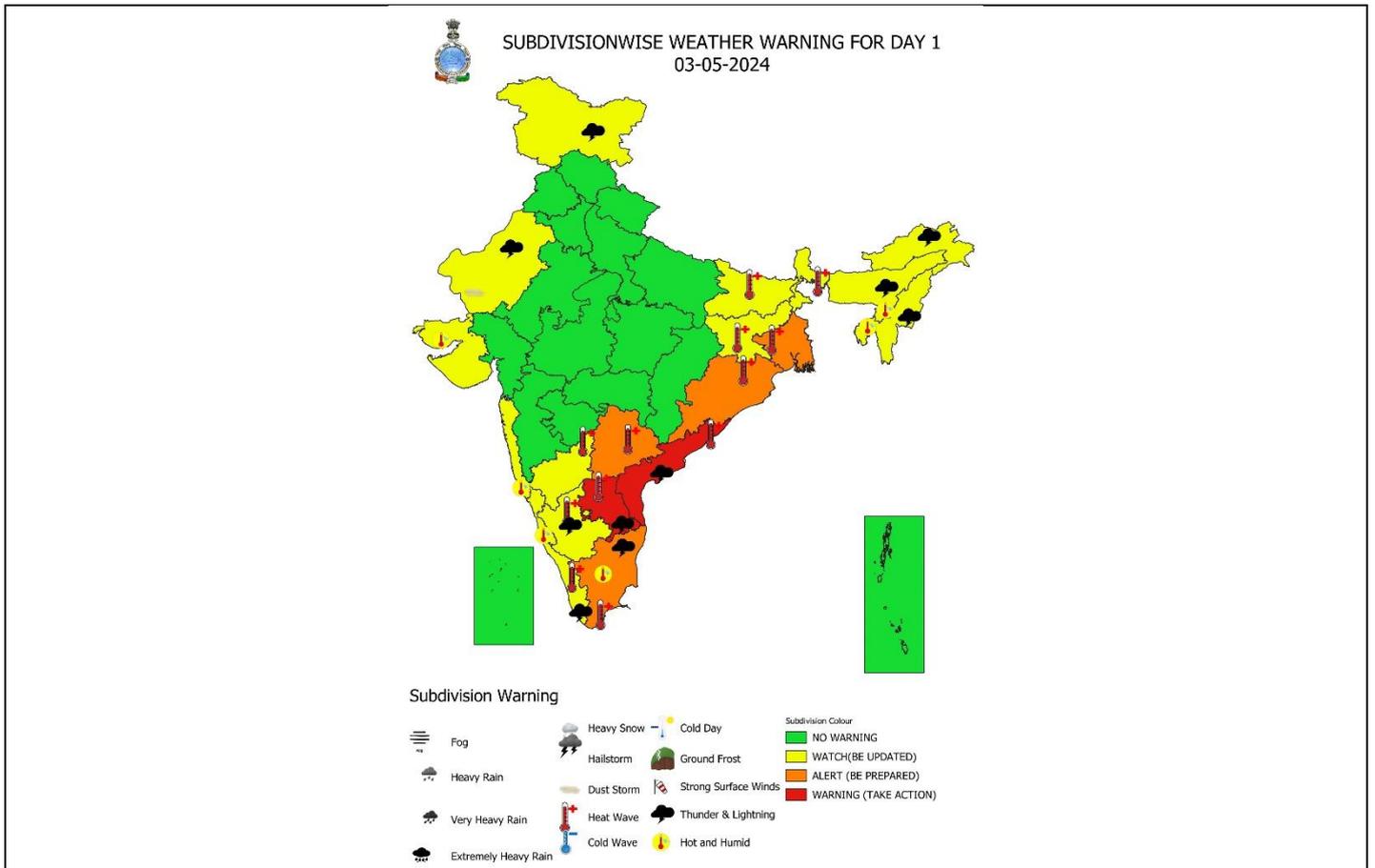
- ❖ **Maximum temperatures in the range of 44-47°C likely to continue over Coastal Andhra Pradesh & Yanam, Telangana and Rayalaseema till 03<sup>rd</sup> May and decrease thereafter.**
- ❖ **Heat wave conditions** very likely in some pockets over Gangetic West Bengal; at isolated pockets over Telangana, Interior Karnataka, Coastal Andhra Pradesh, Rayalaseema, Jharkhand, Tamil Nadu during next 3 days; over Kerala, Sub-Himalayan West Bengal & Sikkim on 03<sup>rd</sup>; Odisha, Bihar on 03<sup>rd</sup> & 04<sup>th</sup>; Madhya Maharashtra, Marathwada on 04<sup>th</sup> & 05<sup>th</sup> and over West Rajasthan on 07<sup>th</sup> May.
- ❖ **Hot and humid weather** very likely to prevail in isolated pockets over Coastal Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe during next 4-5 days; Assam & Meghalaya, Tripura, Saurashtra & Kutch on 03<sup>rd</sup> & 04<sup>th</sup> and Konkan during 03<sup>rd</sup>-05<sup>th</sup> May, 2024.
- ❖ **Warm night** very likely to prevail over Rayalaseema and South Interior Karnataka on 03<sup>rd</sup> May 2024.

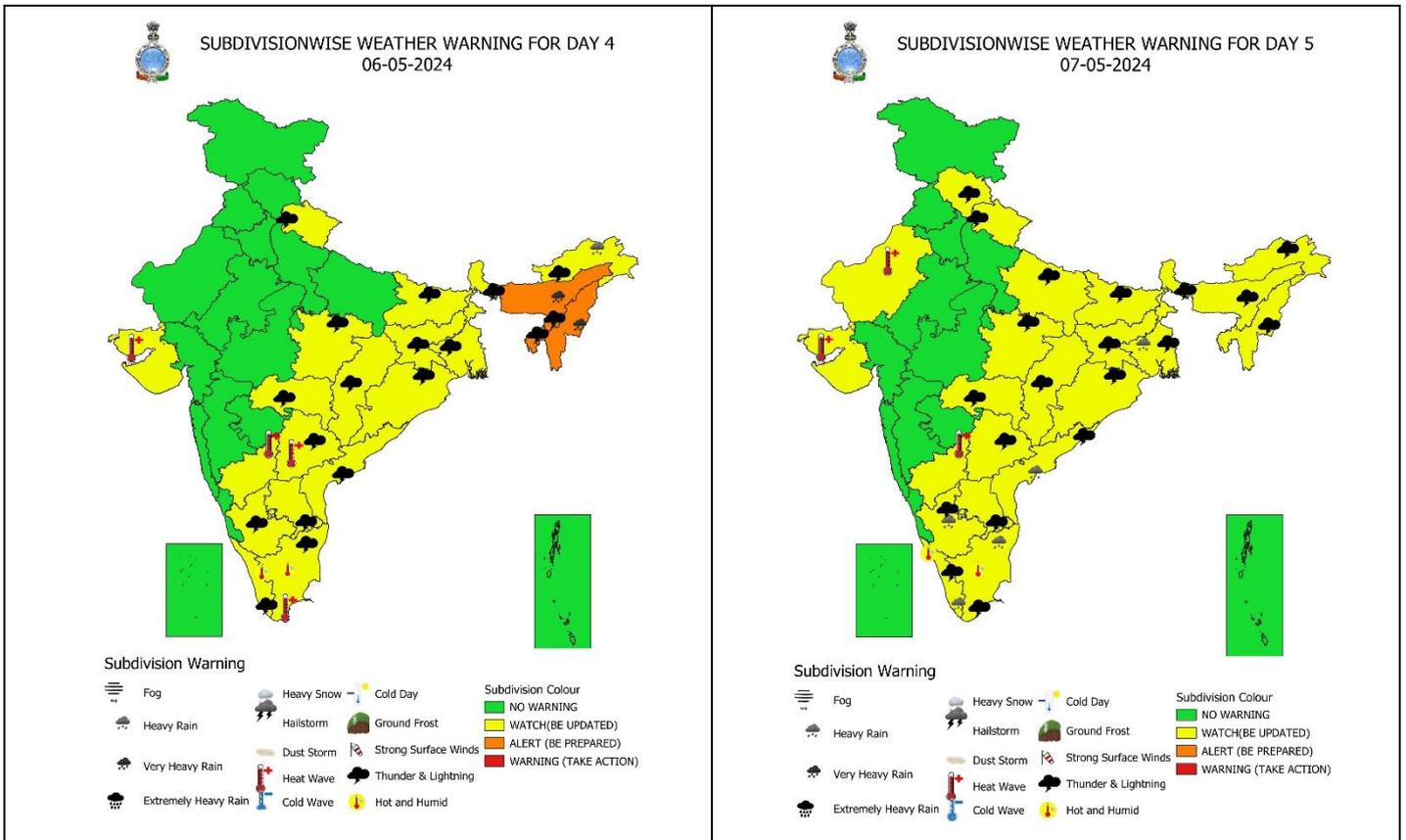
For more details, kindly refer: [https://mausam.imd.gov.in/responsive/all\\_india\\_forcast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forcast_bulletin.php)

- ❖ Light to moderate rainfall accompanied **with isolated thunderstorm & lightning** was observed at many places over Arunachal Pradesh; at a few places over Nagaland, Manipur, Mizoram & Tripura; at isolated places over Assam & Meghalaya, Odisha, South Interior Karnataka, Rayalaseema, Tamil Nadu and Kerala.

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

- ❖ **Arunachal Pradesh:** Anini\_aws (dist Dibang Valley) 21, Pasighat\_ Aero (dist East Siang) 9, Kamba Aws (dist West Siang) 8, Roing (dist Lower Dibang Valley) 3, Nachu Arg (dist Upper Subansiri) 3, Deomali (dist Tirap) 3,
- ❖ **Nagaland, Manipur, Mizoram & Tripura:** Udaipur (dist Gomati) 11, Gokulpur\_aws (dist Gomati) 11, Amarpur Arg (dist Gomati) 10, Lawngtlai (dist Lawngtlai) 8, Saiha (dist Saiha) 8, Lawngtlai Agri (dist Lawngtlai) 7, Sonamura Arg (dist Sipahijala) 7, Sonamura (dist Sipahijala) 6, Tamenglong (dist Tamenglong) 6, Serchip(hydro) (dist Serchhip) 5, Kolasib Agri (dist Kolasib) 5, Lunglei (dist Lunglei) 5, Kolasib\_aws (dist Kolasib) 5, Sabroom (dist South Tripura) 4, Saiha Agri (dist Saiha) 4, Gandachara Aws (dist Dhalai) 4, Kamalpur (dist Dhalai) 3,
- ❖ **Assam & Meghalaya:** Silchar (dist Cachar) 2, Dhemaji (dist Dhemaji) 2, Moranhat (dist Dibrugarh) 2, Lumding (dist Nagaon) 2, Laharighat Arg (dist Morigaon) 2, Jonai Arg (dist Dhemaji) 2, Chauldhowaghat (dist Lakhimpur) 2,





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

**Red alert Areas**

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

**Orange alert Areas**

- ✓ 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**

- ✓ 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.

**Impact & Action Suggested due to Isolated heavy to very heavy rainfall** very likely over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 05<sup>th</sup> & 06<sup>th</sup> May.

**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.

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

- Drain out excess water from crop fields to avoid water stagnation in Arunachal Pradesh, Mizoram and Tripura.
- Provide mechanical support to horticultural crops & staking to vegetables to prevent damage from gusty winds in Jammu & Kashmir, Uttarakhand, Tamil Nadu, Kerala, Andhra Pradesh and North-Eastern States.
- 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, Tamil Nadu, Kerala, Interior Karnataka, Andhra Pradesh and Telangana.

## 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.

<b>SPATIAL DISTRIBUTION</b> (% 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)



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

## LEGENDS

### WARNING

<b>WARNING (TAKE ACTION)</b>
<b>ALERT ( BE PREPARED)</b>
<b>WATCH (BE UPDATED)</b>
<b>NO WARNING ( NO ACTION)</b>

### 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)	
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**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)	