



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release.

Date: 02<sup>nd</sup> May, 2024

Time of Issue: 1315 hours IST

**Subject:**

- i. **Heat wave to severe heat wave conditions likely to continue over East & south Peninsular India till 03<sup>rd</sup> May and gradually improve thereafter.**
- ii. **Heavy to very heavy rainfall spell accompanied with thunderstorms and gusty winds very likely over Northeast India on 02<sup>nd</sup>, 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 conditions** at a few places with **severe heat wave conditions** in isolated pockets prevailed over Bihar, West Bengal and Tamil Nadu. **Heat wave conditions** prevailed in isolated places over Jharkhand, Odisha, Telangana, Coastal Andhra Pradesh, 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, the **highest maximum temperature** of 46.2°C was reported at **Rentachintala (Coastal Andhra Pradesh)** over the country.
- ❖ **Warm night conditions** prevailed in isolated places over Odisha, Gangetic West Bengal and Rayalaseema.
- ❖ **Very Heavy** rainfall occurred at isolated places over Meghalaya **and Heavy** rainfall occurred at isolated places over Arunachal Pradesh and Assam.
- ❖ Isolated **hailstorm** occurred over Odisha.

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

- ❖ A cyclonic circulation lies over northeast Assam in lower tropospheric levels. Strong southwesterly winds from Bay of Bengal to northeast India are prevailing at lower tropospheric levels. 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 02<sup>nd</sup>; 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 trough in middle tropospheric westerlies roughly along Long. 45°E to the north of Lat. 26°N. Under its influence:
  - ✓ Isolated to scattered light to moderate rainfall/snowfall accompanied with **thunderstorm and lightning** very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand and Himachal Pradesh during 03<sup>rd</sup>-06<sup>th</sup> May 2024.
  - ✓ Isolated very light/light rainfall very likely over West Uttar Pradesh during 05<sup>th</sup>-08<sup>th</sup>; Haryana-Chandigarh-Delhi on 04<sup>th</sup> & 05<sup>th</sup> and Punjab, West Rajasthan 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 02<sup>nd</sup>, 03<sup>rd</sup>, 05<sup>th</sup> & 06<sup>th</sup> May, 2024.

- ❖ Isolated light to moderate rainfall accompanied with **thunderstorm & lightning** likely over Odisha, Gangetic West Bengal during 02<sup>nd</sup>-05<sup>th</sup> and increase thereafter with scattered to fairly widespread rainfall during 06<sup>th</sup>-09<sup>th</sup> May. Isolated **hailstorm** likely over Odisha today.
- ❖ Isolated to scattered light to moderate rainfall accompanied with **thunderstorm & lightning** likely over Bihar, Jharkhand during 05<sup>th</sup>-09<sup>th</sup> May, 2024.
- ❖ Isolated to scattered, light to moderate rainfall accompanied with **thunderstorm & lightning** over Andhra Pradesh, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe during 02<sup>nd</sup> – 08<sup>th</sup>; and over Telangana and Karnataka during 06<sup>th</sup> – 08<sup>th</sup> May, 2024.

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

- ❖ Yesterday, maximum temperatures were in the range of 44-46°C in some parts of Odisha; in isolated pockets of Telangana, Coastal Andhra Pradesh & Rayalaseema; in the range of 42-44°C over many parts of Gangetic West Bengal; in some parts of Vidarbha; in isolated pockets of Chhattisgarh, southwest Madhya Pradesh, Madhya Maharashtra, North Interior Karnataka, and Tamil Nadu, Puducherry & Karaikal; in the range of 40-42°C over many parts of Bihar & Marathwada; in some parts of East Uttar Pradesh, Jharkhand, East Madhya Pradesh & Gujarat state; in isolated pockets of Sub-Himalayan West Bengal & southwest Uttar Pradesh. These were above normal by 5-7°C in many parts of Gangetic West Bengal; in isolated pockets of Sub-Himalayan West Bengal, Bihar & Tamil Nadu and above normal by 2-4°C in many parts of Odisha, Telangana, Coastal Andhra Pradesh & Yanam, Rayalaseema, Interior Karnataka; in some parts of Saurashtra & Kutch; in isolated pockets of East Uttar Pradesh, Jharkhand, Chhattisgarh, Gujarat Region & Madhya Maharashtra.
- ❖ Rise in maximum temperatures by 4-6 °C very likely over many parts of Northwest India during next 5 days.
- ❖ No significant change in maximum temperatures very likely over Maharashtra during next 24 hours and rise 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

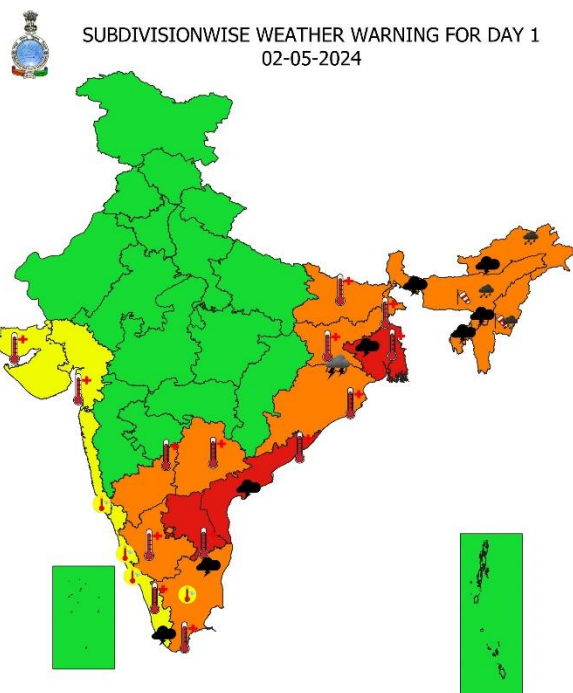
- ❖ **Maximum temperatures in the range of 44-47°C likely to continue over Gangetic West Bengal, East Jharkhand, north Odisha and Rayalaseema till 03<sup>rd</sup> May and decrease thereafter.**
- ❖ **Heat Wave to severe heat wave conditions** very likely to prevail in many/some places over Gangetic West Bengal; in isolated pockets of Bihar during 02<sup>nd</sup> – 04<sup>th</sup> May and reduce in intensity thereafter with heat wave conditions in isolated pockets over the region on 05<sup>th</sup> May, 2024.
- ❖ **Heat wave conditions** very likely in isolated pockets over Telangana, Interior Karnataka, Coastal Andhra Pradesh & Yanam, Gujarat State, Odisha during next 4 days; over Kerala on 02<sup>nd</sup>; Konkan, Madhya Maharashtra and Marathwada on 03<sup>rd</sup> & 04<sup>th</sup>; Vidarbha on 04<sup>th</sup> & 05<sup>th</sup> and over Tamil Nadu, Puducherry & Karaikal during 02<sup>nd</sup>-04<sup>th</sup> May.
- ❖ **Hot and humid weather** very likely to prevail over Coastal Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe during next 5 days and Konkan on 02<sup>nd</sup> & 05<sup>th</sup> May, 2024.
- ❖ **Warm night** very likely to prevail over Odisha, Rayalaseema, South Interior Karnataka on 02<sup>nd</sup> & 03<sup>rd</sup> and West Bengal on 02<sup>nd</sup> May 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)

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

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

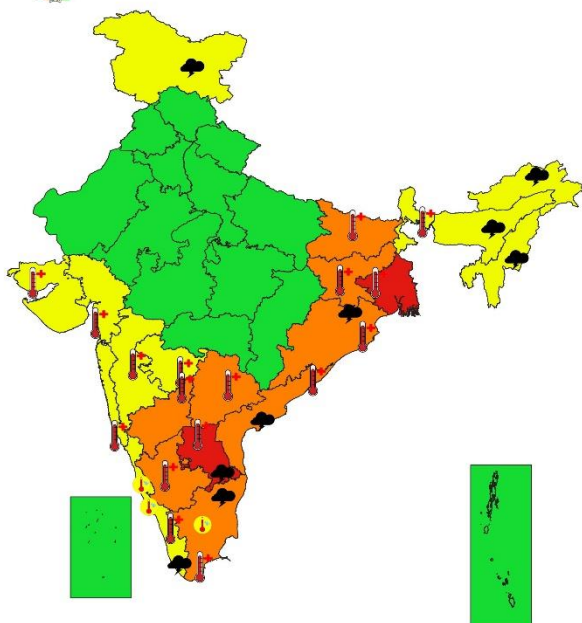
- ❖ **Arunachal Pradesh:** Tuting (dist Upper Siang) 8, Yingkiong (dist Upper Siang) 5, Hawai (dist Anjaw) 5, Roing (dist Lower Dibang Valley) 4, Tezu (dist Lohit) 4, Kibithu (dist Anjaw) 3, Namsai (dist Lohit) 3, Namsai Kvk Aws (dist Lohit) 2, Miao (dist Changlang) 2, Deomali\_aws (dist Tirap) 2, Nachu Arg (dist Upper Subansiri) 2,
- ❖ **Assam & Meghalaya:** Khliehriat (dist East Jaintia Hills) 20, Cherrapunji(rkm) (dist East Khasi Hills) 19, Mawsynram (dist East Khasi Hills) 14, Halflong (dist N. C. Hills) 12, Cherrapunji (dist East Khasi Hills) 12, Jiagaon (dist Tinsukia) 6, Badarpur Arg (dist Karimganj) 3, Dholla Bazar (dist Tinsukia) 3, Silchar (dist Cachar) 3, Nongstein (dist West Khasi Hills) 3, Silchar\_aws (dist Cachar) 3, Naharkatia Arg (dist Dibrugarh) 2, Williamnagar (dist East Garo Hills) 2, Dillighat (dist Dibrugarh) 2, Lakhipur Arg (dist Cachar) 2, Sonari\_arg (dist Sibsagar) 2, Nahar Katia (dist Dibrugarh) 2,
- ❖ **Kerala:** Aruvikkara AWS (Thiruvananthapuram district) 3 and Vellayani AWS (Thiruvananthapuram district), Idamalayar Dam AWS & Neryamangalam ARG (both in Ernakulam district) 1 each.
- ❖ **Nagaland, Manipur, Mizoram & Tripura:** Lamphet\_agri (dist Imphal West) 4, Thoubal (dist Thoubal) 4, Bishnupur\_ Aws (dist Bishnupur) 3, Tamenglong (dist Tamenglong) 3, Imphal T-aero (dist Imphal East) 3, Churachandpur (dist Churachandpur) 3, Tening Nsdma\_aws (dist Peren) 2, Jiribam\_ Aws (dist Imphal East) 2, Chandel\_aws (dist Chandel) 2, Bishnupur (dist Bishnupur) 2;
- ❖ **Tamil Nadu, Puducherry & Karaikal:** Nilakottai (dist Dindigul) 5.



## Subdivision Warning



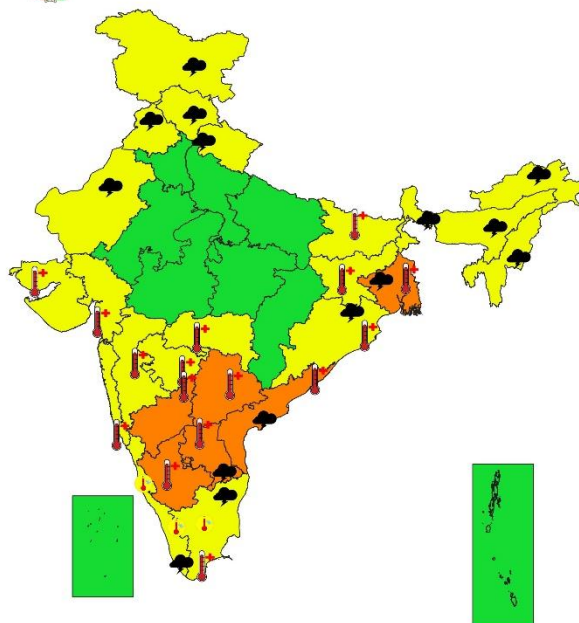
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 2**  
03-05-2024



## Subdivision Warning

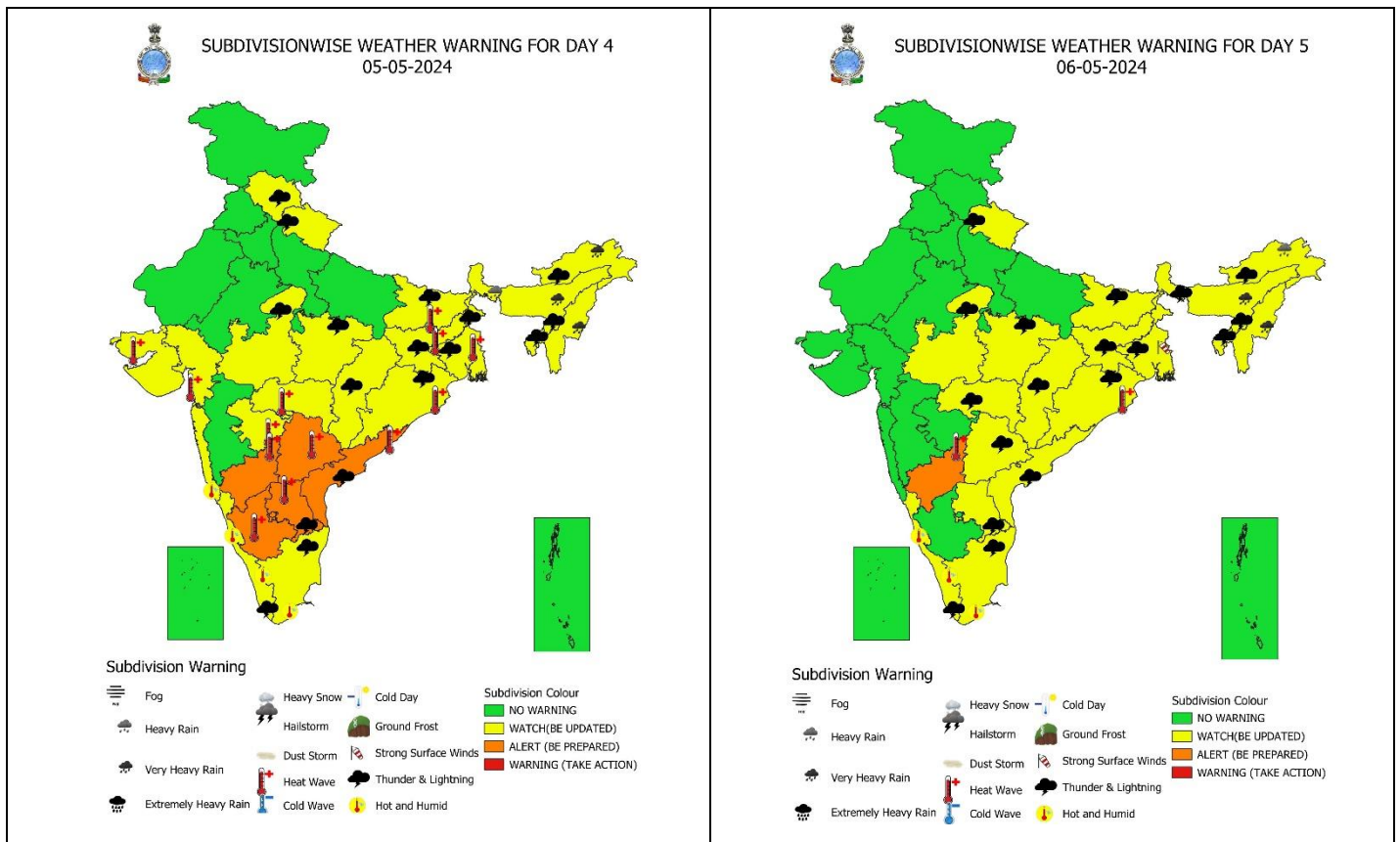


**SUBDIVISIONWISE WEATHER WARNING FOR DAY 3**  
04-05-2024



## Subdivision Warning





## 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 02<sup>nd</sup>; 05<sup>th</sup> & 06<sup>th</sup> May and isolated **heavy rainfall** over Sikkim on 05<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:**

- Use hail nets or hail caps in fruit orchards to prevent mechanical damage and provide mechanical support to horticultural crops & staking to vegetables in Odisha.
- In Arunachal Pradesh, postpone sowing of maize, *jhum* upland rice and vegetables.
- Make necessary arrangements for draining out excess water from crop fields to avoid water stagnation and also provide mechanical support to horticultural crops & staking to vegetables to prevent damage from gusty winds in 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, Gujarat, North Konkan, 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.

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  $4.5^{\circ}\text{C}$  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)