**Government of India**
**Ministry of Earth Sciences**
**India Meteorological Department**

**Press Release**
**Date: 02nd April, 2024**
**Time of Issue: 1315 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 03rd-06th April, 2024.**

## 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** accompanied with **thunderstorm** occurred at most places over Arunachal Pradesh. **Light rainfall/snowfall** occurred at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- **Light/Moderate rainfall** accompanied with **thunderstorm and gusty wind** occurred at a few places over Assam & Meghalaya, Nagaland, Manipur, Mizoram; at isolated places over Sub-Himalayan West Bengal & Sikkim and **Light/Moderate rainfall** at isolated places over Andaman & Nicobar Islands, Tamil Nadu and Kerala.
- **Heavy rainfall** occurred at isolated places over Arunachal Pradesh.

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

- A Western Disturbance as a trough in middle & upper tropospheric westerlies runs roughly along long. 60°E to the north of lat. 30°N. Another fresh Western Disturbance is likely to affect Western Himalayan Region from 05th April, 2024. Under their influence:
  - ✓ Isolated to scattered light to moderate rainfall/snowfall very likely over Western Himalayan Region during next 5 days and isolated very light rainfall/drizzle over adjoining plains of Northwest India during 03rd-05th April, 2024.
  - ✓ Isolated **thunderstorms & lightning** also likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand during 03rd-05th April, 2024.

- A cyclonic circulation lies over north Bangladesh and a trough runs from this cyclonic circulation to southeast Arunachal Pradesh in lower tropospheric levels. There is high moisture incursion from Bay of Bengal to northeastern states in lower tropospheric levels. Under the influence of these systems:
  - ✓ Faily 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 02nd-07th April, 2024.
  - ✓ ***Isolated heavy rainfall/snowfall very likely over Arunachal Pradesh during 02nd-06th April, 2024.***
  - ✓ ***Isolated heavy rainfall over Assam & Meghalaya on 02nd, 04th & 05th April.***

- ✓ Isolated to scattered light/moderate rainfall very likely over Sub-Himalayan West Bengal & Sikkim during next 7 days with isolated **thunderstorms & lightning** during 04th-06th April, 2024.

❖ A trough/wind discontinuity runs from south Tamil Nadu to east Vidarbha in lower tropospheric levels. Under its influence; Isolated light rainfall likely over Madhya Maharashtra during 05th-08th April; over Konkan & Goa, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana, Karnataka during 06th-08th April, 2024.

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

❖ Yesterday, Maximum temperatures were in the range of 40-42°C at many places over Vidarbha, Odisha and Rayalaseema; at a few places over Madhya Maharashtra, Marathwada, Telangana, Coastal Andhra Pradesh & Yanam and at isolated pockets over Gangetic West Bengal, Jharkhand, Chhattisgarh, North Interior Karnataka and interior Tamil Nadu. The temperatures were **above normal by 3-5°C** at a few places over Gangetic West Bengal; at isolated places over Sub-Himalayan West Bengal & Sikkim and Odisha.

❖ Yesterday, the maximum temperature exceeded 95th percentile at a few places over north Odisha & adjoining Jharkhand and Gangetic West Bengal, Vidarbha, southeast Madhya Pradesh, Marathwada and Rayalaseema and at isolated places over Madhya Maharashtra, Coastal Andhra Pradesh & Yanam, Telangana, Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe. These areas are likely to experience above 95th percentile of maximum temperatures over many places from 03rd April.

❖ Maximum temperature likely to exceed 95th percentile over parts of Uttar Pradesh, Bihar and Madhya Pradesh from 03rd April. Similar conditions are likely to continue over the above regions during next 5 days and expand to more areas over these regions and over remaining parts of Uttar Pradesh, Madhya Pradesh and Bihar.

❖ Today, Minimum temperatures are **above normal by 3-5°C** at many places over Nagaland, Manipur, Mizoram & Tripura; at a few places over Odisha; at isolated places over Gangetic West Bengal and Jharkhand.

❖ Gradual rise in maximum temperatures by 2-3°C very likely over many parts of Northwest, Central and East India during next 3 days and no significant change thereafter.

❖ Gradual rise in maximum temperatures by about 2°C very likely over many parts of Maharashtra during next 3 days and no significant change thereafter.

❖ No significant change in maximum temperatures very likely over many parts of south peninsular India during next 5 days except parts of Telangana, Karnataka & Rayalaseema where temperatures are likely to rise by 2-3°C during next 5 days.

## 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 during 02nd-06th; Odisha, Gangetic West Bengal during 03rd-06th; Jharkhand, Rayalaseema, Coastal Andhra Pradesh & Yanam during 04th-06th April, 2024.

❖ **Warm night conditions** very likely to prevail in isolated pockets over Odisha during 03rd- 06th April, 2024.

❖ **Hot and humid weather** very likely to prevail over Coastal Karnataka, Kerala & Mahe, Tamil Nadu and Puducherry & Karaikal during 02nd-06th; over Telangana, South Interior Karnataka during 02nd-04th and over Coastal Andhra Pradesh & Yanam and Rayalaseema on 02nd & 03rd April, 2024.

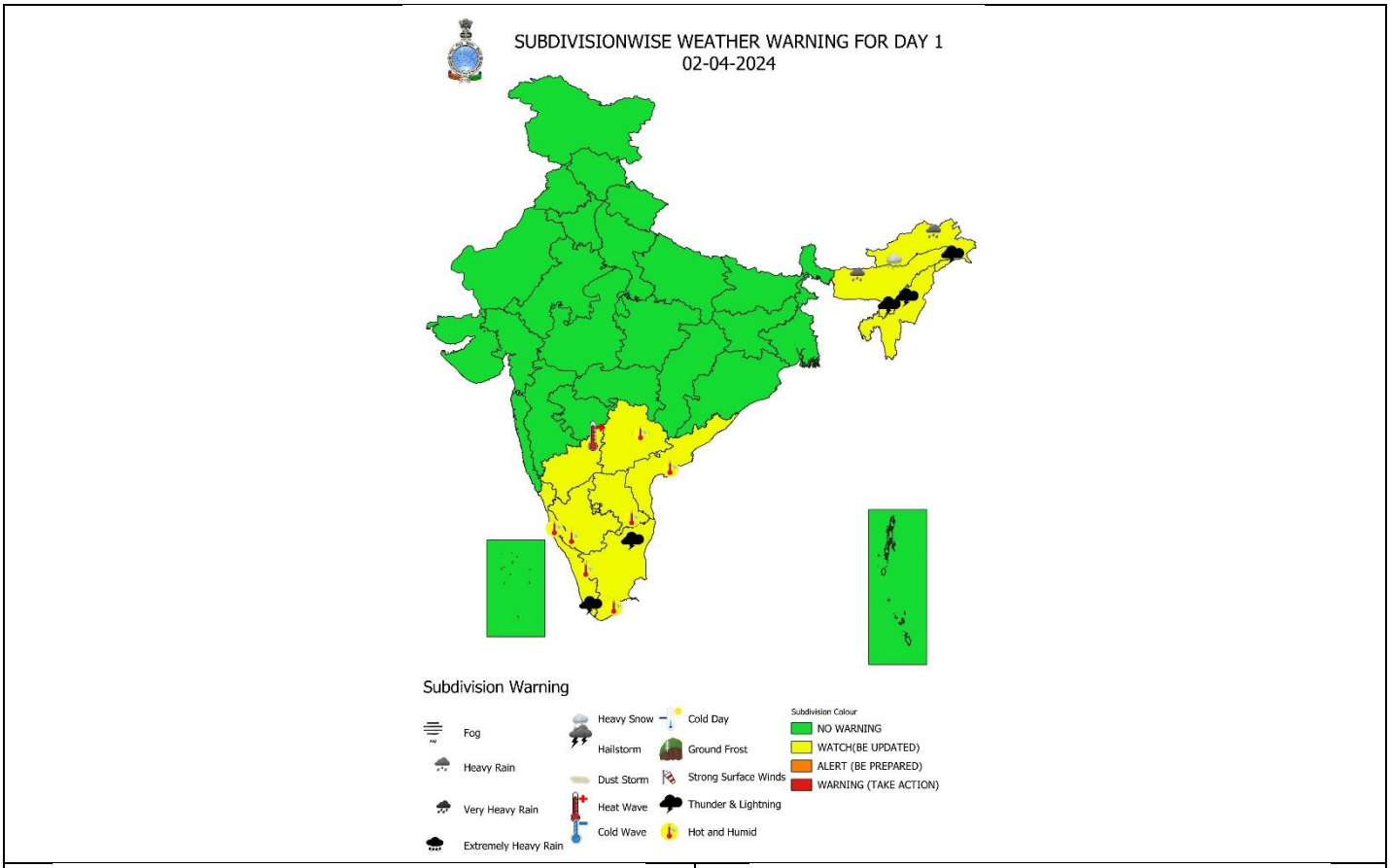
**For more details, kindly refer:** https://mausam.imd.gov.in/responsive/all_india_forcast_bulletin.php

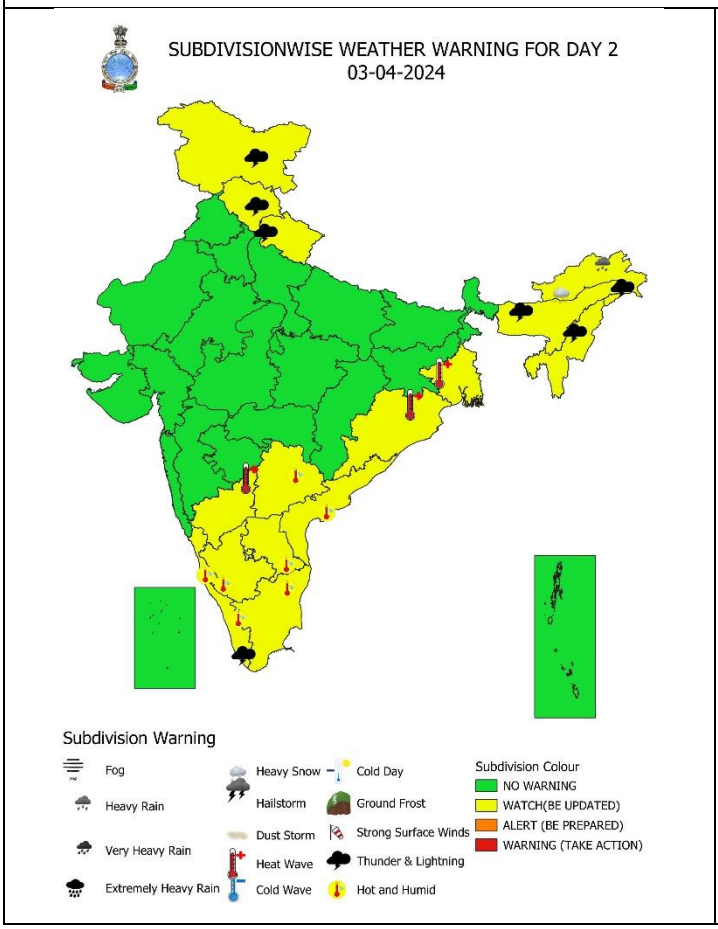
**ANNEXURE I**

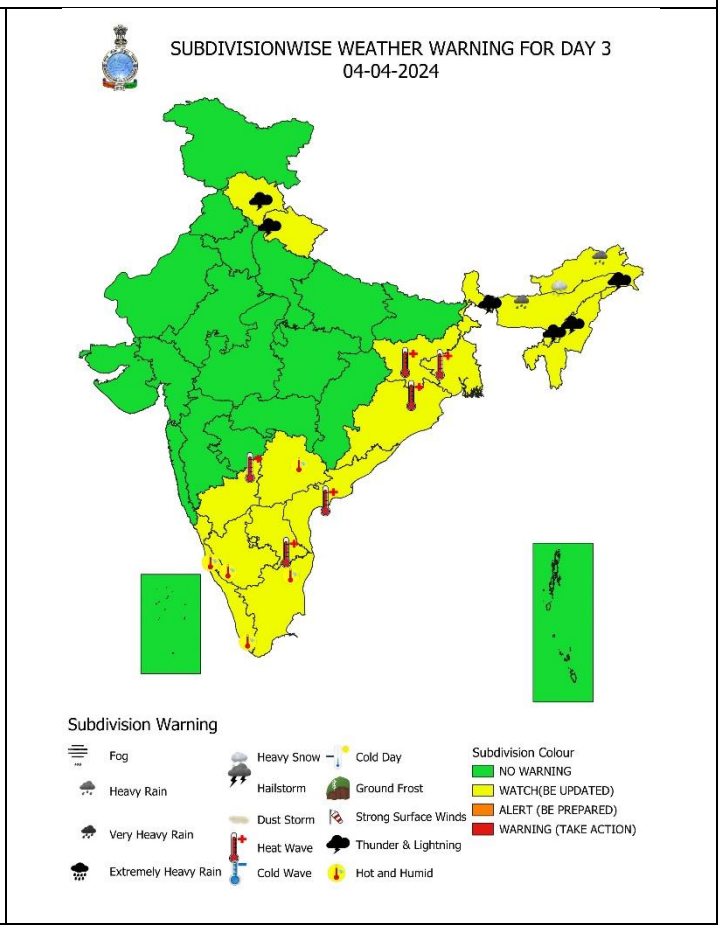
**Significant amount of rainfall (in cm):**

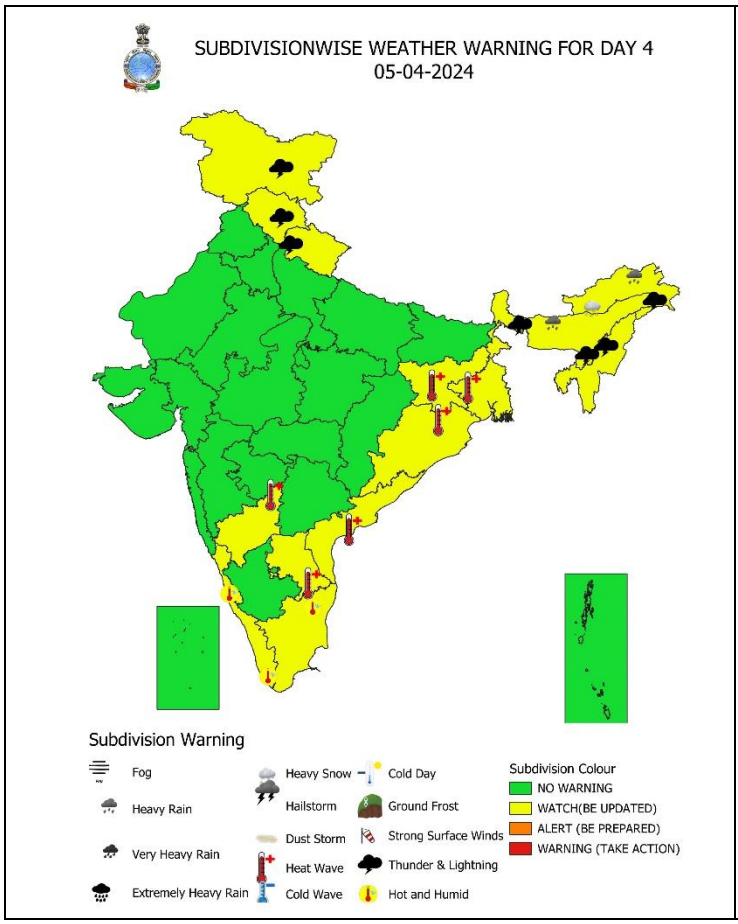
- **Arunachal Pradesh:** Miao (dist Changlang) 10, Hawai (dist Anjaw) 8, Roing (dist Lower Dibang Valley) 4, Kabu Basti (dist West Siang) 3, Kibithu (dist Anjaw) 3, Basar_ Aws (dist West Siang) 3,
- **Assam & Meghalaya:** Udaipur (dist Tinsukia) 6, Margherita (dist Tinsukia) 4, B P Ghat (dist Karimganj) 4, Naharkatia Arg (dist Dibrugarh) 3, Matijuri (dist Hailakandi) 3, Nahar Katia (dist Dibrugarh) 3, Silchar (dist Cachar) 3, Cherrapunji (dist East Khasi Hills) 3,
- **Nagaland, Manipur, Mizoram & Tripura:** Tamenglong (dist Tamenglong) 3, Chottabekra (dist Imphal West) 3, Zunheboto Nsdma_aws (dist Zunheboto) 2

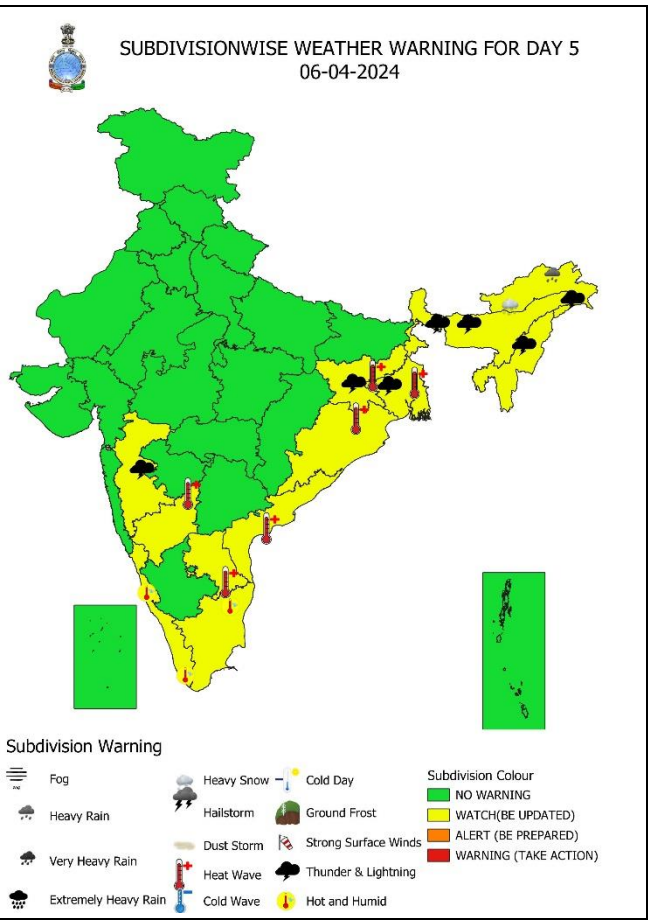
**ANNEXURE II**


SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
02-04-2024
Subdivision Warning
Fog
Heavy Rain
Very Heavy Rain
Extremely Heavy Rain
Heavy Snow
Hailstorm
Dust Storm
Heat Wave
Cold Wave
Cold Day
Ground Frost
Strong Surface Winds
Thunder & Lightning
Hot and Humid
Subdivision Colour
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)


SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
03-04-2024
Subdivision Warning
Fog
Heavy Rain
Very Heavy Rain
Extremely Heavy Rain
Heavy Snow
Hailstorm
Dust Storm
Heat Wave
Cold Wave
Cold Day
Ground Frost
Strong Surface Winds
Thunder & Lightning
Hot and Humid
Subdivision Colour
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)


SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
04-04-2024
Subdivision Warning
Fog
Heavy Rain
Very Heavy Rain
Extremely Heavy Rain
Heavy Snow
Hailstorm
Dust Storm
Heat Wave
Cold Wave
Cold Day
Ground Frost
Strong Surface Winds
Thunder & Lightning
Hot and Humid
Subdivision Colour
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)


SUBDIVISIONWISE WEATHER WARNING FOR DAY 4
05-04-2024
Subdivision Warning
Fog
Heavy Rain
Very Heavy Rain
Extremely Heavy Rain
Heavy Snow
Hailstorm
Dust Storm
Heat Wave
Cold Wave
Cold Day
Ground Frost
Strong Surface Winds
Thunder & Lightning
Hot and Humid
Subdivision Colour
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)


SUBDIVISIONWISE WEATHER WARNING FOR DAY 5
06-04-2024
Subdivision Warning
Fog
Heavy Rain
Very Heavy Rain
Extremely Heavy Rain
Heavy Snow
Hailstorm
Dust Storm
Heat Wave
Cold Wave
Cold Day
Ground Frost
Strong Surface Winds
Thunder & Lightning
Hot and Humid
Subdivision Colour
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)

## 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 Widespred (FWS/ Many Places) | 1-25 | Isolated (ISOL) |

| Subdivision Warning | | Subdivision color |
|---|---|---|
| Heavy Rain | Dust Storm | NO WARNING |
| Heavy Snow | Strong Surface Winds | WATCH(BE UPDATED) |
| Thunderstorms & Lightning | Heat Wave | ALERT (BE PREPARED) |
| Hailstorm | Cold wave | WARNING (TAKE ACTION) |
| | Fog | |

**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 ≥40° C for plains and ≥30° 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 ≥6.5° C |

**(b). Based on Actual maximum temperature**

| |
|---|
| **Heat Wave:** When actual maximum temperature ≥45°C. |
| **Severe Heat Wave:** When actual maximum temperature ≥47°C |

**( c). Criteria for heat wave for coastal stations**

When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum temperature ≥37°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 °C. |

### Cold Wave

**When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C |

**(b) Based on actual Minimum Temperature (for Plains only)**

| |
|---|
| **Cold Wave :** When Minimum Temperature is ≤ 4.0 °C |
| **Severe Cold Wave:** When Minimum Temperature is ≤ 2.0 °C |

**( c) For Coastal Stations**

When Minimum Temperature departure is ≤-4.5 °C & actual Minimum Temperature is ≤ 15 °C

### Cold Day

**When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C |

### Fog

**Phenomenon of small droplets suspended in air and the horizontal visibility < 1km**

| |
|---|
| **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 ≤4°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) |