

Thursday, March 28, 2024
Time of Issue: 2015 hours IST
(NIGHT)

All India Impact Based Weather Warning Bulletin

28 March (Day 1):

- ❖ **Thunderstorm accompanied with lightning & hailstorm** very likely at isolated places over Himachal Pradesh; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over Gangetic West Bengal; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Punjab, Haryana, Chandigarh; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, West Uttar Pradesh, Jharkhand, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada.
- ❖ **Heavy rainfall** very likely at isolated places over Tripura.
- ❖ **Heat wave conditions** very likely at isolated places over West Madhya Pradesh and North Interior Karnataka.
- ❖ **Warm night** very likely to prevail in isolated pockets over Marathwada and Madhya Maharashtra.
- ❖ **Hot and humid weather** very likely to prevail over Saurashtra & Kutch, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

29 March (Day 2):

- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40-50 kmph) & hailstorm** very likely at isolated places over Uttarakhand, Punjab, Haryana, Chandigarh; **with lightning & hailstorm** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over East Rajasthan; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Uttar Pradesh, West Rajasthan, Gangetic West Bengal; **with lightning** at isolated places over Madhya Pradesh, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada.
- ❖ **Heavy rainfall/snowfall** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh.
- ❖ **Warm night** very likely to prevail in isolated pockets over Marathwada and Madhya Maharashtra.
- ❖ **Heat wave conditions** very likely at isolated places over Vidarbha and North Interior Karnataka.
- ❖ **Hot and humid weather** very likely to prevail over Saurashtra & Kutch, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

30 March (Day 3):

- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40-50 kmph) & hailstorm** very likely at isolated places over Uttarakhand, Haryana, Chandigarh; **with lightning, gusty winds (speed reaching 30-40 kmph) & hailstorm** at isolated places over Punjab; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Uttar Pradesh, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Jharkhand, Odisha, Arunachal Pradesh, Assam & Meghalaya, Madhya Maharashtra and Marathwada.
- ❖ **Heavy rainfall/snowfall** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Arunachal Pradesh; **Heavy rainfall** at isolated places over Assam & Meghalaya.
- ❖ **Heat wave conditions** very likely at isolated places over Vidarbha.
- ❖ **Hot and humid weather** very likely to prevail over Konkan & Goa, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

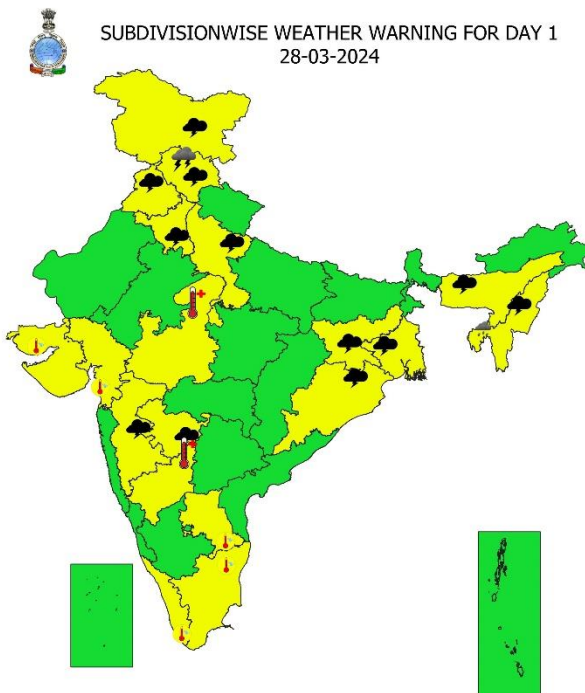
31 March (Day 4):

- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 30-40 kmph) & hailstorm** likely at isolated places over Uttarakhand; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Punjab, Haryana, Chandigarh, West Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim; **with lightning** at isolated places over Jharkhand, Odisha and Arunachal Pradesh.
- ❖ **Heavy to very heavy rainfall/ snowfall** likely at isolated places over Arunachal Pradesh; **Heavy to very heavy rainfall** at isolated places over Assam & Meghalaya; **Heavy rainfall** at isolated places over Nagaland.
- ❖ **Hot and humid weather** likely to prevail over Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

01 April (Day 5):

- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Arunachal Pradesh.
- ❖ **Heavy rainfall/snowfall** likely at isolated places over Arunachal Pradesh; **Heavy rainfall** at isolated places over Assam & Meghalaya.
- ❖ **Hot and humid weather** likely to prevail over Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

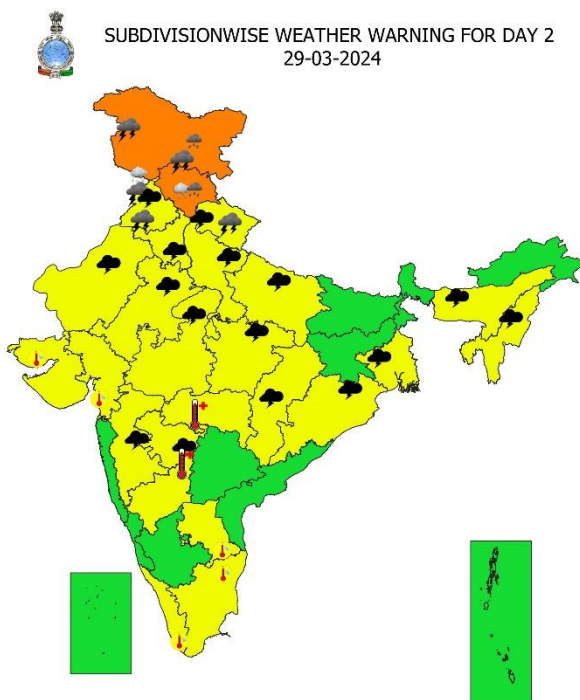
SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
28-03-2024



Subdivision Warning



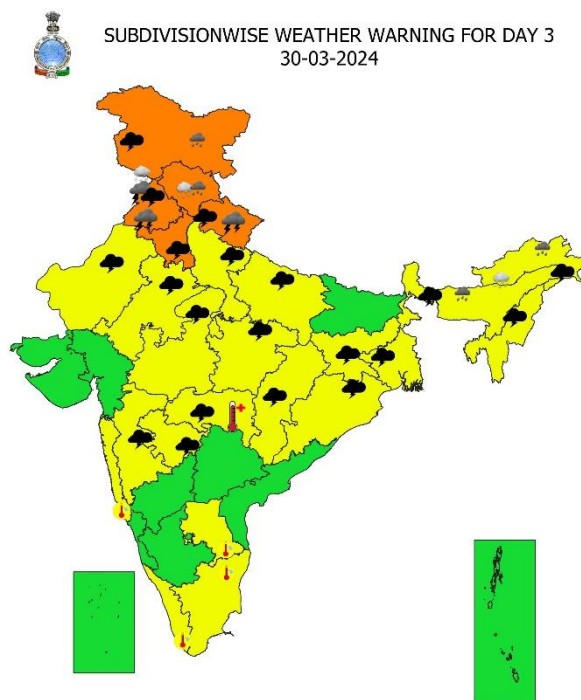
SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
29-03-2024



Subdivision Warning



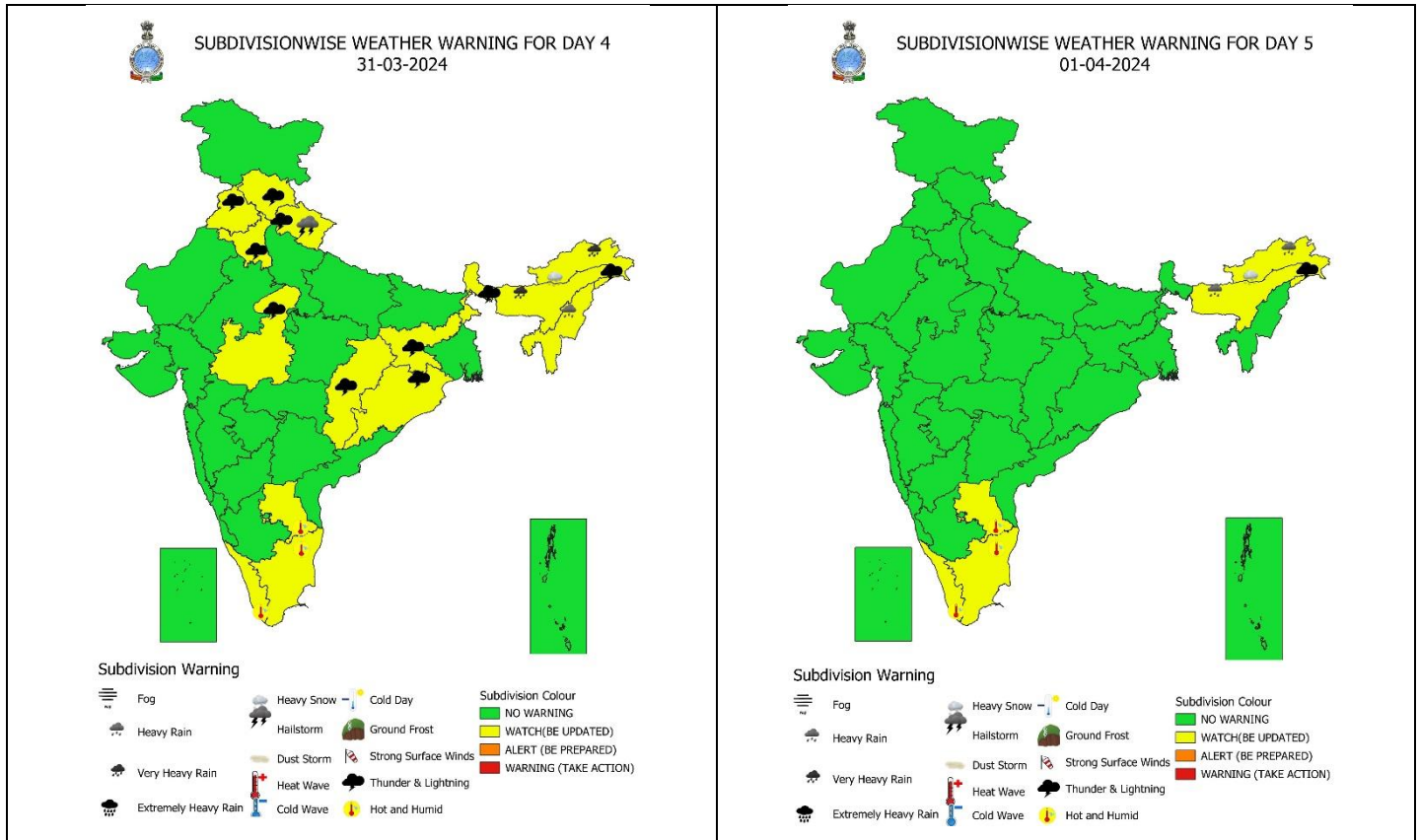
SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
30-03-2024



Subdivision Warning



*** Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".**
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599
(Service to the Nation since 1875)



Impact expected and action suggested due to thunderstorm with lightning/gusty winds & Hailstorm over Jammu & Kashmir on 29th; over Himachal Pradesh on 28th & 29th; over Uttarakhand during 29th-31st; over Punjab and Haryana & Chandigarh on 29th & 30th March.

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/snowfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Himachal Pradesh on 29th & 30th March; Arunachal Pradesh and Assam & Meghalaya on 31st March, 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.

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

- 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 Himachal Pradesh, Uttarakhand, Punjab and Haryana.
- In Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab and Haryana, harvest the matured crops 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.
- Provide mechanical support to horticultural crops and staking to vegetables in Gangetic West Bengal and Rajasthan.
- Apply light and frequent irrigation to standing crops in West Rajasthan, West Madhya Pradesh, Vidarbha and North Interior Karnataka.

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)

Kindly download MAUSAM APP for location specific forecast & warning, MEGHDOOT APP for Agromet advisory and DAMINI APP for Lightning Warning & visit state MC/RMC websites for district wise warning.

* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599
(Service to the Nation since 1875)