

Thursday, March 28, 2024
Time of Issue: 0800 hours IST
(MORNING)

All India Impact Based Weather Warning Bulletin

28 March (Day 1):

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

29 March (Day 2):

- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 30-40 kmph) & hailstorm** very likely at isolated places over Himachal Pradesh, Uttarakhand; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Punjab, Haryana, Chandigarh, West Uttar Pradesh, Rajasthan; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- ❖ **Heavy rainfall/snowfall** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh.
- ❖ **Heat wave conditions** very likely at isolated places over North Interior Karnataka.
- ❖ **Hot and humid weather** very likely to prevail over Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

30 March (Day 3):

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

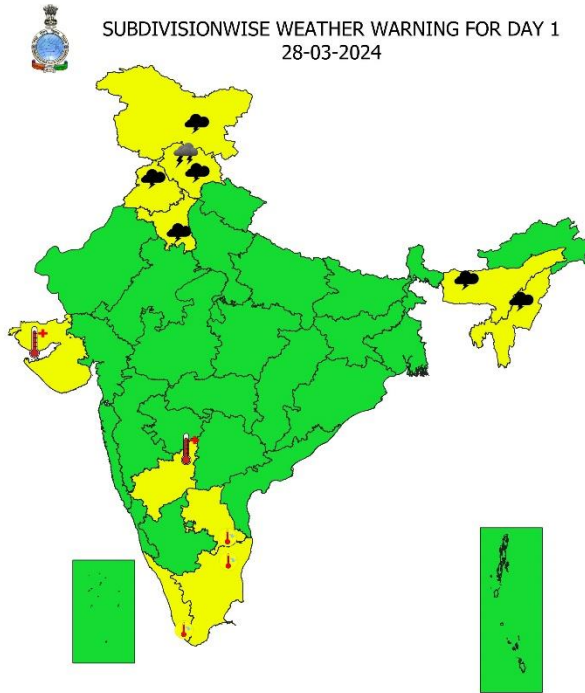
31 March (Day 4):

- ❖ **Thunderstorm accompanied with lightning & hailstorm** likely at isolated places over Himachal Pradesh, Uttarakhand; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over Punjab, Haryana, Chandigarh; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over East Madhya Pradesh, Chhattisgarh, Jharkhand, Odisha, Sub-Himalayan West Bengal & Sikkim **with lightning** at isolated places over Arunachal Pradesh, Assam & Meghalaya and Nagaland.
- ❖ **Heavy to very heavy rainfall** likely at isolated places over Assam & Meghalaya. **Heavy rainfall/snowfall** likely at isolated places over Arunachal Pradesh.
- ❖ **Hot and humid weather** very likely to prevail over Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

01 April (Day 5):

- ❖ **Thunderstorm accompanied with lightning & hailstorm** likely at isolated places over Himachal Pradesh, Uttarakhand; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over Punjab, Haryana, Chandigarh; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over East Madhya Pradesh, Chhattisgarh, Jharkhand, Odisha, Sub-Himalayan West Bengal & Sikkim **with lightning** at isolated places over Arunachal Pradesh, Assam & Meghalaya and Nagaland.
- ❖ **Heavy to very heavy rainfall** likely at isolated places over Assam & Meghalaya. **Heavy rainfall/snowfall** likely at isolated places over Arunachal Pradesh.
- ❖ **Hot and humid weather** very likely to prevail over Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

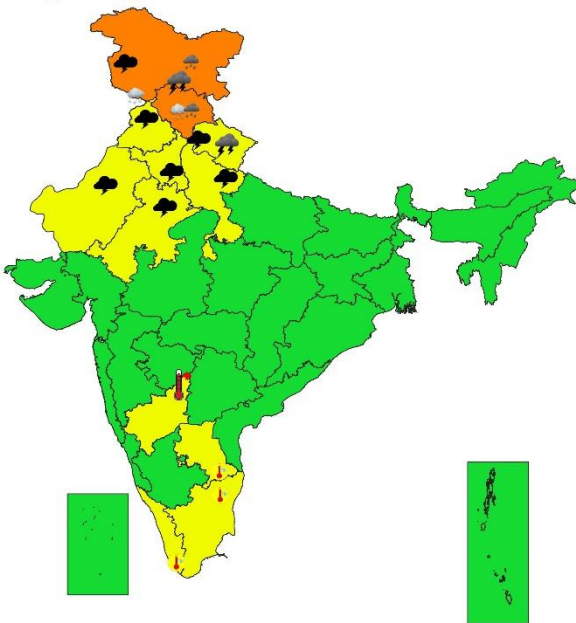
SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
28-03-2024



Subdivision Warning



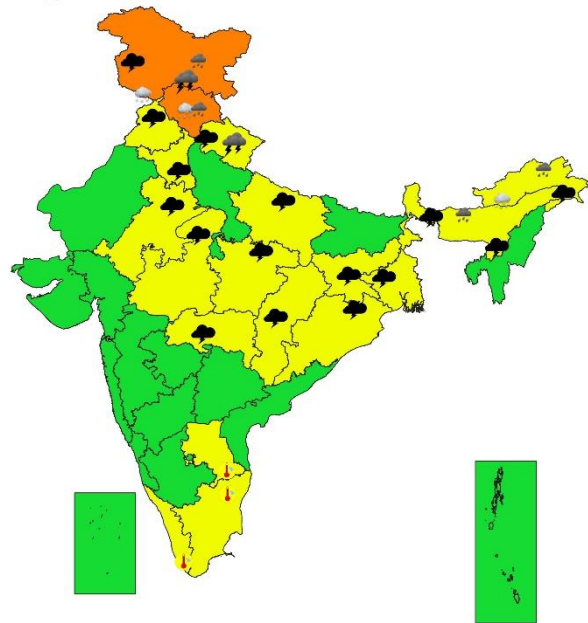
SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
29-03-2024



Subdivision Warning



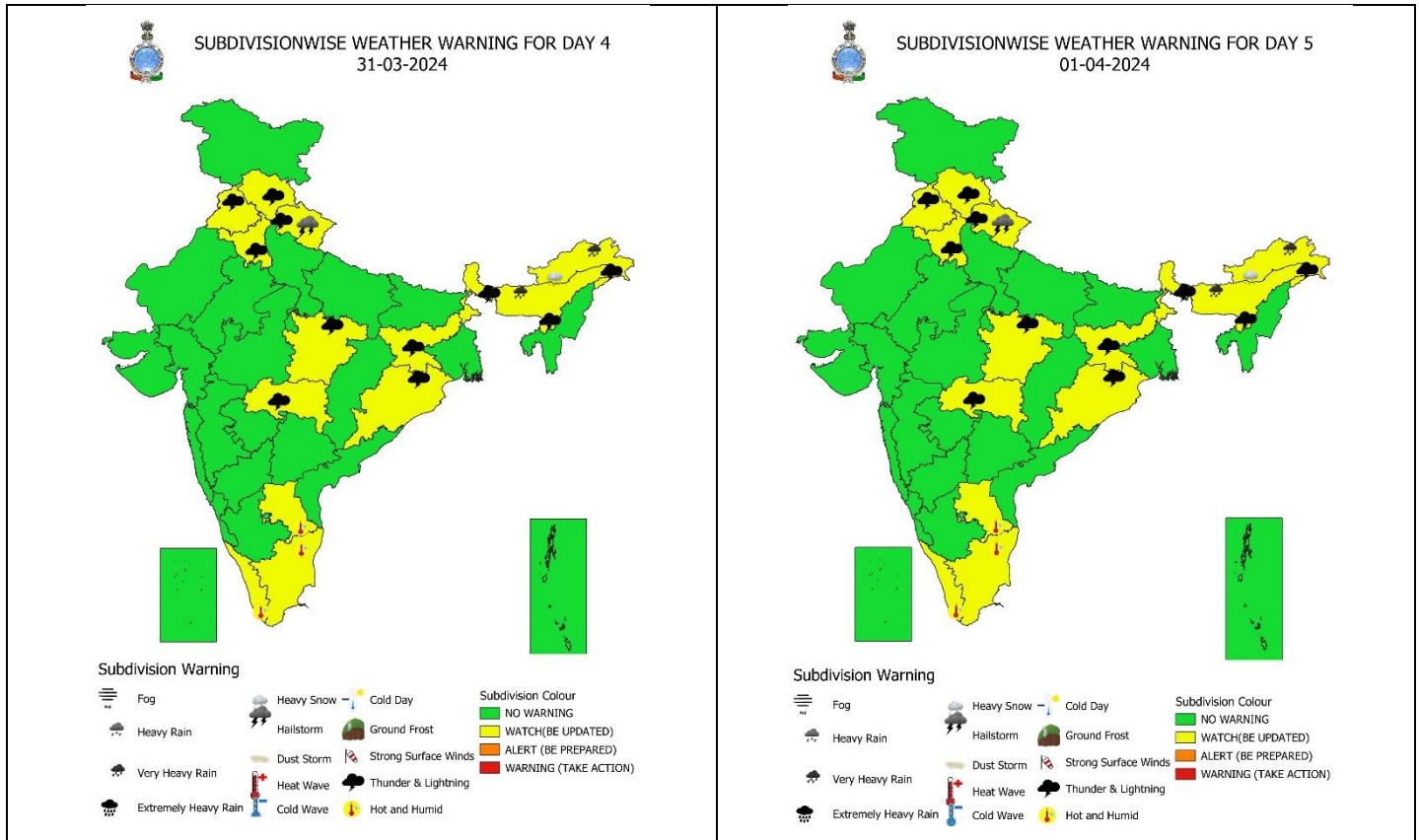
SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
30-03-2024



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 Himachal Pradesh during 28th-30th; Uttarakhand during 29th-31st March, 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/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

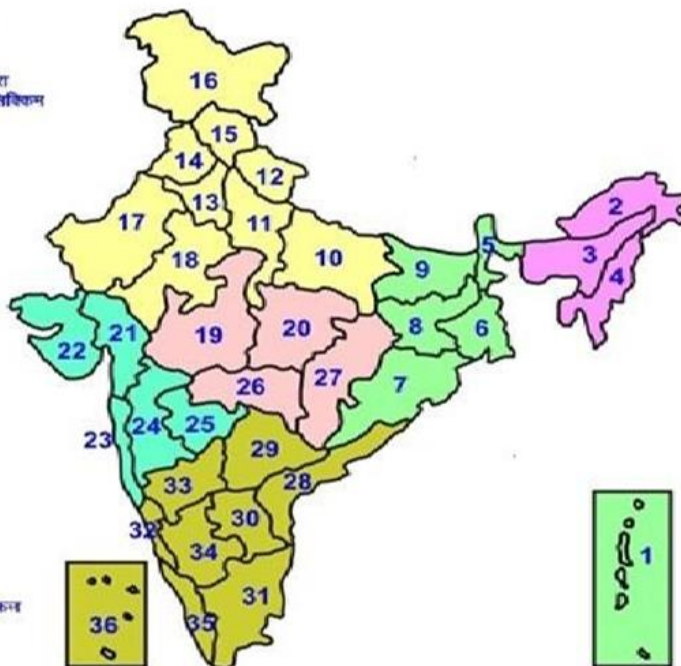
- Disruption of Electricity.
- Landslide, rock fall and mudslides, Blocking/washout of roads/highways/bridges Nallahs.
- Disruption of traffic flow.
- Damage to Kuccha and unsecured structures.

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.

LEGENDS

- 1 अंडमान और निकोबार द्वीप समूह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड, मणिपुर, मिजोरम और त्रिपुरा
- 5 उप हिमालय पश्चिम बंगाल एवं सिक्किम
- 6 पश्चिम गंगेय बंगाल
- 7 ओडिशा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखंड
- 13 हरियाणा, चंडीगढ़ एवं दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू एवं कश्मीर एवं लद्दाख
- 17 पश्चिम राजस्थान
- 18 पूर्वी राजस्थान
- 19 पश्चिम मध्य प्रदेश
- 20 पूर्वी मध्य प्रदेश
- 21 गुजरात
- 22 सौराष्ट्र
- 23 कोंकण एवं कच्छ
- 24 मध्य महाराष्ट्र
- 25 मराठवाड़ा
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 तटीय आंध्र प्रदेश एवं यानम
- 29 तेलंगाना
- 30 रायलसीमा
- 31 तमिलनाडु, पुदुचेरी एवं कराईकल
- 32 तटिय कर्नाटक
- 33 अंतरिक उत्तरी कर्नाटक
- 34 अंतरिक दक्षिणी कर्नाटक
- 35 केरल एवं माहे
- 36 लक्षद्वीप



1. Andaman & Nicobar Islands
2. Arunachal Pradesh
3. Assam & Meghalaya
4. Nagaland, Manipur, Mizoram & Tripura
5. Sub-Himalayan West Bengal & Sikkim
6. Gangetic West Bengal
7. Odisha
8. Jharkhand
9. Bihar
10. East Uttar Pradesh
11. West Uttar Pradesh
12. Uttarakhand
13. Haryana, Chd & Delhi
14. Punjab
15. Himachal Pradesh
16. Jammu & Kashmir and Ladakh
17. West Rajasthan
18. East Rajasthan
19. West Madhya Pradesh
20. East Madhya Pradesh
21. Gujarat
22. Saurashtra
23. Konkan & Goa
24. Madhya Maharashtra
25. Marathwada
26. Vidharbha
27. Chhattisgarh
28. Coastal Andhra Pradesh & Yanam
29. Telangana
30. Rayalaseema
31. Tamilnadu, Puducherry & Karaikal
32. Coastal Karnataka
33. North Interior Karnataka
34. South Interior Karnataka
35. Kerala & Mahe
36. 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)

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

LEGENDS

WARNING

WARNING (TAKE ACTION)
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Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
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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.

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