

Thursday, April 18, 2024
Time of Issue: 0830 hours IST
(MORNING)

All India Impact Based Weather Warning Bulletin

18 April (Day 1):

- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; **with lightning & hailstorm** at isolated places over Himachal Pradesh; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Punjab, West Rajasthan, North Interior Karnataka and Kerala & Mahe; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, Arunachal Pradesh, Madhya Maharashtra, Marathwada and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Heavy rainfall/snowfall** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim; **Heavy rainfall** at isolated places over Assam & Meghalaya, Mizoram and Tripura.
- ❖ **Hot and humid weather** very likely to prevail over Konkan, Kerala & Mahe and Coastal & South Interior Karnataka.
- ❖ **Heat wave to severe heat wave** very likely to prevail in isolated pockets over Odisha, **Heat wave** at isolated pockets over Gangetic West Bengal, Bihar, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema and Telangana.
- ❖ **Warm Night** very likely to prevail in isolated pockets over Madhya Maharashtra.

19 April (Day 2):

- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph) & hailstorm** likely at isolated places over Himachal Pradesh and Uttarakhand; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Punjab, Haryana-Chandigarh-Delhi, West Uttar Pradesh, Rajasthan, Madhya Pradesh, Vidarbha, Sub-Himalayan West Bengal & Sikkim, Karnataka and Kerala & Mahe; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Arunachal Pradesh, Assam & Meghalaya Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.
- ❖ **Heavy rainfall/snowfall** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Arunachal Pradesh; **Heavy rainfall** at isolated places over Assam & Meghalaya, South Interior Karnataka and Kerala & Mahe.
- ❖ **Hot and humid weather** likely to prevail over Konkan and Coastal & south Interior Karnataka.
- ❖ **Heat wave to severe heat wave** very likely to prevail in isolated pockets over Gangetic West Bengal and Odisha; **heat wave** likely to prevail in isolated pockets over Bihar, Jharkhand, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally weather with wind speed 40 kmph to 45 kmph gusting to 55 kmph** likely over Comorin area and adjoining Gulf of Mannar.

20 April (Day 3):

- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** likely at isolated places over Chhattisgarh; with **gusty winds (speed reaching 30-40 kmph)** likely at isolated places over Punjab, Haryana-Chandigarh-Delhi, East Madhya Pradesh, Vidarbha, Odisha, Telangana, North Interior Karnataka and Kerala & Mahe; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, West Madhya Pradesh, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam and Rayalaseema .
- ❖ **Heavy rainfall/snowfall** likely at isolated places over Arunachal Pradesh; **Heavy rainfall** at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Hot and humid weather** likely to prevail over Coastal Andhra Pradesh & Yanam, Rayalaseema and Telangana.
- ❖ **Heat wave to severe heat wave** likely to prevail in isolated pockets over Gangetic West Bengal; **heat wave** likely to prevail in isolated pockets over Bihar, Jharkhand and Odisha.
- ❖ **Squally weather with wind speed 40 kmph to 45 kmph gusting to 55 kmph** likely over Comorin area and adjoining Gulf of Mannar.

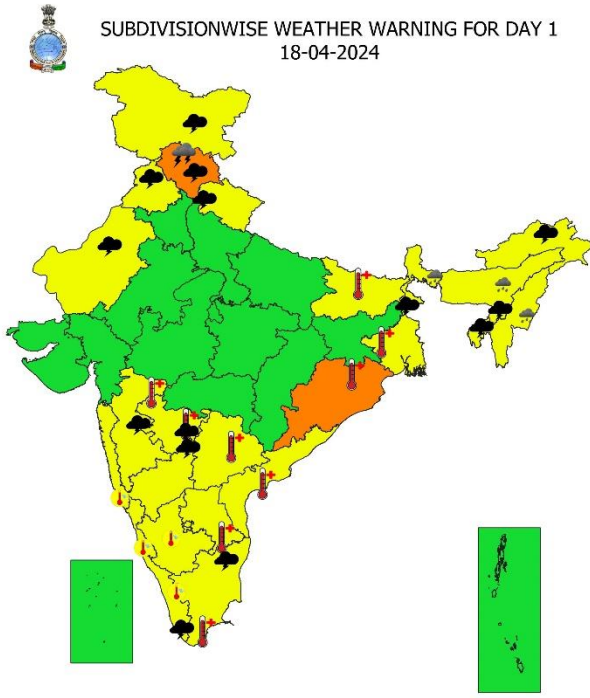
21 April (Day 4):

- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** likely at isolated places over Chhattisgarh; with **gusty winds (speed reaching 30-40 kmph)** likely at isolated places over Vidarbha, Odisha, Telangana and North Interior Karnataka; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Kerala & Mahe, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ❖ **Heavy rainfall/snowfall** likely at isolated places over Arunachal Pradesh; **Heavy rainfall** at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Hot and humid weather** likely to prevail over Coastal Andhra Pradesh & Yanam, Rayalaseema and Telangana.
- ❖ **Heat wave to severe heat wave** likely to prevail in isolated pockets over Gangetic West Bengal; **heat wave** likely to prevail in isolated pockets over Bihar, Jharkhand and Odisha.

22 April (Day 5):

- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** likely at isolated places over Chhattisgarh, Vidarbha, Marathwada; with **gusty winds (speed reaching 30-40 kmph)** likely at isolated places over Madhya Pradesh, Odisha, Madhya Maharashtra, Telangana, North Interior Karnataka and Kerala & Mahe; **with lightning** at isolated places over Konkan & Goa, Coastal Andhra Pradesh & Yanam, Assam & Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Sikkim, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab.
- ❖ **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 Coastal Andhra Pradesh & Yanam, Rayalaseema and Telangana.
- ❖ **Heat wave to severe heat wave** likely to prevail in isolated pockets over Gangetic West Bengal; **heat wave** likely to prevail in isolated pockets over Bihar, Jharkhand and Odisha.

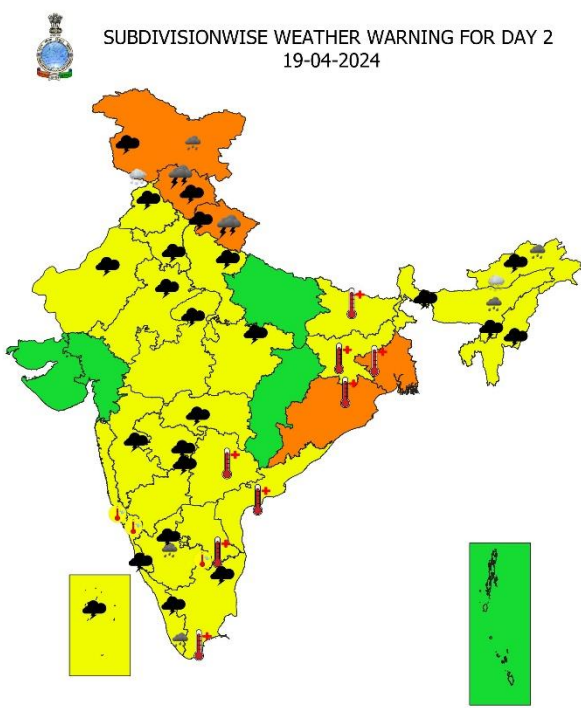
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
 18-04-2024**



Subdivision Warning

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

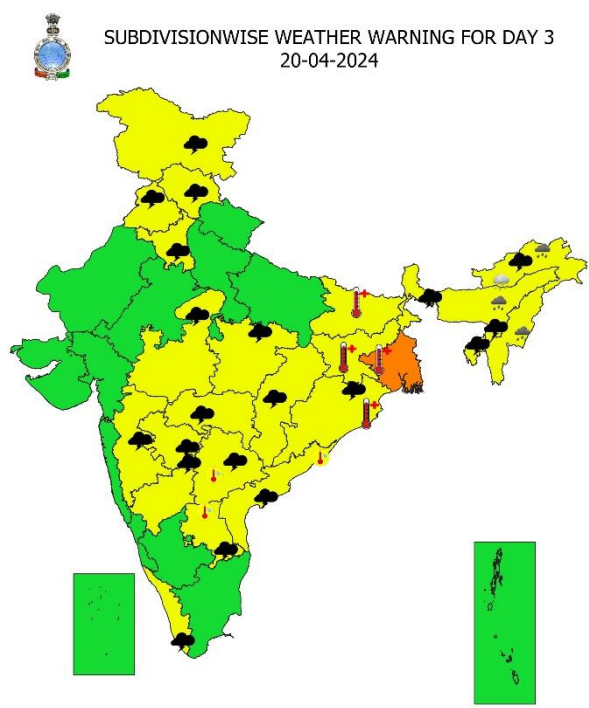
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
 19-04-2024**



Subdivision Warning

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

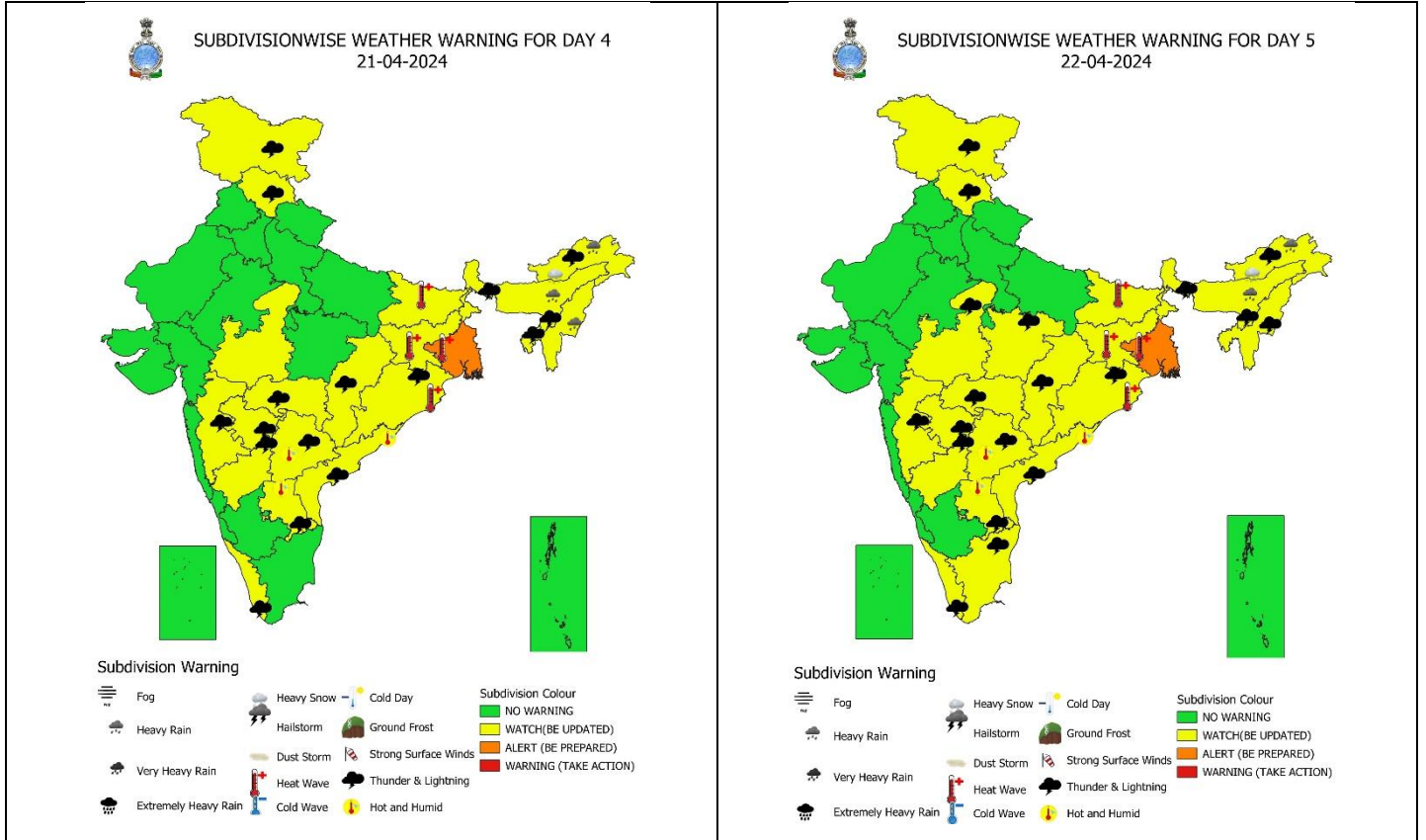
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
 20-04-2024**



Subdivision Warning

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

*** 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 accompanied with lightning/gusty winds & Hailstorm over Himachal Pradesh on 18th & 19th and Uttarakhand 19th April, 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.

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Impact & Action Suggested due to heavy rainfall/snowfall over Assam & Meghalaya during 18th to 21st, over Mizoram and Tripura on 18th, 20th & 21st, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 19th April, 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.

IMPACT & ACTION SUGGESTED due to Heat Wave Conditions:

Orange alert Areas (Odisha, Saurashtra, Gangetic West Bengal)

- ❖ 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– 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 (Jharkhand, north Konkan, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, Tamil Nadu, Puducherry & Karaikal)

- ❖ 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.

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 *



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 $\geq 37^\circ\text{C}$



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 $>6.4^\circ\text{C}$.



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 $\leq 15^\circ\text{C}$



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 $\leq -6.5^\circ\text{C}$



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



Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)



An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.



Ice deposits on ground

Air temperature $\leq 4^\circ\text{C}$ (over Plains)



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



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



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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