

Sunday, April 21, 2024  
Time of Issue: 2000 hours IST  
(NIGHT)

## All India Impact Based Weather Warning Bulletin

### 21 April (Day 1):

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

### 22 April (Day 2):

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

### 23 April (Day 3):

- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** likely at isolated places over Chhattisgarh; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over East Madhya Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam and Telangana; **with lightning & hail** at isolated places over Himachal Pradesh; **with lightning** at isolated places over Uttarakhand, West Bengal & Sikkim, Vidarbha, Arunachal Pradesh, Jharkhand and Odisha.
- ❖ **Heavy to very heavy rainfall/snowfall** likely at isolated places over Arunachal Pradesh and **Heavy rainfall** at isolated places over Assam & Meghalaya.
- ❖ **Hot and humid weather** very likely to prevail over Sub-Himalayan West Bengal & Sikkim, Odisha, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Rayalaseema, Coastal Karnataka, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Heat wave conditions in some parts with severe heat wave conditions in isolated pockets** very likely to prevail over Gangetic West Bengal; **heat wave conditions** in isolated pockets over East Uttar Pradesh and Bihar.

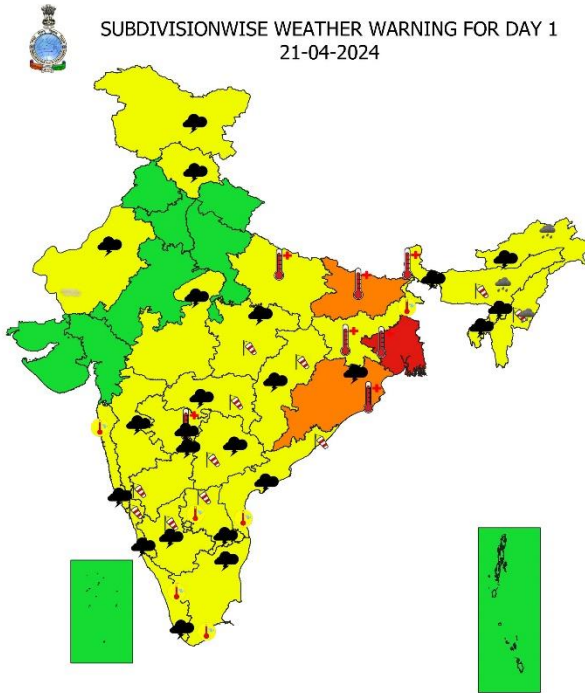
### 24 April (Day 4):

- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 30-40 kmph)** likely at isolated places over Coastal Andhra Pradesh & Yanam, Telangana; **with lightning** at isolated places over Sub-Himalayan West Bengal & Sikkim, Vidarbha, Madhya Maharashtra, Marathwada, Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Heavy rainfall** very likely at isolated places over Arunachal Pradesh.
- ❖ **Hot and humid weather** very likely to prevail over Sub-Himalayan West Bengal & Sikkim, Odisha, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Rayalaseema, Coastal Karnataka, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Heat wave conditions in some parts with severe heat wave conditions in isolated pockets** likely to prevail over Gangetic West Bengal; **heat wave conditions** in isolated pockets over East Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim and Bihar.

### 25 April (Day 5):

- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 30-40 kmph)** likely at isolated places over Coastal Andhra Pradesh & Yanam; **with lightning** at isolated places over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Heavy rainfall** very likely at isolated places over Arunachal Pradesh.
- ❖ **Hot and humid weather** very likely to prevail over Sub-Himalayan West Bengal & Sikkim, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Rayalaseema, Coastal Karnataka, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Heat wave conditions in some parts with severe heat wave conditions in isolated pockets** likely to prevail over Gangetic West Bengal; **heat wave conditions** in isolated pockets over East Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Jharkhand, Odisha and Bihar.

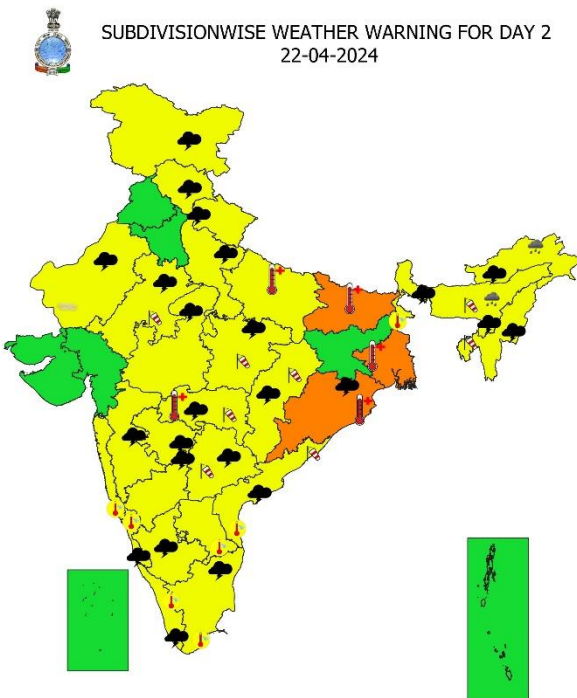
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 1  
 21-04-2024**



**Subdivision Warning**

Fog	Heavy Snow	Cold Day	<b>Subdivision Colour</b>
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)

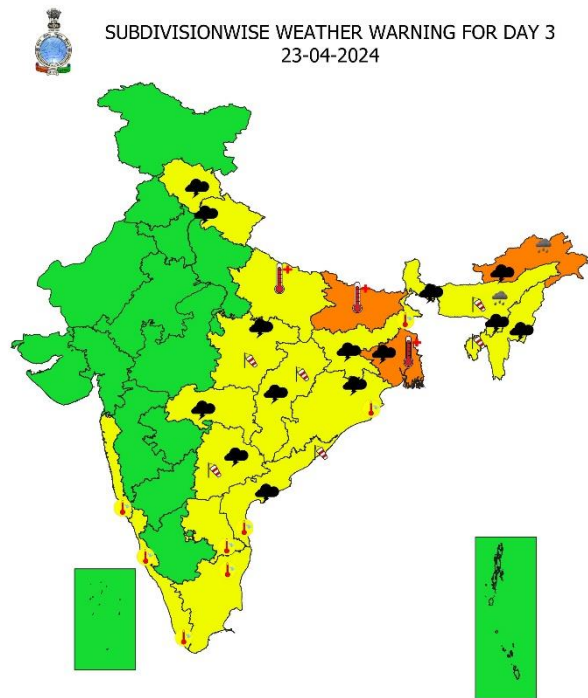
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 2  
 22-04-2024**



**Subdivision Warning**

Fog	Heavy Snow	Cold Day	<b>Subdivision Colour</b>
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)

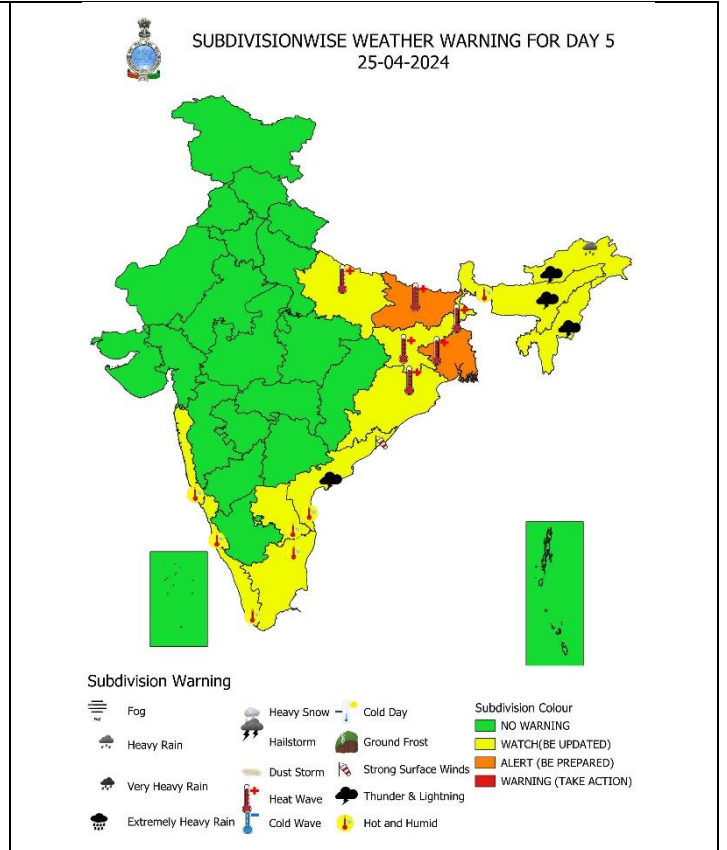
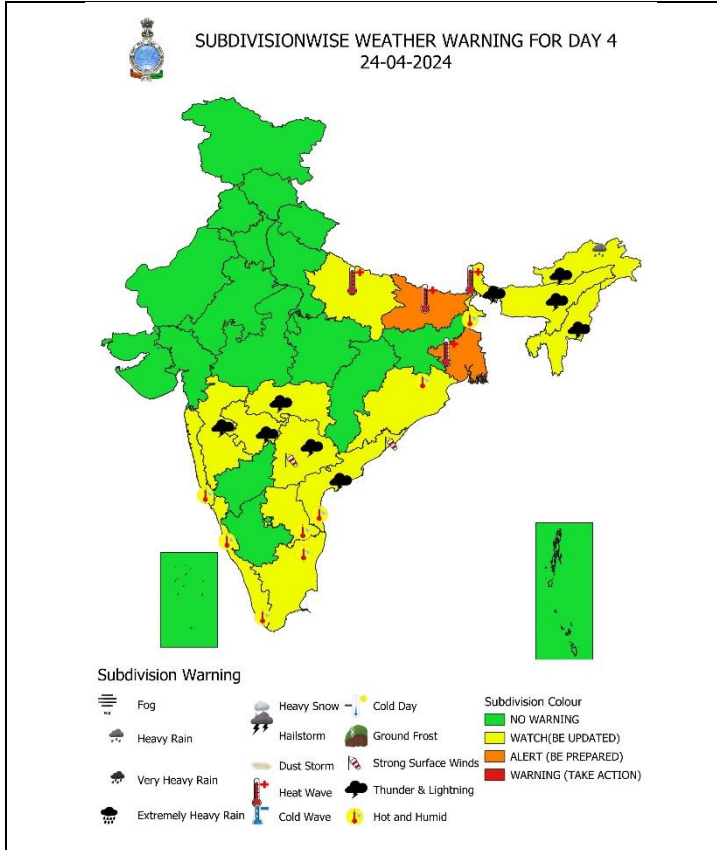
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 3  
 23-04-2024**



**Subdivision Warning**

Fog	Heavy Snow	Cold Day	<b>Subdivision Colour</b>
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)**



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**Impact expected and action suggested due to thunderstorm accompanied with lightning/gusty winds & Hailstorm over Vidarbha on 22<sup>nd</sup> 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.

**Impact & Action Suggested due to heavy rainfall over Arunachal Pradesh during 21<sup>st</sup>-25<sup>th</sup>; Assam & Meghalaya on 21<sup>st</sup>, 22<sup>nd</sup> & 23<sup>rd</sup> April, 2024.**

**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.

**IMPACT & ACTION SUGGESTED due to Heat Wave Conditions:**

**Red & Orange alert Areas (Bihar, Odisha & 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 (Sub-Himalayan West Bengal, Jharkhand, East Uttar Pradesh)**

- ❖ 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.

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## 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 < 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  $\leq 4^\circ\text{C}$  ( 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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