

Tuesday, April 30, 2024
Time of Issue: 1945 hours IST
(NIGHT)

All India Impact Based Weather Warning Bulletin

30 April (Day 1):

- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 50-60 kmph)** very likely at isolated places over Assam and Tripura; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over Meghalaya Manipur, Mizoram; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Nagaland; **with lightning** at isolated places over Himachal Pradesh, Sikkim, Arunachal Pradesh, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
- ❖ **Heavy rainfall** very likely at isolated places over Arunachal Pradesh and Assam & Meghalaya.
- ❖ **Hot and humid weather** very likely to prevail over west Assam & Meghalaya, Tripura, Saurashtra & Kutch, Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe.
- ❖ **Heat wave to severe heat wave conditions** very likely to prevail at many places over Gangetic West Bengal; at a few places over Bihar, Odisha; in isolated pockets over Sub-Himalayan West Bengal, Jharkhand, Saurashtra & Kutch; **heat wave conditions** in isolated pockets over Konkan, Marathwada, Madhya Maharashtra, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana and Interior Karnataka.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over East Madhya Pradesh, Bihar, Gangetic West Bengal, Odisha and North Interior Karnataka.

01 May (Day 2):

- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40-50 kmph) & hailstorm** very likely at isolated places over Sikkim; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura; **with lightning** at isolated places over Arunachal Pradesh, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
- ❖ **Heavy to very heavy rainfall** very likely at isolated places over Arunachal Pradesh; **Heavy rainfall** at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Hot and humid weather** very likely to prevail over west Assam & Meghalaya, Tripura, Saurashtra & Kutch, Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe.
- ❖ **Heat wave to severe heat wave conditions** very likely to prevail at many places over Gangetic West Bengal; at a few places over Bihar, Odisha; in isolated pockets over Jharkhand, Saurashtra & Kutch; **heat wave conditions** in isolated pockets over Sub-Himalayan West Bengal, Konkan, Marathwada, Madhya Maharashtra, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, Interior Karnataka and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over East Madhya Pradesh, Bihar, Gangetic West Bengal, Odisha and North Interior Karnataka.

02 May (Day 3):

- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Sikkim; **with lightning** at isolated places over Arunachal Pradesh, Tamil Nadu and Kerala & Mahe.
- ❖ **Heavy to very heavy rainfall with extremely heavy falls** very likely at isolated places over Assam & Meghalaya; **Heavy to very heavy rainfall** at isolated places over Arunachal Pradesh and Mizoram & Tripura and **heavy rainfall** at isolated places over Nagaland, & Manipur.
- ❖ **Hot and humid weather** very likely to prevail over Konkan, Saurashtra & Kutch, Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe.
- ❖ **Heat wave to severe heat wave conditions** very likely to prevail at many places over Gangetic West Bengal; at a few places over Bihar, Odisha; in isolated pockets over Rayalaseema and Saurashtra & Kutch; **heat wave conditions** in isolated pockets over Jharkhand, Sub-Himalayan West Bengal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Telangana, Interior Karnataka and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over East Madhya Pradesh, Bihar, Odisha and North Interior Karnataka.

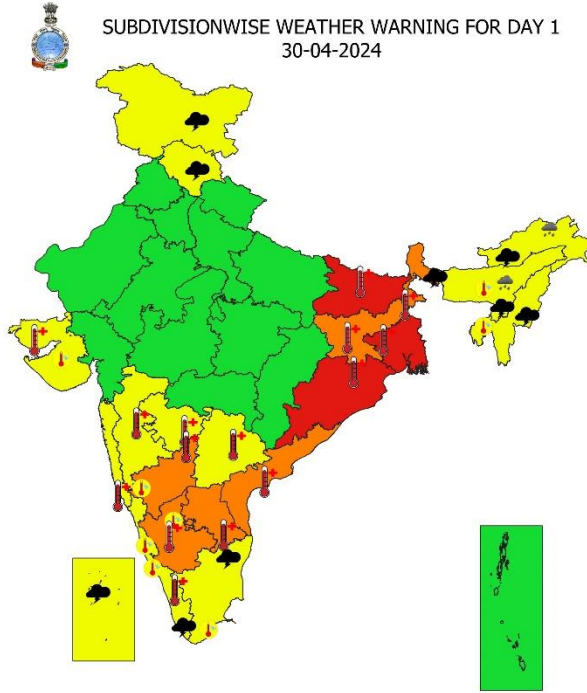
03 May (Day 4):

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

04 May (Day 5):

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

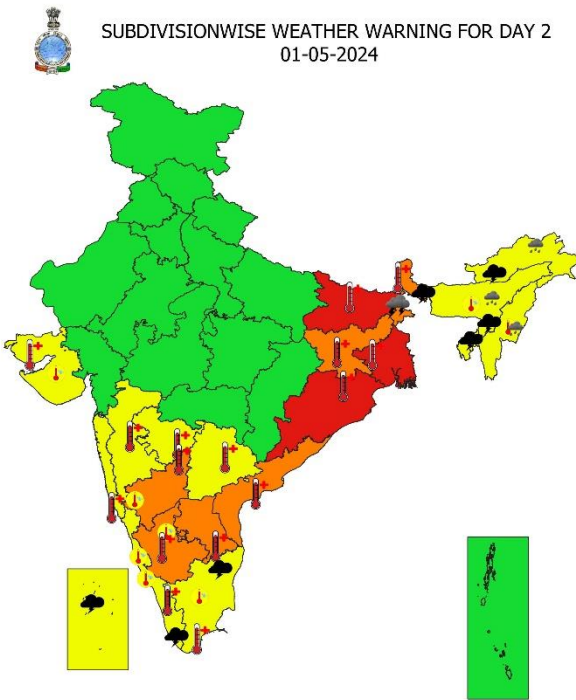
SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
 30-04-2024



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)

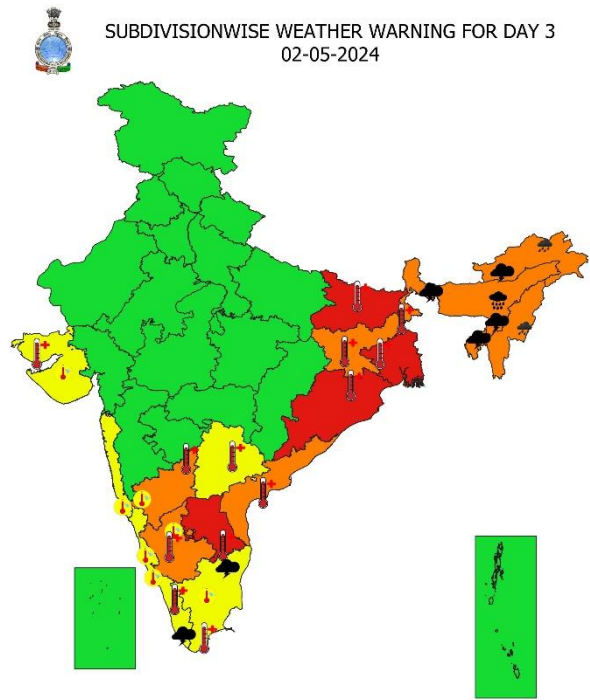
SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
 01-05-2024



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)

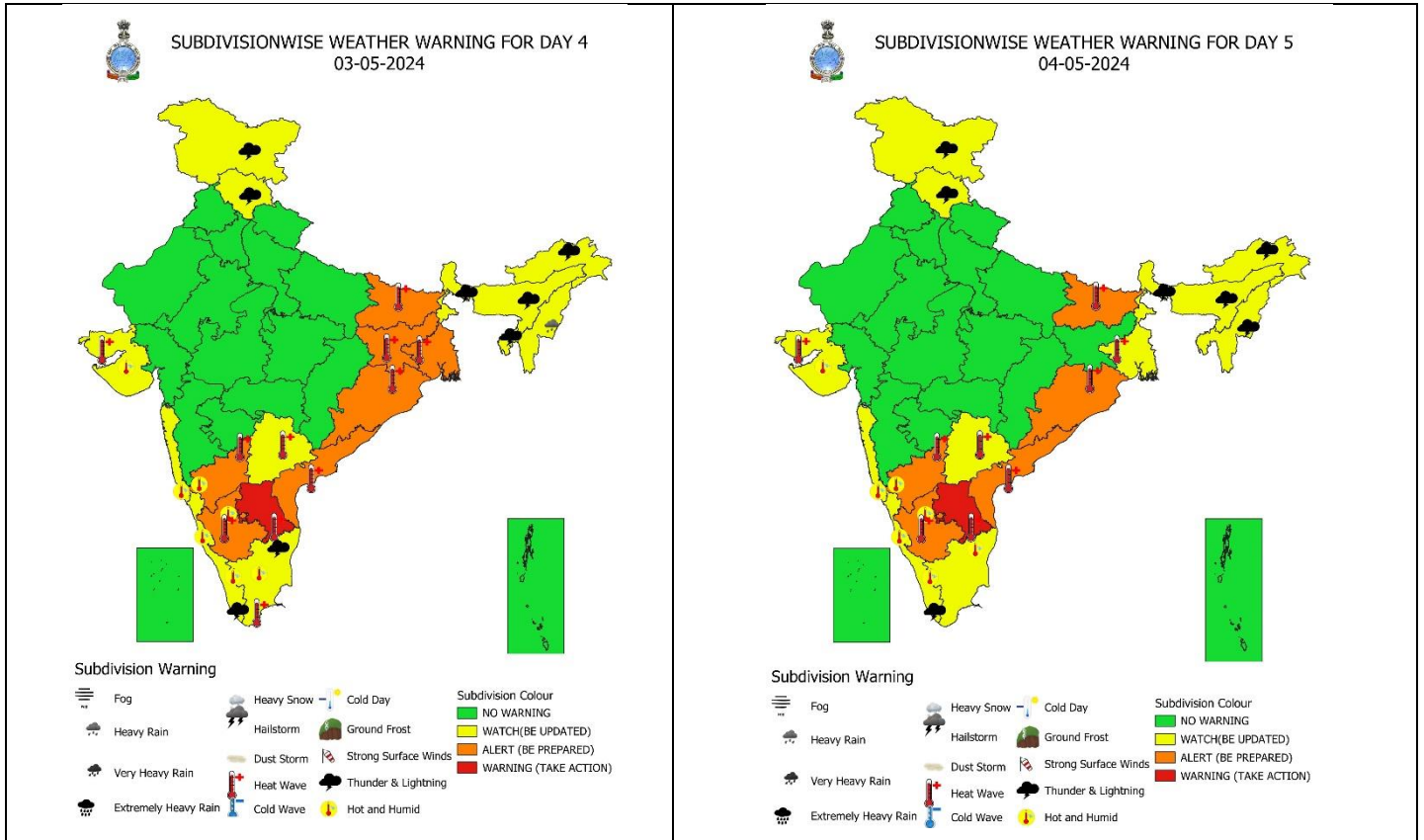
SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
 02-05-2024



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 & ACTION SUGGESTED due to Heat Wave Conditions:

Red alert Areas (Gangetic West Bengal, Odisha, Bihar, Rayalaseema)

- ✓ Very high likelihood of developing heat illness and heat stroke in all ages.
- ✓ Extreme care needed for vulnerable people.

Orange alert Areas (Sub-Himalayan West Bengal, Coastal Andhra Pradesh & Yanam, Telangana, Interior Karnataka, Jharkhand)

- ✓ High temperature & increased likelihood of heat illness symptoms in people who are either exposed to sun for a prolonged period or doing heavy work.
- ✓ High health concern 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 (Saurashtra, Konkan, Madhya Maharashtra, Marathwada, Kerala, Tamil Nadu)

- ✓ 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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Impact & Action Suggested due to heavy / very rainfall over Arunachal Pradesh, Assam & Meghalaya during 30th April-02nd May and Nagaland, Manipur, Mizoram & Tripura during 01st -03rd May 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.

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

- Use hail nets or hail caps in fruit orchards to prevent mechanical damage and provide mechanical support to horticultural crops & staking to vegetables in Sikkim.
- In Arunachal Pradesh, postpone sowing of maize, *jhum* upland rice and vegetables.
- Make necessary arrangements for draining out excess water from crop fields to avoid water stagnation in Jammu & Kashmir, Himachal Pradesh and North-Eastern States.
- Apply light and frequent irrigation to standing crops to avoid heat stress; provide mulching to conserve soil moisture and minimise evaporation in West Bengal, Odisha, Bihar, Jharkhand, Saurashtra & Kutch, North Konkan, Madhya Maharashtra, Tamil Nadu, Kerala, Interior Karnataka, Andhra Pradesh and Telangana.
- Provide mechanical support to horticultural crops & staking to vegetables to prevent damage from gusty winds in Assam & Meghalaya and NMMT.

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.