

Sunday, April 28, 2024
Time of Issue: 0800 hours IST
(MORNING)

All India Impact Based Weather Warning Bulletin

28 April (Day 1):

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

29 April (Day 2):

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

30 April (Day 3):

- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40-50 kmph)** very 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, Assam & Meghalaya and Chhattisgarh; **with lightning** at isolated places over Himachal Pradesh, Uttarakhand, Arunachal Pradesh, Sub-Himalayan West Bengal & Sikkim and Kerala & Mahe.
- ❖ **Heavy to very rainfall** very likely at isolated places over Arunachal Pradesh; **Heavy rainfall** very likely at isolated places over Assam & Meghalaya.
- ❖ **Hot and humid weather** very likely to prevail over Kerala & Mahe and Coastal Karnataka.
- ❖ **Heat wave to severe heat wave conditions** very likely to prevail at many places over Gangetic West Bengal; at some places over north Odisha; **heat wave conditions** in isolated pockets over Uttar Pradesh, Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema and Interior Karnataka.

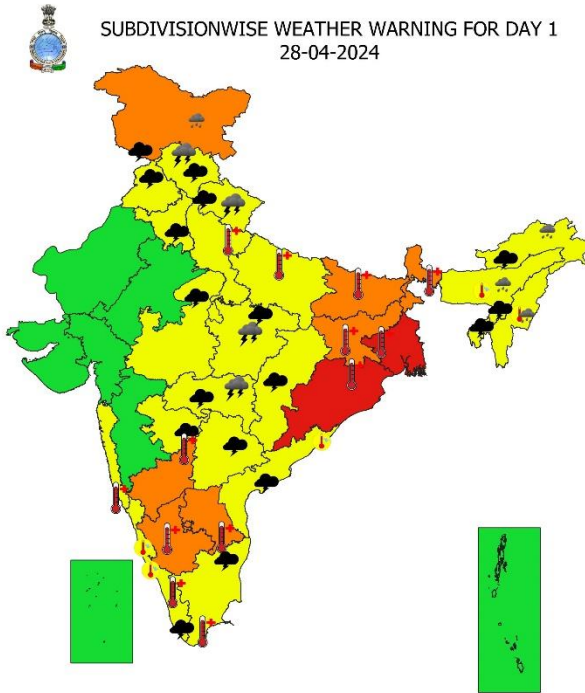
01 May (Day 4):

- ❖ **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 Assam & Meghalaya; **with lightning** at isolated places over Arunachal Pradesh and Sub-Himalayan West Bengal & Sikkim.
- ❖ **Heavy to very rainfall** likely at isolated places over Arunachal Pradesh; **Heavy rainfall** very likely at isolated places over Assam & Meghalaya.
- ❖ **Hot and humid weather** likely to prevail over Kerala & Mahe and Coastal Karnataka.
- ❖ **Heat wave to severe heat wave conditions** likely to prevail at many places over Gangetic West Bengal; at some places over north Odisha; **heat wave conditions** in isolated pockets over Bihar, Jharkhand, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema and Interior Karnataka.

02 May (Day 5):

- ❖ **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 Assam & Meghalaya; **with lightning** at isolated places over Arunachal Pradesh and Sub-Himalayan West Bengal & Sikkim.
- ❖ **Heavy to very rainfall** likely at isolated places over Arunachal Pradesh; **Heavy rainfall** very likely at isolated places over Assam & Meghalaya.
- ❖ **Hot and humid weather** likely to prevail over Kerala & Mahe and Coastal Karnataka.
- ❖ **Heat wave to severe heat wave conditions** likely to prevail at many places over Gangetic West Bengal; at some places over north Odisha; **heat wave conditions** in isolated pockets over Bihar, Jharkhand, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema and Interior Karnataka.

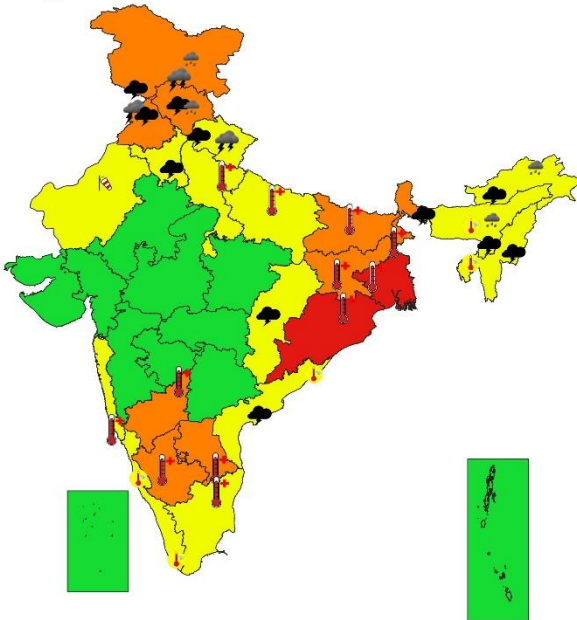
SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
 28-04-2024



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)

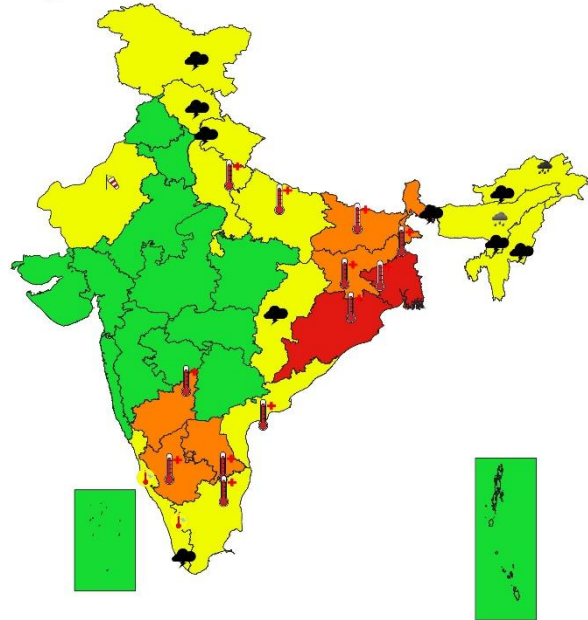
SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
 29-04-2024



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)

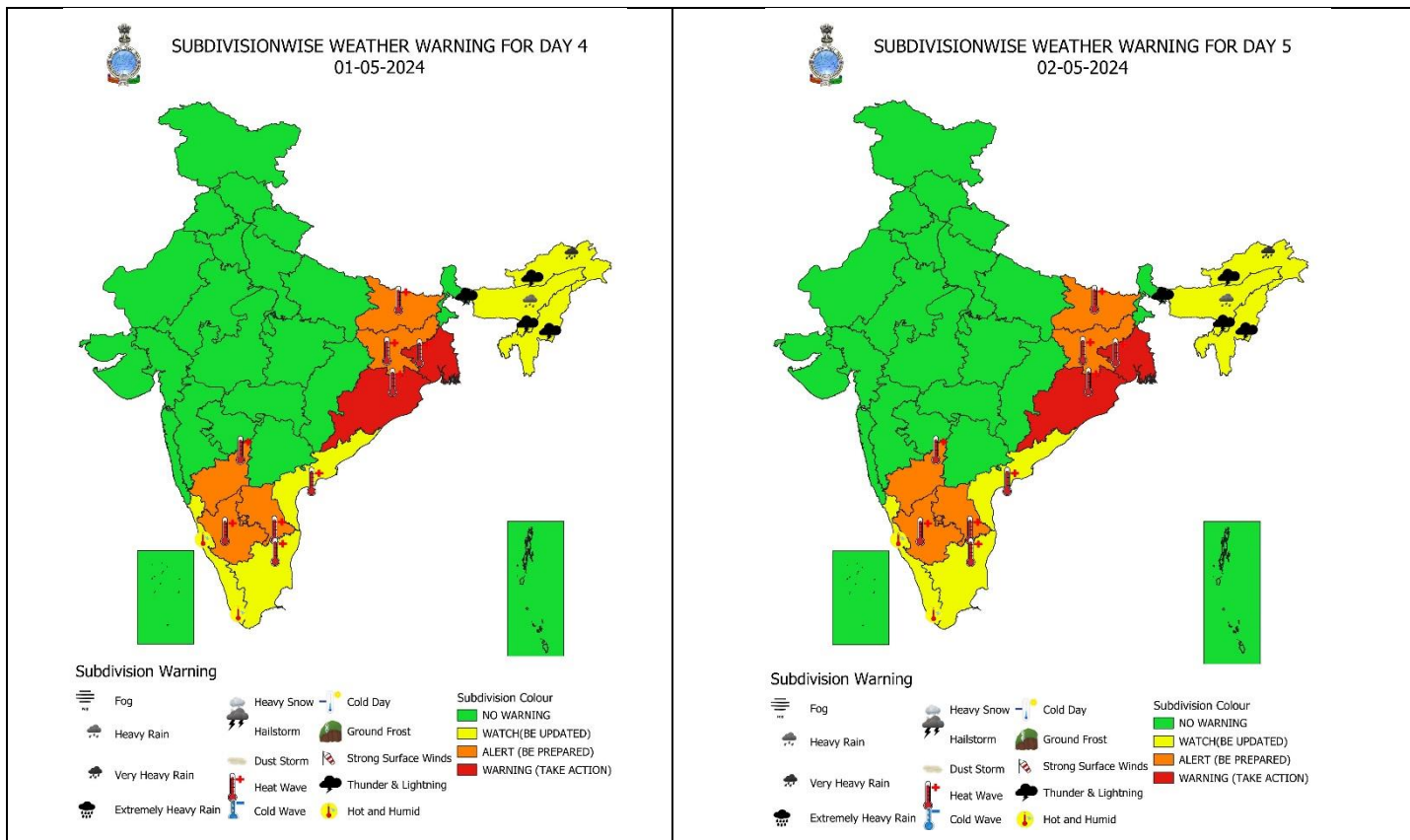
SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
 30-04-2024



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)

*** 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 & Uttarakhand on 28th & 29th; Punjab, East Madhya Pradesh and Vidarbha on 28th 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 over Jammu-Kashmir-Gilgit-Baltistan-Muzaffarabad on 28th & 29th; Himachal Pradesh on 29th; Arunachal Pradesh and Assam & Meghalaya during 28th April-01st 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.

IMPACT & ACTION SUGGESTED due to Heat Wave Conditions:

Red alert Areas (Gangetic West Bengal & Odisha)

- ❖ 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, Bihar, Jharkhand, Rayalaseema & Interior Karnataka)

- ❖ 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 (Uttar Pradesh, Konkan, Coastal Andhra Pradesh & Yanam, Tamil Nadu and Kerala & Mahe)

- ❖ 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.

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 Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, East Rajasthan, Madhya Pradesh and Marathwada. Keep the harvested produce at safer places or cover the heaps of harvested produce in the fields with tarpaulin sheets.
- In Jammu & Kashmir, withhold harvesting and threshing of wheat, mustard, late sown pea, chickpea and lentil; cover the already harvested produce with polythene sheet or tarpaulin; postpone transplanting of cucurbits and solanaceous vegetables and make necessary arrangements for draining out excess water from crop fields to avoid water stagnation.
- 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, East Uttar Pradesh, Kerala, Interior Karnataka, Rayalaseema and Telangana.
- Provide mechanical support to horticultural crops & staking to vegetables to prevent damage from gusty winds.
- Provide mechanical support to horticultural crops & staking to vegetables to prevent damage from gusty winds.

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 < 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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