

Thursday, May 09, 2024
Time of Issue: 2000 hours IST
(NIGHT)

All India Impact Based Weather Warning Bulletin

09 May (Day 1):

- ❖ **Thunderstorm accompanied with lightning, squally winds (speed reaching 50-60 kmph) & hailstorm** very likely at isolated places over East Madhya Pradesh and Vidarbha; **with lightning, gusty winds (speed reaching 40-50 kmph) & hailstorm** at isolated places over Uttarakhand, West Madhya Pradesh, Madhya Maharashtra and Marathwada; **with lightning & squally winds (speed reaching 50-60 kmph)** at isolated places over Sub-Himalayan West Bengal & Sikkim and Bihar; **with lightning, gusty winds (speed reaching 40-50 kmph)** at isolated places over Jharkhand, Chhattisgarh, Gangetic West Bengal, Odisha, Kerala & Mahe, Coastal Andhra Pradesh & Yanam and Interior Karnataka; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal and Rayalaseema; **with lightning** at isolated places over Himachal Pradesh, East Rajasthan, Arunachal Pradesh, , Lakshadweep and Coastal Karnataka.
- ❖ **Dust Storm/Thunderstorm with gusty winds (speed 30-40 kmph)** very likely in isolated pockets over East Uttar Pradesh.
- ❖ **Heavy rainfall** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Gangetic West Bengal, Bihar, Odisha, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and South Interior Karnataka.
- ❖ **Hot and humid weather** very likely to prevail over coastal areas of Gujarat.
- ❖ **Heat wave conditions** very likely to prevail in isolated pockets over West Rajasthan and Kerala & Mahe.

10 May (Day 2):

- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40-50 kmph) & hailstorm** very likely at isolated places over Uttarakhand, Madhya Pradesh and Vidarbha; **with lightning & squally winds (speed reaching 50-60 kmph)** at isolated places Gangetic West Bengal and Jharkhand; **with lightning, gusty winds (speed reaching 40-50 kmph)** at isolated places over Chhattisgarh, Odisha, North Interior Karnataka; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Himachal Pradesh, Punjab, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, South Interior Karnataka; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, northwest Uttar Pradesh, Arunachal Pradesh and Marathwada.
- ❖ **Dust Storm/Thunderstorm with gusty winds (speed 40-50 kmph)** very likely in isolated pockets over Rajasthan; **with gusty winds (speed 30-40 kmph)** in isolated pockets over in isolated pockets over Haryana-Chandigarh-Delhi and East Uttar Pradesh.
- ❖ **Heavy rainfall** very likely at isolated places over Gangetic West Bengal, Odisha, Arunachal Pradesh and Assam & Meghalaya.
- ❖ **Hot and humid weather** very likely to prevail over coastal areas of Gujarat.
- ❖ **Heat wave conditions** very likely to prevail in isolated pockets over West Rajasthan.

11 May (Day 3):

- ❖ **Thunderstorm accompanied with lightning, squally winds (speed reaching 50-60 kmph) & hailstorm** very likely at isolated places over Uttarakhand; **with lightning, squally winds (speed reaching 50-60 kmph)** at isolated places over Gangetic West Bengal; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over Uttar Pradesh, Chhattisgarh, Odisha, North Interior Karnataka, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Himachal Pradesh, Punjab, East Rajasthan, Madhya Pradesh, Vidarbha, Sub-Himalayan West Bengal & Sikkim, Bihar, Jharkhand, Madhya Maharashtra, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana and South Interior Karnataka; **with lightning** at isolated places Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad Arunachal Pradesh and Marathwada.
- ❖ **Dust Storm/Thunderstorm with gusty winds (speed 40-50 kmph)** very likely in isolated pockets over Uttar Pradesh and West Rajasthan; **with gusty winds (speed 30-40 kmph)** in isolated pockets over in isolated pockets over Haryana-Chandigarh-Delhi.
- ❖ **Heavy rainfall** very likely at isolated places over Odisha.
- ❖ **Hot and humid weather** very likely to prevail over coastal areas of Gujarat.

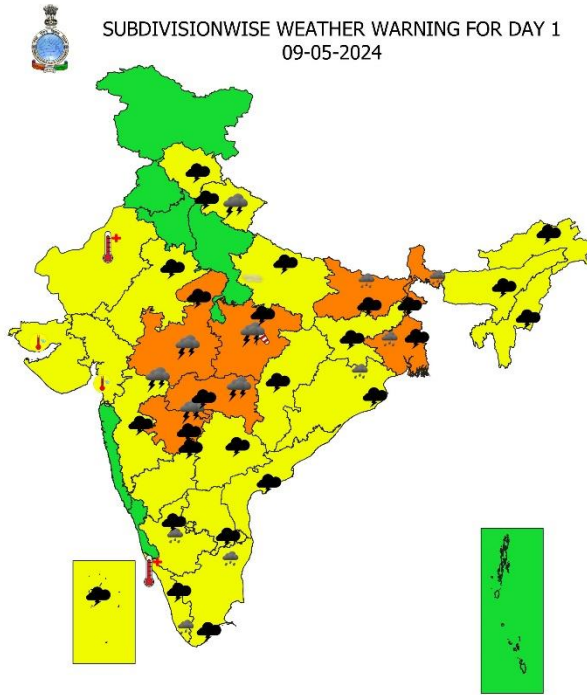
12 May (Day 4):

- ❖ **Thunderstorm accompanied with lightning, squally winds (speed reaching 50-60 kmph) & hailstorm** likely at isolated places over Uttarakhand; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over Himachal Pradesh, East Rajasthan, Chhattisgarh, Odisha, Madhya Maharashtra, Kerala & Mahe, North Interior Karnataka and Rayalaseema; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Punjab, East Madhya Pradesh, Vidarbha, Andaman & Nicobar Islands, Gangetic West Bengal, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Telangana and South Interior Karnataka; **with lightning** at isolated places Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Sub-Himalayan West Bengal & Sikkim, Bihar, Jharkhand, Arunachal Pradesh and Marathwada.
- ❖ **Dust Storm/Thunderstorm with gusty winds (speed 40-50 kmph)** likely in isolated pockets over Uttar Pradesh; **with gusty winds (speed 30-40 kmph)** in isolated pockets over in isolated pockets over Haryana-Chandigarh-Delhi and West Rajasthan.
- ❖ **Heavy rainfall** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and South Interior Karnataka.
- ❖ **Hot and humid weather** likely to prevail over coastal areas of Gujarat.

13 May (Day 5):

- ❖ **Thunderstorm accompanied with lightning, squally winds (speed reaching 50-60 kmph gusting to 70 kmph) & hailstorm** likely at isolated places over Uttarakhand; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over Chhattisgarh, Madhya Maharashtra, Kerala & Mahe, Rayalaseema, Telangana and North Interior Karnataka; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Himachal Pradesh, Vidarbha, Andaman & Nicobar Islands, Tamil Nadu, Puducherry & Karaikal, Lakshadweep, Coastal Andhra Pradesh & Yanam and South Interior Karnataka; **with lightning** at isolated places Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Gangetic West Bengal, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Marathwada.
- ❖ **Dust Storm/Thunderstorm with gusty winds (speed 30-40 kmph)** likely in isolated pockets over Haryana-Chandigarh-Delhi and East Uttar Pradesh; **Dust Storm/Thunderstorm** in isolated pockets over West Uttar Pradesh.
- ❖ **Heavy rainfall** likely at isolated places over Kerala & Mahe, Rayalaseema, Telangana, North & South Interior Karnataka.

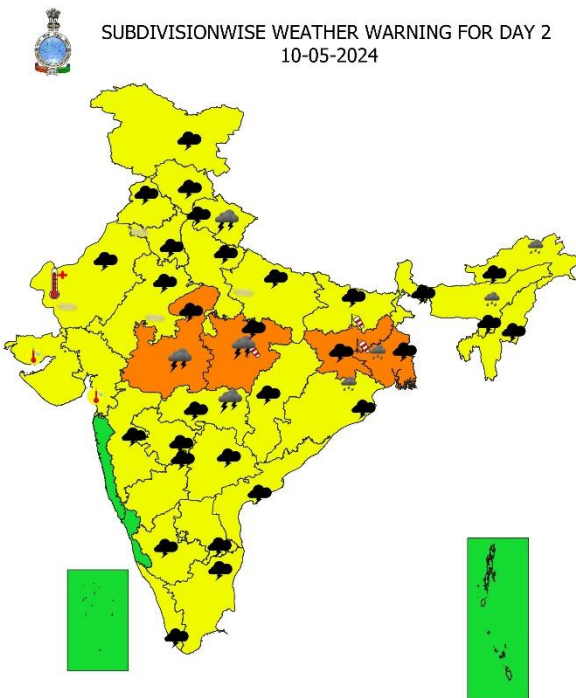
SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
 09-05-2024



Subdivision Warning

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

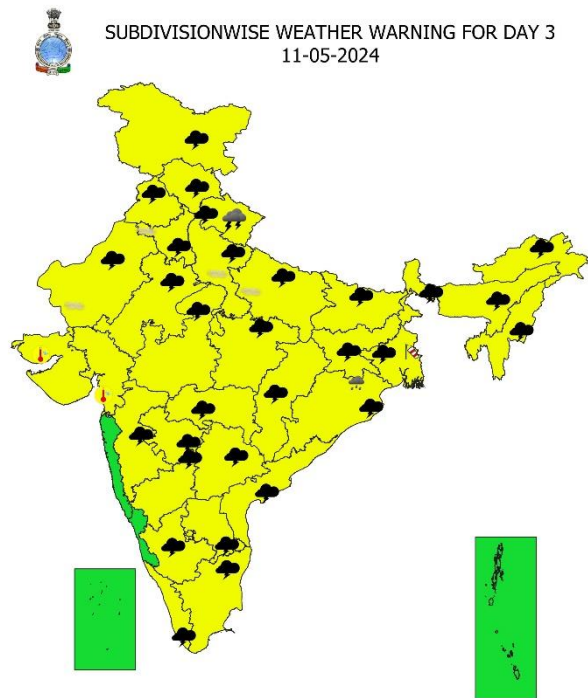
SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
 10-05-2024



Subdivision Warning

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

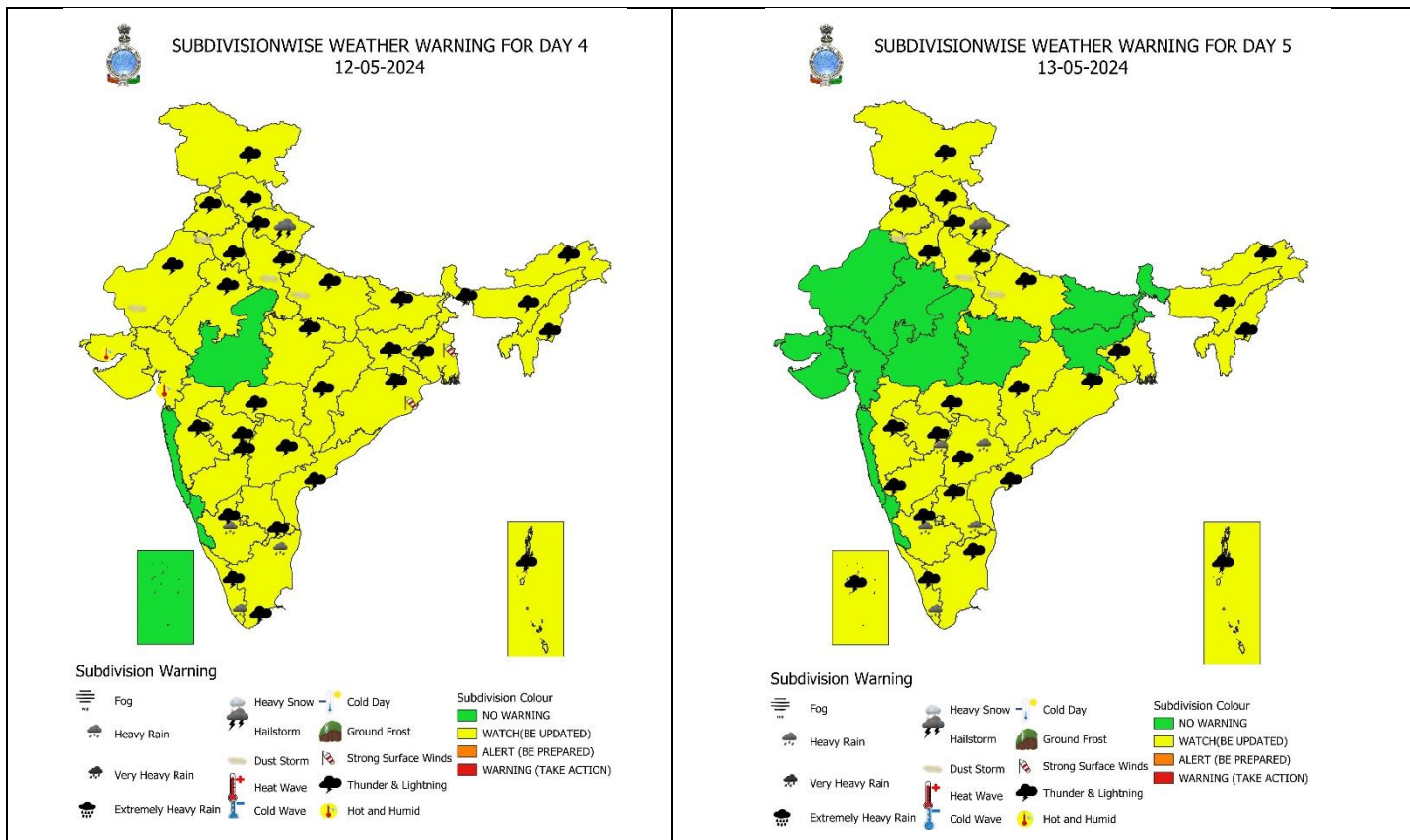
SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
 11-05-2024



Subdivision Warning

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

*** 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 Heat Wave Conditions:

Yellow alert Areas

- ✓ 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.

Impact expected and action suggested due to thunderstorm accompanied with lightning/squally winds & Hailstorm over Uttarakhand during next 5 days; central, east and south peninsular India till 12th May, 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.

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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 Sub-Himalayan West Bengal & Sikkim and Bihar on 09th; Gangetic West Bengal during 09th-10th; Odisha during 09th-11th; Tamil Nadu, Puducherry & Karaikal on 09th & 12th; Kerala & Mahe and South Interior Karnataka on 9th, 12th and 13th; Arunachal Pradesh and Assam & Meghalaya on 10th and Rayalaseema, Telangana and North Interior Karnataka on 13th 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, Gusty winds, Hailstorms and Heat Wave likely over various parts of the country

(Based on the IBF and advisories issued by different AMFUs)

- Drain out excess water from crop fields to avoid water stagnation in West Bengal & Sikkim, Odisha, Bihar, Arunachal Pradesh, Assam, Tamil Nadu, Kerala and South Interior Karnataka.
- Use hail nets or hail caps in fruit orchards to prevent mechanical damage and provide mechanical support to horticultural crops & staking to vegetables in Uttarakhand, Madhya Pradesh and Madhya Maharashtra, Marathwada & Vidarbha region of Maharashtra.
- Apply need-based irrigation to standing crops to avoid heat stress; provide mulching to conserve soil moisture and minimise evaporation.
- 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 $< 1\text{km}$

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.