



#### National Weather Forecasting Centre India Meteorological Department Ministry of Earth Sciences

Tuesday, October 22, 2024 Time of Issue: 1945 hours IST (NIGHT)

# **All India Impact Based Weather Warning Bulletin**

Weather Warnings for next 7 days is given below: (Graphics for warnings & rainfall distribution (Table 1) are given below the text:

### **22 October (Day 1):**

- ❖ Heavy to very heavy rainfall with extremely heavy falls (≥ 20 cm) very likely at isolated places over South Interior Karnataka; Heavy rainfall (≥7cm) very likely at isolated places over Andaman & Nicobar Islands, Konkan & Goa, Madhya Maharashtra, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Rayalaseema, Coastal & North Interior Karnataka.
- ❖ Thunderstorm accompanied with lightning very likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat state, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, Karnataka, East Rajasthan, West Madhya Pradesh, Vidarbha.
- ❖ Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph very likely to prevail over eastcentral Bay of Bengal and adjoining areas and Andaman Sea. Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph is likely to prevail over Eastcentral and adjoining Areas. Strong winds with speed 50 kmph to 60 kmph gusting to 70 kmph is likely to prevail over Eastcentral & adjoining areas of Bay of B Bengal. Gale winds with speed 60 kmph to 90 kmph gusting to 100 kmph is likely to prevail over many parts of Eastcentral adjoining westcentral Bay of Bengal. Fishermen are advised not to venture into these areas.

### 23 October (Day 2):

- ❖ Heavy rainfall (≥7cm) very likely at isolated places over Gangetic West Bengal, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Karnataka.
- Thunderstorm accompanied gusty winds (speed reaching 30-40 kmph) very likely at isolated places over Gangetic West Bengal, Odisha, Kerala & Mahe; with lightning likely at isolated places over Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema, Karnataka.
- ❖ Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph very likely to prevail over Central and North Bay of Bengal along and off North Andhra Pradesh, Odisha & west Bengal coasts. Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph is likely to prevail over parts of central & north Bay of Bengal. Strong winds with speed 50 kmph to 60 kmph gusting to 70 kmph is likely to prevail over many parts of central adjoining north Bay of Bengal. Gale winds with speed 60 kmph to 90 kmph gusting to 100 kmph is likely to prevail over many parts of eastcentral & adjoining westcentral Bay of Bengal. Fishermen are advised not to venture into these areas





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### 24 October (Day 3):

- ♣ Heavy to very heavy rainfall with extremely heavy falls (≥ 20 cm) very likely at isolated places over Odisha and Gangetic West Bengal; Heavy rainfall (≥7cm) likely at isolated places over Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura.
- Thunderstorm accompanied gusty winds (speed reaching 30-40 kmph) very likely at isolated places Bihar and Jharkhand; with lightning likely at isolated places over Chhattisgarh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Sub-Himalayan West Bengal & Sikkim.
- ❖ Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph very likely to prevail over many parts of central and North Bay of Bengal. Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph is likely to prevail over many parts of Westcentral & North Bay of Bengal and adjoining parts of Eastcentral, along and off Bangladesh coasts. Strong winds with speed 50 kmph to 60 kmph gusting to 70 kmph is likely to prevail over many parts of Westcentral and adjoining Eastcentral and North Bay of Bengal. Gale winds with speed 60 kmph to 90 kmph gusting to 110 kmph is likely to prevail over many parts of Westcentral & Northwest Bay of Bengal along and off Odisha, West Bengal coasts. Gale winds with speed 90 kmph to 110 kmph gusting to 120 kmph is likely to prevail over many parts of Westcentral & Northwest Bay of Bengal along and off Odisha, West Bengal coasts. Fishermen are advised not to venture into these areas.

#### 25 October (Day 4):

- ★ Heavy to very heavy rainfall with extremely heavy falls (≥ 20 cm) likely at isolated places over Odisha, Gangetic West Bengal; Heavy to very heavy rainfall (≥ 12 cm) likely at isolated places over Jharkhand; Heavy rainfall (≥7cm) likely at isolated places over Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam.
- ❖ Thunderstorm accompanied gusty winds (speed reaching 30-40 kmph) likely at isolated places Jharkhand with lightning likely at isolated places over Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema.
- ❖ Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph likely to prevail over many parts of central, Northeast Bay of Bengal, along and off North Andhra Pradesh. Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph is likely to prevail over many parts of central and Northeast Bay of Bengal along and off few parts of North Andhra Pradesh. Strong winds with speed 50 kmph to 60 kmph gusting to 70 kmph is likely to prevail over many parts of Westcentral and adjoining Eastcentral and Northeast Bay of Bengal. and Bangladesh coasts Gale winds with speed 60 kmph to 90 kmph gusting to 110 kmph is likely to prevail over many parts of Northwest Bay of Bengal and adjoining parts of Westcentral Bay of Bengal, along and off Odisha, West Bengal coasts. Gale winds with speed 90 kmph to 110 kmph gusting to 120 kmph is likely to prevail over Northwest along and off Odisha, West Bengal coasts. Fishermen are advised not to venture into these areas.

### 26 October (Day 5):

- ❖ Heavy rainfall (≥12cm) likely at isolated places over Odisha and Gangetic West Bengal.
- **Thunderstorm accompanied with lightning** likely at isolated places over Rayalaseema, Coastal Andhra Pradesh & Yanam, Chhattisgarh.
- ❖ Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph likely to prevail over along and off few parts North Andhra Pradesh, Odisha, West Bengal. Fishermen are advised not to venture into these areas.

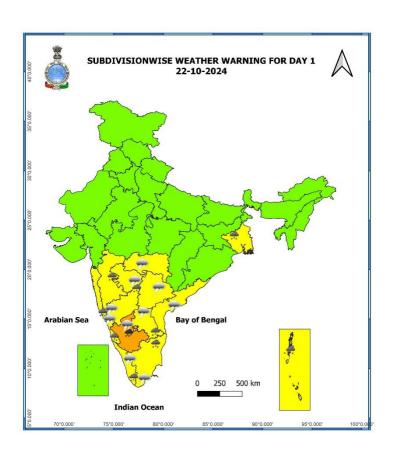
### 27 October (Day 6):

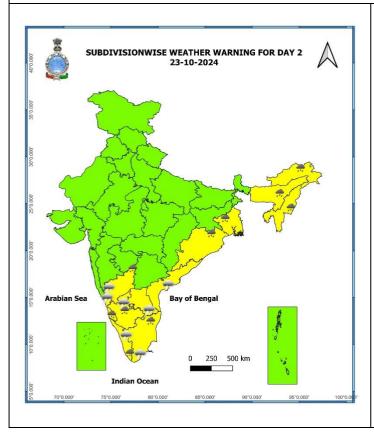
No weather warning.

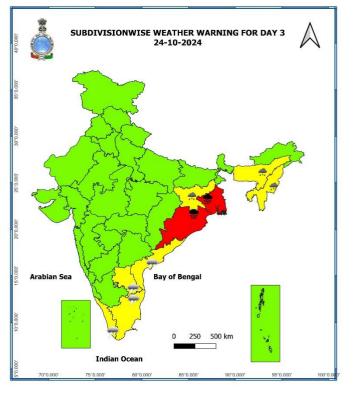
### 28 October (Day 7):

No weather warning.





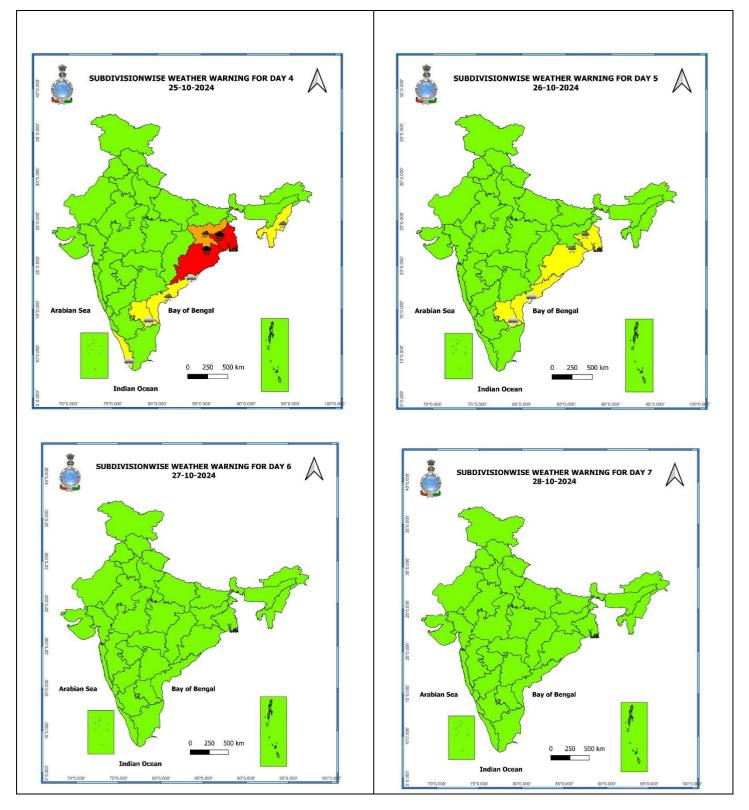








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- Action may be taken based on ORANGE AND RED COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.



#### Table-1

Table-1									
	7 Days Rainfall Forecast								
		22-	23-	24-	25-	26-	27-	28-	
S.	Subdivision	Oct							
No.	Subulvision	Day							
		1	2	3	4	5	6	7	
1	ANDAMAN & NICOBAR ISLANDS	WS	WS	WS	FWS	FWS	FWS	SCT	
2	ARUNACHAL PRADESH	ISOL	SCT	SCT	SCT	ISOL	ISOL	ISOL	
3	ASSAM & MEGHALAYA	SCT	FWS	FWS	FWS	ISOL	ISOL	ISOL	
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	FWS	WS	FWS	SCT	ISOL	ISOL	ISOL	
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	ISOL	ISOL	SCT	SCT	SCT	SCT	SCT	
6	GANGETIC WEST BENGAL	ISOL	FWS	WS	WS	FWS	ISOL	ISOL	
7	ODISHA	ISOL	SCT	FWS	WS	SCT	ISOL	ISOL	
8	JHARKHAND	DRY	ISOL	FWS	WS	FWS	ISOL	DRY	
9	BIHAR	DRY	ISOL	SCT	SCT	ISOL	ISOL	ISOL	
10	EAST UTTAR PRADESH	DRY	DRY	ISOL	DRY	DRY	DRY	DRY	
11	WEST UTTAR PRADESH	DRY							
12	UTTARAKHAND	ISOL	DRY	DRY	DRY	DRY	DRY	DRY	
13	HARYANA CHANDIGARH & DELHI	DRY							
14	PUNJAB	DRY							
15	HIMACHAL PRADESH	ISOL	DRY	DRY	DRY	DRY	DRY	DRY	
16	JAMMU & KASHMIR AND LADAKH	DRY	ISOL	ISOL	DRY	DRY	DRY	ISOL	
17	WEST RAJASTHAN	ISOL	DRY	DRY	DRY	DRY	DRY	DRY	
18	EAST RAJASTHAN	ISOL	DRY	DRY	DRY	DRY	DRY	DRY	
19	WEST MADHYA PRADESH	ISOL	DRY	DRY	DRY	DRY	DRY	DRY	
20	EAST MADHYA PRADESH	DRY							
21	GUJARAT REGION	ISOL	DRY	DRY	DRY	DRY	DRY	DRY	
22	SAURASHTRA & KUTCH	ISOL	DRY	DRY	DRY	DRY	DRY	DRY	
23	KONKAN & GOA	SCT	ISOL	ISOL	DRY	DRY	DRY	DRY	
24	MADHYA MAHARASHTRA	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY	
25	MARATHAWADA	ISOL	ISOL	DRY	DRY	DRY	DRY	ISOL	
26	VIDARBHA	ISOL	DRY	DRY	DRY	ISOL	ISOL	ISOL	
27	CHHATTISGARH	DRY	DRY	ISOL	ISOL	ISOL	ISOL	ISOL	
28	COASTAL ANDHRA PRADESH & YANAM	SCT	SCT	ISOL	SCT	SCT	SCT	SCT	
29	TELANGANA	SCT	ISOL	DRY	DRY	ISOL	ISOL	ISOL	
30	RAYALASEEMA	SCT	SCT	ISOL	ISOL	ISOL	ISOL	ISOL	
31	TAMILNADU PUDUCHERRY & KARAIKAL	SCT	SCT	SCT	ISOL	ISOL	ISOL	ISOL	
32	COASTAL KARNATAKA	FWS	FWS	SCT	ISOL	DRY	DRY	ISOL	
33	NORTH INTERIOR KARNATAKA	SCT	SCT	ISOL	DRY	DRY	DRY	ISOL	
34	SOUTH INTERIOR KARNATAKA	WS	WS	FWS	SCT	ISOL	ISOL	ISOL	
35	KERALA & MAHE	FWS	FWS	FWS	FWS	SCT	SCT	SCT	
36	LAKSHADWEEP	FWS	FWS	FWS	FWS	SCT	SCT	SCT	

• As the lead period increases forecast accuracy decreases.





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### Impact due to

- ✓ **Isolated extremely heavy rainfall** very likely over Odisha, Gangetic West Bengal on 24<sup>th</sup> & 25<sup>th</sup> October.
- ✓ **Isolated heavy to very heavy rainfall** very likely over South Interior Karnataka on 22<sup>nd</sup>; Jharkhand on 25<sup>th</sup> October.

### **Impact Expected**

- ✓ Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- ✓ Minor damage to power and communication lines.
- ✓ Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- ✓ Possibilities of damage to vulnerable structure. Breaking of tree branches and uprooting of trees.
- ✓ Moderate damage to banana and papaya trees. Large dead limbs blown from trees.
- ✓ Damage to horticulture and standing crops in some areas due to inundation and wind.
- ✓ Damage to embankments/ salt pans.
- ✓ Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
- ✓ Occasional reduction in visibility due to heavy rainfall.
- ✓ Disruption of traffic in major cities and roadways due to water logging in roads and poor visibility due to heavy rain leading to increased travel time and incidents
- ✓ Localized Landslides/Mudslides/landslips/mud slips/land sinks/mud sinks.
- ✓ Likely disruption of marine and inland water transportation like small boats and trawlers.
- ✓ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Webpage of Central Water Commission)

### **Action Suggested**

- ✓ Judicious regulation of surface transports including railways and roadways.
- ✓ Check for traffic congestion on your route before leaving for your destination.
- ✓ Follow any traffic advisories that are issued in this regard.
- ✓ Avoid going to areas that face the water logging problems often.
- ✓ Avoid staying in vulnerable structure

### Agromet advisories for Heavy Rainfall likely over various parts of the country

- ✓ In **Tamil Nadu**, drain out excess water from rice nurseries and fields of rice, maize, pepper and newly planted turmeric. Undertake detrashing and propping of more than five-month-old sugarcane to avoid lodging. Provide support to banana plantations.
- ✓ Make necessary arrangements to drain out excess water from standing crop fields and fruit orchards to avoid water stagnation in Andaman and Nicobar Islands, Kerala, Karnataka and Rayalaseema.
- ✓ Keep the harvested produce at safer places.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.
- ✓ In **Odisha**, undertake harvesting of rice crop if 85% of grains are matured in a panicle. Immediately harvest matured maize, black gram, green gram, groundnut, vegetables and fruits. Withhold sowing of pre-*rabi* pulses and winter vegetables. Provide propping in sugarcane by tying leaves from four to five plants together to prevent their lodging.
- ✓ In **Gangetic West Bengal**, drain out excess water from *Aman* rice, groundnut, pulses and vegetables. Complete harvesting of *kharif* rice, vegetables, and fruits as soon as possible.
- ✓ Shift the harvested produce to safer places at the earliest.
- ✓ Make arrangements for adequate drainage to avoid water logging in crop fields.
- ✓ Provide mechanical support to young fruit plants and staking in vegetables to prevent their lodging



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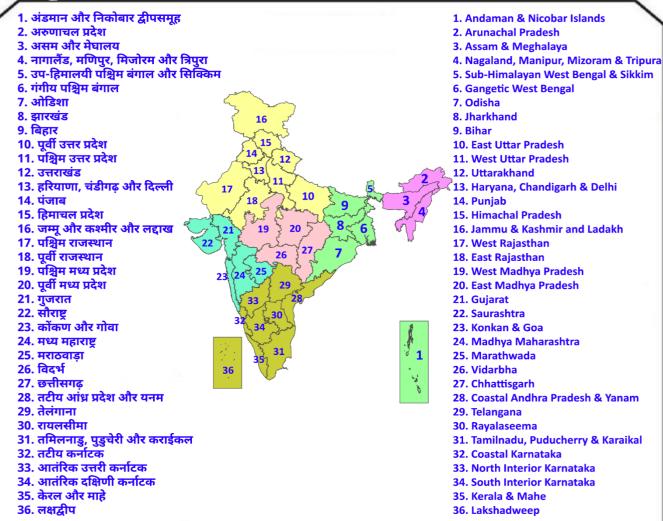
### **Legends & abbreviations:**

- **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- Obsy.: Observatory; AWS: Automatic Weather Station; ARG: Automatic Rain Gauge; dist.: District: NH: National Highway; KVK: Krishi Vigyan Kendra; DVC: Damodar Valley Corporation; PTO: Part Time Office, Aero: Aerodrome, IAF: Indian Air Force.
- **Region wise classification of meteorological Sub-Divisions:**
- ✓ **Northwest India:** Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand); Punjab, Haryana-Chandigarh-Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.
- ✓ **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
- ✓ **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
- ✓ **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ✓ West India: Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathawada.
- ✓ **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.



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# **LEGENDS**



# **SPATIAL DISTRIBUTION** (% of Stations reporting)

% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/A Few Places)
51-75	Fairly Widespread (FWS/Many Places)	1-25	Isolated (ISOL)
			COLOUR CORED WARNING





	DEFINITION/CRITERIA
*	Heavy: 64.5 to 115.5 mm/cm *
Rain/ Snow *	Very Heavy: 115.6 to 204.4 mm/cm*  Extremely Heavy: > 204.4 mm/cm *
	When maximum temperature of a station reaches ≥40° C for plains and ≥30° 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 ≥6.5° C
Heat Wave	(b). Based on Actual maximum temperature
	Heat Wave: When actual maximum temperature ≥45°C.  Severe Heat Wave: When actual maximum temperature ≥47°C
	( c). Criteria for heat wave for coastal stations When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum
	temperature ≥37°C  When maximum temperature remains 40°C
Warm Night	Warm Night: When minimum temperature departure 4.5 °C to 6.4 °C.
· · · · · · · · · · · · · · · · · · ·	Severe Warm Night: When minimum temperature departure >6.4 °C.
	When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C
Cold Wave	(b) Based on actual Minimum Temperature (for Plains only)
	Cold Wave : When Minimum Temperature is ≤ 4.0 °C
	Severe Cold Wave: When Minimum Temperature is ≤ 2.0 °C
	( c) For Coastal Stations
	When Minimum Temperature departure is ≤-4.5 °C & actual Minimum Temperature is ≤ 15 °C
	When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions
Cold Day	Based on departure  Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.
cola bay	Severe Cold Day: Maximum Temperature Departure from normal ≤ -6.5 °C
	Phenomenon of small droplets suspended in air and the horizontal visibility < 1km  Moderate Fog: When the visibility between 500-200 metres
Fog	Dense Fog: when the visibility between 50-200 metres
	Very Dense Fog: when the visibility < 50 metres
hunderstorm	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
Frost	Air temperature ≤4°C ( over Plains)
	A strong wind that rises suddenly, lasts for atleast 1 minute.
1000	Moderate: Wind speed 52-61 kmph
Squall	Severe: Wind speed 62-87 kmph
-9	Very Severe: Wind speed >87 kmph
	Effect of various waves in the sea over specific area
Sea State	Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre
Cou Clate	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)
Cyclone	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)