



National Weather Forecasting Centre India Meteorological Department Ministry of Earth Sciences

Thursday, November 28, 2024 Time of Issue: 1630 hours IST (EVENING)

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:

28 November (Day 1):

- ❖ Heavy rainfall (≥ 7 cm) very likely at isolated places over north coastal Tamil Nadu, Puducherry & Karaikal.
- ❖ Dense fog very likely in isolated pockets of Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi, Bihar and Uttar Pradesh; Shallow to moderate fog in isolated pockets of Odisha & Gangetic West Bengal in night/morning hours.
- **♦ Thunderstorm accompanied with lightning** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖ Gale wind speed reaching 65-75 kmph gusting to 85 kmph is very likely to prevail over southwest Bay of Bengal. Squally wind speed reaching 40-50 kmph gusting to 60 kmph is prevailing over adjoining areas of westcentral Bay of Bengal. Squally wind speed reaching 45-55 kmph gusting to 65 kmph is prevailing along & off North Tamil Nadu Puducherry and adjoining South Andhra Pradesh coasts. Squally wind speed reaching 55-65 kmph gusting to 75 kmph is very likely to prevail Along & off East Sri Lanka coasts. Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail Along & off South Tamil Nadu coast and Gulf of Mannar. Fishermen are advised not to venture into these areas.

29 November (Day 2):

- ★ Heavy to very Heavy rainfall (≥ 12 cm) very likely at a few places with extremely heavy falls at isolated places over north Tamil Nadu, Puducherry & Karaikal; Heavy to very Heavy rainfall (≥ 12 cm) with extremely falls very likely at isolated places over south Coastal Andhra Pradesh & Yanam, Rayalaseema; Heavy rainfall (≥ 7 cm) at isolated places over South Interior Karnataka, Kerala & Mahe.
- ❖ **Dense fog** very likely in isolated pockets of Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi, Bihar and Uttar Pradesh; **Shallow to moderate fog** in isolated pockets of Odisha & Gangetic West Bengal in night/morning hours.
- **Thunderstorm accompanied with lightning** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka.
- ❖ Gale wind speed reaching 65-75 kmph gusting to 85 kmph is very likely to prevail over southwest Bay of Bengal. Squally wind speed reaching 50-60 kmph gusting to 70 kmph is prevailing over adjoining areas of westcentral Bay of Bengal. Squally wind speed reaching 50-60 kmph gusting to 70 kmph is prevailing along & off North Tamil Nadu Puducherry and adjoining South Andhra Pradesh coasts. Squally wind speed reaching 55-65 kmph gusting to 75 kmph is very likely to prevail Along & off East Sri Lanka coasts. Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail Along & off South Tamil Nadu coast and Gulf of Mannar. Fishermen are advised not to venture into these areas. Fishermen are advised not to venture into these areas.



National Weather Forecasting Centre India Meteorological Department Ministry of Earth Sciences

30 November (Day 3):

- **♦ Heavy to very Heavy rainfall (≥ 12 cm) with extremely falls** very likely at isolated places over north Tamil Nadu, Puducherry & Karaikal; **Heavy to very Heavy rainfall (≥ 12 cm)** very likely at isolated places over Kerala & Mahe, South Interior Karnataka, south Coastal Andhra Pradesh & Yanam, Rayalaseema; **Heavy rainfall (≥ 7 cm)** at isolated places over Andaman & Nicobar Islands.
- ❖ Dense fog very likely in isolated pockets of Uttar Pradesh; Shallow to moderate fog in isolated pockets of Odisha & Gangetic West Bengal in night/morning hours.
- **❖ Thunderstorm accompanied with lightning** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Rayalaseema, Telangana, South Interior Karnataka, Kerala & Mahe.
- ❖ Gale wind speed reaching 65-75 kmph gusting to 85 kmph is very likely to prevail over southwest Bay of Bengal. Squally wind speed reaching 50-60 kmph gusting to 70 kmph is prevailing over adjoining areas of westcentral Bay of Bengal. Squally wind speed reaching 50-60 kmph gusting to 70 kmph is prevailing along & off North Tamil Nadu Puducherry and adjoining South Andhra Pradesh coasts. Squally wind speed reaching 55-65 kmph gusting to 75 kmph is very likely to prevail Along & off East Sri Lanka coasts. Squally wind speed reaching 45-55 kmph gusting to 65 kmph is likely to prevail Along & off South Tamil Nadu coast and Gulf of Mannar. Fishermen are advised not to venture into these areas. Fishermen are advised not to venture into these areas.

01 December (Day 4):

- ❖ Heavy to very Heavy rainfall (≥ 12 cm) very likely at isolated places over Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka, Kerala & Mahe.
- ❖ **Dense fog** very likely in isolated pockets of Uttar Pradesh in night/morning hours.
- * Thunderstorm accompanied with lightning very likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Rayalaseema, Telangana, Karnataka, Lakshadweep, Kerala & Mahe.

02 December (Day 5):

- ❖ Heavy rainfall (≥ 7 cm) likely at isolated places over Lakshadweep, South Interior Karnataka, Kerala & Mahe.
- Thunderstorm accompanied with lightning very likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Rayalaseema, Telangana, South Interior Karnataka, Lakshadweep, Kerala & Mahe.

03 December (Day 6):

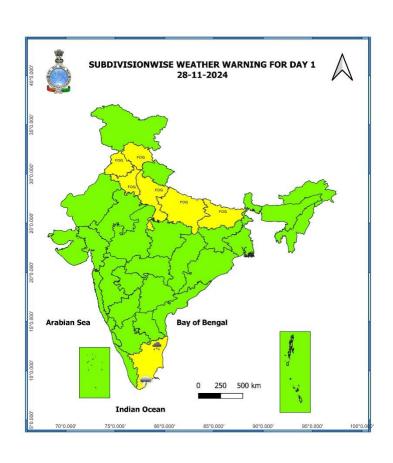
♦ Heavy rainfall (≥ 7 cm) likely at isolated places over Lakshadweep.

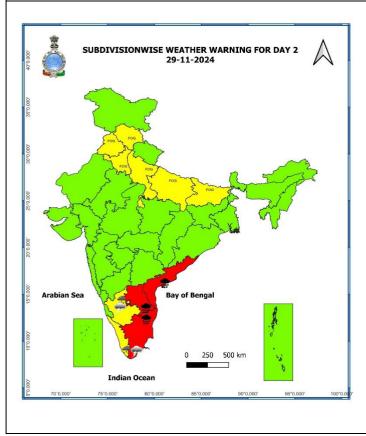
04 December (Day 7):

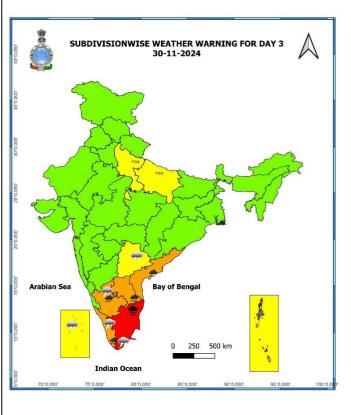
❖ No Warning.







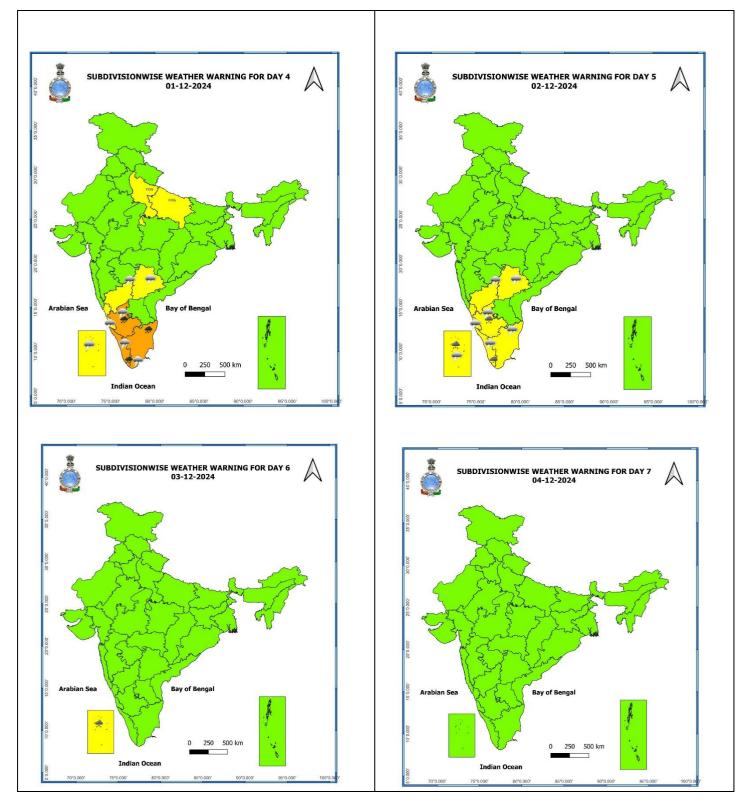








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- Action may be taken based on **ORANGE** AND **RED** COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.



Table-1

	7 Days Ra	infall Fo	orecast					
S. No.	Subdivision	28- Nov	29- Nov	30- Nov	01- Dec Day	02- Dec Day	03- Dec Day	04- Dec
		Day 1	Day 2	Day 3	4	5	6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	SCT	FWS	WS	WS	FWS	SCT	SCT
2	ARUNACHAL PRADESH	DRY	ISOL	ISOL	DRY	DRY	DRY	ISOL
3	ASSAM & MEGHALAYA	DRY	ISOL	DRY	DRY	DRY	DRY	DRY
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	FWS	FWS	SCT	SCT	ISOL	ISOL	ISOL
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
6	GANGETIC WEST BENGAL	DRY	DRY	ISOL	ISOL	DRY	DRY	DRY
7	ODISHA	ISOL	ISOL	ISOL	DRY	DRY	ISOL	ISOL
8	JHARKHAND	DRY	DRY	DRY	DRY	DRY	DRY	DRY
9	BIHAR	DRY	DRY	DRY	DRY	DRY	DRY	DRY
10	EAST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
11	WEST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
12	UTTARAKHAND	DRY	DRY	DRY	DRY	DRY	DRY	DRY
13	HARYANA CHANDIGARH & DELHI	DRY	DRY	DRY	DRY	DRY	DRY	DRY
14	PUNJAB	DRY	DRY	DRY	DRY	DRY	DRY	DRY
15	HIMACHAL PRADESH	DRY	ISOL	ISOL	ISOL	SCT	DRY	DRY
16	JAMMU & KASHMIR AND LADAKH	DRY	ISOL	ISOL	ISOL	SCT	ISOL	DRY
17	WEST RAJASTHAN	DRY	DRY	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	DRY	DRY	DRY	DRY	DRY	DRY	DRY
19	WEST MADHYA PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
20	EAST MADHYA PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
21	GUJARAT REGION	DRY	DRY	DRY	DRY	DRY	DRY	DRY
22	SAURASHTRA & KUTCH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
23	KONKAN & GOA	DRY	DRY	DRY	DRY	ISOL	ISOL	DRY
24	MADHYA MAHARASHTRA	DRY	DRY	DRY	DRY	ISOL	ISOL	DRY
25	MARATHAWADA	DRY	DRY	DRY	DRY	ISOL	ISOL	DRY
26	VIDARBHA	DRY	DRY	DRY	ISOL	ISOL	DRY	DRY
27	CHHATTISGARH	DRY	DRY	ISOL	ISOL	ISOL	ISOL	ISOL
28	COASTAL ANDHRA PRADESH & YANAM	SCT	FWS	FWS	SCT	SCT	SCT	ISOL
29	TELANGANA	DRY	ISOL	ISOL	SCT	SCT	ISOL	ISOL
30	RAYALASEEMA	ISOL	FWS	FWS	SCT	SCT	SCT	ISOL
31	TAMILNADU PUDUCHERRY & KARAIKAL	SCT	FWS	FWS	FWS	FWS	SCT	SCT
32	COASTAL KARNATAKA	DRY	DRY	ISOL	SCT	FWS	FWS	FWS
33	NORTH INTERIOR KARNATAKA	DRY	DRY	DRY	DRY	ISOL	ISOL	ISOL
34	SOUTH INTERIOR KARNATAKA	DRY	ISOL	ISOL	SCT	FWS	FWS	FWS
35	KERALA & MAHE	ISOL	ISOL	FWS	WS	FWS	SCT	ISOL
36	LAKSHADWEEP	DRY	DRY	DRY	SCT	FWS	FWS	FWS

• As the lead period increases forecast accuracy decreases.





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Impact & Action Suggested due to

- ✓ **Heavy to very Heavy rainfall with extremely falls** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal on 29th & 30th; Coastal Andhra Pradesh & Yanam & Rayalaseema on 29th November.
- ✓ **Isolated heavy to very heavy rainfall** over Tamil Nadu, Puducherry & Karaikal on 01st December; South Interior Karnataka, Kerala & Mahe on 30th November & 01st December; Coastal Andhra Pradesh & Yanam, Rayalaseema on 30th November.
- ✓ **Low to Moderate flash flood risk** likely over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam & Rayalaseema on 28th & 29th November. (ANNEXURE I)

A. Impact Expected

- ❖ 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 due to water logging in roads leading to increased travel time.
- Minor damage to kutcha roads.
- ❖ Possibilities of damage to vulnerable structure.
- ❖ Localized Landslides/Mudslides
- ❖ Damage to horticulture and standing crops in some areas due to inundation.
- ❖ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC).

B. Action Suggested

- ❖ 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.

Impact expected due to dense/very dense fog in the late night/morning hours

Transport and Aviation:

- May affect some airports, highways and railway routes in the areas of met-sub-division.
- Difficult driving conditions with slower journey times.
- Unless taken precautionary measures, it may lead to some road traffic collisions.

❖ Power Sector:

• Chances of Tripping of Power lines in the very dense fog routes.

❖ Human Health:

- Lung related health impacts: Dense fog contains particulate matter and other pollutants and in case exposed it gets lodged in the lungs, clogging them and decreasing their functional capacity which increases episodes of wheezing, coughing and shortness of breath.
- Impact on people having asthma bronchitis: Long time exposure to dense fog may cause respiratory problem for people having asthma bronchitis and other lung related health problems.
- Eye Irritation: Dense fog contains pollutions of various types and these Pollutants in the air if exposed may tend to irritate the membranes of the eye causing various infections leading to redness or swelling of the eye.

Action suggested:

- **Transport and Aviation:**
 - Be careful while driving or outing through any transport.
 - Use fog lights during driving.
 - Be in touch with airlines, railways and state transport for schedule of your journey.
- ❖ Power Sector:
 - To keep ready Maintenance Team
 - Human Health: To avoid outing until unless emergency and to cover the face.



Agromet advisories for Heavy Rainfall likely over Tamil Nadu, Kerala and Coastal Andhra Pradesh:

- ➤ In **Tamil Nadu**, drain out excess water from rice, sugarcane, cotton, turmeric, vegetables and other standing crop fields; coconut and banana orchards. Undertake propping in sugarcane. Provide mechanical support to banana plants to prevent lodging.
- Undertake picking of matured cotton bolls and harvesting of matured rice, maize, groundnut, finger millet, pigeon pea, arecanut, fruits and vegetables in **South Interior Karnataka** and harvesting of matured rice in **Andhra Pradesh** immediately. Keep the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields.
- > Provide adequate drainage facilities for removal of excess water from standing crop fields and fruit orchards in Andhra Pradesh and South Interior Karnataka.
- > Provide mechanical support to horticultural crops and staking to vegetables.

Livestock and Fishery

- ► Keep the animals inside the shed during heavy rainfall and provide balanced feed.
- Store the feed and fodder at safer place to avoid spoilage from rainfall.
- Hang gunny bags all around poultry sheds.
- Construct an outlet with proper netting around the pond to drain out excess rain water, thereby preventing fishes/fingerlings from escaping in case of overflowing.
- > Check and repair dykes around the ponds to avoid entry of runoff water from catchment area.

Flash Flood Guidance:

ANNEXURE I

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 29-11-2024:

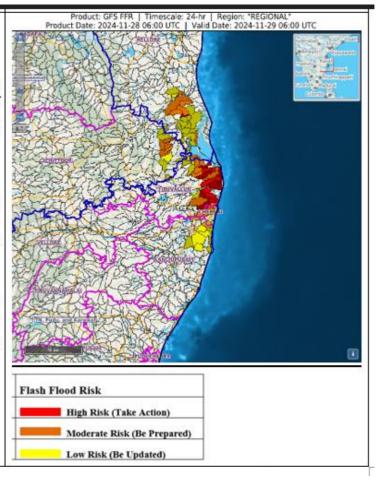
Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of following Meteorological Sub-divisions during next 24 hours.

Rayalaseema - Chittoor district.

Coastal Andhra Pradesh – Nellore district

Tamil Nadu - Puducherry & Karaikal
Chennai, Kanchipuram and Tiruvallur districts.

Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over Area of Concern as shown in map due to expected rainfall occurrence in next 24 hours.





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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)
Fog	Heavy Snow -	Cold Wa	ve COLOUR CODED WARNING





Rain/ Snow *	Heavy: 64.5 to 115.5 mm/cm * Very Heavy: 115.6 to 204.4 mm/cm*
kain/ Snow	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.
Cold Wave	Severe Cold Wave: Minimum Temperature Departure from normal ≤ -6.5 °C
ooid 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
Cold Day	When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions Based on departure Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.
Cold Day	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
Dust/Sand	Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder) An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.
	An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.
Dust/Sand Storm	An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind. Ice deposits on ground
Dust/Sand	An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.
Dust/Sand Storm	An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind. Ice deposits on ground Air temperature ≤4°C (over Plains) A strong wind that rises suddenly, lasts for atleast 1 minute. Moderate: Wind speed 52-61 kmph
Dust/Sand Storm	An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind. Ice deposits on ground Air temperature ≤4°C (over Plains) A strong wind that rises suddenly, lasts for atleast 1 minute. Moderate: Wind speed 52-61 kmph Severe: Wind speed 62-87 kmph
Dust/Sand Storm	An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind. Ice deposits on ground Air temperature ≤4°C (over Plains) A strong wind that rises suddenly, lasts for atleast 1 minute. Moderate: Wind speed 52-61 kmph
Dust/Sand Storm	An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind. Ice deposits on ground Air temperature ≤4°C (over Plains) A strong wind that rises suddenly, lasts for atleast 1 minute. Moderate: Wind speed 52-61 kmph Severe: Wind speed 62-87 kmph
Dust/Sand Storm Frost Squall	An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind. Ce deposits on ground
Dust/Sand Storm Frost Squall	An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind. Ice deposits on ground
Dust/Sand Storm Frost Squall Sea State	An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind. Ce deposits on ground
Frost	An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind. Ce deposits on ground