

Government of India Ministry of Earth Sciences India Meteorological Department



Press Release Date: 11<sup>th</sup> July, 2024 Time of Issue: 1315 hours IST

Subject: (1) Heavy to very heavy rainfall with isolated extremely heavy falls likely over Northeast India during next 2 days and decrease in intensity thereafter.
 (2) Heavy to very heavy rainfall likely over Konkan & Goa, Madhya Maharashtra and Coastal Karnataka during 12<sup>th</sup>-15<sup>th</sup> July.

# Realised weather during past 24 hours till 0830 hours IST of today: (details in Annexure I)

Heavy to very heavy rainfall with extremely heavy falls at isolated places over Meghalaya; Heavy to very heavy rainfall at isolated places over Konkan & Goa, Uttarakhand, Assam; Heavy rainfall at isolated places over East Rajasthan, West Uttar Pradesh, West Madhya Pradesh, Chhattisgarh, Yanam, Madhya Maharashtra, Tamil Nadu, Bihar, West Bengal & Sikkim, Arunachal Pradesh, South Interior Karnataka and Coastal Karnataka.

## Weather Systems

- ✓ The Monsoon trough is near its normal position at mean sea levels.
- ✓ The off-shore trough at mean sea level runs along south Gujarat-north Kerala coasts.
- ✓ A cyclonic circulation over Odisha and another over north Madhya Maharashtra in lower tropospheric levels.
- ✓ A cyclonic circulation over northeast Assam & neighbourhood in lower tropospheric levels.

## Forecast & Warnings (Annexure II)

## West and South Peninsular India

- ✓ Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm & lightning very likely over Konkan & Goa, Madhya Maharashtra, Kerala & Mahe, Lakshadweep, Karnataka, Gujarat Region; scattered to fairly widespread light to moderate rainfall over Saurashtra & Kutch, Coastal Andhra Pradesh & Yanam, Telangana, Marathwada; isolated to scattered light to moderate rainfall over Tamil Nadu, Puducherry & Karaikal and Rayalaseema during next 5 days.
- ✓ Isolated heavy rainfall over Konkan & Goa, Madhya Maharashtra and Coastal Karnataka, Gujarat Region, South Interior Karnataka during 11<sup>th</sup>-15<sup>th</sup>; Saurashtra & Kutch on 11<sup>th</sup> & 12<sup>th</sup>; Telangana, Kerala & Mahe and North Interior Karnataka during 12<sup>th</sup>-15<sup>th</sup>; Coastal Andhra Pradesh & Yanam on 14<sup>th</sup> & 15<sup>th</sup> and Rayalaseema on 15<sup>th</sup> July.
- ✓ Isolated very heavy rainfall also likely over Konkan & Goa during 11<sup>th</sup>-15<sup>th</sup>; ghat areas of Madhya Maharashtra, Coastal Karnataka during 12<sup>th</sup>-15<sup>th</sup>; Kerala during 13<sup>th</sup>-15<sup>th</sup>; South Interior Karnataka on 14<sup>th</sup> & 15<sup>th</sup> July and Gujarat State today.

### East & Northeast India

✓ Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm, lightning very likely over Andaman & Nicobar Islands, Sub-Himalayan West Bengal & Sikkim, Bihar and

Northeast India; scattered to fairly widespread light to moderate rainfall over Gangetic West Bengal, Jharkhand, Odisha during next 5 days.

- Heavy rainfall very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Bihar, Arunachal Pradesh during 11<sup>th</sup>-14<sup>th</sup>; Assam & Meghalaya during 11<sup>th</sup>-15<sup>th</sup>; isolated heavy rainfall over Odisha during 13<sup>th</sup>-15<sup>th</sup>; Andaman & Nicobar Islands on 13<sup>th</sup> & 14<sup>th</sup>; Nagaland and Manipur on 11<sup>th</sup>, 14<sup>th</sup> & 15<sup>th</sup> July.
- Isolated very heavy rainfall also likely over Sub-Himalayan West Bengal & Sikkim, Bihar on 11<sup>th</sup> & 12<sup>th</sup>; Arunachal Pradesh on 12<sup>th</sup> July.
- Isolated extremely heavy rainfall very likely over Arunachal Pradesh on 11<sup>th</sup> and Meghalaya on 11<sup>th</sup> & 12<sup>th</sup> July.

## \* Northwest & Central India

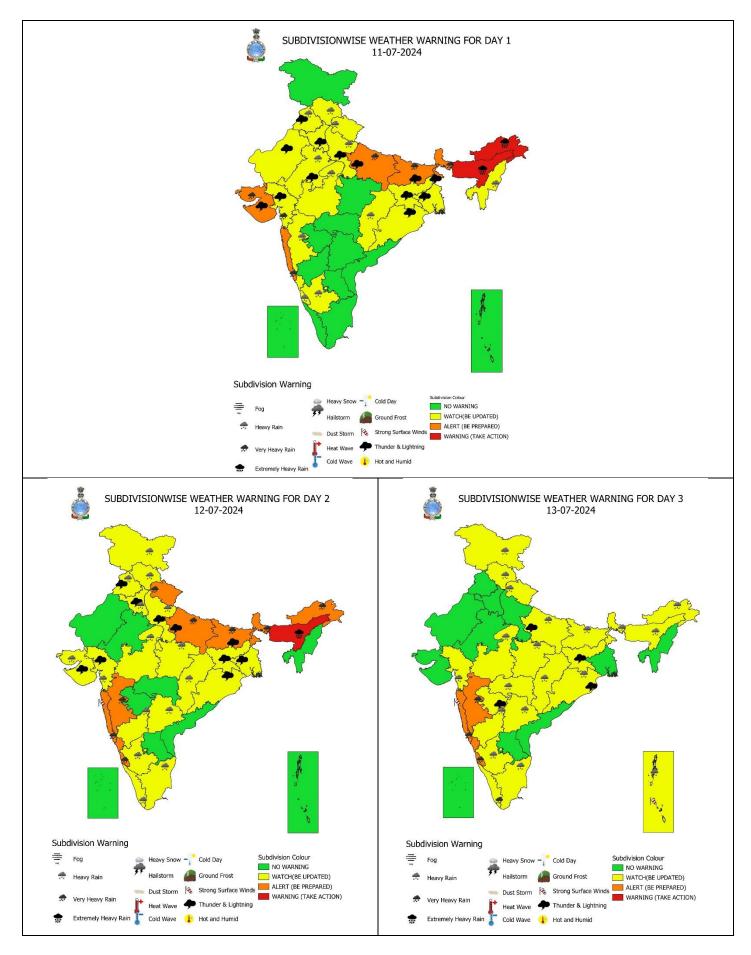
- ✓ Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm & lightning very likely over Uttarakhand and Central India; scattered to fairly widespread light to moderate rainfall over Himachal Pradesh, Uttar Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; isolated to scattered over Rajasthan during next 5 days; Punjab, Haryana-Chandigarh-Delhi during 11<sup>th</sup>-14<sup>th</sup> July.
- ✓ Isolated heavy rainfall very likely over Uttarakhand, West Madhya Pradesh, Chhattisgarh during 11<sup>th</sup>-15<sup>th</sup>; East Uttar Pradesh during 11<sup>th</sup>-14<sup>th</sup>; East Madhya Pradesh during 12<sup>th</sup>-15<sup>th</sup>; West Uttar Pradesh, Punjab on 11<sup>th</sup> & 12<sup>th</sup>; Himachal Pradesh during 11<sup>th</sup>-13<sup>th</sup>; Jammu on 12<sup>th</sup> & 13<sup>th</sup>; north Haryana on 12<sup>th</sup>; East Rajasthan on 11<sup>th</sup> & 15<sup>th</sup>; Vidarbha during 13<sup>th</sup>-15<sup>th</sup> July.
- Isolated very heavy rainfall also likely over East Uttar Pradesh on 11<sup>th</sup> & 12<sup>th</sup> and Uttarakhand on 12<sup>th</sup> July.

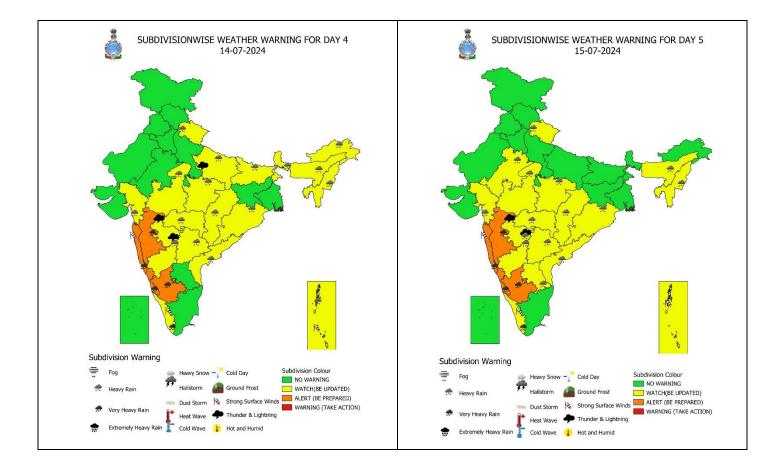
For more details, kindly refer: https://mausam.imd.gov.in/responsive/all\_india\_forcast\_bulletin.php

### Significant Rainfall during past 24 hours till 0830 hours IST of today (in cm):

- Assam & Meghalaya: Cherrapunji (dist East Khasi Hills) 31, Cherrapunji(rkm) (dist East Khasi Hills) 29, Mawsynram (dist East Khasi Hills) 28, Bilasipara Arg (dist Dhubri) 15, Dhubri\_ Cwc (dist Dhubri) 12, Tihu Arg (dist Nalbari) 12, Dhubri\_imd (dist Dhubri) 11, Goalpara\_cwc (dist Goalpara) 11, Bahalpur (dist Dhubri) 10, Nalbari/pagladia (dist Nalbari) 10, Mawkyrwat\_arg (dist South West Khasi Hills) 9, Tikrikilla (dist West Garo Hills) 9, Srijangram Arg (dist Bongaigaon) 9, Nongstein (dist West Khasi Hills) 8, Goalpara \_aws (dist Goalpara) 7, Tamulpur (dist Baksa) 7, Kokrajhar (dist Kokrajhar) 7, Tamulpur Arg (dist Baksa) 7, Jowai (dist West Jaintia Hills) 7, Khliehriat (dist East Jaintia Hills) 7,
- Konkan & Goa: Dodamarg (dist Sindhudurg) 15, Malvan (dist Sindhudurg) 11, Devgad (dist Sindhudurg) 9, Palghar\_agri (dist Palghar) 9, Rameshwar\_agri (dist Sindhudurg) 9, Mulde\_ Agri (dist Sindhudurg) 8, Sawantwadi (dist Sindhudurg) 7, Canacona (dist South Goa) 7, Awalegaon Arg (dist Sindhudurg) 7, Vasai (dist Palghar) 7, Kudal (dist Sindhudurg) 7,
- Uttarakhand: Dharchula (Pithoragarh): 12, Kashipur (Udham Singh Nagar) : 7, Munsiyari (Pithoragarh): 6,
- \* West Madhya Pradesh: Zirapur (dist Rajgarh) 11, Godadongri (dist Betul) 7,
- Bihar: Bahadurganj (dist Kishanganj) 11, Tribeni/balmikinagar (dist West Champaran) 10, Sahebpur Kanal (dist Begusarai) 8,
- Tamil Nadu: Tirumayam (dist Pudukkottai) 9,Ponneri (dist Tiruvallur) 8, Red Hills (dist Tiruvallur), Avadi (dist Tiruvallur), Minnal (dist Ranipet), Zone 03 Puzhal (dist Chennai), Puzhal ARG (dist Tiruvallur), Thirukalukundram (dist Chengalpattu), AWS Ranipet (Ranipet), Zone 01 Kathivakkam (dist Chennai) 7 each,
- Chhattisgarh: Kusmi (dist Balrampur) 9, Ambikapur (dist Surguja) 7,
- Coastal Karnataka: Karwar Obsy (dist Uttara Kannada) 9, Kota (dist Udupi) 7,
- South Interior Karnataka: Agumbe Emo (dist Shivamogga) 9, Sringeri Hms (dist Chikkamagaluru) 7,
- West Uttar Pradesh: Bilari (dist Moradabad) 8,
- East Uttar Pradesh: Jalalpur Fmo (dist Ambedkar Nagar) 8, Chhatnag (dist Prayagraj) 8, Jaunpur Cwc (dist Jaunpur) 7,
- \* West Uttar Pradesh: Bilari (dist Moradabad) 8,
- East Rajasthan: Nagrarfort Sr (dist Tonk) 7,
- Yanam: Yanam (dist Yanam) 7
- Madhya Maharashtra: Shevgaon (dist Ahmednagar) 7,
- Coastal Andhra Pradesh & Yanam: Yanam (dist Yanam) 7,
- Arunachal Pradesh: Basar (dist West Siang) 9, Basar\_Aws (dist West Siang) 9, Roing (dist Lower Dibang Valley) 9, Pasighat\_Aero (dist East Siang) 7,
- Sub-Himalayan West Bengal & Sikkim: Kumargram (dist Alipurduar) 7, Buxaduar (dist Alipurduar) 7, Chepan (dist Alipurduar) 7,

#### **ANNEXURE II**





## **IMPACT & ACTION SUGGESTED due to**

- ✓ Isolated extremely heavy rainfall very likely over Meghalaya on 11<sup>th</sup> & 12<sup>th</sup> and Arunachal Pradesh on 11<sup>th</sup> July.
- ✓ Isolated very heavy rainfall very likely over Konkan & Goa during 11<sup>th</sup>-15<sup>th</sup>; Bihar, Sub-Himalayan West Bengal & Sikkim, East Uttar Pradesh on 11<sup>th</sup> & 12<sup>th</sup>; Arunachal Pradesh, Uttarakhand on 12<sup>th</sup>; Gujarat State on 11<sup>th</sup>; ghat areas of Madhya Maharashtra, Coastal Karnataka during 12<sup>th</sup>-15<sup>th</sup> and Kerala during 13<sup>th</sup>-15<sup>th</sup> July.
- 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/landslips/mud slips/land sinks/mud sinks.
- > 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)

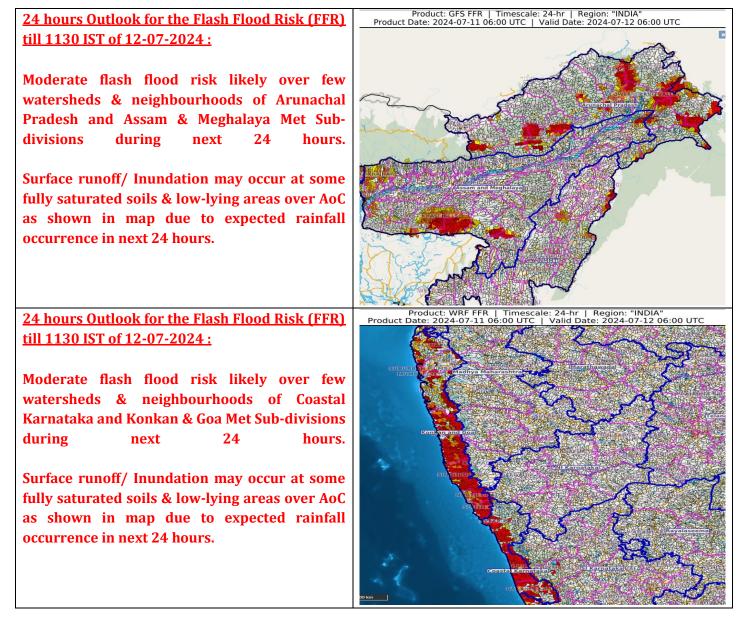
### **Action Suggested**

- > 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.

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

- Make provision for draining out excess water from crop fields to avoid water stagnation in Arunachal Pradesh, Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Bihar, Himachal Pradesh, Uttarakhand, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Chhattisgarh, Konkan & Goa, Ghat areas of Madhya Maharashtra, Gujarat State and Coastal and South Interior Karnataka.
- > Provide mechanical support to horticultural crops & staking to vegetables.

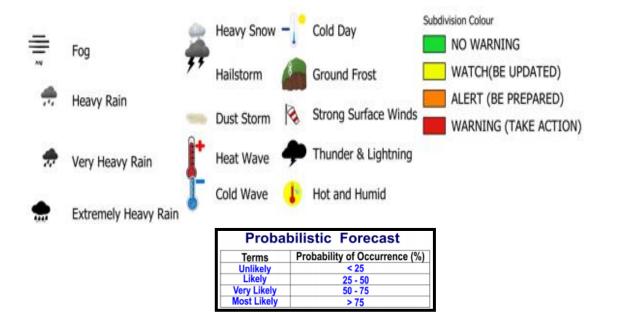
### **FLASH FLOOD GUIDANCE:**



### 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; 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.

	SPATIAL DISTRIBUT	ION (%	of Stations reporting)
% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespred (FWS/ Many Places)	1-25	Isolated (ISOL)



WARNING (TAKE ACTION) ALERT (BE PREPARED) NO WARNING (TAKE ACTION)         Important to the present to the pr		WARNING Probabilistic Forecast				
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NO WARNING ( NO ACTION)         Mod Likely         0 * 78           Normality         Heavy: 64 50 1155 mm/cm **         Heavy: 64 50 1155 mm/cm **           Normality         Heavy: 64 50 1155 mm/cm **         Heavy: 64 50 1155 mm/cm **           Heavy: 64 50 1155 mm/cm **         Heavy: 52 0044 mm/cm **           Heat Wave: Mean transmum temperature of a station reaches 240° C for plains and 230° C for hilly regit (abseed on Departure from normal 4.5° C to 6.4° C.           Heat Wave: Mean dual maximum temperature Departure from normal 4.5° C to 6.4° C.           Severe Heat Wave: When actual maximum temperature 247°C.           Generative Wave: When actual maximum temperature 43° C to 6.4 °C.           Warm Night: When minimum temperature 45° C to 6.4 °C.           Warm Night: When minimum temperature 45° C to 6.4 °C.           Warm Night: When minimum temperature 65° C to 6.4 °C.           Warm Night: When minimum temperature 65° C to 6.4 °C.           Severe Cold Wave: Minimum Temperature 15° C to 6.4 °C.           Severe Cold Wave: Minimum Temperature 05 a station 510°C for plains and 50°C for hilly regions.           (a) Based on actual Minimum Temperature 15° C to 6.4 °C.           Severe Cold Wave: When Minimum Temperature 15° C to 6.4 °C.           Severe Cold Wave: When Minimum Temperature 15° C to 70°C for hilly regions.           (b) Based on actual Minimum Temperature 15° C to 70°C for hilly regions.           (c) For Coastal Stations			Likely	25 - 50		
Heavy: E4:5 to 115.5 mm/cm*           Way Heavy: 156 to 204.4 mm/cm*           Heavy: 50:100           Wen maximum temperature of a station reaches >40° C for plains and >30° C for hilly regir (a) Based on Departure from normal           Heat Wave: Mainum Temperature Departure from normal 4.5° C to 6.4° C. Severe Heat Wave: Mean dual maximum temperature 247°C           Based on Actual maximum temperature 247°C           (c) C riferia for heat wave for coastal stations When maximum temperature departure 15.4°C           Wave: Mean wave for coastal stations When maximum temperature departure 15.4°C for 0.54°C. Severe Heat Wave: When actual maximum temperature 247°C           (c) C riferia for heat wave for coastal stations When maximum temperature departure 15.4°C for plains and ≤0°C for hilly regions. (a) Based on departure is ×4.5°C to 6.4°C. Severe Warm Night: When minimum temperature departure 15.5°C to -6.4°C. Severe Cold Wave: Minimum Temperature departure 15.5°C to -6.4°C. Severe Cold Wave: Minimum Temperature Departure from normal -4.5°C to -6.4°C. Severe Cold Wave: Minimum Temperature departure 15.5°C to -6.4°C. Severe Cold Wave: Minimum Temperature 0.5°C for plains and ≤0°C for hilly regions. Cold Wave: When Minimum Temperature departure is ≤ 4.5°C           Cold Wave: When Minimum Temperature is ≤ 4.5°C to -6.4°C. Severe Cold Wave: Minimum Temperature departure is ≤ 4.5°C           Men minimum Temperature Departure from normal -4.5°C to -6.4°C. Severe Cold Day: Maximum Temperature Departure from normal -4.5°C to -6.4°C. Severe Cold Wave: Minimum Temperature Departure from normal -4.5°C to -6.4°C. Severe Cold Day: Maximum Temperature Departure from normal -4.5°C to -6.4°C. Severe Cold Day: Maximum Temperature Departure from n		The second se				
Very Heavy: 115.6 to 204.4 mm/cm *         When maximum temperature of a station reaches >40° C for plains and >30° C for hilly regi         Heat Wave: Maximum Temperature Departure from normal 4.5° C to 6.4° C.         Severe Heat Wave: Maximum Temperature Departure from normal 26.5° C         (b). Based on Actual maximum temperature >44°C.         Severe Heat Wave: When actual maximum temperature >44°C.         Severe Heat Wave: When actual maximum temperature >44°C.         Orienta for heat wave for costals lations         When maximum temperature departure for normal. Heat Wave may be described provided maximum temperature departure 6.4°C.         Severe Heat Wave: When minimum temperature departure 4.5°C to 6.4°C.         Severe Warn Night: When minimum temperature departure 4.5°C to 6.4°C.         Severe Warn Night: When minimum temperature departure 6.5°C         (c) Based on departure         Cold Wave: When minimum temperature departure 5.4°C.         Severe Cold Wave: When Minimum Temperature for normal. 4.5°C to 6.4°C.         Severe Cold Wave: When Minimum Temperature (of Plains and ≤0°C for hilly regions.         (c) For Cosatal Stations         When Minimum Temperature 5.4.5°C & actual Minimum Temperature is 5.4.5°C.         (b) Based on departure         Cold Wave: When Minimum Temperature is 5.4.5°C & actual Minimum Temperature is 5.5°C.         (c) For Cosatal Stations         When Minimum Temperature departure is 5.4.5°C & actu		NO WARNING (NO ACTION)	WOSt Likely	> /5		
When maximum temperature of a station reaches >40° C for plains and >30° C for hilly regions (a) Based on Departure from normal 4.5° C to 6.4° C.         Severe Heat Wave: Maximum Temperature Departure from normal 4.5° C to 6.4° C.         Severe Heat Wave: When actual maximum temperature >44°C.         Heat Wave: Wave actual maximum temperature >44°C.         C). Criteria for heat Wave for costal stations         When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum temperature 34°C.         When maximum temperature departure 4.5°C to 6.4°C.         Severe Near Night: When minimum temperature departure 4.5°C to 6.4°C.         Severe Warn Night: When minimum temperature departure 4.5°C to 6.4°C.         Severe Cold Wave: When minimum temperature departure 4.5°C to 6.4°C.         Severe Cold Wave: When minimum temperature departure 5.5°C         (b) Based on departure         Cold Wave: When Minimum Temperature Departure from normal 4.5°C to 6.4°C.         Severe Cold Wave: When Minimum Temperature (for Plains and 20°C for hilly regions.         (c) For Coastal Stations         When Minimum Temperature is 5.4.5°C & actual Minimum Temperature is 5.5°C         (c) For Coastal Stations         When Minimum Temperature beparture from normal 4.5°C to 6.4°C.         Severe Cold Wave: When Minimum Temperature is 5.2.0°C         (c) For Coastal Stations         When Minimum Temperature is 5.4.5°C & actual Minimum Temperature is 5.15	in/ Snow	Very Heavy: 115.6 to 204.4 mm/cm*				
Severe Heat Wave: Maximum Temperature Departure from normal 26.5° C         (b). Based on Actual maximum temperature 245°C.         Severe Heat Wave: When actual maximum temperature 245°C.         Severe Heat Wave: When actual maximum temperature 245°C.         Severe Heat Wave: Mena cubal maximum temperature 245°C.         Severe Marm Might: When minimum temperature 245°C for normal. Heat Wave may be described provided maximu temperature 237°C         When maximum temperature remains 40°C         Warm Night: When minimum temperature departure 4.5°C to 6.4 °C.         Severe Old Wave: Minimum Temperature departure 54.5°C to 6.4 °C.         (a). Based on departure         Cold Wave: Minimum Temperature Departure from normal -6.5°C to -6.4°C.         (b). Based on actual Minimum Temperature is 5.4.0°C         (c). For Coastal Stations         (b). Based on actual Minimum Temperature is 5.2.0°C         (c). For Coastal Stations         When Minimum Temperature 0 is 4.5.5°C to relains and 50°C for hilly regions         Based on departure         Coid Day: Maximum Temperature 1 is 5.4.5°C & actual Minimum Temperature is 5.15°C         When Minimum Temperature is 5.4.5°C to relains and 50°C for hilly regions         Based on departure         Coid Day: Maximum Temperature Bog-200 metres         Dema Fog: when the visibility between 50-200 metres         Fog       Phenomenon of smail droplets suspended in air and the		When maximum temperature of a (a) Based on Departure from norm	nal			
b). Based on Actual maximum temperature         Heat Wave         (b). Based on Actual maximum temperature 249°C.         Were Heat Wave: When actual maximum temperature 247°C         (c). Criteria for heat wave for costal stations         When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum temperature 237°C         Winn Might: When minimum temperature departure 4.5°C to 6.4 °C.         Severe Warm Night: When minimum temperature departure 5.0°C to 6.4 °C.         Severe Cold Wave: Minimum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Wave: Minimum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Wave: Minimum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Wave: When Minimum Temperature beparture from normal -4.5 °C to -6.4 °C.         Severe Cold Wave: When Minimum Temperature is ≤ 4.0 °C         Severe Cold Wave: When Minimum Temperature is 5 -4.5 °C to -6.4 °C.         Severe Cold Wave: When Minimum Temperature is 5 -15 °C         When minimum temperature departure is 5 -2.0 °C         (c) For Coastal Stations         When minimum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.<	0					
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Severe Heat Wave: When actual maximum temperature 247°C         (c). Criteria for heat wave for coastal stations         When maximum temperature departure is v4.5°C form normal. Heat Wave may be described provided maximu temperature 23°C         When maximum temperature departure is v4.5°C to 6.4 °C.         Severe Warm Night: When minimum temperature departure 4.5°C to 6.4 °C.         Severe Warm Night: When minimum temperature departure 5.5°C to 6.4 °C.         Severe Warm Night: Winn minimum temperature departure 5.5°C to 6.4 °C.         Severe Cold Wave: Minimum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Wave: Minimum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Wave: Minimum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Wave: When Minimum Temperature is 5.4.0 °C         Severe Cold Wave: When Minimum Temperature is 5.4.0 °C         Severe Cold Wave: When Minimum Temperature is 5.4.0 °C         Severe Cold Wave: When Minimum Temperature is 5.4.0 °C         Cold Wave: When Minimum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Wave: When winimum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day:	leat Wave					
When maximum temperature is >4.5°C from normal. Heat Wave may be described provided maximum temperature >37°C         When maximum temperature remains 40°C         Warm Night: When minimum temperature departure >6.4 °C.         Severe Warm Night: When minimum temperature departure >6.4 °C.         Severe Warm Night: When minimum temperature departure >6.4 °C.         Severe Cold Wave: Minimum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Wave: Minimum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Wave: When Minimum Temperature (for Plains and ≤0°C for hilly regions.         (a). Based on departure         (b) Based on actual Minimum Temperature (s ≤ 4.0 °C         Severe Cold Wave: When Minimum Temperature is ≤ 4.0 °C         Severe Cold Wave: When Minimum Temperature is ≤ 4.0 °C         Severe Cold Wave: When Minimum Temperature is ≤ 4.0 °C         Severe Cold Wave: When Minimum Temperature is ≤ 4.0 °C         Severe Cold Wave: When Minimum Temperature is ≤ 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature beparture from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Seve						
Imperature 237°C         When maximum temperature remains 40°C         Wirm Night: When minimum temperature departure >6.4 °C.         Severe Warm Night: When minimum temperature departure >6.4 °C.         Severe Warm Night: Winnem Temperature of a station ≤10°C for plains and ≤0°C for hilly regions. <ul> <li>(a). Based on departure.</li> <li>Coid Wave: Minimum Temperature Departure from normal &lt;4.5 °C to -6.4 °C.</li> <li>Severe Coid Wave: Minimum Temperature (for Plains only)</li> <li>Coid Wave: When Minimum Temperature is ≤ 4.0 °C</li> <li>Severe Coid Wave: When Minimum Temperature is ≤ 2.0 °C.</li> <li>(c) For Coastal Stations</li> <li>When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions</li> <li>Based on departure</li> <li>Coid Day: Maximum Temperature is ≤ 4.5 °C &amp; actual Minimum Temperature is ≤ 15 °C</li> </ul> Image: Coid Day: Maximum Temperature Departure from normal <4.5 °C to -6.4 °C.		( c). Criteria for heat wave for coas	stal stations			
Imm         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.           Severe Warm Night:         When minimum temperature departure >6.4 °C.           Severe Cold Wave:         Minimum Temperature Departure from normal 4.5 °C to -6.4 °C.           Severe Cold Wave:         Minimum Temperature Departure from normal 4.5 °C to -6.4 °C.           Severe Cold Wave:         Minimum Temperature Departure from normal 4.5 °C to -6.4 °C.           Severe Cold Wave:         When Minimum Temperature is \$ 4.0 °C           Cold Wave:         When Minimum Temperature is \$ 4.0 °C           Severe Cold Wave:         When Minimum Temperature is \$ 4.0 °C           Severe Cold Wave:         When Minimum Temperature is \$ 4.0 °C           Severe Cold Wave:         When Minimum Temperature is \$ 4.0 °C           Severe Cold Wave:         When Minimum Temperature of a station \$ 10°C for plains and \$ 0°C for hilly regions           Based on departure         Cold Day:         Maximum Temperature beparture from normal 4.5 °C to -6.4 °C.           Severe Cold Day:         Maximum Temperature beparture from normal 5.6 °C         Phenomenon of small droplets suspended in air and the horizontal visibility < 1kr		When maximum temperature departure i		eat Wave may be described provided maxim		
Severe Warm Night:         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 -4.5 °C to -6.4 °C.           Severe Cold Wave:         Minimum Temperature Departure from normal -4.5 °C to -6.4 °C.           Severe Cold Wave:         When Minimum Temperature is ≤ 4.0 °C           (c) For Coastal Stations         When Minimum Temperature departure is ≤ 4.0 °C           When Minimum Temperature departure is ≤ 4.0 °C.         (c) For Coastal Stations           When Minimum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.           Severe Cold Day:         Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.           Severe Cold Day:         Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.           Severe Cold Day:         Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.           Severe Cold Day:         Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.           Severe Cold Day:         Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.           Severe Cold Day:         Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.	1.					
Understand       Use of the main might which maintain deriver a station static departure 50.4 °C.         Ord Wave:       When minimum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Wave:       Severe Cold Wave: Minimum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Wave:       When Minimum Temperature is stat0 °C         Cold Wave:       When Minimum Temperature is stat0 °C         Cold Wave:       When Minimum Temperature is stat0 °C         Cold Wave:       When Minimum Temperature is stat0 °C for plains and s0°C for hilly regions         Based on departure       Cold Day: Maximum Temperature is stat0 °C for plains and s0°C for hilly regions         Based on departure       Cold Day: Maximum Temperature is stat0 °C for plains and s0°C for hilly regions         Based on departure       Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day:       Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day:       Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day:       Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day:       Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day:       Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe	arm Night					
(a). Based on departure         Cold Wave: Minimum Temperature Departure from normal ≤ 4.5 °C to -6.4 °C.         Severe Cold Wave: Minimum Temperature is ≤ 4.0 °C         Severe Cold Wave: When Minimum Temperature is ≤ 4.0 °C         Severe Cold Wave: When Minimum Temperature is ≤ 4.0 °C         Severe Cold Wave: When Minimum Temperature is ≤ 4.0 °C         Severe Cold Wave: When Minimum Temperature is ≤ 4.0 °C         Severe Cold Wave: When Minimum Temperature is ≤ 4.5 °C & actual Minimum Temperature is ≤ 15 °C         When Minimum Temperature departure is ≤ 4.5 °C & actual Minimum Temperature is ≤ 15 °C         When Minimum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 5.6 °C         Phenomenon of small droplets suspended in air and the horizont		Severe warm Night: When minimum te	emperature departure >6	4-0.		
Severe Cold Wave: Minimum Temperature Departure from normal ≤ -6.5 °C.         (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 departure is ≤ 4.5 °C & actual Minimum Temperature is ≤ 15 °C         When minimum temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C         Moderate Fog: When the visibility between 50- 200 metres         Dense Fog: When the visibility between 50- 200 metres         Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)         Suffam       An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.         Storm       Ket deposits on ground         Air temper		(a). Based on departure				
b) Based on actual Minimum Temperature (for Plains only)         cold Wave         b) Based on actual 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 ≤ 4.0 °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         Unable         c) Gold Day         Cold Day: Maximum Temperature Departure from normal = 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal = 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal = 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal = 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal = 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal = 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal = 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal = 4.5 °C to -6.4 °C.         Severe Severe Seventhe visibility between 500-200 metres         Dense Fog: When the visibility between 50-200 metres         Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)      <		· · · · · · · · · · · · · · · · · · ·				
Old Wave       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 \$ 2.0 °C       (c) For Coastal Stations         When Minimum Temperature departure is \$ 2.0 °C       (c) For Coastal Stations         When Minimum Temperature departure is \$ 2.0 °C       (c) For Coastal Stations         When Minimum Temperature departure from normal 4.5 °C to -6.4 °C.       Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.       Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.       Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.       Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.       Severe Cold Day: Maximum Temperature Supperside din air and the horizontal visibility C 1kr         Moderate Fog: When the visibility between 50-200 metres       Dense Fog: when the visibility between 50-200 metres         Storm       Storm       Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)         Storm       Ce deposits on ground	<b>_</b> _					
Severe Cold Wave: When Minimum Temperature is \$ 2.0 °C         (c) For Coastal Stations         When Minimum Temperature departure is \$ 2.0 °C         (c) For Coastal Stations         When Minimum Temperature departure is \$ 2.0 °C         (c) For Coastal Stations         When Minimum Temperature departure is \$ 2.0 °C         (c) For Coastal Stations         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.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal 4.5 °C         Phenomenon of small droplets suspended in air and the horizontal visibility < 1kr	Cold Wave			; only)		
(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         Based on departure         Cold Day         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal -4.5 °C         Phenomenon of small droplets suspended in air and the horizontal visibility < 1kr						
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 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 ≤ -6.5 °C         Phenomenon of small droplets suspended in air and the horizontal visibility < 1kr Moderate Fog: When the visibility between 500-200 metres Dense Fog: when the visibility between 500-200 metres         Pense Fog:       Wory Dense Fog: when the visibility between 500-200 metres         Very Dense Fog: when the visibility between 500-200 metres         Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)         Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)         Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)         Storm       Lee deposits on ground Air temperature ≤4°C ( over Plains)         Moderate:       Wind speed 52-61 kmph Severe:         Wind speed 62-87 kmph Very Severe:       Wind speed 62-87 kmph         Very Se						
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. 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 Dense Fog: when the visibility between 500-200 metres         Fog       Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)         Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)         Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)         Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)         Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)         Sudden electrical discharges manifested by a flash of light (Lightning)         Moderate:       Sudden electrical discharges manifested by a flash of light (Lightning)         Moderate:       No ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.         Storm       Ice deposits on ground         Air temperature ≤4°C (over Plains)       Energet (Cover Plains)         Sequal       Reget 62-87 kmph         Very Severe:       Wind speed 614-62 kmph (22-33 knots		• •	is ≤-4.5 °C & actual I	/inimum Temperature is ≤ 15 °C		
Based on departure         Cold Day:         Based on departure         Cold Day:         Maximum         Cold Day:         Maximum         Moderate         Fog         Phenomenon of small droplets suspended in air and the horizontal visibility <1kr						
Cold Day: Maximum Temperature Departure from normal 4.5 °C to -6.4 °C.         Severe Cold Day: Maximum Temperature Departure from normal ≤ -6.5 °C         Phenomenon of small droplets suspended in air and the horizontal visibility < 1kr	0		station ≤10°C for pl	ains and $\leq 0^{\circ}$ C for hilly regions		
Severe 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	-		arture from normal -4.5	C to -6.4 °C.		
Phenomenon of small droplets suspended in air and the horizontal visibility < 1km	Cold Day					
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         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.         Storm       Ice deposits on ground         Air temperature ≤4°C (over Plains)       Moderate: Wind speed 52-61 kmph         Sequall       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 52-87 kmph         Very high: Wind speed 52-87 kmph         Cyclonic Storm: Wind speed 51-17 kmph (34-63 knots) & Wave height 6-14 metre         Phenomenal: Wind speed 62-87 kmph (34-63 knots) & Wave height 6-14 metre         Phenomenal: Wind speed 62-87 kmph (34-47 knots)         Severe Cyclonic Storm: Wind speed 81-117 kmph (34-63 knots)         Severe Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)         Severe Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)         Severe Cyclonic Storm: Wind speed 118-165 kmph (64- 89 knots)         Extremely Severe Cyclonic Storm: Wind speed 118-165 kmph (90-119 knots)						
Fog       Dense Fog: when the visibility between 50- 200 metres         Very Dense Fog: when the visibility < 50 metres				and the horizontal visibility < 1k		
Fog       Very Dense Fog: when the visibility < 50 metres	0					
With the second of the sec	Fog					
An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.         Storm       Ice deposits on ground         Air temperature ≤4°C (over Plains)         Astrong 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 62-87 kmph         Very Severe: Wind speed 63-117 kmph (32-33 knots) & Wave height 2.5-6 metre         High to very rough: Wind speed 63-117 kmph (34-63 knots) & Wave height 6.14 metre         Phenomenal: Wind speed 62-87 kmph (34-47 knots)         Severe: Vind speed 62-87 kmph (48-63 knots)         Very Severe Cyclonic Storm: Wind speed 118-165 kmph (48-63 knots)         Very Severe Cyclonic Storm: Wind speed 118-165 kmph (90 -119 knots)		very benaer og. when the visibility vo	o metres			
storm       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 52-61 kmph         Severe: Wind speed 52-61 kmph         Very Severe: Wind speed 52-87 kmph         Very Severe: Wind speed 52-87 kmph         Very Severe: Wind speed 62-87 kmph         Severe: Wind speed 62-87 kmph         Very Severe: Wind speed 63-117 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 62-87 kmph (34-47 knots)         Severe Cyclonic Storm: Wind speed 118-165 kmph (64-89 knots)         Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64-89 knots)         Extremely Severe Cyclonic Storm: Wind speed 118-165 kmph (90-119 knots)	<i>yy</i> understorm	Sudden electrical discharges man sound (thunder)	ifested by a flash of	ight (Lightning) and a sharp rumbling		
Air temperature ≤4°C (over Plains)         Severe: Wind speed 52-61 kmph         Very Severe: Wind speed 62-87 kmph         Very Severe: Wind speed 52-61 kmph (22-33 knots) & Wave height 2.5-6 metre         High to very nough: Wind speed 41-62 kmph (34-63 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 62-87 kmph (34-47 knots)         Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 69 knots)         Very Severe Cyclonic Storm: Wind speed 118-165 kmph (90 - 119 knots)	Dust/Sand	An ensemble of particles of dust c turbulent wind.	or sand energetically	lifted to great heights by a strong and		
Air temperature ≤4°C (over Plains)         Severe: Wind speed 52-61 kmph         Very Severe: Wind speed 62-87 kmph         Very Severe: Wind speed 52-61 kmph (22-33 knots) & Wave height 2.5-6 metre         High to very nough: Wind speed 41-62 kmph (34-63 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 62-87 kmph (34-47 knots)         Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 69 knots)         Very Severe Cyclonic Storm: Wind speed 118-165 kmph (90 - 119 knots)	11	Ice deposits on around				
Frost       A strong wind that rises suddenly, lasts for atleast 1 minute.         Moderate: Wind speed 52-61 kmph       Severe: Wind speed 52-61 kmph         Severe: Wind speed 62-87 kmph       Very Severe: Wind speed >87 kmph         Very Severe: Wind speed >87 kmph       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 63-117 kmph (>63 knots) & Wave height >14 metre       Phenomenal: Wind speed 62-87 kmph (34-47 knots)         Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)       Very Severe Cyclonic Storm: Wind speed 118-165 kmph (90 -119 knots)	>>	•				
Moderate: Wind speed 52-61 kmph         Severe: Wind speed 62-87 kmph         Very Severe: Wind speed >87 kmph         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 63-117 kmph (>63 knots) & Wave height >14 metre         Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)         Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)         Very Severe Cyclonic Storm: Wind speed 118-165 kmph (90 -119 knots)	Frost					
Moderate: Wind speed 52-61 kmph         Severe: Wind speed 62-87 kmph         Very Severe: Wind speed >87 kmph         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 63-117 kmph (>63 knots) & Wave height >14 metre         Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)         Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)         Very Severe Cyclonic Storm: Wind speed 118-165 kmph (90 -119 knots)		A strong wind that rises sudd	enly, lasts for atle	east 1 minute.		
Squall       Very Severe: Wind speed >87 kmph         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 rough: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre         Phenomenal: Wind speed 63-117 kmph (>63 knots) & Wave height >14 metre         Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)         Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)         Very Severe Cyclonic Storm: Wind speed 118-165 kmph (90 -119 knots)	$\bigcirc$					
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 63-117 kmph (>63 knots) & Wave height >14 metre         Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)         Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)         Very Severe Cyclonic Storm: Wind speed 118-165 kmph (90 -119 knots)	77					
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         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)	Squall	Very Severe: Wind speed >87 kmph				
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         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)		Effect of various waves in the cos	over specific area			
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)         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)	6.6			Wave height 2.5-6 metre		
ea State       Phenomenal: Wind speed >117 kmph (>63 knots) & Wave height >14 metre         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)		High to very high: Wind speed 63-117 kmph ( 34-63 knots) & Wave height 6-14 metre				
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)	Sea State					
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)						
Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)           Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)	-					
Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)	6					
	Cyclone			(00 - 110 KIIO(8)		