



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 17th July, 2024

Time of Issue: 1310 hours IST

Subject: 1) Isolated extremely heavy rainfall very likely over South Interior Karnataka, Saurashtra & Kutch on 17th & 18th; Konkan & Goa, Coastal Karnataka on 18th July and isolated heavy to very heavy rainfall during subsequent 3 days.
2) Monsoon is likely to be active in Peninsular & central India during next 4-5 days.

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 Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka; **Heavy to very heavy rainfall** at many places over Kerala & Mahe, at some places over Chhattisgarh, Telangana, Chhattisgarh, Saurashtra & Kutch, Assam & Meghalaya, East Rajasthan; **Heavy rainfall** at isolated places over Coastal Karnataka, Gujarat Region, West Madhya Pradesh, Marathwada, Vidarbha, Himachal Pradesh, Odisha, Punjab, Madhya Maharashtra, West Rajasthan.

Weather Systems

- ✓ The Monsoon trough is active and south of its normal position. It is likely to be south of its normal position during next 4-5 days.
- ✓ A shear zone runs in lower & middle tropospheric levels roughly along 20°N tilting southwards with height.
- ✓ The off-shore trough runs along south Gujarat-north Kerala coasts at mean sea level.
- ✓ A fresh low-pressure area is likely to form over Westcentral & adjoining Northwest Bay of Bengal around 19th July.
- ✓ A cyclonic circulation lies over Saurashtra & Kutch in lower tropospheric levels.

Forecast & Warnings (Annexure II)

❖ West, Central and South Peninsular India

- ✓ Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm & lightning very likely over West & Central India, Kerala & Mahe, Lakshadweep, Coastal Andhra Pradesh & Yanam, Telangana, Karnataka; isolated to scattered light to moderate rainfall over Tamil Nadu, Puducherry & Karaikal, Rayalaseema during next 5 days.
- ✓ **Heavy to very heavy rainfall very likely at isolated/some places over West Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Saurashtra & Kutch, Telangana, Coastal & South Interior Karnataka during next 5 days.**
- ✓ **Isolated extremely heavy rainfall very likely over South Interior Karnataka, Saurashtra & Kutch on 17th & 18th; Konkan & Goa, Coastal Karnataka on 18th July.**
- ✓ Isolated **Heavy rainfall** very likely over East Madhya Pradesh, Vidarbha, Chhattisgarh, Gujarat Region, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, North Interior Karnataka during next 5 days, Marathwada on 17th & 20th;

- ✓ **Isolated very heavy rainfall likely over Tamil Nadu, Puducherry & Karaikal on 17th & 18th; Kerala & Mahe during 17th – 19th; Coastal Andhra Pradesh & Yanam during 18th – 20th; Vidarbha, Chhattisgarh on 19th & 20th; East Madhya Pradesh on 20th & 21st; Gujarat Region during 17th – 19th July.**

❖ **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, and Odisha; scattered to fairly widespread light to moderate rainfall over Bihar, Jharkhand and Northeast India during next 5 days.
- ✓ **Heavy rainfall** very likely at isolated places over Andaman & Nicobar Islands on 17th; Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura during 19th-21st; Sub-Himalayan West Bengal & Sikkim on 20th & 21st; Jharkhand on 21st; Odisha during 17th – 21st; Arunachal Pradesh, Assam & Meghalaya on 17th, 20th & 21st July.
- ✓ **Isolated very heavy rainfall also likely over Odisha on 19th & 20th July.**

❖ **Northwest India**

- ✓ Scattered to fairly widespread light to moderate rainfall **accompanied with thunderstorm & lightning** very likely over Himachal Pradesh, Uttarakhand, East Rajasthan, Haryana-Chandigarh-Delhi; isolated to scattered rainfall likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Uttar Pradesh and West Rajasthan during next 5 days.
- ✓ Isolated **heavy rainfall** very likely over Himachal Pradesh, Uttarakhand, East Rajasthan during next 5 days, Punjab, West Rajasthan on 17th & 18th, Haryana-Chandigarh on 17th, 18th & 21st, Uttar Pradesh on 20th & 21st July.
- ✓ **Isolated very heavy rainfall also likely over Uttarakhand, East Rajasthan on 17th & 18th July.**

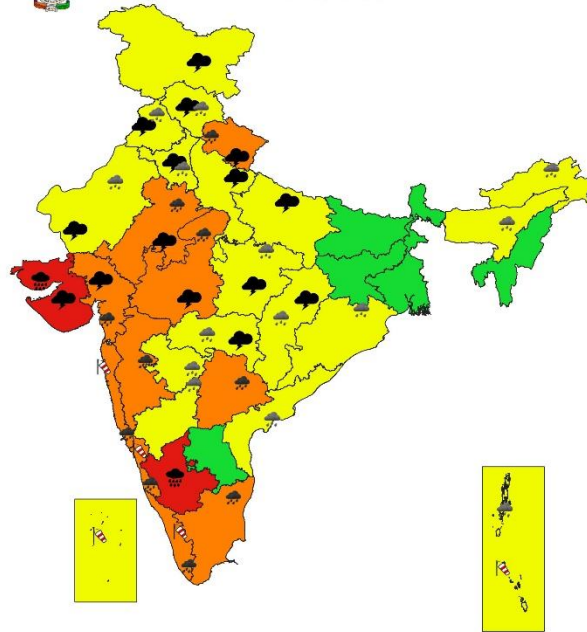
For more details, kindly refer: https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php

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

- ❖ **Tamil Nadu:** Avalanche (dist The Nilgiris) 34, Upper Bhavani (dist The Nilgiris) 22, Devala (dist The Nilgiris) 15, Taluk Office Pandalur (dist The Nilgiris) 14, Emerald (dist The Nilgiris) , Vint Worth Estate (dist The Nilgiris) 13 each, Kunda Bridge (dist The Nilgiris) , Chinnakalar (dist Coimbatore) 11 each, Wood Braiyar Estate (dist The Nilgiris), Barwood (dist The Nilgiris), Gudalur Bazar (dist The Nilgiris), Harisan Malayalam Ltd. (dist The Nilgiris) 10 each, Upper Gudalur (dist The Nilgiris) 9, Valparai PTO (dist Coimbatore) 8, Cincona (dist Coimbatore), Siruvani Adivaram (dist Coimbatore), Valparai PAP (dist Coimbatore), Chamraj Estate (dist The Nilgiris), Valparai Taluk Office (dist Coimbatore) 7 each,
- ❖ **South Interior Karnataka:** Agumbe Emo (dist Shivamogga) 21, Bhagamandala (dist Kodagu) 15, Sringeri Hms (dist Chikkamagaluru) 14, Kottigehara (dist Chikkamagaluru) 14, Kammardi (dist Chikkamagaluru) 14, Jayapura (dist Chikkamagaluru) 13, Kalasa (dist Chikkamagaluru) 11, Linganamakki Hms (dist Shivamogga) 11, Koppa (dist Chikkamagaluru) 11, Somwarpet (dist Kodagu) 11, Napoklu (dist Kodagu) 8,
- ❖ **Konkan & Goa:** Ponda (dist North Goa) 19, Mormugao - Pmo Imd (dist South Goa) 12, Quepem (dist South Goa) 10, Dabolim N.a.s.- Navy (dist South Goa) 10, Rameshwar_agri (dist Sindhudurg) 10, Panjim - Imd Obsy (dist North Goa) 10, Mapusa (dist North Goa) 8, Canacona (dist South Goa) 7, Sawantwadi (dist Sindhudurg) 7,
- ❖ **Telangana:** Yeda Pale (dist Nizamabad) 17, Navipet (dist Nizamabad) 15, Venkatapuram (dist Mulugu) 11, Pinapaka (dist B. Kothagudem) 11, Manuguru (dist B. Kothagudem) 9, Perur (arg) (dist J. Bhupalpally) 9, Bodhan (dist Nizamabad) 9, Aswapuram (dist B. Kothagudem) 7,
- ❖ **CHHATTISGARH:** Bhopalpatnam (dist Bijapur) 17, Kutaru (dist Bijapur) 16, Dornapal (dist Sukma) 12, Usoor (dist Bijapur) 8, Bijapur (dist Bijapur) 7, Bhairamgarh (dist Bijapur) 7, Dhanora (dist Kondagaon) 7, Gangalur (dist Bijapur) 7,
- ❖ **Kerala & Mahe:** Ayyankunnu (Kannur district) 14, Padamala (Wayanad dist) 13, Aralam AWS (Kannur district) 12, Vythiri & Mananthavady (both in Wayanad district), Taliparamba & Cheruvanchery (both in Kannur district) 11 each, KANNUR (Kannur district), Myladumpara ; Munnar (both in Idukki district) 9 each, Hosdurg (Kasaragod district), Munderi (Malappuram district) & Cheruthazham (Kannur district) 8 each,
- ❖ **Saurashtra & Kutch:** Manavadar (dist Junagadh) 13, Vichhiya (dist Rajkot) 13, Mangrol(j) (dist Junagadh) 12, Malia (dist Junagadh) 12, Veraval (dist Gir Somnath) 9, Okha (dist Devbhoomi Dwarka) 7, Khambhalia (dist Devbhoomi Dwarka) 7, Kalyanpur (dist Devbhoomi Dwarka) 7, Porbandar (dist Porbandar) 7,
- ❖ **Assam & Meghalaya:** Lakhimpur (dist Cachar) 12, Lakhimpur Arg (dist Cachar) 9, Jiagaon (dist Tinsukia) 8,
- ❖ **East Rajasthan:** Sajjangarh Sr (dist Banswara) 12, Dug (dist Jhalawar) 5, Dhambola (dist Dungarpur) 5,
- ❖ **Coastal Karnataka:** Castle Rock (dist Uttara Kannada) 11, Gersoppa (dist Uttara Kannada) 11, Siddapura (dist Udupi) 11, Manki (dist Uttara Kannada) 9, Honavar Obsy (dist Uttara Kannada) 9, Kota (dist Udupi) 9, Kundapur (dist Udupi) 9, Gokarna (dist Uttara Kannada) 8, Kumta (dist Uttara Kannada) 8, Udupi (dist Udupi) 8,
- ❖ **Gujarat Region:** Khedbrahma (dist Sabarkantha) 10, Dharoi Colony (dist Mehsana) 8, Vadgam (dist Banaskantha) 7, Danta (dist Banaskantha) 7,
- ❖ **West Madhya Pradesh:** Jharda (dist Ujjain) 10, Sultanpur (dist Raisen) 8, Bareilly (dist Raisen) 8, Alot (dist Ratlam) 7, Tal (dist Ratlam) 7, Barod (dist Agar-malwa) 7,
- ❖ **Marathwada:** Kinwat (dist Nanded) 10, Manjlegaon (dist Beed) 8, Ahmedpur (dist Latur) 8,
- ❖ **Vidarbha:** Shegaon (dist Buldhana) 9, Shegaon (arg) (dist Buldhana) 7, Arni (dist Yeotmal) 7,
- ❖ **Himachal Pradesh:** Olinda (dist Bilaspur) 9, R L Bbmb (dist Bilaspur) 8,
- ❖ **Odisha:** Padia (dist Malkangiri) 9, Tangi (dist Khurda) 6,
- ❖ **Punjab:** Rajpura Arg (dist Patiala) 8, Rauni Aws (dist Patiala) 7,
- ❖ **Madhya Maharashtra:** Yeola (dist Nashik) 8, Gaganbawada (dist Kolhapur) 7,
- ❖ **West Rajasthan:** Sanchoe (dist Jalore) 7, Raniwada Sr (dist Jalore) 5,



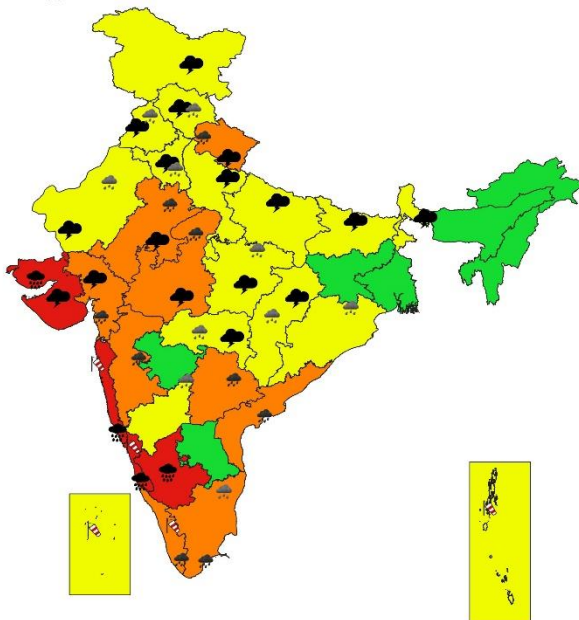
SUBDIVISIONWISE WEATHER WARNING FOR DAY 1 17-07-2024



Subdivision Warning



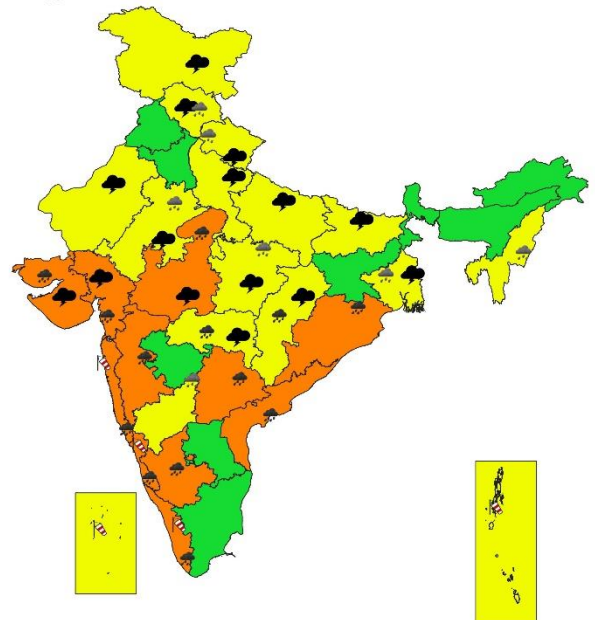
SUBDIVISIONWISE WEATHER WARNING FOR DAY 2 18-07-2024



Subdivision Warning

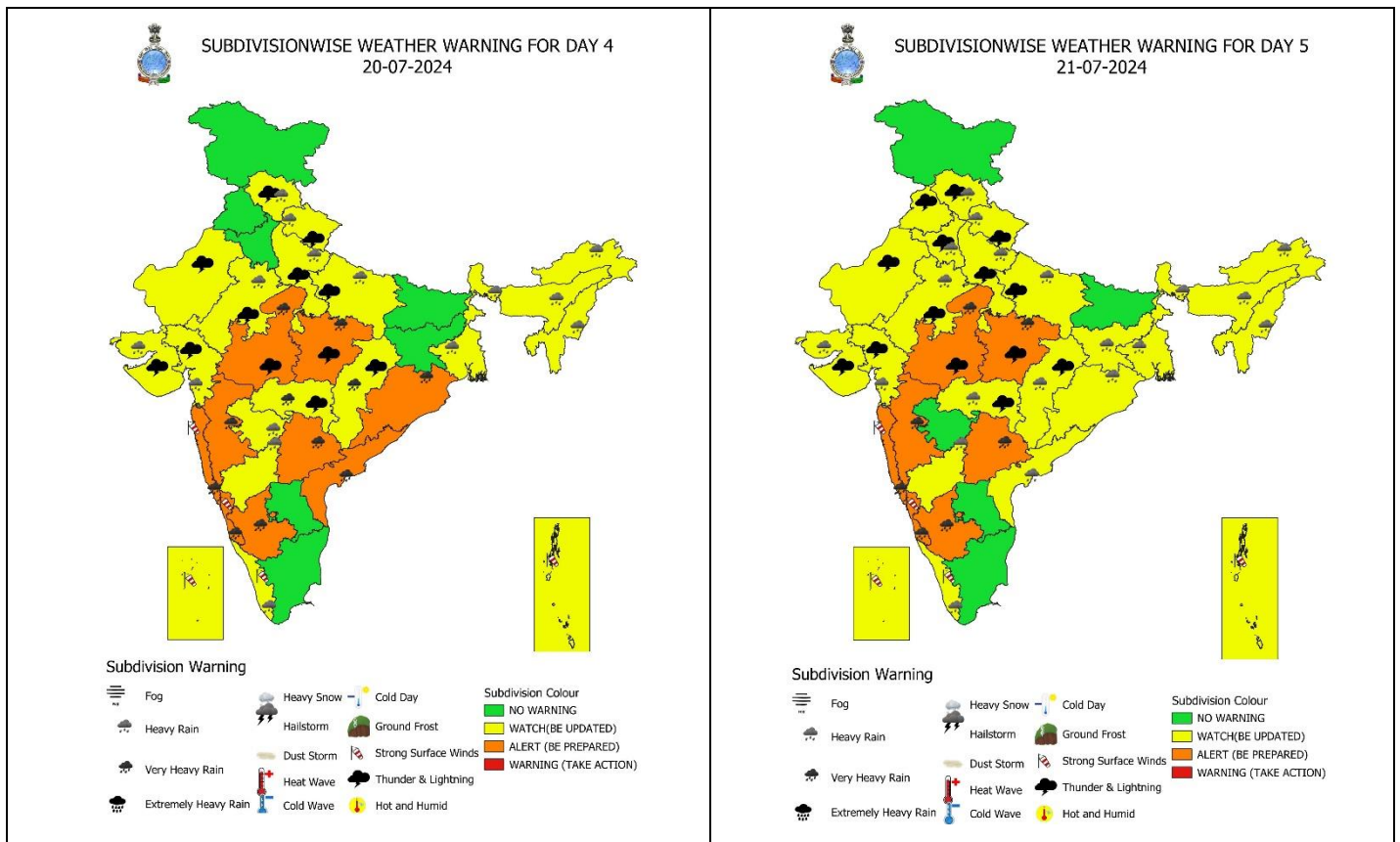


SUBDIVISIONWISE WEATHER WARNING FOR DAY 3 19-07-2024



Subdivision Warning





IMPACT & ACTION SUGGESTED due to

- ✓ **Isolated extremely heavy rainfall very likely over South Interior Karnataka, Saurashtra & Kutch on 17th & 18th; Konkan & Goa, Coastal Karnataka on 18th July.**
- ✓ **Isolated very heavy rainfall likely over Uttarakhand, East Rajasthan, Tamil Nadu, Puducherry & Karaikal on 17th & 18th; Kerala & Mahe, Gujarat Region during 17th – 19th; Coastal Andhra Pradesh & Yanam during 18th – 20th; Vidarbha, Chhattisgarh, Odisha on 19th & 20th; East Madhya Pradesh on 20th & 21st 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

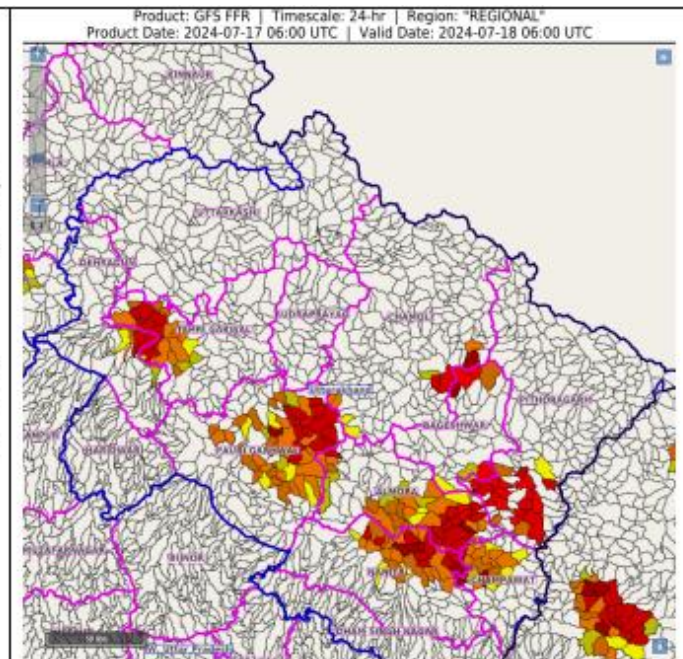
- Make provision for draining out excess water from crop fields to avoid water stagnation in Arunachal Pradesh, Assam & Meghalaya, Odisha, Himachal Pradesh, Uttarakhand, Rajasthan, Madhya Pradesh, Chhattisgarh, Vidarbha, Konkan & Goa, Ghat areas of Madhya Maharashtra, Gujarat State, Tamil Nadu, Kerala, Karnataka, Coastal Andhra Pradesh and Telangana.
- Provide mechanical support to horticultural crops; staking to vegetables.

FLASH FLOOD GUIDANCE:

24 hours Outlook for the Flash Flood Risk (FFR) till 1730 IST of 18-07-2024 :

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

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



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.

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)



Probabilistic Forecast	
Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75













LEGENDS

WARNING

WARNING (TAKE ACTION)
ALERT (BE PREPARED)
WATCH (BE UPDATED)
NO WARNING (NO ACTION)

Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75

 Rain/ Snow *	Heavy: 64.5 to 115.5 mm/cm * Very Heavy: 115.6 to 204.4 mm/cm* Extremely Heavy: > 204.4 mm/cm *
 Heat Wave	When maximum temperature of a station reaches $\geq 40^{\circ}\text{C}$ for plains and $\geq 30^{\circ}\text{C}$ for hilly regions (a) Based on Departure from normal Heat Wave: Maximum Temperature Departure from normal 4.5°C to 6.4°C . Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^{\circ}\text{C}$ (b). Based on Actual maximum temperature Heat Wave: When actual maximum temperature $\geq 45^{\circ}\text{C}$. Severe Heat Wave: When actual maximum temperature $\geq 47^{\circ}\text{C}$ (c). Criteria for heat wave for coastal stations When maximum temperature departure is $> 4.5^{\circ}\text{C}$ from normal. Heat Wave may be described provided maximum temperature $\geq 37^{\circ}\text{C}$
 Warm Night	When maximum temperature remains 40°C Warm Night: When minimum temperature departure 4.5°C to 6.4°C . Severe Warm Night: When minimum temperature departure $> 6.4^{\circ}\text{C}$.
 Cold Wave	When minimum temperature of a station $\leq 10^{\circ}\text{C}$ for plains and $\leq 0^{\circ}\text{C}$ for hilly regions. (a). Based on departure Cold Wave: Minimum Temperature Departure from normal -4.5°C to -6.4°C . Severe Cold Wave: Minimum Temperature Departure from normal $\leq -6.5^{\circ}\text{C}$ (b) Based on actual Minimum Temperature (for Plains only) Cold Wave : When Minimum Temperature is $\leq 4.0^{\circ}\text{C}$ Severe Cold Wave: When Minimum Temperature is $\leq 2.0^{\circ}\text{C}$ (c) For Coastal Stations When Minimum Temperature departure is $\leq -4.5^{\circ}\text{C}$ & actual Minimum Temperature is $\leq 15^{\circ}\text{C}$
 Cold Day	When minimum temperature of a station $\leq 10^{\circ}\text{C}$ for plains and $\leq 0^{\circ}\text{C}$ for hilly regions Based on departure Cold Day: Maximum Temperature Departure from normal -4.5°C to -6.4°C . Severe Cold Day: Maximum Temperature Departure from normal $\leq -6.5^{\circ}\text{C}$
 Fog	Phenomenon of small droplets suspended in air and the horizontal visibility < 1km Moderate Fog: When the visibility between 500-200 metres Dense Fog: when the visibility between 50- 200 metres Very Dense Fog: when the visibility < 50 metres
 Thunderstorm	Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)
 Dust/Sand Storm	An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.
 Frost	Ice deposits on ground Air temperature $\leq 4^{\circ}\text{C}$ (over Plains)
 Squall	A strong wind that rises suddenly, lasts for atleast 1 minute. Moderate: Wind speed 52-61 kmph Severe: Wind speed 62-87 kmph Very Severe: Wind speed > 87 kmph
 Sea State	Effect of various waves in the sea over specific area Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre High to very high: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre Phenomenal: Wind speed > 117 kmph (> 63 knots) & Wave height > 14 metre
 Cyclone	Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots) Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots) Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots) Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots) Super Cyclone Strom: Wind speed > 220 kmph (> 119 knots)