

# Government of India Ministry of Earth Sciences India Meteorological Department



Press Release
Date: 23rd March, 2025

Time of Issue: 1330 hours IST

Subject: (i) Intense thunderstorms activity along with hailstorms & winds (40-60 Kmph) likely to continue over many parts of East India on today and decrease significantly thereafter.

- (ii) Intense thunderstorms likely over many parts of South Peninsular India during  $23^{\rm rd}$  to  $24^{\rm th}$  with heavy rainfall at isolated places over Tamilnadu and Kerala on today, the  $23^{\rm rd}$  March.
- (iii) Gradual Rise in maximum temperature by 2-4°C over most parts of the country during next 3-4 days.

## i.Realised weather during past 24 hours till 0830 hours IST of today, the 23<sup>rd</sup> March 2025 (Annexure I):

- ❖ **Heavy rainfall** reported at isolated places over Odisha and Kerala.
- ❖ Hailstorms reported at isolated locations over Uttarakhand, Jharkhand, Odisha, Rayalaseema, Telangana, South Interior Karnataka.
- Squally/Gusty winds prevailed at isolated locations over Uttar Pradesh, Gangetic West Bengal, Bihar, Jharkhand, Odisha, Assam & Meghalaya.
- \* For more details of realised weather, kindly refer Annexure I

#### **Temperature:**

❖ For temperature observations during past 24 hours till 0830 hours IST of today are provided in **Annexure II** 

#### ii. Weather Systems, Forecast and Warnings (Annexure III & IV):

- ❖ A cyclonic circulation lies over central Uttar Pradesh and another over northeast Assam & neighbourhood in lower tropospheric levels. A north-south trough runs from west Vidarbha to south Tamil Nadu in lower tropospheric levels. There is wind confluence over east & adjoining east peninsular India in association with the anticyclonic circulation over Bay of Bengal at lower tropospheric levels. Under the influence of these systems:
  - ✓ **Scattered to Fairly widespread** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 40-50 kmph)** likely over West Bengal, Sikkim, Bihar, Assam & Meghalaya, Tamilnadu Puducherry & Karaikal, Rayalaseema on 23<sup>rd</sup> March and reduction in intensity thereafter.
  - ✓ **Heavy rainfall** likely at isolated places over south Tamil Nadu, Kerala & Mahe on 23<sup>rd</sup> March and over Arunachal Pradesh on 28<sup>th</sup> & 29<sup>th</sup> March.
  - ✓ **Isolated hailstorms also likely over** West Bengal & Sikkim, Assam & Meghalaya and Rayalaseema on 23<sup>rd</sup> March.
  - ✓ **Scattered to Fairly widespread** light/moderate rainfall accompanied with **thunderstorm**, **lightning & gusty winds (speed 30-40 kmph)** likely over East Uttar Pradesh, Chhattisgarh, Jharkhand, Odisha, North Interior Karnataka on 23<sup>rd</sup> March; over Coastal Andhra Pradesh & Yanam, Telangana on 23<sup>rd</sup> & 24<sup>th</sup> March; over Rayalaseema on 24<sup>th</sup> March and over South Interior Karnataka during 23<sup>rd</sup>-26<sup>th</sup> March.

- **❖** A fresh Western Disturbance is likely to affect Western Himalayan Region from night of 24<sup>th</sup> March. Under its influence:
  - ✓ **Isolated to Fairly widespread** light/moderate rainfall accompanied with **thunderstorm, lightning** likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad during 24<sup>th</sup>-28<sup>th</sup>; Himachal Pradesh during 24<sup>th</sup>-27<sup>th</sup> and over Uttarakhand on 26<sup>th</sup> & 27<sup>th</sup> March.
  - ✓ **Heavy rainfall** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 26<sup>th</sup> March.

#### **Temperature Forecast:**

#### **Forecast of temperature:**

#### Maximum temperature:

- ❖ Gradual rise in maximum temperatures by 3-5°C likely over many places over Northwest India during next 4 days and no significant change thereafter.
- ❖ Gradual rise in maximum temperatures by 2-4°C likely over Central India and Interior Maharashtra during next 4-5 days.
- ❖ Gradual rise in maximum temperatures by 2-3°C likely over Gujarat during next 3 days and then fall by about 2-3°C thereafter.

#### **Heat wave and Hot & Humid weather warning:**

**♦ Hot & humid weather conditions** very likely to prevail in isolated pockets over coastal areas of Gujarat State during 23<sup>rd</sup>-25<sup>th</sup> March.

## iv. Weather conditions and forecast over Delhi/NCR during 23rd March to 26th March. 2025 (Annexure V)

#### For more details, kindly refer National Weather Bulletin:

https://mausam.imd.gov.in/responsive/all india forcast bulletin.php

For District wise warnings refer: <a href="https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php">https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php</a>

#### Significant weather reported during past 24 hours till 0830 hours IST of today:

- **Light to moderate Rainfall/Snowfall** observed at isolated places over Uttarakhand.
- ❖ Light/moderate Rainfall observed at most places over Gangetic West Bengal; at many places over Sub-Himalayan West Bengal & Sikkim, Odisha, Arunachal Pradesh, South Interior Karnataka, Kerala & Mahe; at a few places over Jharkhand, Assam & Meghalaya, Rayalaseema, Lakshadweep; at isolated places over Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, Bihar, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, North Interior Karnataka and Tamilnadu Puducherry & Karaikal.
- ❖ Thunderstorm reported at isolated locations over Uttarakhand, Uttar Pradesh, Assam & Meghalaya, West Bengal & Sikkim, Odisha, Jharkhand, Bihar, Telangana, Rayalaseema, Tamilnadu Puducherry & Karaikal, Kerala & Mahe, Lakshadweep.

#### Rainfall recorded (in cm):

- Odisha: Rangeilunda (Ganjam) 8, Chhatrapur (Ganjam) 7, Aska (Ganjam) 5, Kakatpur (Puri) 5, Buguda (Ganjam) 5, Gop (Puri) 5, Ganjam (Ganjam) 5, Sheragada (Ganjam) 4, Astaranga (Puri) 4, Khajuripada (Kandhamal) 4, Sohela (Bargarh) 4, Krishnaprasad (Puri) 4, Naktideul (Sambalpur) 4, Komna (Nawapara) 3, Odagaon (Nayagarh) 3, Derabis (Kendrapara) 3, Junagarh (Kalahandi) 3, Dharakote (Ganjam) 3, Bhuban (Dhenkanal) 3, Korei (Jajpur) 3, Rairangpur (Mayurbhanj) 3, Nayagarh (Nayagarh) 3, Cuttack (Cuttack) 3, Lanjigarh (Kalahandi) 3, Kodala (Ganjam) 3, Tihidi (Bhadrak) 3, Polsara (Ganjam) 3, Rairakhol (Sambalpur) 3, Bhandaripokhari (Bhadrak) 3,
- Chhattisgarh: Surajpur (dist Surajpur) 3,
- Kerala & Mahe: Cherthala (dist Alapuzha) 8, Udumbannoor (dist Idukki) 7, Thodupuzha (dist Idukki) 5, Chimoni (dist Thrissur) 5, Pampadumpara (dist Idukki) 4, Angadipuram (dist Malappuram) 4, Vellayani (dist Thiruvananthapuram) 4, Athirappalli (dist Thrissur) 4, Idukki (dist Idukki) 4, Kanjirappally (dist Kottayam) 3, Pattembi (dist Palakkad) 3, Thattathumala (dist Thiruvananthapuram) 3, Ambalavayal (dist Wynad) 3,

#### Hailstorm recorded:

\* Rayalaseema: Sri Sathyasai

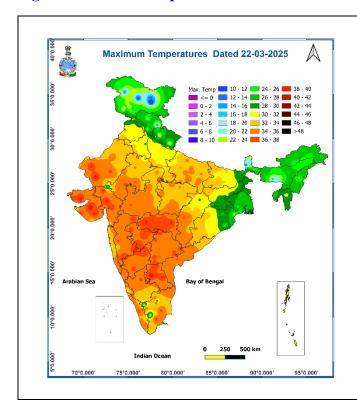
**❖ Iharkhand:** Ranchi;

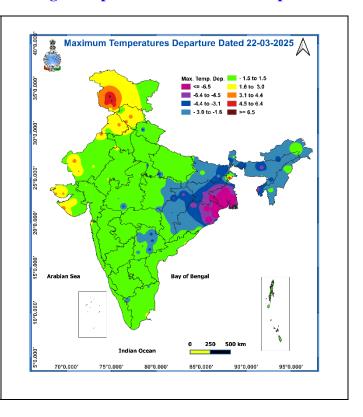
Odisha: Mayurbhanj, BaripadaSouth Interior Karnataka: Kolar

- ❖ Maximum Temperatures were markedly above normal (5.1°C or more) at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; appreciably above normal (3.1°C to 5.0°C) at isolated places over Himachal Pradesh; above normal (1.6°C to 3.0°C) at many places over Punjab; at a few places over Saurashtra & Kutch; at isolated places over Haryana-Chandigarh-Delhi, Rajasthan. These were markedly below normal (-5.1°C or less) at many places over Gangetic West Bengal; at isolated places over Odisha, Jharkhand, Chhattisgarh; appreciably below normal (-3.1°C to -5.0°C) at a few places over Sub-Himalayan West Bengal & Sikkim; at isolated places over Bihar, Assam & Meghalaya; below normal (-3.0°C to -1.6°C) at many places over Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura; at a few places over Bast Madhya Pradesh, Telangana, Tamil Nadu, Puducherry & Karaikal; at isolated places over Madhya Pradesh, Madhya Maharashtra, Marathwada, Telangana, East Rajasthan, Nagaland, Manipur, Mizoram & Tripura and near normal over rest parts of the country. Yesterday, the highest maximum temperature of 40.4°C was reported at Anantapur (Rayalaseema) over the country (Fig. 2).
- ❖ Yesterday, the Maximum temperatures have shown falling tendency during past 24 hours by 2-5°C over some parts of Gangetic West Bengal, Odisha, Jharkhand and by 1-4°C over major parts of Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Uttarakhand, Uttar Pradesh, Chhattisgarh; rising tendency by 2-5°C over Bihar, Jammu, Kashmir, Ladakh and by 1-2°C over Rajasthan, Saurashtra & Kutch, Vidarbha, Madhya Pradesh and no significant change over the rest parts of the country.
- Yesterday, the Maximum temperatures were in the range of 36-40°C at many places over Interior Maharashtra, Rayalaseema, south Coastal Andhra Pradesh & Yanam, Gujarat state, southwest Rajasthan; 30-35°C at most places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Karnataka, remaining Rajasthan, Madhya Pradesh, Chhattisgarh, South Odisha, Uttar Pradesh, Punjab, Haryana, Lakshadweep and Andaman & Nicobar Islands; 25-30°C over remaining parts of country. (Fig.1)

Fig. 1: Maximum Temperatures

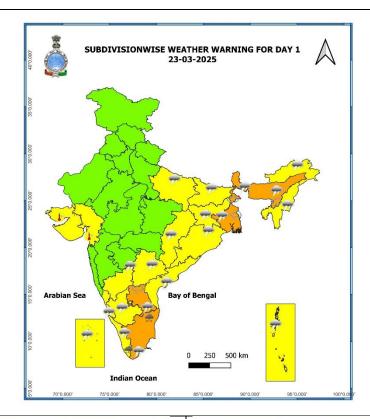
Fig. 2: Departure of Maximum Temperatures

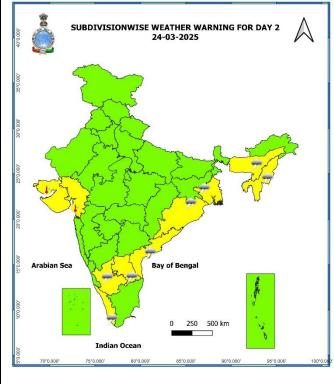


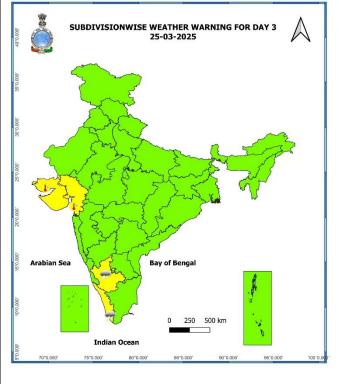


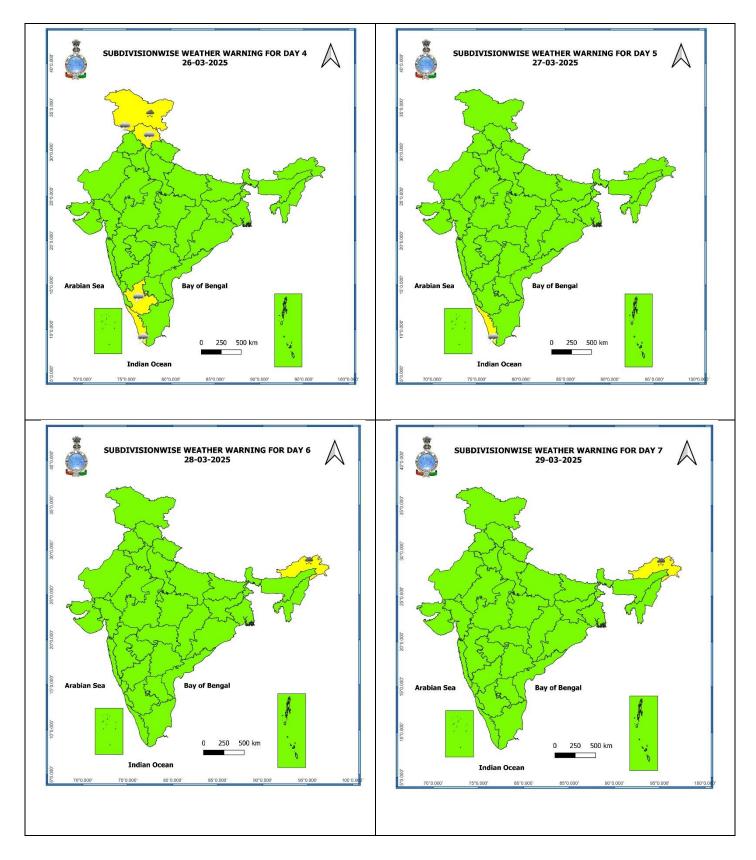
7 Days Rainfall Forecast										
S. No.	Subdivision	23-Mar	24-Mar	25-Mar	26-Mar	27-Mar	28-Mar	29-Mar		
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7		
1	ANDAMAN & NICOBAR ISLANDS	ISOL	ISOL	ISOL	DRY	DRY	ISOL	ISOL		
2	ARUNACHAL PRADESH	SCT	ISOL	ISOL	ISOL	ISOL	FWS	FWS		
3	ASSAM & MEGHALAYA	SCT	ISOL	DRY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

<sup>•</sup> As the lead period increases forecast accuracy decreases.









- 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.

Detailed district wise Multi Hazard weather warning for next five days available at <a href="https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php">https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php</a>

#### Weather forecast over Delhi/NCR during 23rd Mar. to 26th Mar. 2025

#### **Past Weather:**

There has been a fall in minimum and maximum temperatures upto 01°C over Delhi/NCR during the past 24 hours. The maximum and minimum temperatures over Delhi are in the range of 31 to 33°C and 14 to 17°C respectively. The minimum temperature was below normal upto 03°C and maximum temperature near normal at most places. Mainly clear sky conditions with predominant surface wind from the northwest direction with wind speeds less than 18 to 20 kmph prevailed during the past 24 hours. Mainly clear sky conditions with wind speed less than 08 kmph from the southwest direction prevailed over the region in the forenoon today.

#### **Weather Forecast:**

**23.03.2025:** Mainly clear sky. The maximum temperature over Delhi is likely to be in the range of 32 to 34°C. The predominant surface wind will likely be from the northwest direction with a wind speed of less than 10 kmph till evening. It would decrease thereafter becoming less than 06 kmph from the east direction during the night.

**24.03.2025:** Mainly clear sky. The maximum and minimum temperatures over Delhi are likely to be in the range of 33 to 35°C and 16 to 18°C respectively. The predominant surface wind will likely be from the west direction with a wind speed of 04-06 kmph during morning hours. The wind speed will gradually increase thereafter becoming 08-10 kmph from the northwest direction during the afternoon. It will decrease becoming less than 06 kmph from the northeast direction during evening and night.

**25.03.2025**: Mainly clear sky. The maximum and minimum temperatures over Delhi are likely to be in the range of 35 to 37°C and 16 to 18°C respectively. The predominant surface wind will likely be from the northeast direction with a wind speed of 04-06 kmph during morning hours. The wind speed will gradually increase becoming 10-12 kmph from the northwest direction in the afternoon. It will decrease becoming less than 08 kmph from the northeast direction during evening and night.

**26.03.2025:** Mainly clear sky. The maximum and minimum temperatures over Delhi are likely to be in the range of 36 to 38°C and 17 to 19°C respectively. The predominant surface wind will likely be from the northwest direction with a wind speed of 06-08 kmph during morning hours. The wind speed will gradually increase becoming 12-14 kmph from the northwest direction in the afternoon. It will decrease becoming less than 08 kmph from the northwest direction during evening and night.

Impact expected and action suggested due to thunderstorm accompanied with lightning/gusty winds & hailstorm over Rayalaseema, Assam & Meghalaya, East India on 23rd March 2025.

#### **❖** Impact expected:

- ✓ Strong wind may damage plantation, horticulture and standing crops.
- ✓ Partial damage to vulnerable structures due to strong winds.
- ✓ Minor damage to kutcha houses/walls and huts.
- ✓ Loose objects may fly.

#### **Action suggested:**

- ✓ Stay indoors, close windows & doors and avoid travel if possible.
- ✓ Take safe shelters; do not take shelter under trees.
- ✓ Do not lie on concrete floors and do not lean against concrete walls.
- ✓ Unplug electrical/ electronic appliances.
- ✓ Immediately get out of water bodies.
- ✓ Keep away from all the objects that conduct electricity.

#### Agromet advisories for likely impact of Heavy Rainfall / Hailstorm

- ➤ In **Assam & Meghalaya**, **Gangetic West Bengal** and **Rayalaseema**, keep the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields to avoid the adverse impact of likely hailstorm. Use hail net and hail caps to prevent mechanical damage in orchards due to hailstorms.
- ➤ In **Odisha**, **Tamil Nadu** and **Kerala**, drain out excess water from standing crop and vegetable fields.
- > Provide mechanical support to horticultural crops and staking to vegetables to avoid lodging.

#### Livestock

- > Keep the animals inside the shed during heavy rainfall/hailstorm and provide them balanced feed.
- > Store feed and fodder in a safe place to prevent spoilage.

#### **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.



#### राष्ट्रीय मौसम पूर्वानुमान केन्द्र भारत मौसम विज्ञान विभाग पृथ्वी विज्ञान मंत्रालय

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

### **LEGENDS**

16



4. नागालैंड, मणिपुर, मिजोरम और त्रिपुरा 5. उप-हिमालयी पश्चिम बंगाल और सिक्किम

6. गंगीय पश्चिम बंगाल



8. झारखंड

9. बिहार

10. पूर्वी उत्तर प्रदेश

11. पश्चिम उत्तर प्रदेश

12. उत्तराखंड

13. हरियाणा, चंडीगढ़ और दिल्ली

14. पंजाब

15. हिमाचल प्रदेश

16. जम्मू और कश्मीर और लद्दाख

17. पश्चिम राजस्थान

18. पूर्वी राजस्थान

19. पश्चिम मध्य प्रदेश

20. पूर्वी मध्य प्रदेश

21. गुजरात

22. सौराष्ट्र

23. कोंकण और गोवा

24. मध्य महाराष्ट्र

25. मराठवाड़ा

26. विदर्भ

27. छत्तीसगढ़

28. तटीय आंध्र प्रदेश और यनम

29. तेलंगाना

30. रायलसीमा

31. तमिलनाडु, पुडुचेरी और कराईकल

32. तटीय कर्नाटक

33. आतंरिक उत्तरी कर्नाटक

Sust Raising Winds

34. आतंरिक दक्षिणी कर्नाटक

35. केरल और माहे

36. लक्षद्वीप



2. Arunachal Pradesh

3. Assam & Meghalaya

4. Nagaland, Manipur, Mizoram & Tripura

5. Sub-Himalayan West Bengal & Sikkim

6. Gangetic West Bengal

7. Odisha

8. Jharkhand

9. Bihar

10. East Uttar Pradesh

11. West Uttar Pradesh

12. Uttarakhand

13. Haryana, Chandigarh & Delhi

14. Puniab

15. Himachal Pradesh

16. Jammu & Kashmir and Ladakh

17. West Rajasthan

18. East Rajasthan

19. West Madhya Pradesh

20. East Madhya Pradesh

21. Gujarat

22. Saurashtra

23. Konkan & Goa

24. Madhya Maharashtra

25. Marathwada

26. Vidarbha

27. Chhattisgarh

28. Coastal Andhra Pradesh & Yanam

29. Telangana

30. Rayalaseema

31. Tamilnadu, Puducherry & Karaikal

50 - 75

> 75

32. Coastal Karnataka

33. North Interior Karnataka

34. South Interior Karnataka

35. Kerala & Mahe

36. Lakshadweep

Very Likely

Most Likely

#### 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)



**Hot & Humid** 

Strong Surface Winds





#### **DEFINITION/CRITERIA** Heavy: 64.5 to 115.5 mm/cm \* Very Heavy: 115.6 to 204.4 mm/cm Rain/ 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 (b). Based on Actual maximum temperature **Heat Wave** 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: When minimum temperature departure 4.5 °C to 6.4 °C. **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 $\leq$ -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 Based on departure **Cold Day** 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 50- 200 metres Fog Very Dense Fog: when the visibility < 50 metres Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder) Thunderstorm **Dust/Sand** An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind. Ice deposits on ground Frost Air temperature ≤4°C ( over Plains) A strong wind that rises suddenly, lasts for atleast 1 minute. Moderate: Wind speed 52-61 kmph Squall 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 Sea State 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) Cyclone Super Cyclone Strom: Wind speed >220 kmph (>119 knots)

\* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action". Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day. For more details, kindly visit https://mausam.imd.gov.in or contact: 011-2434-4599 (Service to the Nation since 1875)

**Hot and Humid:** When maximum temperatures remain 3°C above normal along with the above normal relative humidity.