



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 28th February, 2025

Time of Issue: 1415 hours IST

Subject: 1) Due to active Western Disturbance, ongoing isolated heavy to very heavy rainfall/snowfall spell likely to continue over Himachal Pradesh & Uttarakhand and isolated heavy rainfall/snowfall over Jammu-Kashmir on today, the 28th February, 2025 and reduced significantly thereafter.

2) Thunderstorm accompanied with hailstorms & gusty winds likely over Northern parts of Punjab, Haryana and West Uttar Pradesh with isolated heavy rainfall over Punjab on today, the 28th February, 2025 and reduced significantly thereafter.

i. Realised Severe Weather during past 24 hours till 0830 hours IST of today 28 Feb. 2025 (Annexure I)

Temperature:

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

Realised Severe Weather (Rainfall/snowfall) due to ongoing Western Disturbance during past 24 hours till 0830 hours IST of today 28 Feb. 2025 (States severely impacted)

- ❖ **Rainfall/Snowfall observed** at most places with **Heavy to very heavy rainfall** with **extremely heavy falls** at isolated places over Jammu; **Heavy to very heavy rainfall/snowfall** at isolated places over Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand.
- ❖ Light to moderate **Rainfall** observed at most places with **Heavy to very heavy rainfall** at isolated places over north Punjab and Light to moderate rainfall observed at many places over Haryana and Chandigarh.
- ❖ Light to moderate **Rainfall/Snowfall** observed at isolated places over Arunachal Pradesh; Light to moderate **Rainfall** observed at a few places over Andaman & Nicobar Islands, Sub-Himalayan West Bengal & Sikkim; at isolated places over Assam & Meghalaya, Bihar, Uttar Pradesh, Tamilnadu Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Thunderstorm with lightning** reported at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Punjab.
- ❖ **Hailstorm** recorded at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- ❖ **Gusty winds** observed at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and north Punjab.
- ❖ **Heat Wave conditions** observed at isolated places over Konkan & Coastal Karnataka.
- ❖ **Hot & Humid weather conditions** observed at isolated places over Konkan.

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

- ❖ A Western Disturbance lay as a trough in lower to upper tropospheric levels with its axis at 3.1 km above mean sea level roughly along Long. 59°E to the north of Lat. 26°N.
- ❖ An induced low pressure area lay over west Rajasthan & adjoining parts of Pakistan with associated cyclonic circulation extending upto lower tropospheric levels.
- ❖ Under their influence, high moisture feeding is also taking place over northwest India in lower tropospheric levels from Arabian Sea. As a result:
 - ✓ **Widespread** light to moderate rainfall/snowfall accompanied with **thunderstorm & lightning** with **gusty winds (speed 40-50 kmph)** likely over Western Himalayan region on 28th February.
 - ✓ **Heavy to very heavy rainfall/snowfall** at isolated places likely over Himachal Pradesh & Uttarakhand on 28th February; **heavy rainfall/snowfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad 28th February.

- ✓ **Widespread** light to moderate rainfall accompanied with thunderstorm & lightning likely over Punjab, Haryana, Chandigarh on 28th February; **Isolated to Scattered** light to moderate rainfall accompanied with thunderstorm & lightning likely over Uttar Pradesh & Rajasthan on 28th February & 01st March; Bihar on 01st March with **gusty winds (speed 30-40 kmph)** over Punjab, West Uttar Pradesh, West Rajasthan and Bihar on 28th February; Haryana Chandigarh on 28th February & 01st March.
- ✓ **Isolated heavy rainfall/snowfall** likely at isolated places likely over north Punjab on 28th February
- ✓ **Isolated Hailstorm activity also likely over Uttarakhand, Punjab, Haryana, Chandigarh, West Uttar Pradesh on 28th February.**
- ❖ A fresh **Western Disturbance** is likely to affect Northwest India from 02nd March. Under its influence; **Isolated to Scattered** light/moderate rainfall/snowfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Himachal Pradesh during 02nd -04th; Uttarakhand on 03rd & 04th; **Isolated** light/moderate rainfall/snowfall likely over Punjab, Haryana, Chandigarh on 03rd February.
- ❖ A **cyclonic circulation** lies over northeast Assam & adjoining Arunachal Pradesh lower tropospheric levels. Under Its Influence,
 - ✓ **Isolated to Scattered** light/moderate rainfall/snowfall accompanied with **thunderstorm, lightning** very likely over Arunachal Pradesh on 28th February & 01st March; **Isolated to scattered** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 40-50 kmph)** over Assam & Meghalaya on 01st March; with **thunderstorm & lightning** likely over Sub-Himalayan West Bengal & Sikkim on 28th February & 01st March; Assam & Meghalaya on 28th February, Nagaland, Manipur, Mizoram & Tripura on 01st March. **Isolated Heavy rainfall** likely over Sikkim on 28th February; Arunachal Pradesh and Assam & Meghalaya on 01st March.
 - ✓ **Isolated Hailstorm** activity also likely over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 01st March.
- ❖ Under the influence of an active easterly wave;
 - ✓ **Scattered to Fairly widespread** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 30-40 kmph)** very likely over Kerala & Mahe on 28th February & 01st March; with **thunderstorm, lightning** over Tamilnadu Puducherry & Karaikal on 28th February & 01st March, Kerala & Mahe on 02nd March; Lakshadweep on 01st & 02nd March with isolated **heavy rainfall** on Tamilnadu Puducherry & Karaikal on 28th February & 01st March and Kerala & Mahe 01st March.

Temperature Forecast:

Forecast of temperature:

Minimum Temperature:

- ❖ Gradual fall in minimum temperatures by 3-5°C likely over Northwest India during next 3 days and no significant change thereafter.
- ❖ No significant change in minimum temperatures likely over rest parts of India during next 4-5 days.

Maximum temperature:

- ❖ No significant change in maximum temperatures likely over Northwest India during next 24 hours and gradual rise by 4-6°C thereafter.
- ❖ Gradual rise in maximum temperatures by 2-3°C likely over Central India during next 3-4 days.
- ❖ Gradual rise in maximum temperatures by 2-3°C likely over East India during next 2 days and no significant change thereafter.
- ❖ Gradual fall in maximum temperatures by 2-3°C likely over Gujarat State during next 2 days and no significant change thereafter.
- ❖ No significant change in maximum temperatures likely over rest parts of India during next 4-5 days.

Heat Wave and Hot & Humid weather warnings:

- ❖ **Heat wave conditions** very likely in isolated pockets over Coastal Karnataka on 28th February.
- ❖ **Hot and humid weather** very likely to prevail over Konkan & Goa on 28th February.

iii. Weather conditions and forecast over Delhi/NCR during 28th Feb. to 03rd March. 2025 (Annexure V)

For more details, kindly refer National Weather Bulletin:

https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php

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

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

- ❖ **Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad:** Udhampur(iaf) (dist Udhampur) 21, Batote (dist Ramban) 16, Katra (dist Reasi) 12, Banihal (dist Ramban) 10, Reasi Arg (dist Reasi) 9, Burmal Arg (dist Kathua) 9, Govindpura Aws (dist Ramban) 9, Jammu Aws (dist Jammu) 8, Reasi Kvk Aws (dist Reasi) 8, Raj Pura Arg (dist Poonch) 8, Jammu (dist Jammu) 8, Kathua (dist Kathua) 7, Kathua Arg (dist Kathua) 7, Rajouri Arg (dist Rajouri) 7, Bakore Arg (dist Jammu) 7, Badarwah (dist Doda) 7, Rajouri (dist Rajouri) 7, Kukernag (dist Anantnag) 7;
- ❖ **Himachal Pradesh:** Kothi (dist Kullu) 13, Seo Bagh (dist Kullu) 12, Khadrula (dist Shimla) 11, Bhuntar (dist Kullu) 11, Banjar (dist Kullu) 11, Jogindarnagar (dist Mandi) 11, Saloni (dist Chamba) 11, Palampur (dist Kangra) 10, Chamba (dist Chamba) 10, Rampur (dist Shimla) 10, Shillaro (dist Shimla) 8, Baijnath (dist Kangra) 7, Keylong (dist Lahaul & Spiti) 7, Kangra (dist Kangra) 7, Karsog (dist Mandi) 7, Rohru (dist Shimla) 7, Theog (dist Shimla) 7;
- ❖ **Uttarakhand:** Devprayag 9, Tehri (Cwc) 9, Joshimath 8, Mussoorie 8, Chamoli 7, Tehri 7, Sama 7, Dhanaulti 7, Karnprayag 6, Purola 6, Mori 5, Loharkhet 5, Munsiyari 5, Srinagar 5, Chakrata 5, Jakholi 5, Rudraprayag 5, Kapkot 5, Tyuni 5, Pauri 5, Uttarkashi 5, Nainital 5, Almora 5, Ranikhet 5, Ghansali 5, Keertinagar 5;
- ❖ **Punjab:** Pathankot Iaf (dist Pathankot) 12, Ranjit Sagar Dam Site (dist Pathankot) 8, Madhopur (dist Pathankot) 7, Phangota (dist Pathankot) 7;
- ❖ **Tamilnadu Puducherry & Karaikal:** Karaikal (dist Karaikal) 5, Karaikal AWS (dist Karaikal) 4, Pandavaiyar Head (dist Thiruvavur), Madukkur (dist Thanjavur), Vedaranyam (dist Nagapattinam) 3 each

Thunderstorm reported:

- ❖ **Jammu & Kashmir:** Jammu; **Himachal Pradesh:** Palampur; **Uttarakhand:** Chakrata

Hailstorm reported:

- ❖ **Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad:** Batote

Visibility reported (≤ 200 m) (in meter):

- ❖ **Dense fog (visibility 50-199 m)** reported in isolated pockets of Sub-Himalayan West Bengal & Sikkim and Meghalaya.
- ❖ **Visibility reported (≤ 200 m) (in meter): Sub-Himalayan West Bengal & Sikkim:** Darjeeling 50, Pakyong 100, Tadong (50-199); **Meghalaya:** Barapani 150

- ❖ Minimum temperatures are in the range of 14°C to 19 °C at many places over Punjab, East Rajasthan, Haryana, Uttar Pradesh, Madhya Pradesh, Bihar, Jharkhand, Odisha, Assam & Meghalaya, Arunachal Pradesh, Marathawada; 19°C to 24 °C at many places over Gujarat State, Maharashtra and Gangetic West Bengal. Today, the lowest minimum temperature of **11.0°C** is reported at **Gurdaspur (Punjab)** over the plains of the country.
- ❖ During the past 24 hours, **minimum temperatures** have fallen by 2-6°C at many places over Jammu-Kashmir, Himachal Pradesh & Punjab; at isolated places over Uttarakhand & West Rajasthan; by 1-2°C at isolated places over West Uttar Pradesh, Haryana, Chandigarh & Delhi, Kerala & Mahe, Tamilnadu Puducherry & Karaikal and it has risen by 1-4°C at many places over Central India, Gujarat State, East Uttar Pradesh, Bihar; at a few places over Assam & Meghalaya & West Bengal & Sikkim; at isolated places over Madhya Maharashtra and Marathawada.
- ❖ Minimum temperatures are **markedly above normal (5°C or more)** at a few places over Delhi, Punjab and West Rajasthan; at isolated places over Uttarakhand, Uttar Pradesh, Gujarat Region and Madhya Pradesh; **appreciably above normal (3°C to 5°C)** at most places over Haryana-Chandigarh; at a few places over East Rajasthan, Madhya Maharashtra and Saurashtra & Kutch, at isolated places over Bihar, Assam & Meghalaya and Tamil Nadu, Puducherry & Karaikal; **above normal (1°C to 3°C)** at many places over North Interior Karnataka; at a few places over Konkan & Goa and Coastal Andhra Pradesh & Yanam; at isolated places over West Bengal & Sikkim, Vidarbha, Odisha and Kerala & Mahe. These are **below normal (-3°C to -1°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and near normal over rest parts of the country.
- ❖ Maximum temperatures were in the range of 35-40°C at many places over Maharashtra, Telangana; at a few places over Tamilnadu Puducherry & Karaikal, Kerala & Mahe, North Interior Karnataka, Coastal Andhra Pradesh & Yanam; at isolated places over Madhya Pradesh and Saurashtra & Kutch; 30-35°C at many places over Central India, Odisha, Karnataka; at a few places over South Rajasthan, Chhattisgarh & Gangetic West Bengal; at isolated places over Nagaland, Manipur, Mizoram & Tripura. Yesterday, the highest **maximum temperature** of **39.8°C** was reported at **Kannur Airport (Kerala)** over the plains of the country.
- ❖ During the past 24 hours, **maximum temperatures** had fallen by more than 5°C at a few places over Himachal Pradesh, Punjab, Haryana, Uttarakhand; at isolated places over Jammu-Kashmir, West Uttar Pradesh, Saurashtra & Kutch; by 2-5°C at a few places over West Rajasthan; at isolated places over Goa, Coastal Karnataka, Rayalaseema, Telangana. It had risen by 2-5°C at many places over Assam & Meghalaya, Madhya Pradesh & East Uttar Pradesh; at isolated places over East Rajasthan, Vidarbha and Madhya Maharashtra.
- ❖ Maximum temperatures were **markedly above normal (5°C or more)** at a few places over Konkan & Goa; at isolated places over East Madhya Pradesh; **appreciably above normal (3°C to 5°C)** at most places over Saurashtra & Kutch; at many places over Gujarat Region and East Rajasthan; at a few places over West Madhya Pradesh and Vidarbha; at isolated places over East Uttar Pradesh; **above normal (1°C to 3°C)** at a few places over Chhattisgarh, Odisha, Assam & Meghalaya, Coastal Karnataka and Kerala & Mahe; at isolated places over Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura, Lakshadweep and Tamil Nadu, Puducherry & Karaikal. These were **markedly below normal (-5°C or less)** at a few places over Himachal Pradesh and Uttarakhand; **appreciably below normal (-5°C to -3°C)** at a few places over Punjab and Haryana-Chandigarh; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, West Uttar Pradesh and Andaman & Nicobar Islands; **below normal (-3°C to -1°C)** at a few places over Rayalaseema and North Interior Karnataka; at isolated places over Delhi and near normal over rest parts of the country.

Fig. 1: Maximum Temperatures

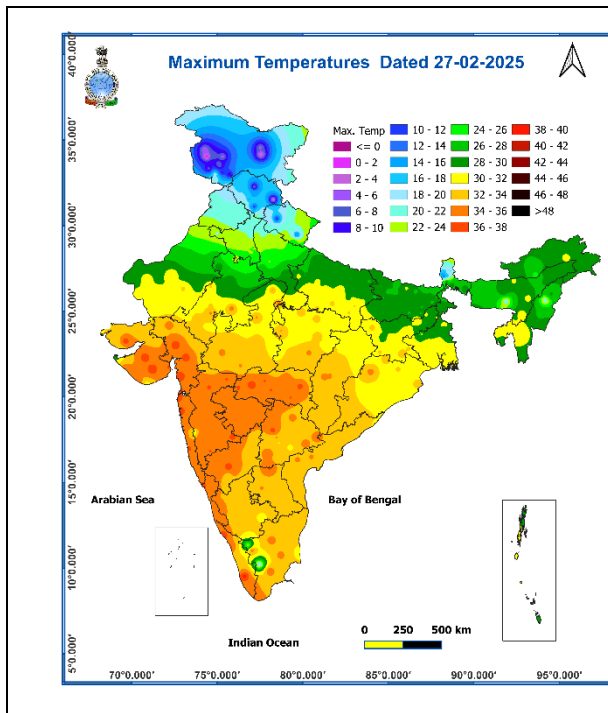


Fig. 2: Departure of Maximum Temperatures

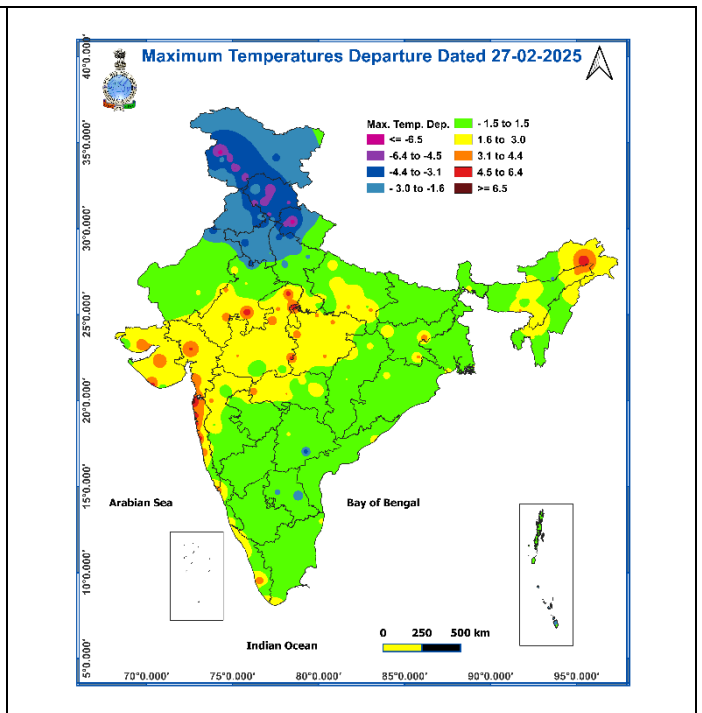


Fig. 3: Minimum Temperatures

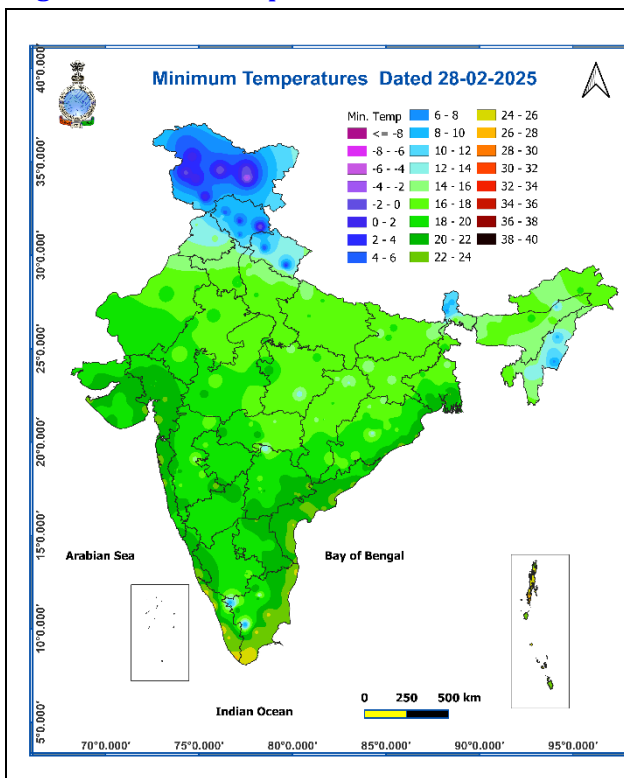
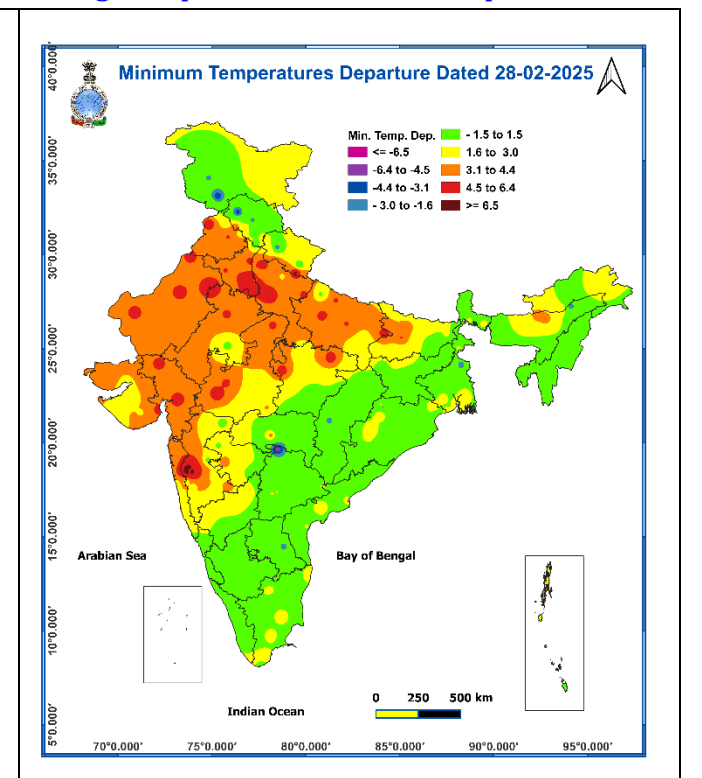
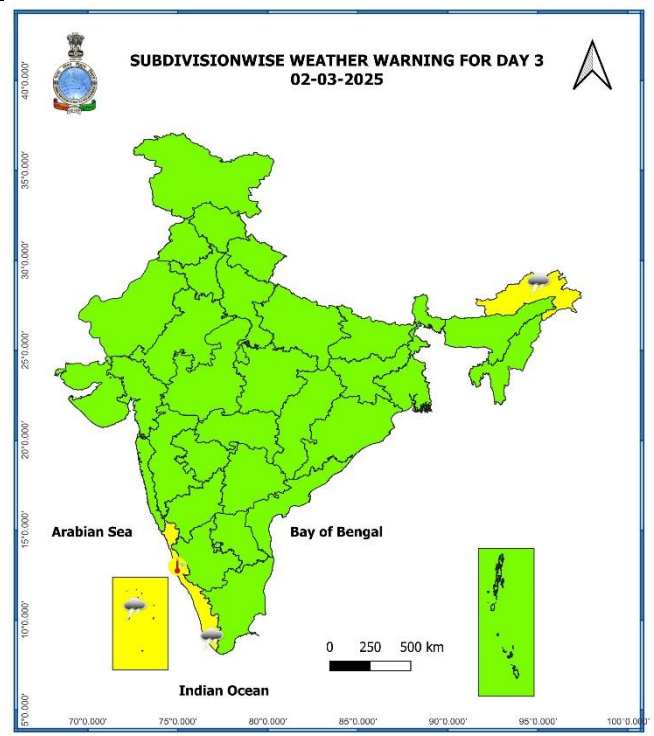
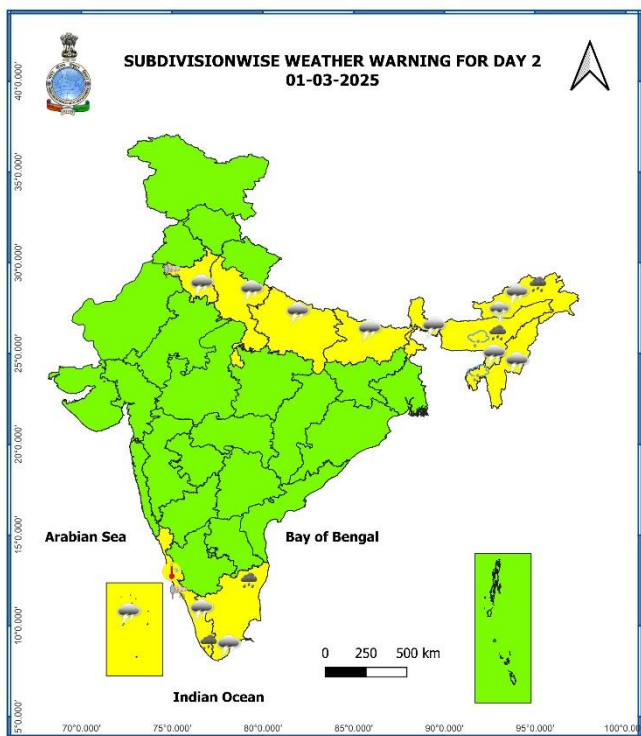
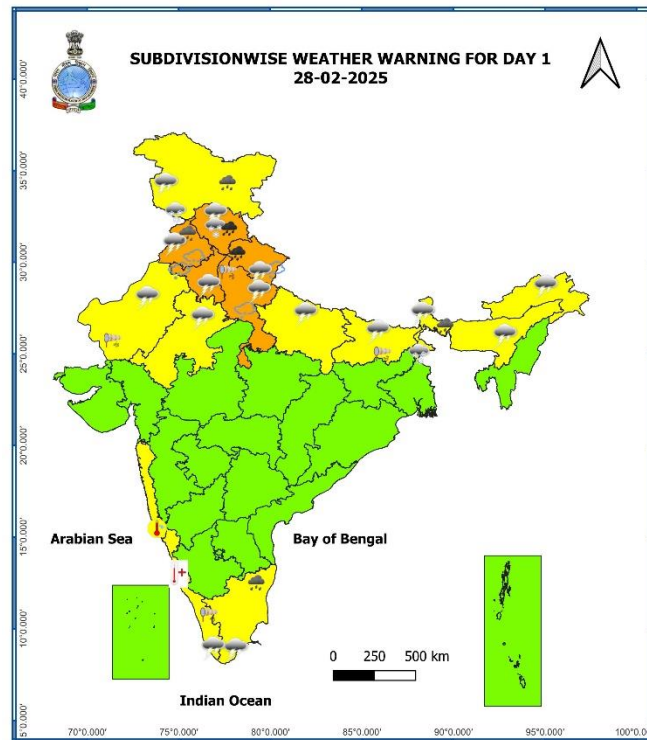


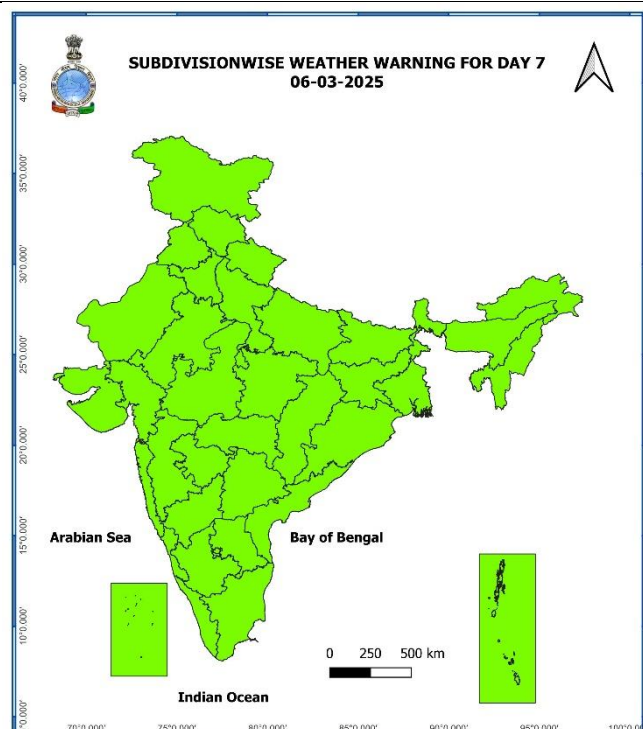
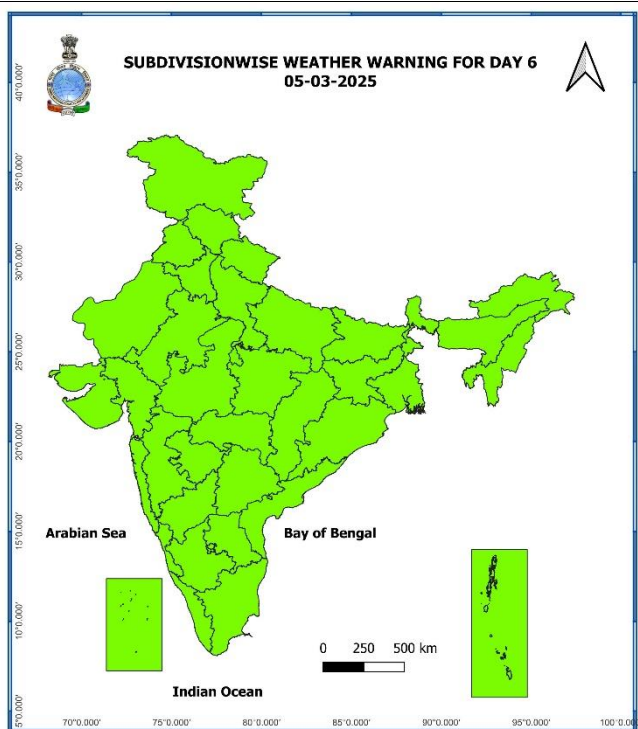
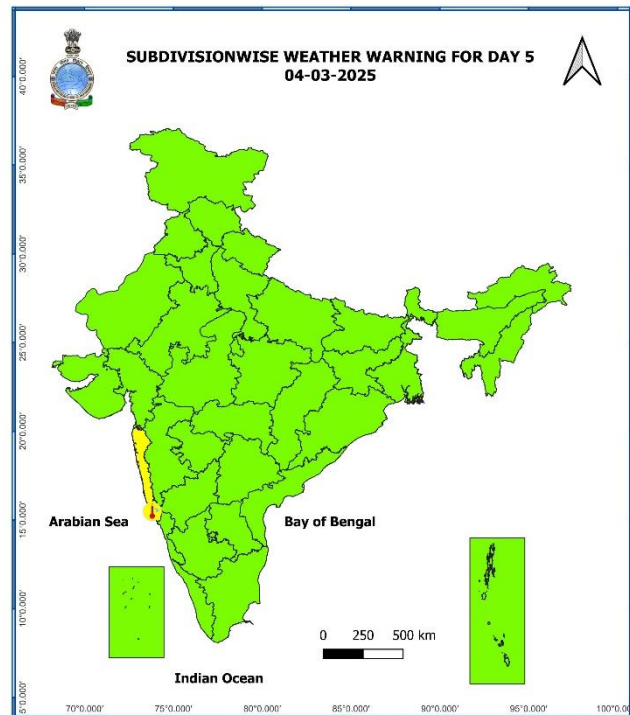
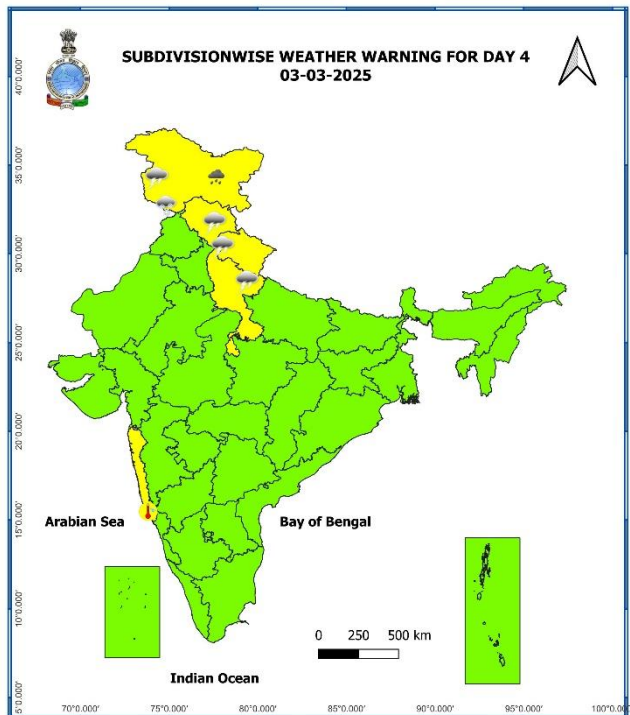
Fig. 4: Departure of Minimum Temperatures



7 Days Rainfall Forecast								
S. No.	Subdivision	28-Feb	01-Mar	02-Mar	03-Mar	04-Mar	05-Mar	06-Mar
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	SCT	ISOL	ISOL	ISOL	DRY	DRY	DRY
2	ARUNACHAL PRADESH	ISOL	FWS	SCT	ISOL	ISOL	SCT	SCT
3	ASSAM & MEGHALAYA	ISOL	SCT	ISOL	ISOL	DRY	DRY	DRY
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	DRY	ISOL	ISOL	ISOL	DRY	DRY	DRY
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	SCT	ISOL	ISOL	DRY	ISOL	ISOL	DRY
6	GANGETIC WEST BENGAL	DRY	DRY	DRY	DRY	DRY	DRY	DRY
7	ODISHA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
8	JHARKHAND	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
9	BIHAR	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
10	EAST UTTAR PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
11	WEST UTTAR PRADESH	SCT	ISOL	DRY	DRY	DRY	DRY	DRY
12	UTTARAKHAND	WS	ISOL	DRY	SCT	ISOL	DRY	DRY
13	HARYANA CHANDIGARH & DELHI	WS	ISOL	DRY	ISOL	DRY	DRY	DRY
14	PUNJAB	WS	ISOL	DRY	SCT	DRY	DRY	DRY
15	HIMACHAL PRADESH	WS	ISOL	ISOL	FWS	SCT	DRY	DRY
16	JAMMU & KASHMIR AND LADAKH	WS	ISOL	SCT	FWS	ISOL	DRY	DRY
17	WEST RAJASTHAN	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
19	WEST MADHYA PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
20	EAST MADHYA PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
21	GUJARAT REGION	DRY	DRY	DRY	DRY	DRY	DRY	DRY
22	SAURASHTRA & KUTCH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
23	KONKAN & GOA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
24	MADHYA MAHARASHTRA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
25	MARATHAWADA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
26	VIDARBHA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
27	CHHATTISGARH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
28	COASTAL ANDHRA PRADESH & YANAM	DRY	DRY	DRY	DRY	DRY	DRY	DRY
29	TELANGANA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
30	RAYALASEEMA	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
31	TAMILNADU PUDUCHERRY & KARAIKAL	SCT	SCT	ISOL	ISOL	DRY	DRY	DRY
32	COASTAL KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
33	NORTH INTERIOR KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
34	SOUTH INTERIOR KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
35	KERALA & MAHE	SCT	FWS	SCT	ISOL	DRY	DRY	DRY
36	LAKSHADWEEP	SCT	SCT	FWS	SCT	DRY	DRY	DRY

- 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
<https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php>

Weather forecast over Delhi/NCR during 28th Feb. to 03rd March,2025.**Past Weather:**

There has been a fall in minimum temperature upto 02°C and markedly fall in maximum temperature over Delhi/NCR during the past 24 hours. The maximum and minimum temperatures over Delhi are in the range of 24 to 25°C and 17 to 18°C, respectively. The minimum temperature was above normal upto 7°C and maximum temperature was below normal upto 3°C over most places. Generally cloudy sky conditions with predominant surface wind from the southeast/east direction with wind speeds less than 18 to 20 kmph prevailed during the past 24 hours. Mainly cloudy conditions with wind speed less than 10 kmph from the east direction prevailed over the region in the forenoon today.

Weather Forecast:

28.02.2025: Generally cloudy sky. Very light to light rain accompanied by thunderstorm/lightning. Strong surface winds (Speed 20-30 kmph). The maximum temperature over Delhi is likely to be in the range of 23 to 25°C. The predominant surface wind will likely be from the east-southeast direction with a wind speed of less than 14 kmph till evening. It would decrease thereafter becoming less than 10 kmph from the east-southeast direction during the night.

01.03.2025: Generally cloudy sky. Mist likely in the morning. Very light/drizzle during morning hours. The maximum and minimum temperatures over Delhi are likely to be in the range of 26 to 28°C and 14 to 16°C respectively. The predominant surface wind will likely be from the east-southeast direction with a wind speed of 08-10 kmph during morning hours. The wind speed will gradually increase thereafter becoming 12-14 kmph from the east direction during the afternoon. It will decrease becoming less than 10 kmph from the northeast direction during evening and night.

02.03.2025: Mainly clear sky. Mist likely in the morning. The maximum and minimum temperatures over Delhi are likely to be in the range of 26 to 28°C and 14 to 16°C, respectively. The predominant surface wind will likely be from the northwest direction with a wind speed of 08-10 kmph during morning hours. The wind speed will gradually increase thereafter becoming 10-12 kmph from the northwest direction during the afternoon. It will decrease becoming less than 08 kmph from the north direction during evening and night.

03.03.2025: Mainly clear sky. Mist likely in the morning. The maximum and minimum temperatures over Delhi are likely to be in the range of 28 to 30°C and 13 to 15°C, respectively. The predominant surface wind will likely be from the west-northwest direction with a wind speed of 06-08 kmph during morning hours. The wind speed will gradually increase becoming 08-10 kmph from the northwest direction in the afternoon. It will decrease becoming less than 08 kmph from the southeast direction during evening and night.

Agromet advisories for likely impact of Heavy Rainfall / Snowfall / Hailstorm / Heat Wave

- Use hail nets or hail caps in fruit orchards and vegetable plants to protect them from mechanical damage in **Uttarakhand, Punjab, Haryana, West Uttar Pradesh, Arunachal Pradesh** and **Nagaland**.
- Drain out excess water from the standing crop fields in **Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Tamil Nadu, Kerala, Arunachal Pradesh, Assam** and **Meghalaya**. In the regions of heavy snowfall, shake the fruit bearing trees to remove snow immediately from the branches.
- In **Coastal Karnataka**, apply light and frequent irrigation to the standing crops in the evening to protect them from heat wave.
- Keep the harvested produce in safer places or cover the produce with tarpaulin sheets in the 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.

Impact & Action Suggested due to heavy to very heavy rainfall/ snowfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh & Uttarakhand on 28th February.

A. Impact Expected

- ❖ Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
- ❖ Occasional reduction in visibility due to heavy rainfall.
- ❖ Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- ❖ Minor damage to kutchha roads.
- ❖ Possibilities of damage to vulnerable structure.
- ❖ Localized Landslides/Mudslides
- ❖ Damage to horticulture and standing crops in some areas due to inundation.
- ❖ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC).

B. Action Suggested

- ❖ Check for traffic congestion on your route before leaving for your destination.
- ❖ Follow any traffic advisories that are issued in this regard.
- ❖ Avoid going to areas that face the water logging problems often.
- ❖ Avoid staying in vulnerable structure.

Impact expected and action suggested due to isolated thunderstorm with lightning/gusty winds & Hailstorm over Northwest India on 28th February and Northeast India on 28th February & 01st March.

Impact expected:

- Strong wind/hail may damage plantation, horticulture and standing crops.
- Hail may injure people and cattle at open places.
- Partial damage to vulnerable structures due to strong winds.
- Minor damage to kutchha 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.

Impact expected and action suggested due to Heat Wave conditions over Coastal Karnataka.

Yellow alert Areas:

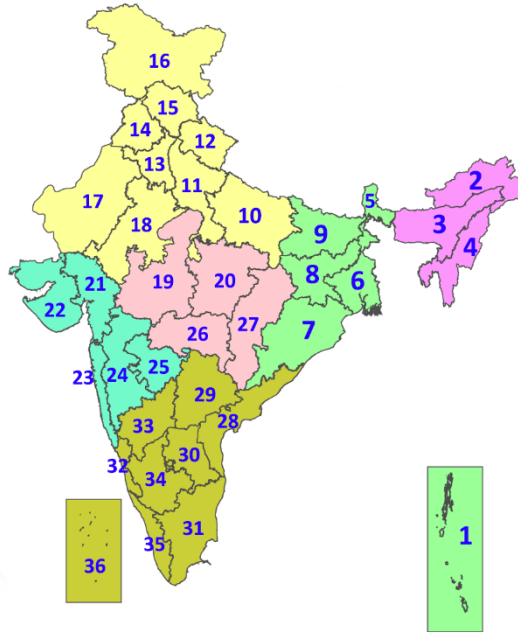
- Moderate temperature & heat is tolerable for general public but moderate health concern likely for vulnerable people e.g. infants, elderly, people with chronic diseases.
- Avoid heat exposure.
- Wear lightweight, light colour, loose, cotton clothes.
- Cover your head, use a cloth, hat or umbrella.

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.

LEGENDS

1. अंडमान और निकोबार द्वीपसमूह
2. अरुणाचल प्रदेश
3. असम और मेघालय
4. नागालैंड, मणिपुर, मिजोरम और त्रिपुरा
5. उप-हिमालयी पश्चिम बंगाल और सिक्किम
6. गंगीय पश्चिम बंगाल
7. ओडिशा
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. आंतरिक उत्तरी कर्नाटक
34. आंतरिक दक्षिणी कर्नाटक
35. केरल और माहे
36. लक्षद्वीप



1. Andaman & Nicobar Islands
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. Punjab
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
32. Coastal Karnataka
33. North Interior Karnataka
34. South Interior Karnataka
35. Kerala & Mahe
36. 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)



Fog



Heavy Snow



Cold Wave



Heavy Rain



Dust Storm



Cold Day



Very Heavy Rain



Heat Wave



Ground Frost



Extremely Heavy Rain



Warm Night



Thunder & Lightning



Hot Day



Hailstorm



Hot & Humid



Dust Raising Winds



Strong Surface Winds

COLOUR CODED WARNING

No Warning (No Action)

Watch (Be Aware)

Alert (Be Prepared To Take Action)

Warning (Take Action)

Probabilistic Forecast

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

* 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)

DEFINITION/CRITERIA

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 $< 1\text{km}$

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)

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