

Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 27th December, 2024

Time of Issue: 1420 hours IST

Subject: Due to interaction of Western Disturbance with easterly winds over central parts of India, light to moderate rainfall/thunderstorm accompanied with hailstorm very likely over Northwest & Central India on 27th & 28th December, 2024.

i. Realised weather during past 24 hours till 0830 hours IST of today (Annexure I)

- ❖ **Dense fog (50-199 m)** reported in isolated pockets of Odisha and Meghalaya; **Moderate fog (visibility 200-499 m)** reported in isolated pockets of Delhi, Rajasthan, Meghalaya and Manipur.
- ❖ **Visibility reported (≤ 200 m)** (in meter): **Odisha:** Bolangir 80m; **Meghalaya:** Barapani 50m; **Punjab:** Amritsar & Halwara IAF-200 each; **Delhi:** Safdarjung & Ayanagar-200 each; **East Uttar Pradesh:** Varanasi- Babatpur-200; **West Rajasthan:** Churu-200; **East Rajasthan:** Udaipur Dabok-200;
- ❖ **Heavy rainfall** recorded at isolated places over Tamil Nadu, Rayalaseema and coastal Andhra Pradesh.

Weather Systems, Forecast and warning (Annexure II & III):

- ❖ A **Western disturbance** as a cyclonic circulation lay over north Pakistan & neighbourhood in lower & middle tropospheric levels with a trough aloft in upper tropospheric westerlies along Long. 68°E to the north of Lat. 17°N.
- ❖ An **induced cyclonic circulation** over southwest Rajasthan and A **trough** runs from north Pakistan to eastcentral Arabian Sea across **induced cyclonic circulation** in lower tropospheric levels.
- ❖ In addition, there is a interaction of westerly winds due to Western Disturbance with easterly winds from anti-cyclone over north Chhattisgarh at lower tropospheric levels alongwith high moisture feeding from Arabian Sea as well as Bay of Bengal over northwest & central India mainly during 27th & 28th December. Under the influence of these systems:
 - ✓ Fairly widespread to widespread Rainfall/Snowfall accompanied with thunderstorm, lightning is likely over Western Himalayan Region on 27th & 28th December with isolated **Heavy Rainfall/Snowfall** likely over Himachal Pradesh on 27th and Uttarakhand on 27th & 28th December.
 - ✓ Fairly widespread to widespread Rainfall accompanied with thunderstorm, lightning is likely over Punjab, Haryana-Chandigarh-Delhi, West Uttar Pradesh and East Rajasthan on 27th & Isolated to Scattered rainfall accompanied with thunderstorm, lightning & gusty winds (wind speed 30-40 kmph) likely over the same region on 28th December with isolated **Heavy rainfall** likely over Haryana-Chandigarh-Delhi, West Uttar Pradesh, East Rajasthan and west Madhya Pradesh on 27th December.
 - ✓ Isolated to Scattered rainfall accompanied with thunderstorm, lightning & gusty winds (wind speed 30-50 kmph) likely over East Uttar Pradesh, West Rajasthan, west Madhya Pradesh, Vidarbha, interior Maharashtra and Gujarat Region on 27th & 28th December.
 - ✓ **Thunderstorm accompanied with hailstorms also likely over Southeast Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh, Delhi, Uttar Pradesh, East Rajasthan, Vidarbha, Madhya Maharashtra, Marathwada & Gujarat Region on 27th and Madhya Pradesh on 27th & 28th December.**
- ❖ A Fresh **Western Disturbance** likely to affect western Himalayan region from 1st January, 2025. Under its influence light rainfall/snowfall likely over the region on 1st & 2nd January.

ii. Temperature, Cold Wave and Fog Forecast:

Temperature Conditions during past 24 hours till 0830 hours IST of today (Annexure IV):

- ❖ Minimum temperatures were **below 0°C** over many parts of Jammu, Kashmir & Ladak; **10-15°C** over Northwest, central and east India; **12-18°C** over many parts of Central, West & East India. Today, the lowest minimum temperature of 5.4°C is reported at Churu (West Rajasthan) over the plains of the country.

- ❖ There has been a rise by 2-4⁰C in minimum temperature over many parts of Northwest India adjoining central India during past 24 hours.
- ❖ Minimum temperatures are **markedly above normal (5.1°C or more)** at most places over North Interior Karnataka; at many places over Madhya Pradesh, Gujarat Region, East Rajasthan, Madhya Maharashtra, Marathwada, Vidarbha and Telangana; at a few places over Odisha; at isolated places over Haryana-Chandigarh-Delhi, Uttar Pradesh and Chhattisgarh; **appreciably above normal (3.1°C to 5.0°C)** at most places over Punjab, Jharkhand, Coastal Karnataka and Rayalaseema; at a few places over Tamil Nadu, Puducherry & Karaikal; at isolated places over West Rajasthan, Bihar, Gangetic West Bengal and Coastal Andhra Pradesh & Yanam; **above normal (1.6°C to 3.0°C)** at isolated places over Uttarakhand and Assam & Meghalaya. These are below normal (-1.6°C to -3.0°C) at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and near normal over rest parts of the country.

Forecast of temperature:

- ❖ No significant change in minimum temperatures during next 48 hours and fall by 2-4°C likely over Northwest, West, Central and East India during Subsequent 3 days.

Cold Wave Warnings:

Cold wave conditions very likely in some parts of Himachal Pradesh from 29th to 31st December.

Cold Day Warnings:

Cold day to severe cold day conditions very likely in some parts of Himachal Pradesh on 27th & 28th December.

Cold Day conditions very likely in isolated pockets of Uttarakhand and Haryana-Chandigarh-Delhi on 27th & 28th December.

Dense Fog Warnings:

Dense to Very dense fog conditions very likely to prevail during late night/early morning hours in isolated pockets of Rajasthan during 27th-29st December;

Dense fog conditions very likely to prevail during late night/early morning hours in isolated pockets of Himachal Pradesh on 29th & 30th; Punjab during 27th-30th; Haryana, Chandigarh during 28th-30th, West Uttar Pradesh 29th & 30th; Orisha on 27th; Jharkhand on 28th; Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during 27th-29th December.

Ground Frost Warnings:

Ground frost conditions very likely in isolated pockets of Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura on 27th December.

iii. Weather conditions and forecast over Delhi/NCR during 27th to 30th Dec. 2024 (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>

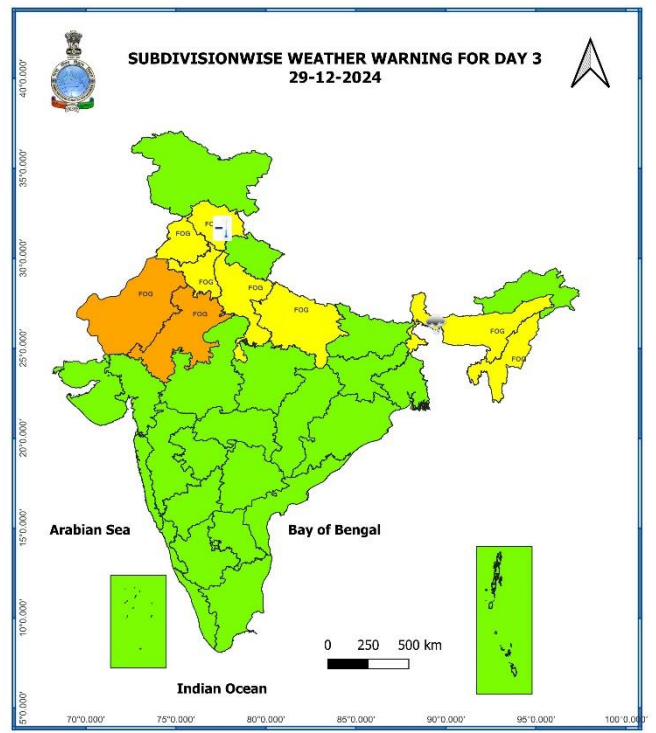
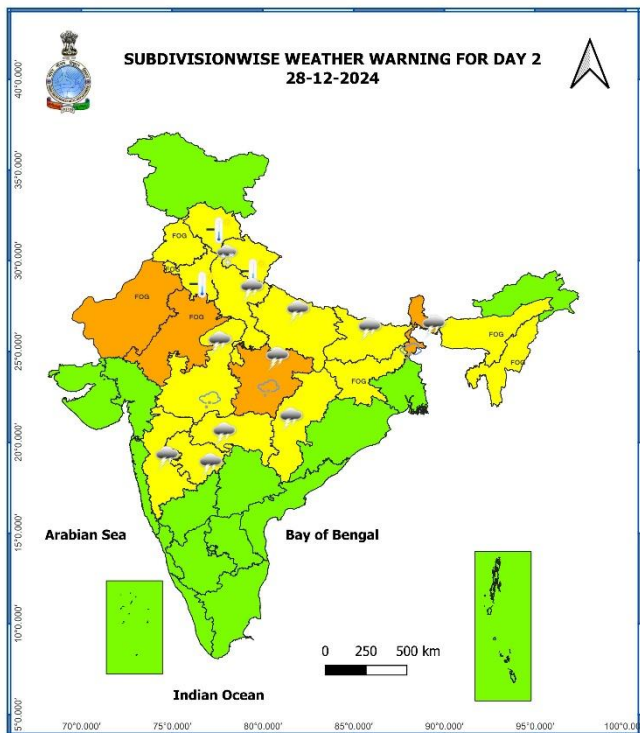
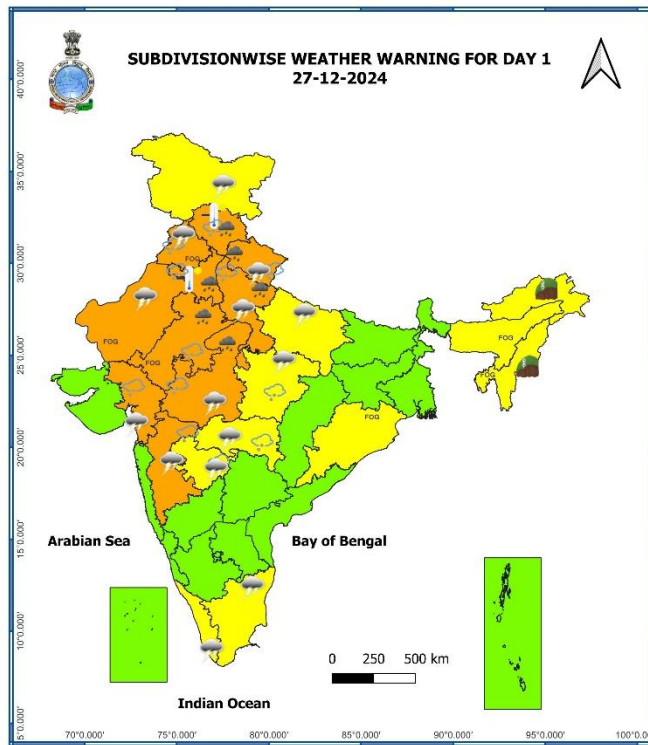
ANNEXURE I

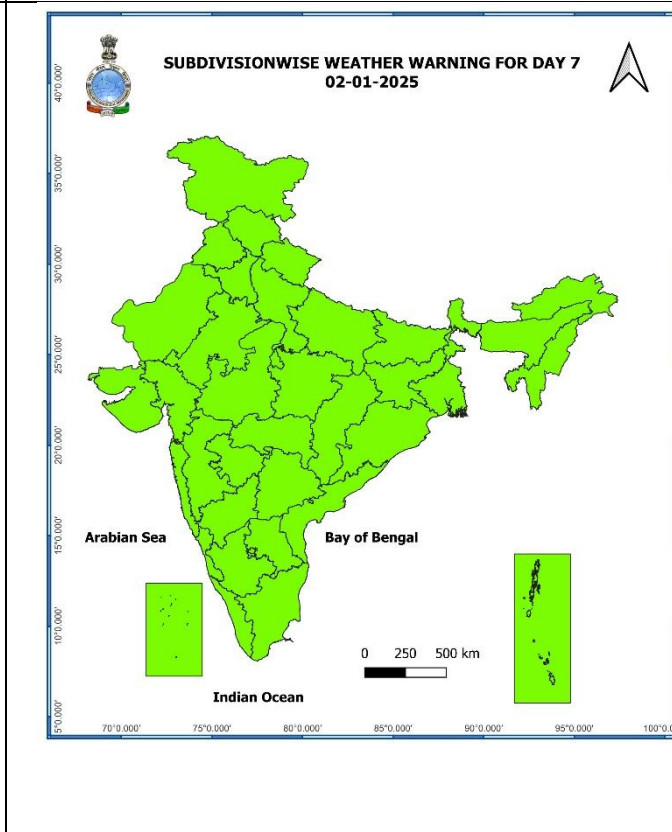
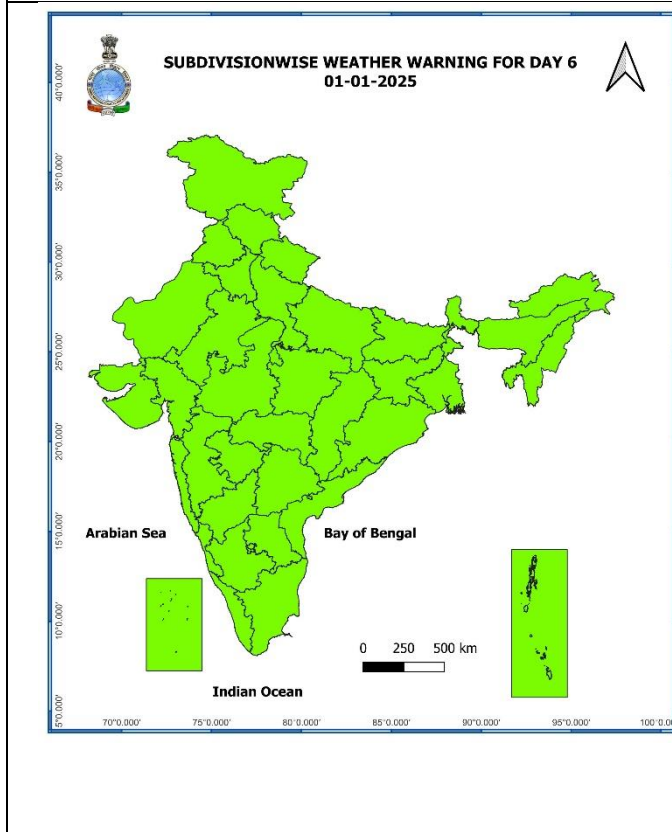
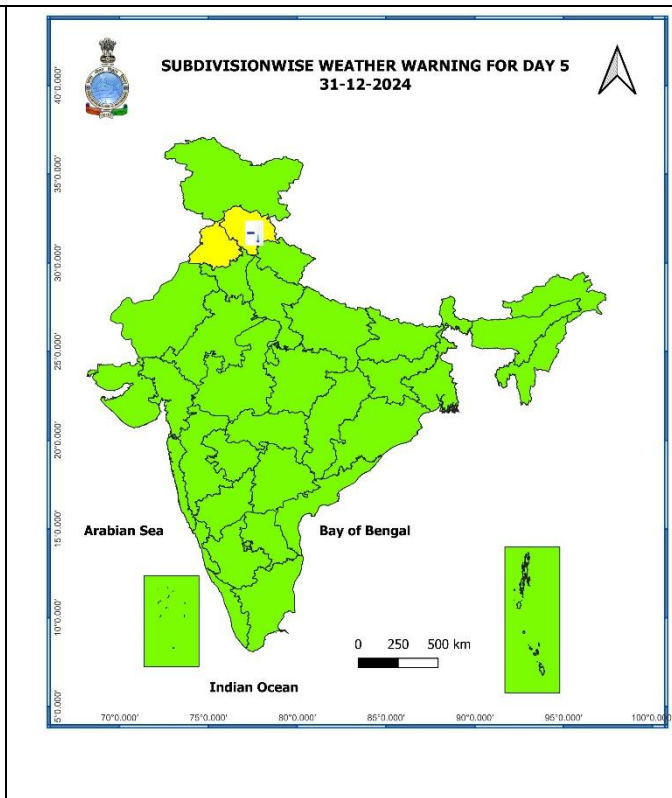
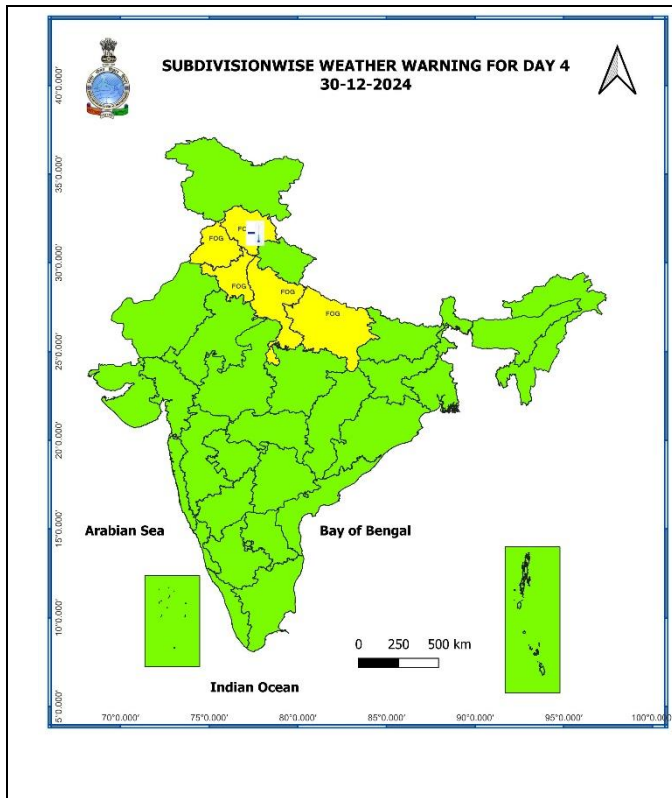
Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 27.12.2024 (in cm):

- ❖ **Coastal Andhra Pradesh & Yanam:** Kavali (dist Spsr Nellore) 8, Kandukur (dist Spsr Nellore) 5;
- ❖ **Tamil Nadu:** Tiruttani (dist Tiruvallur) 8, Zone 06 Perambur (dist Chennai), Zone 05 Basin bridge (dist Chennai), Zone 08 Anna Nagar West (dist Chennai), Pallipattu (dist Tiruvallur), Kodanad (dist The Nilgiris), Tiruttani AWS (dist Tiruvallur) 6 each, Tiruttani PTO (dist Tiruvallur), Coonoor (dist The Nilgiris), Zone 06 Kolathur (dist Chennai), Zone 04 Tondiarpet (dist Chennai) 5 each;
- ❖ **Rayalaseema:** Nagari (dist Chittoor) 7;

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

- 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.

Fig. 1: Maximum Temperatures

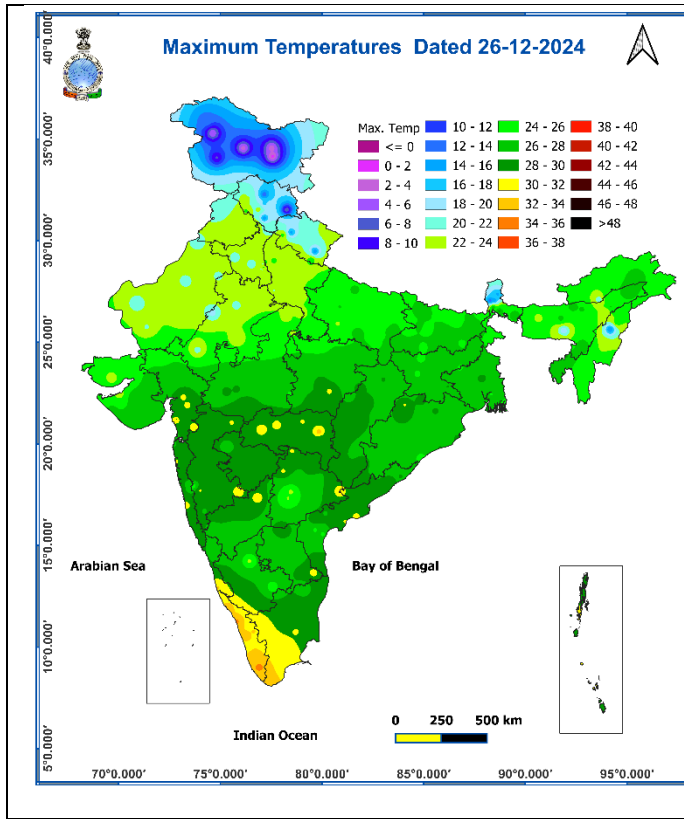


Fig. 2: Departure of Maximum Temperatures

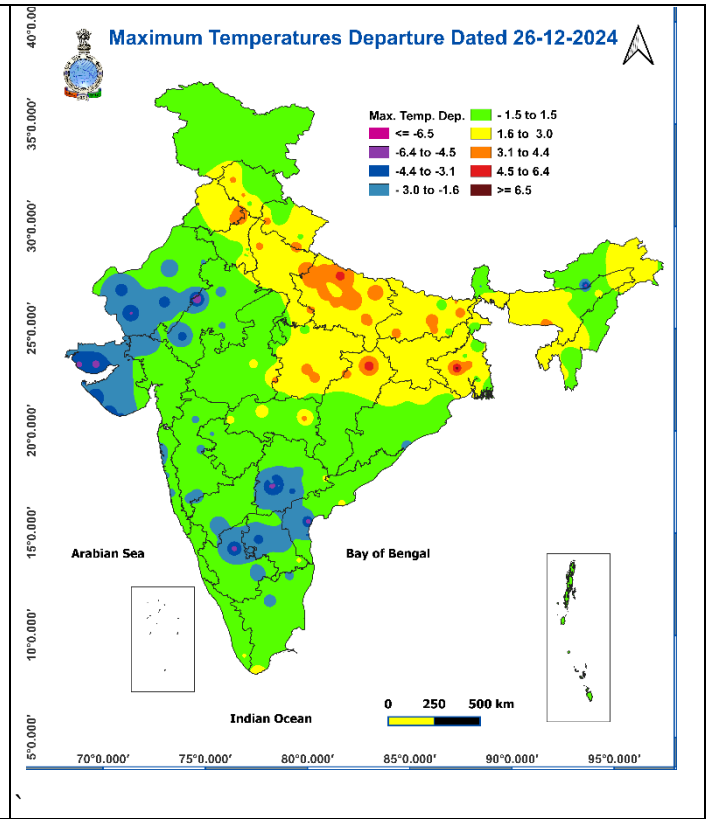


Fig. 3: Minimum Temperatures

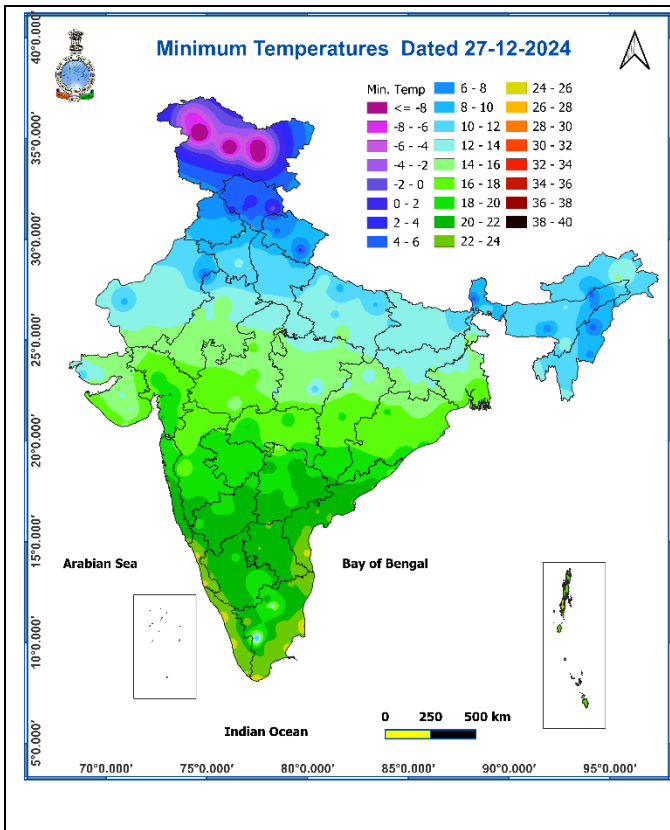
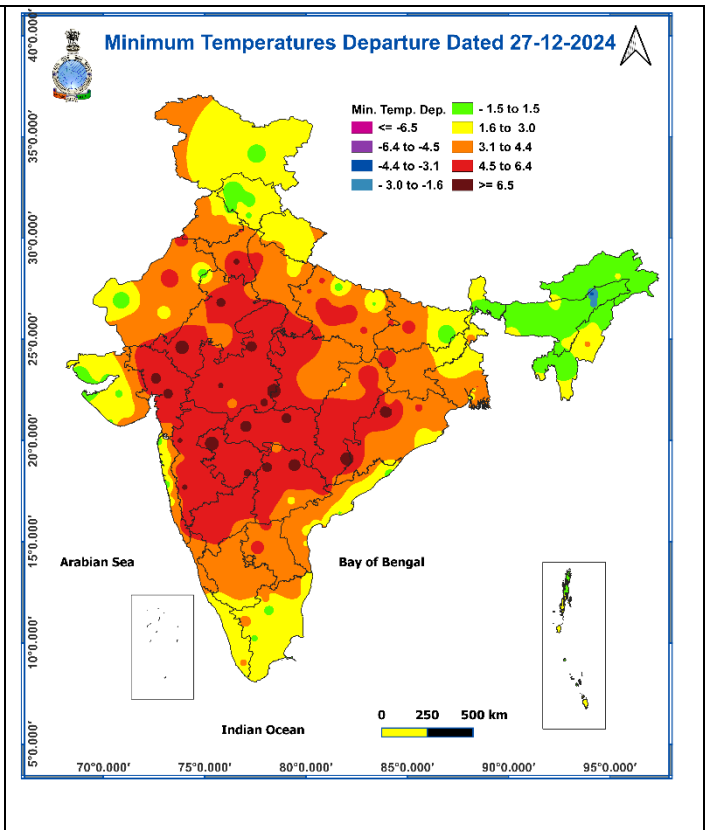


Fig. 4: Departure of Minimum Temperatures



Weather forecast over Delhi/NCR during 27th Dec. to 30th Dec. 2024

Past Weather:

There has been a rise in minimum temperature upto 03°C over Delhi/NCR during past 24hr. The Maximum and Minimum temperature over Delhi is in the range of 22 to 24°C and 11 to 13°C respectively. The minimum temperature was above normal upto 04 to 07°C and maximum temperature was above normal upto 01 to 03°C over most places. Moderate fog reported at Safdarjung airport. Safdarjung airport recorded lowest visibility 300 m during 0700 hours to 0900 hours IST which improved thereafter becoming 500 m at 1000 hours IST. Palam airport recorded lowest visibility 450 m at 1000 hours IST which improved thereafter becoming 600m at 1030 hours IST. Mainly smog/ moderate fog condition with predominant surface wind from variable direction with wind speed reaching calm to 06 kmph prevailed past 24hr. Mainly smog condition with wind speed less than 06 kmph variable direction prevailed over the region in the forenoon today.

Weather Forecast:

27.12.2024: Generally cloudy sky. Intermittent Light to moderate rain with few spells becoming moderate to heavy rainfall upto 18 UTC thereafter decreasing the intensity with one or two spells of light rain. The predominant surface wind is likely to be variable direction with wind speed less than 08 kmph till evening. It would decrease thereafter becoming less than 04 kmph from northeast direction during night. Smog/shallow fog is likely in the evening/night.

28.12.2024: Generally cloudy sky. Intermittent rain with one or two spells of light rain during early morning to forenoon and generally cloudy sky thereafter. The predominant surface wind is likely to be from southeast direction with speed less than 04 kmph during morning hours. Smog/ shallow fog in most of the places and moderate fog in isolated places is likely in the morning. The wind speed will increase thereafter becoming less than 08 kmph from northeast direction during afternoon. It will decrease thereafter becoming less than 04 kmph from northeast direction during evening and night. Smog/shallow fog is likely in the evening/night.

29.12.2024: Mainly clear sky. The predominant surface wind is likely to be from north direction with speed less than 04 kmph during morning hours. Smog/ dense fog in most of the places and very dense fog in isolated places is likely in the morning. The wind speed will gradually increase becoming 06-08 kmph from northwest direction during afternoon. It will decrease thereafter becoming less than 04 kmph from north direction during evening and night. Smog/shallow fog is likely in the evening/night.

30.12.2024: Mainly clear sky. The predominant surface wind is likely to be from northwest direction with wind speed less than 04 kmph during morning hours. Smog/ moderate fog in most of the places and dense fog in isolated places is likely in the morning. The wind speed will increase thereafter becoming 08-10 kmph from northwest direction during afternoon. It will gradually decrease becoming less than 06 kmph from northwest direction during evening and night. Smog/shallow fog is likely in the evening/night.

Impact expected and action suggested due to thunderstorm with lightning & Hailstorm.

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 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.

Impact & Action Suggested due to heavy rainfall/ snowfall over Himachal Pradesh, Uttarakhand, Haryana-Chandigarh-Delhi, West Uttar Pradesh, West Madhya Pradesh and East Rajasthan on 27th December.

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

B. Action Suggested

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

Impact expected due to dense/very dense fog in the night /morning hour:

- ❖ Transport and Aviation:
 - May affect some airports, highways and railway routes in the areas of met- sub-division.
 - Difficult driving conditions with slower journey times.
 - Unless taken precautionary measures, it may lead to some road traffic collisions.
- ❖ Power Sector:
 - Chances of Tripping of Power lines in the very dense fog routes.
- ❖ Human Health:
 - Lung related health impacts: Dense fog contains particulate matter and other pollutants and in case exposed it gets lodged in the lungs, clogging them and decreasing their functional capacity which increases episodes of wheezing, coughing and shortness of breath.
 - Impact on people having asthma bronchitis: Long time exposure to dense fog may cause respiratory problem for people having asthma bronchitis and other lung related health problems.
 - Eye Irritation: Dense fog contains pollutions of various types and these Pollutants in the air if exposed may tend to irritate the membranes of the eye causing various infections leading to redness or swelling of the eye.

Action suggested:

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

Impact expected due to cold wave/severe cold wave conditions

- An increased likelihood of various illnesses like flu, running/ stuffy nose or nosebleed, which usually set in or get aggravated due to prolonged exposure to cold.
- Do not ignore shivering. It is the first sign that the body is losing heat. Get Indoors.
- Frostbite can occur due to prolonged exposure to cold. The skin turns pale, hard and numb and eventually black blisters appear on exposed body parts such as fingers, toes, nose and or earlobes. Severe frostbite needs immediate medical attention and treatment.
- Impact on agriculture, crop, livestock, water supply, transport and power sector at some places.

Action suggested:

- Wear several layers of loose fitting, light weight; warm woollen clothing.

- Cover your head, neck, hands and toes adequately as majority of heat loss occurs through these body parts. Wear several layers of loose fitting, light weight; warm woollen clothing rather than one layer of heavy cloth.
- Eat vitamin-C rich fruits & vegetable and drink sufficient fluids preferably warm fluids to maintain adequate immunity.
- Avoid or limit outdoor activities.
- Keep dry, if wet, change cloths immediately to prevent loss of body heat. Wear insulated/waterproof shoes.
- Warm the affected area of the body slowly with lukewarm water; do not rub the skin vigorously.
- If the affected skin area turns black, immediately consult a doctor.
- Maintain ventilation while using Heaters to avoid inhaling toxic fumes.
- Take safety measures while using electrical and gas heating devices.
- Extreme care needed for vulnerable people.
- Seek medical attention as soon as possible for someone suffering from frostbite/ Hypothermia.
- Protect livestock from cold weather.

Agromet advisories for Heavy Rainfall / Cold Wave likely over various parts of the country

- Keep the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields.
- Use hail nets to protect orchards and vegetable plants in **Himachal Pradesh, Uttarakhand, Punjab, Haryana, West Uttar Pradesh, East Rajasthan, Madhya Pradesh, Vidarbha, Madhya Maharashtra, Marathwada and Gujrat region.**
- In **Himachal Pradesh and Uttarakhand**, in case of heavy snowfall, shake the trees to remove snow immediately from the branches.
- Make necessary arrangements to drain out excess water from standing crop fields and vegetables in **Haryana, West Uttar Pradesh, West Madhya Pradesh, Tamil Nadu; Coastal Andhra Pradesh and Rayalaseema.**
- Provide mechanical support to horticultural crops and staking to vegetables.
- In **Arunachal Pradesh, Meghalaya, Nagaland and Manipur**, apply light and frequent irrigation to the standing crops in the evening to protect them from low temperature stress or cold injuries. Use mulching and cover vegetable nurseries and young fruit plants with straw/polythene sheets to maintain optimum soil temperature.

Livestock and Fishery

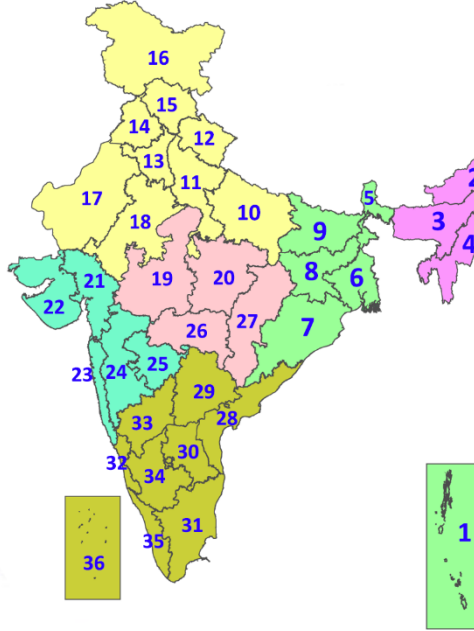
- Keep the animals inside the shed during heavy rainfall/ hailstorms and provide them with balanced feed.
- Store feed and fodder in a safe place to prevent spoilage.
- Remove excess water from fish ponds to avoid losses of fish (if feasible).
- To protect from cold, keep cattle inside the sheds during night and provide dry bedding. Also keep the chicks warm by providing artificial light in the poultry sheds.

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. रायलसेमा
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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