



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 15th January, 2025

Time of Issue: 1245 hours IST

**Subject: (i) In association with the Western disturbance, wet spell likely over Northwest & adjoining central India on 15th & 16th January, 2025.
(ii) Dense fog conditions likely to continue over Northwest India during next 4-5 days.**

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

- ❖ Cold wave to severe cold wave conditions prevailed in isolated pockets of Himachal Pradesh.
- ❖ Dense to very dense fog (visibility < 50 m) reported in isolated pockets of Haryana, Delhi, Rajasthan, Uttar Pradesh, West Madhya Pradesh, Meghalaya and dense fog (visibility 50-199 m) reported in isolated pockets of Uttarakhand, Punjab, East Madhya Pradesh, Odisha and Gangetic West Bengal.
- ❖ Visibility reported (<200 m) (in meter): **Haryana:** Karnal 0, Ambala 40, Bhiwani 40; **Delhi:** Safdarjung 0, Palam 0; **Rajasthan:** Churu 0; **Madhya Pradesh:** Gwalior 0, Rewa 50; **East Uttar Pradesh:** Kanpur IAF 0; **West Uttar Pradesh:** Meerut 20; **Meghalaya:** Barapani 30; **Punjab:** Amritsar 50, Patiala 50, Bhatinda 50; **Uttarakhand:** Khatima 50, Pantnagar-100; **Odisha:** Nayagarh 60; **Gangetic West Bengal:** Durgapur 150
- ❖ Heavy rainfall recorded at isolated places over Tamilnadu.

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

- ❖ A Western Disturbance seen as a cyclonic circulation over north Pakistan & neighbourhood with a trough aloft in middle & upper tropospheric levels runs roughly along Long. 65°E to the north of Lat. 25°N. An induced cyclonic circulation lies over Punjab & adjoining Pakistan in lower tropospheric levels. Another cyclonic circulation lies over southwest Rajasthan & neighbourhood in lower tropospheric levels. Under their influence,
 - ✓ Isolated to scattered rainfall/snowfall activity likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Uttarakhand on 15th & 16th; Himachal Pradesh during 15th-17th and Isolated rainfall activity over Punjab, Haryana, Chandigarh, Uttar Pradesh, East Rajasthan & Madhya Pradesh on 15th & 16th; West Rajasthan on 15th and Vidarbha on 16th January.
 - ✓ Thunderstorm activity at isolated places likely over West Uttar Pradesh & Madhya Pradesh on 15th & West Rajasthan during 15th-17th January.
- ❖ A fresh Western Disturbance is likely to affect Western Himalayan Region from 18th January, 2025. Under its influence, isolated to scattered rainfall/snowfall activity likely over Western Himalayan region during 18th-21st January.
- ❖ Isolated heavy rainfall likely over Nicobar Islands on 16th January.
- ❖ Light to moderate rainfall accompanied with thunderstorm, lightning very likely at a few places over Tamil Nadu, Puducherry & Karaikal on 18th & 19th and Kerala & Mahe on 19th January with isolated heavy rainfall likely over Tamilnadu, Puducherry & Karaikal on 18th & 19th and Kerala & Mahe on 19th January.

ii. Temperature, Cold Wave and Fog Forecast:

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

- ❖ Minimum temperatures are below 0°C over many parts of Jammu, Kashmir & Ladakh; 1-4°C over some parts of Himachal Pradesh; 5-10°C over many parts of Northwest India; 10-15°C over many parts of Central & East India; 15-20°C over many parts of West India. Today, the lowest minimum temperature of 2.8°C is reported at Amritsar (Punjab) over the plains of the country.

- ❖ During the past 24 hours, there has been **fall in minimum temperatures by 1-3°C** in many parts of West Bengal & Sikkim; in some parts over Assam & Meghalaya; in isolated pockets of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Haryana Chandigarh & Delhi, South Interior Karnataka, Tamilnadu Puducherry & Karaikal and **rise by 3-6°C** in some parts of West Madhya Pradesh and Gujarat Region; by **1-3°C** in some parts of Uttar Pradesh, East Madhya Pradesh, Odisha, Telangana, Vidarbha; in isolated pockets of Chhattisgarh.
- ❖ Minimum temperatures are **below normal (-1°C to -3°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Haryana, Chandigarh & Delhi and Saurashtra & Kutch. These are **appreciably above normal (3°C to 5°C)** at many places over Odisha; at a few places over East Uttar Pradesh, Kerala & Mahe; at isolated places over Telangana, Rayalaseema, Madhya Maharashtra, Marathwada, Gujarat Region, Tamilnadu Puducherry & Karaikal; **above normal (1°C to 3°C)** at a few places over West Uttar Pradesh, West Bengal & Sikkim, Vidarbha, Madhya Pradesh, Andaman & Nicobar Islands; at isolated places over Rajasthan, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and near normal over rest part of the country.

Forecast of temperature:

- ❖ Gradual rise in minimum temperatures by 2-4°C likely over Northwest India during next 5 days.
- ❖ Gradual rise in minimum temperatures by about 2°C likely over Central India during next 24 hours and no significant change thereafter.
- ❖ No significant change in minimum temperatures likely over East & West India during next 5 days.

Dense Fog Warnings:

Dense to very Dense fog Condition very likely to continue to prevail during night/early morning hours in some parts of Uttar Pradesh on 15th; Punjab, Haryana, Chandigarh during 16th & 17th; in isolated pockets of Uttar Pradesh on 16th; Punjab, Haryana, Chandigarh on 15th; Rajasthan on 15th & 16th January.

Dense fog conditions very likely to continue to prevail during night/early morning hours in isolated pockets of Himachal Pradesh on 15th & during 17th-20th; Gangetic West Bengal till 16th; Sub-Himalayan West Bengal & Sikkim, Odisha till 17th; Uttar Pradesh during 17th-20th; Rajasthan on 17th & 18th; Punjab, Haryana, Chandigarh during 18th-20th; Madhya Pradesh, Assam & Meghalaya & Nagaland, Manipur, Mizoram & Tripura till 18th January.

Cold Day Warnings:

Cold day conditions very likely in isolated pockets of Himachal Pradesh on 16th January.

Ground Frost Warnings:

Ground frost conditions very likely in isolated pockets of Arunachal Pradesh, Meghalaya and Nagaland, Manipur, Mizoram & Tripura during 15th- 17th January.

Fishermen Warnings (Annexure V):

Fishermen are advised not to venture into Gulf of Mannar, adjoining Comorin area, Somalia coast & adjoining sea area on 15th & 16th January.

iii. Weather conditions and forecast over Delhi/NCR during 15th Jan. to 18th Jan. 2025 (Annexure VI)

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

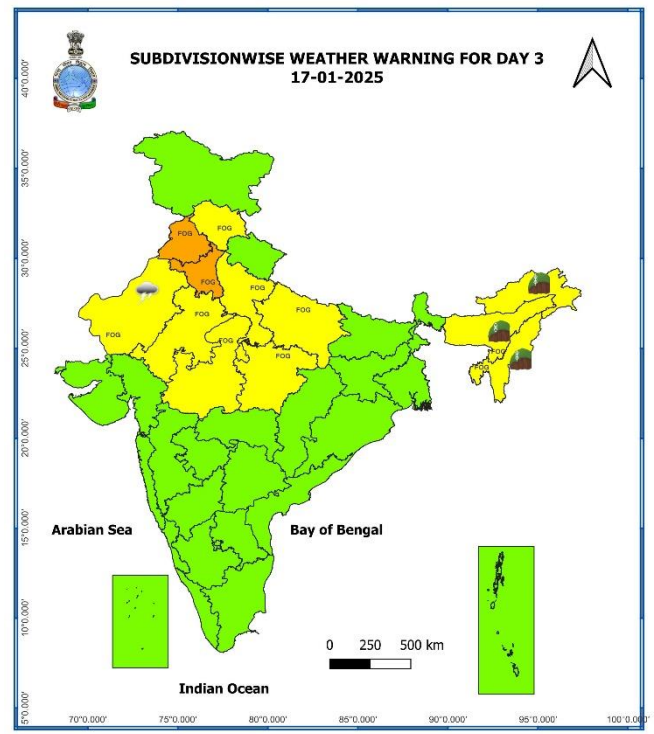
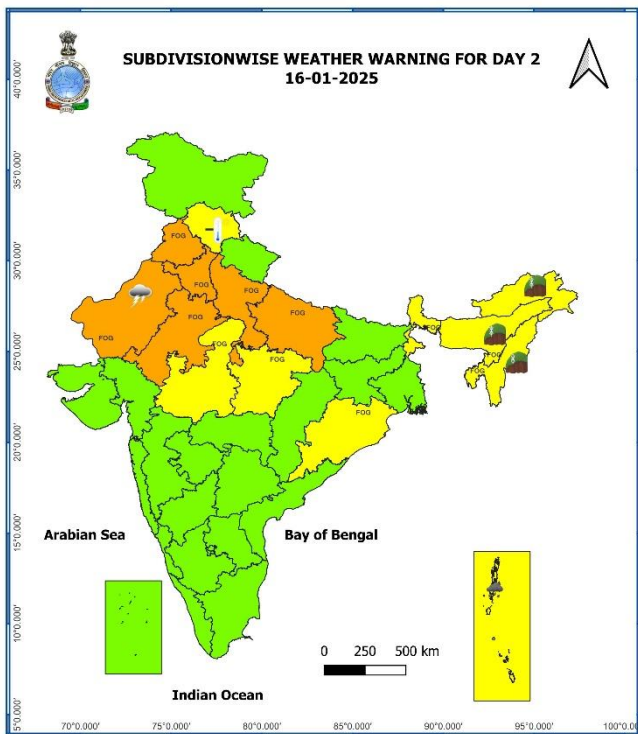
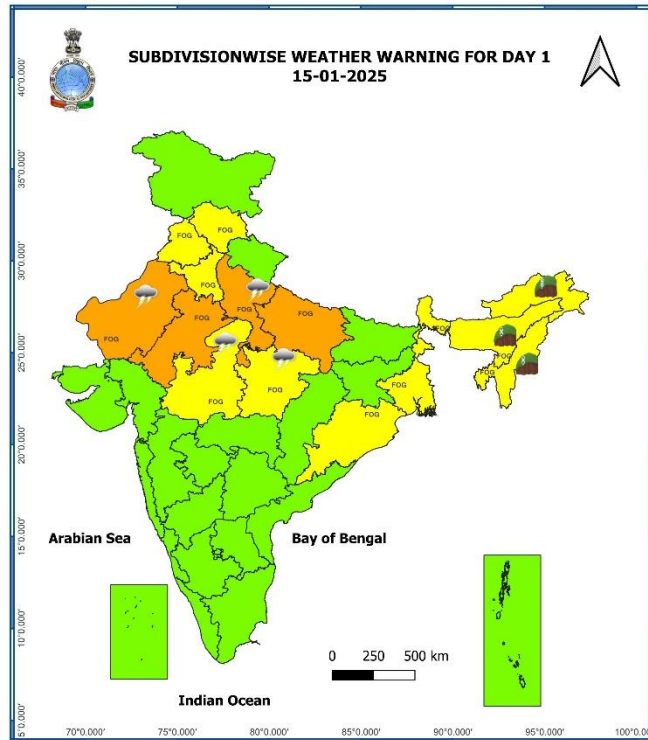
Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 15.01.2025 (in cm):

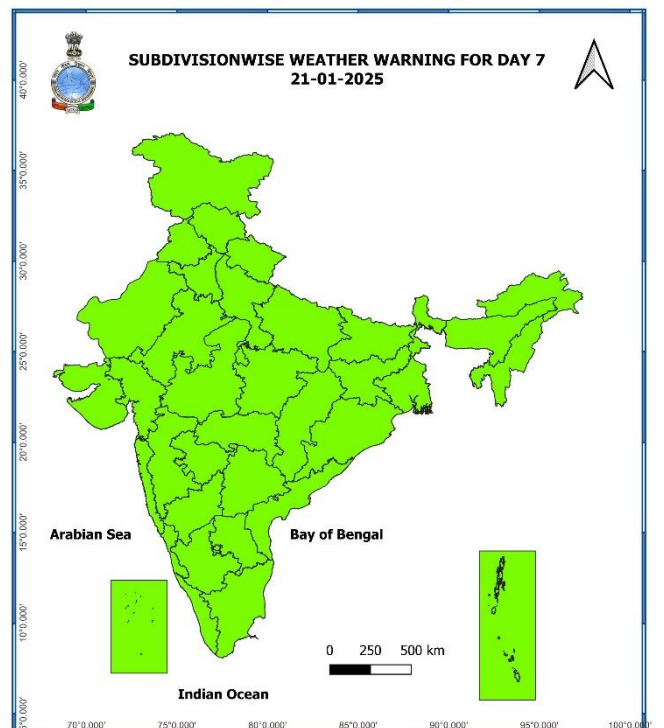
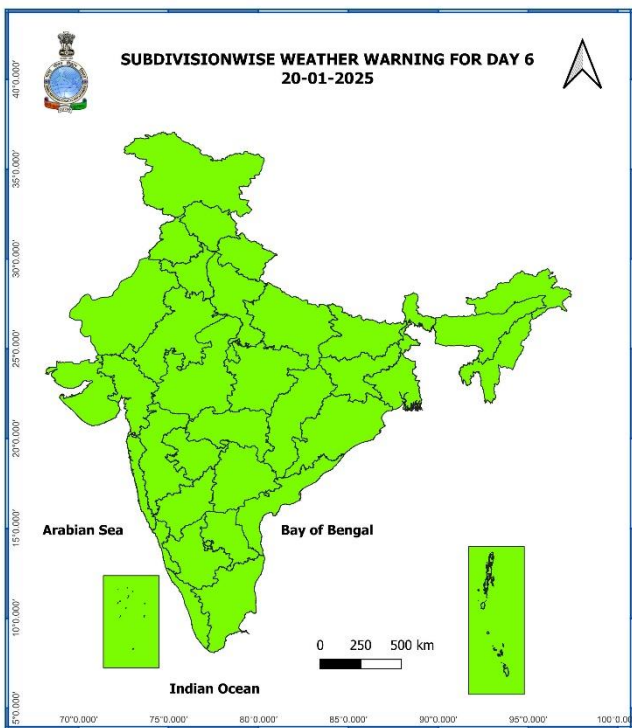
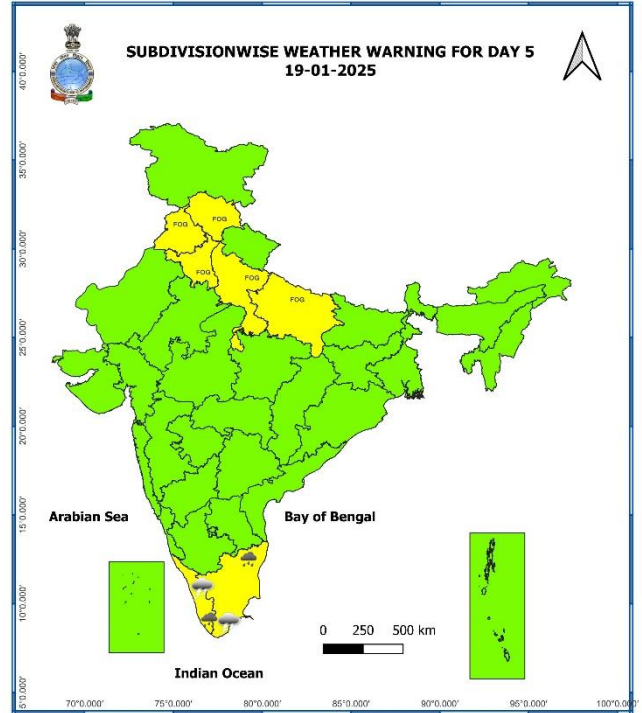
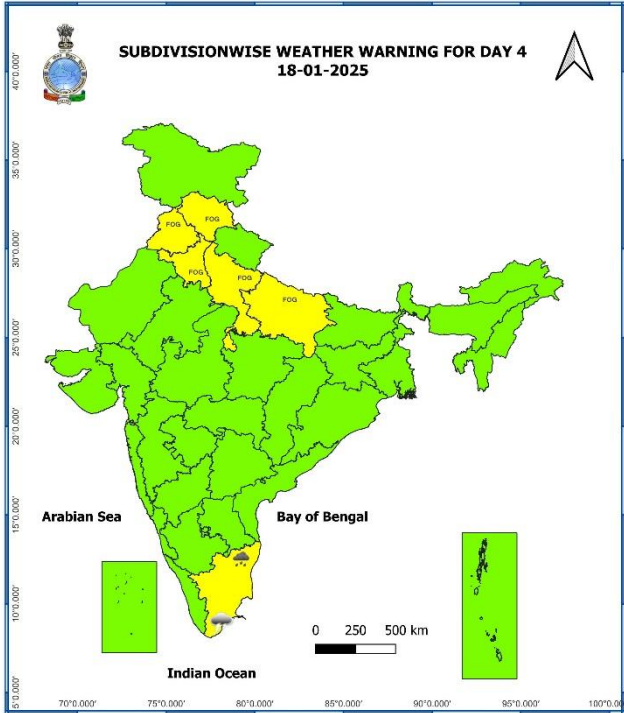
- ❖ **Tamilnadu Puducherry & Karaikal:** Oothu (dist Tirunelveli) 7, Nalumukku (dist Tirunelveli) 6, Kakkachi (dist Tirunelveli) 5, Manjolai (dist Tirunelveli) 4, Rameswaram (dist Ramanathapuram), Thangachimadam (dist Ramanathapuram) 3 each;
- ❖ **Coastal Karnataka:** Karkala (dist Udupi) 2

7 Days Rainfall Forecast

S. No.	Subdivision	15-Jan	16-Jan	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	SCT	FWS	FWS	SCT	ISOL	ISOL	ISOL
2	ARUNACHAL PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
3	ASSAM & MEGHALAYA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	DRY	DRY	DRY	DRY	DRY	DRY	DRY
6	GANGETIC WEST BENGAL	DRY	DRY	DRY	DRY	DRY	DRY	DRY
7	ODISHA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
8	JHARKHAND	DRY	DRY	DRY	DRY	DRY	DRY	DRY
9	BIHAR	DRY	DRY	DRY	DRY	DRY	DRY	DRY
10	EAST UTTAR PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
11	WEST UTTAR PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
12	UTTARAKHAND	ISOL	SCT	DRY	ISOL	ISOL	ISOL	ISOL
13	HARYANA CHANDIGARH & DELHI	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
14	PUNJAB	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
15	HIMACHAL PRADESH	ISOL	SCT	ISOL	ISOL	ISOL	ISOL	SCT
16	JAMMU & KASHMIR AND LADAKH	ISOL	ISOL	DRY	DRY	DRY	SCT	SCT
17	WEST RAJASTHAN	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	SCT	ISOL	DRY	DRY	ISOL	ISOL	DRY
19	WEST MADHYA PRADESH	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
20	EAST MADHYA PRADESH	ISOL	ISOL	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	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
25	MARATHAWADA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
26	VIDARBHA	DRY	ISOL	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	DRY	DRY	DRY	DRY	DRY	DRY	DRY
31	TAMILNADU PUDUCHERRY & KARAIKAL	ISOL	ISOL	ISOL	ISOL	SCT	ISOL	ISOL
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	ISOL	ISOL	ISOL	SCT	SCT	ISOL
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

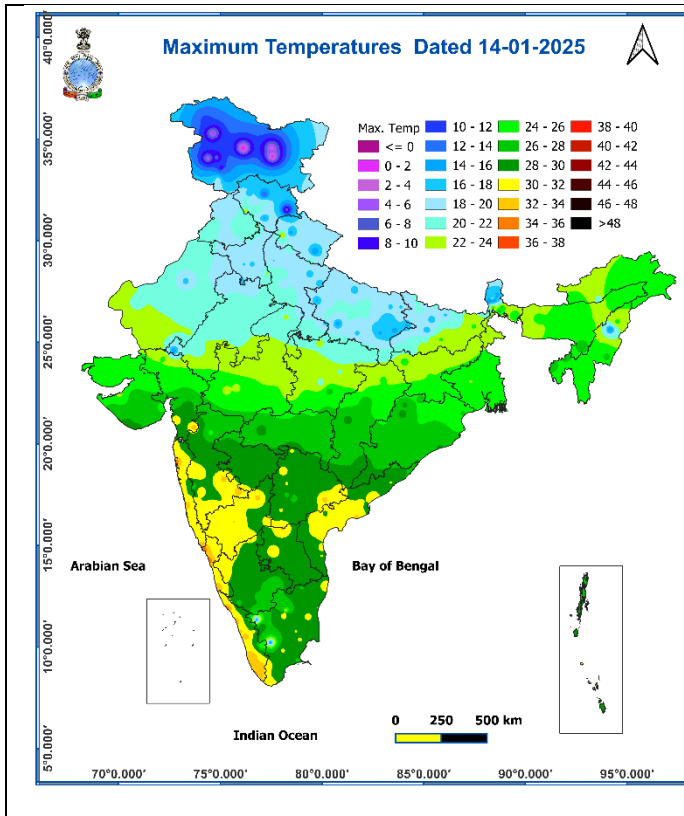


Fig. 2: Departure of Maximum Temperatures

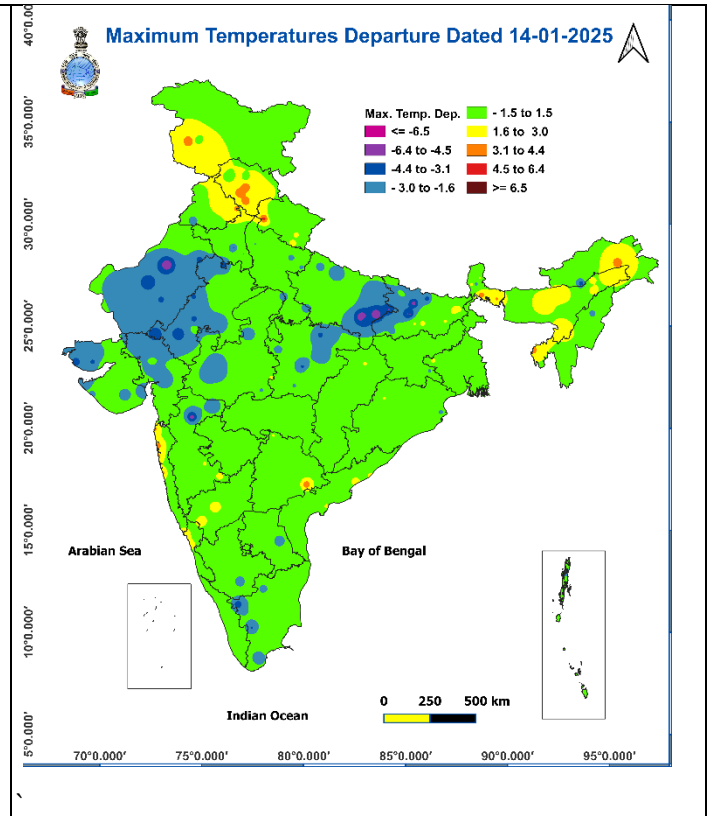


Fig. 3: Minimum Temperatures

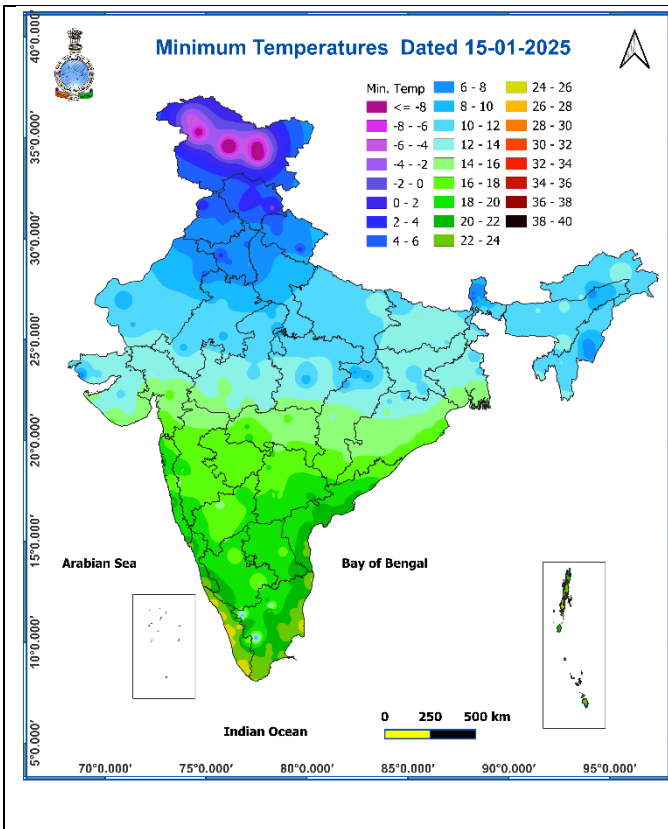
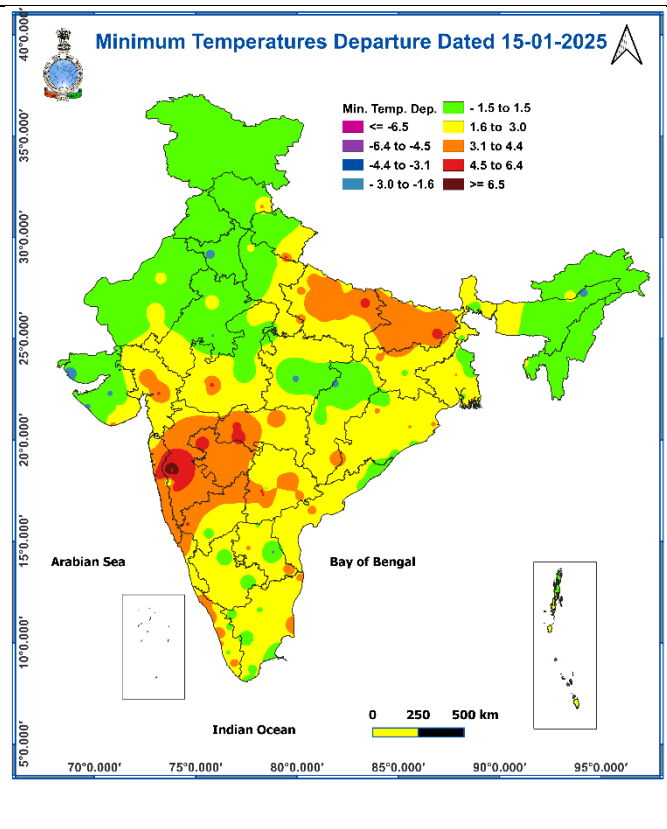
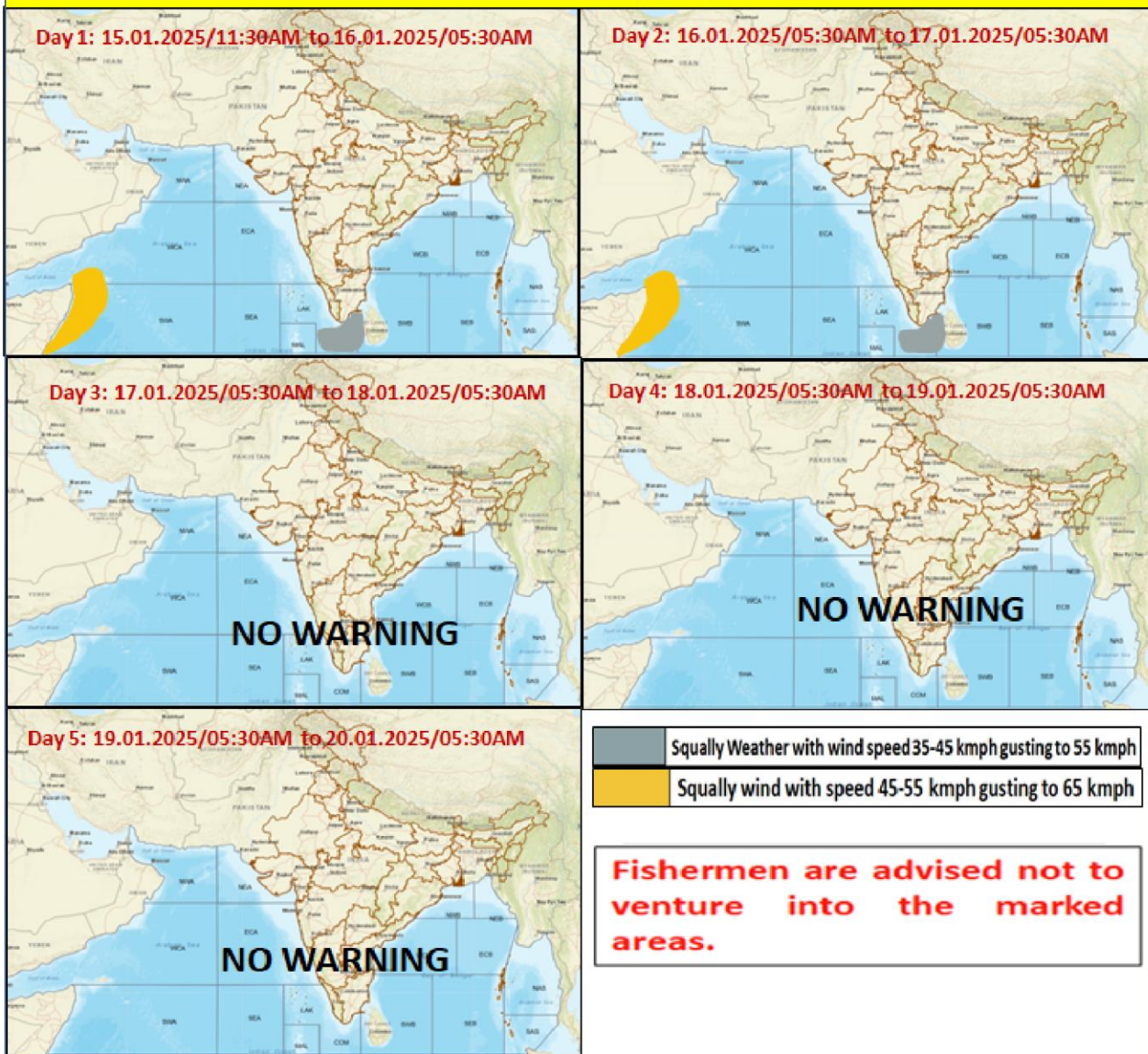


Fig. 4: Departure of Minimum Temperatures





Fishermen Warning Graphics



Weather forecast over Delhi/NCR during 15th to 18th Jan. 2025**Past Weather:**

There has been a fall in minimum temperature upto 03°C over Delhi/NCR during past 24hr. The Maximum and Minimum temperatures over Delhi are in the range of 18 to 21°C and 6 to 7°C respectively. The minimum temperature was near normal and maximum temperature was below normal upto 02°C over most places. Very dense fog was reported at Safdarjung and Palam airport. Safdarjung airport recorded the lowest visibility 00m from 0830 hours to 1000 hours IST which improved thereafter becoming 50 m at 1030 hours IST. Palam airport recorded the lowest visibility 00 m from 0900 hours to 1030 hours IST. Mainly smog/mist conditions with predominant surface wind from the northwest direction with wind speed reaching 10 to 12 kmph prevailed during daytime and calm wind during night time on 14.01.2025. Mainly moderate to dense fog conditions with wind speed less than 04 kmph variable direction prevailed over the region in the forenoon today.

Weather Forecast:

15.01.2024: Generally cloudy sky. Possibility of one or two spell of very light rain during night. The predominant surface wind will likely be in the northeast direction with a wind speed of less than 06 kmph till evening. It would decrease thereafter becoming less than 04 kmph from the northwest direction during the night. Smog/shallow to moderate fog is likely in the evening/night.

16.01.2025: Partly cloudy sky. Possibility of a spell of very light rain during morning hours. The predominant surface wind is likely to be from the north direction with a wind speed less than 04 kmph during morning hours. Smog/moderate fog in most of the places and dense fog in few places is likely in the morning. The wind speed will gradually increase thereafter becoming 06-08 kmph from northeast direction during afternoon. It will decrease becoming less than 06 kmph from northeast direction during evening and night. Smog/ shallow fog is likely in the evening/night.

17.01.2025: Mainly clear sky. The predominant surface wind is likely to be from north direction with wind speed less than 04 kmph during morning hours. Smog/ moderate fog in most of the places and dense fog in few places is likely in the morning. The wind speed will gradually increase thereafter becoming 10-12 kmph from northwest direction during afternoon. It will decrease becoming less than 06 kmph from north direction during evening and night. Smog/ shallow to moderate fog is likely in the evening/night.

18.01.2025: Mainly clear sky. The predominant surface wind will likely be in the northwest direction with a wind speed of less than 06 kmph during morning hours. Smog/ moderate fog in most of the places and dense fog in few places is likely in the morning. The wind speed will gradually increase thereafter becoming 10-12 kmph from northwest direction during afternoon. It will decrease becoming less than 04 kmph from north direction during evening and night. Smog/ shallow fog is likely in the evening/night.

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 Day/Severe Cold day 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:

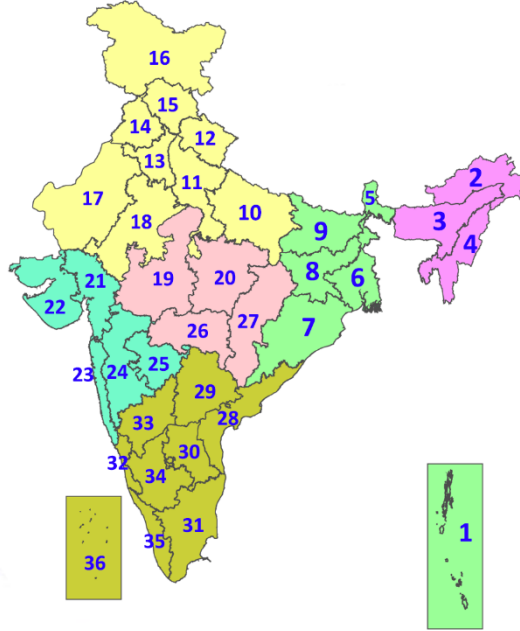
- ❖ Wear several layers of loose fitting, light weight; warm woollen clothing.
- ❖ Cover your head, neck, hands and toes adequately as majority of heat loss occurs through these body parts. Wear several layers of loose fitting, light weight; warm Woolen clothing rather than one layer of heavy cloth.
- ❖ 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.

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 Storm: 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
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