



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 18th January, 2025

Time of Issue: 1345 hours IST

**Subject: (i) Enhancement in rainfall activity over Northwest India on 22nd & 23rd January, 2025.
(ii) Dense to very dense fog conditions likely to continue over Northwest India during next 2 days and decrease in intensity thereafter.**

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

- ❖ **Cold day cold to severe cold day conditions** prevailed in isolated pockets of West Madhya Pradesh and **Cold day conditions** in isolated pockets of Rajasthan and East Madhya Pradesh.
- ❖ **Dense to very dense fog (visibility < 50 m)** reported in many parts of Haryana and East Uttar Pradesh; in some parts of Punjab, West Uttar Pradesh; in isolated pockets of Rajasthan, West Madhya Pradesh, Bihar, Meghalaya and **dense fog (visibility 50-199 m)** reported in isolated pockets of Uttarakhand, Chandigarh, East Madhya Pradesh and Sub-Himalayan West Bengal.
- ❖ **Visibility reported (<200 m)** (in meter): **Punjab:** Bathinda 0, Ludhiana 20, Faridkot 30, Gurdaspur 100; **Haryana:** Sirsa 0, Karnal 30, Bhiwani, Ambala, Hisar 150 each; **East Rajasthan:** Kota < 50; **West Rajasthan:** Ganganagar 0; **Meghalaya:** Barapani 30, Shillong airport 100; **Uttar Pradesh:** Bareilly 0, Bahraich 0, Ghoorpur 0, Lucknow 50, Ayodhya 50, Fursatganj 100, Varanasi 100; **West Madhya Pradesh:** Gwalior 0; **Bihar:** Purnea 0; **Uttarakhand:** Pantnagar 50; **Sub-Himalayan West Bengal:** Cooch Behar 50; **Chandigarh** 90.

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

- ❖ A Western Disturbance lies as a trough in lower and middle tropospheric levels roughly along Long. 58°E to the north of Lat. 28°N. A trough in easterlies extends from Gujarat to north Rajasthan in lower tropospheric levels. Under their influence, isolated to scattered rainfall/snowfall likely over Western Himalayan Region till 21st January.
- ❖ As the trough in westerlies moves eastwards and due to interaction with southeasterly winds from the Bay of Bengal, the distribution and intensity of rainfall/snowfall likely to increase over Western Himalayan region and commence over Northwest Indian plains during 21st to 23rd January with isolated to scattered activity over Punjab, Haryana, Chandigarh during 21st-23rd, Rajasthan on 22nd and West Uttar Pradesh on 22nd & 23rd January.
- ❖ Isolated **heavy snowfall** likely over Uttarakhand on 23rd January.
- ❖ A trough in easterlies lies over Southwest Bay of Bengal off Tamil Nadu coast in lower levels. Under its influence, scattered Light to moderate rainfall accompanied with **heavy rainfall**, thunderstorm & lightning at isolated places very likely at a few places over coastal Tamil Nadu, Puducherry & Karaikal on 18th and south interior Tamil Nadu, south Kerala on 19th January.

ii. Temperature, Cold Wave, Cold Day 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; **2-5°C** over some parts of Himachal Pradesh; **6-12°C** over many parts of Northwest & Central India; **12-16°C** over many parts of East & West India. Today, the lowest minimum temperature of **5.0°C** is reported at **Bulandshahr (West Uttar Pradesh)** 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 Madhya Maharashtra & Vidarbha; in some parts of Bihar, Sub-Himalayan West Bengal & Sikkim, Madhya Pradesh, Telangana,

Coastal Andhra Pradesh & Yanam; in isolated places of Chhattisgarh, Odisha and Kerala & Mahe and **rise by 3-6°C** in many parts of Himachal Pradesh; in isolated places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; **by 1-3°C** in some parts of Gujarat State & Gangetic West Bengal; in isolated places of Uttarakhand, Uttar Pradesh and Assam & Meghalaya.

- ❖ Minimum temperatures are **below normal (-1°C to -3°C)** at isolated places over East Rajasthan, Chhattisgarh and Odisha. These are **appreciably above normal (3°C to 5°C)** at isolated places over Gujarat Region, Assam & Meghalaya, Andaman & Nicobar Islands; **above normal (1°C to 3°C)** at many places over Tamilnadu Puducherry & Karaikal; at a few places over Uttar Pradesh, Saurashtra & Kutch, Konkan & Goa; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Haryana, Chandigarh & Delhi, Madhya Pradesh, Gangetic West Bengal, Jharkhand, Telangana, Rayalaseema, Kerala & Mahe and near normal over rest part of the country.

Forecast of temperature:

- ❖ Gradual rise in minimum temperatures by 3-5°C likely over plains of Northwest India during next 5 days.
- ❖ No significant change in minimum temperatures likely over Central India during next 3 days and gradual rise by 2-3°C thereafter.
- ❖ No significant change in minimum temperatures likely over Western Himalayan region, East & West India during next 5 days.

Cold Wave Warnings:

Cold wave conditions very likely in isolated pockets over Himachal Pradesh on 18th January.

Dense Fog Warnings:

Dense to very Dense fog Condition very likely to continue to prevail during night/early morning hours in some parts of Punjab, Haryana, Chandigarh, East Uttar Pradesh on 18th; in isolated pockets of West Uttar Pradesh and Rajasthan on 18th January.

Dense fog conditions very likely to continue to prevail during night/early morning hours in isolated pockets of Uttarakhand, Bihar & Odisha till 19th; Punjab, Haryana, Chandigarh, Uttar Pradesh & West Rajasthan on 19th & 20th; East Rajasthan during 19th-21st; Madhya Pradesh & Sub-Himalayan West Bengal & Sikkim till 20th; Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura till 21st January.

Cold Day Warnings:

Cold day conditions very likely in isolated pockets of Punjab, Haryana, Chandigarh & Rajasthan on 18th; Madhya Pradesh on 18th & 19th and Himachal Pradesh on 22nd January.

Fishermen Warnings (Annexure V):

Fishermen are advised not to venture into Comorin area & adjoining Gulf of Mannar on 18th & 19th; central parts of south Bay of Bengal on 18th January.

iii. Weather conditions and forecast over Delhi/NCR during 18th Jan. to 21st 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

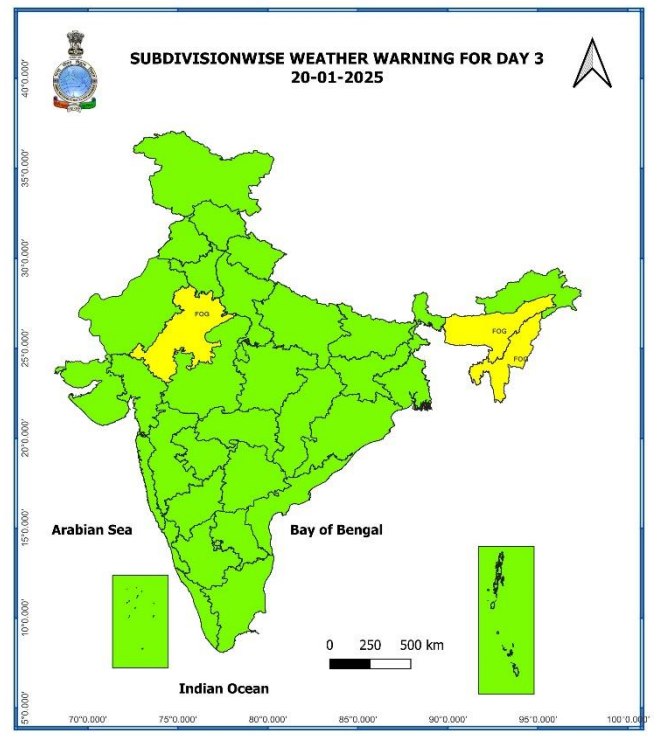
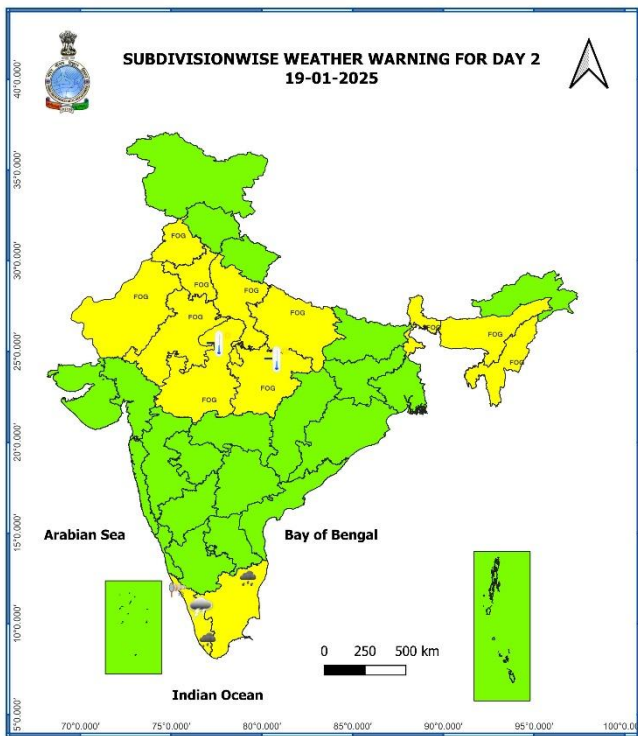
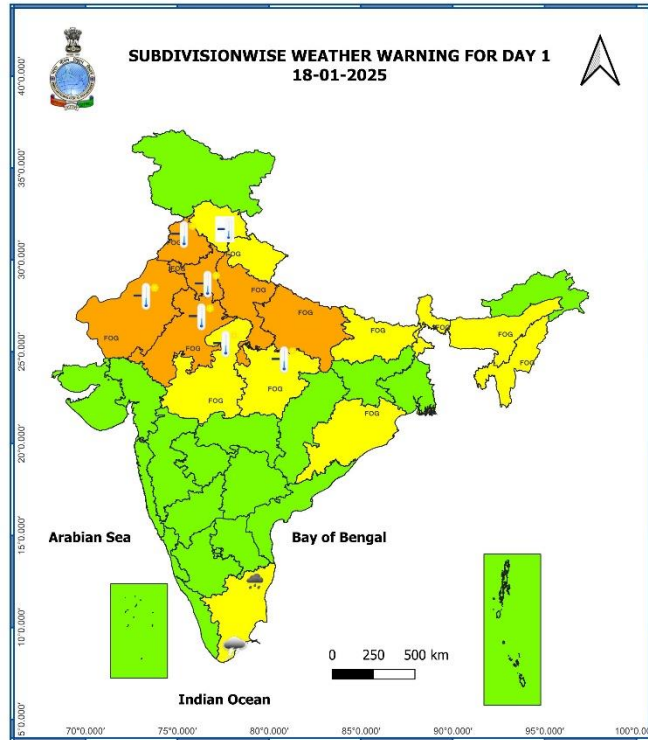
Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 18.01.2025 (in cm):

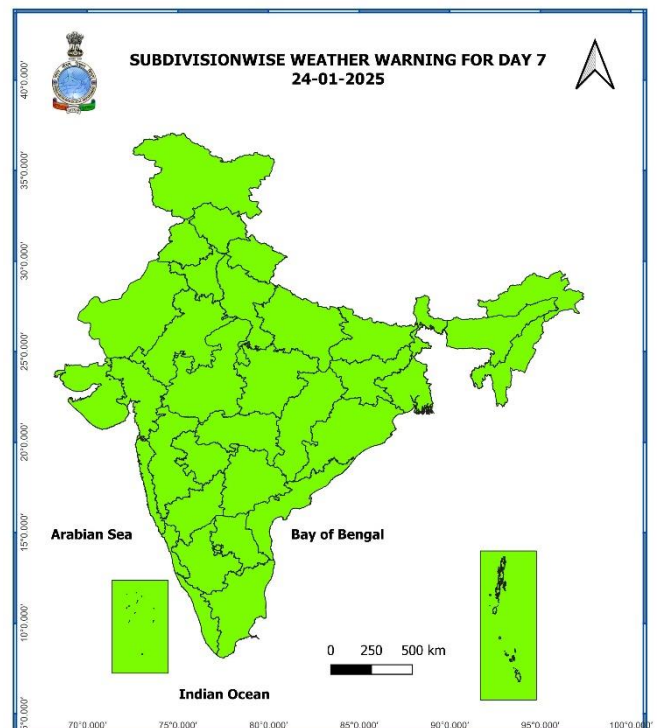
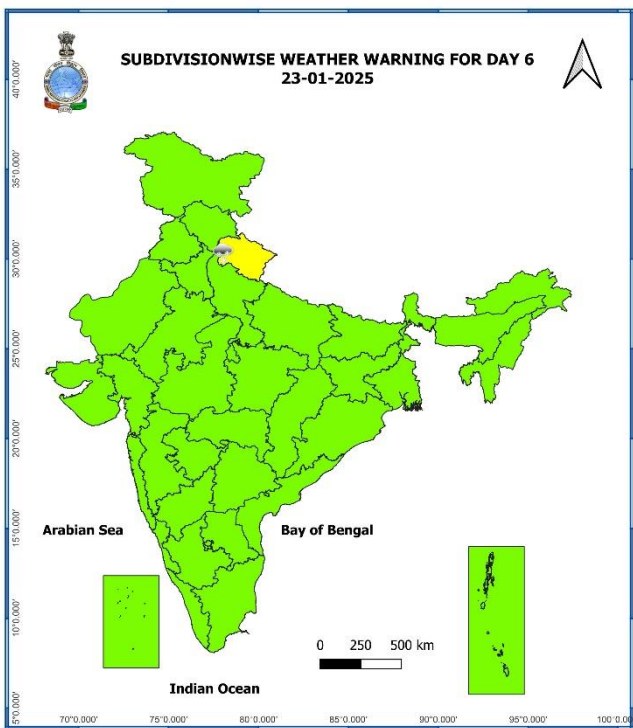
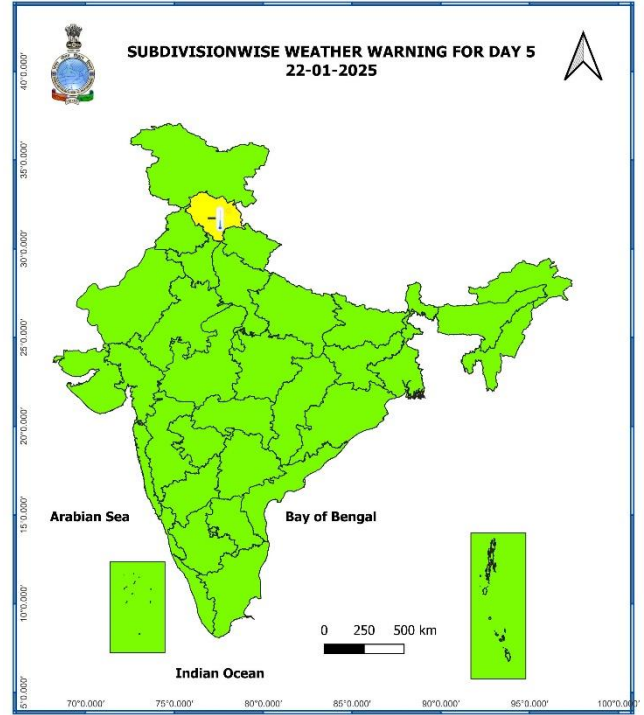
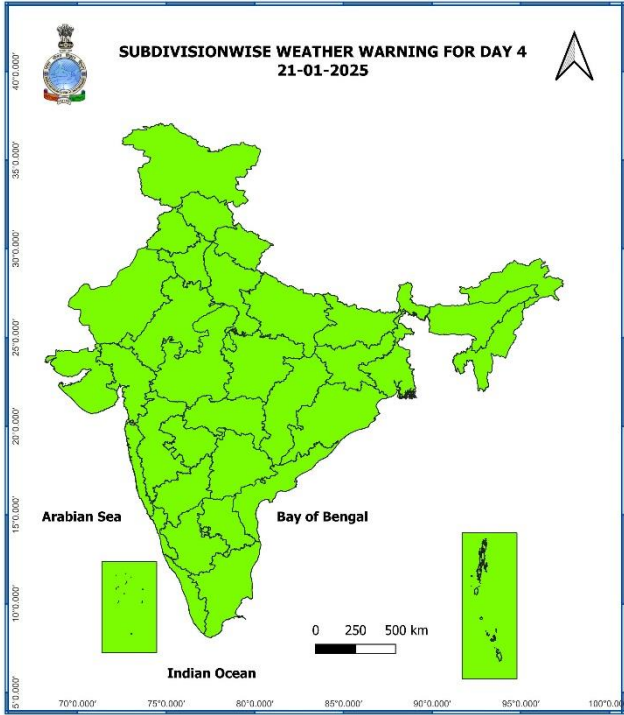
- ❖ **Andaman & Nicobar Islands:** Nancowry (dist Nicobar) 1;
- ❖ **Tamilnadu Puducherry & Karaikal:** Oothu (dist Tirunelveli) 1

7 Days Rainfall Forecast

S. No.	Subdivision	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	23-Jan	24-Jan
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
2	ARUNACHAL PRADESH	DRY	DRY	DRY	DRY	DRY	ISOL	ISOL
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	ISOL	ISOL
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	DRY	DRY	DRY	DRY	DRY	DRY	DRY
11	WEST UTTAR PRADESH	ISOL	DRY	DRY	DRY	ISOL	ISOL	DRY
12	UTTARAKHAND	ISOL	ISOL	ISOL	ISOL	WS	FWS	DRY
13	HARYANA CHANDIGARH & DELHI	ISOL	DRY	DRY	ISOL	SCT	SCT	DRY
14	PUNJAB	ISOL	DRY	DRY	ISOL	SCT	ISOL	DRY
15	HIMACHAL PRADESH	ISOL	ISOL	ISOL	ISOL	FWS	ISOL	ISOL
16	JAMMU & KASHMIR AND LADAKH	SCT	ISOL	SCT	SCT	FWS	FWS	SCT
17	WEST RAJASTHAN	DRY	DRY	DRY	DRY	ISOL	DRY	DRY
18	EAST RAJASTHAN	DRY	DRY	DRY	DRY	ISOL	DRY	DRY
19	WEST MADHYA PRADESH	DRY	DRY	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	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
29	TELANGANA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
30	RAYALASEEMA	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
31	TAMILNADU PUDUCHERRY & KARAIKAL	SCT	SCT	ISOL	ISOL	DRY	DRY	DRY
32	COASTAL KARNATAKA	DRY	ISOL	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	ISOL	ISOL	ISOL	ISOL	DRY	DRY	DRY
36	LAKSHADWEEP	DRY	SCT	SCT	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.

Fig. 1: Maximum Temperatures

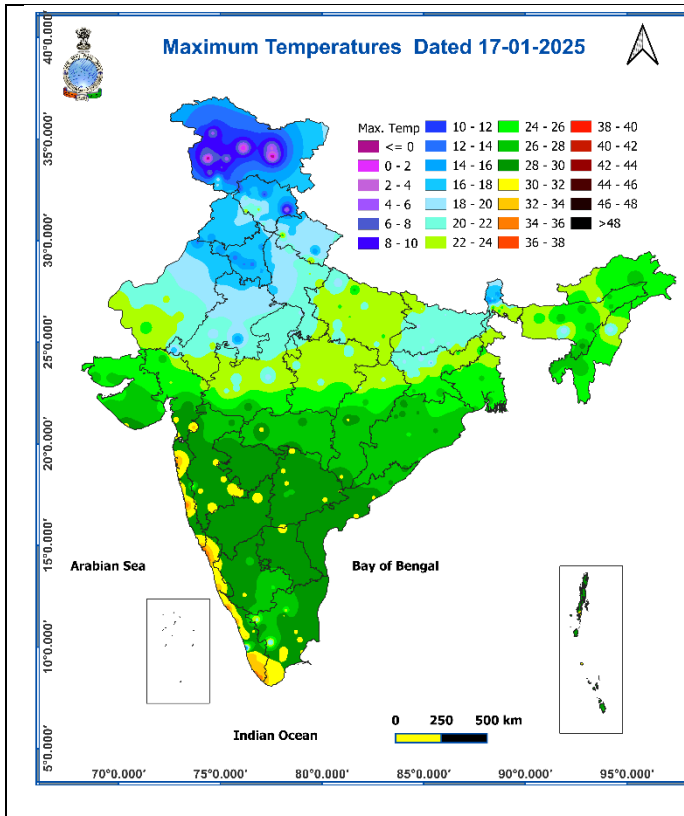


Fig. 2: Departure of Maximum Temperatures

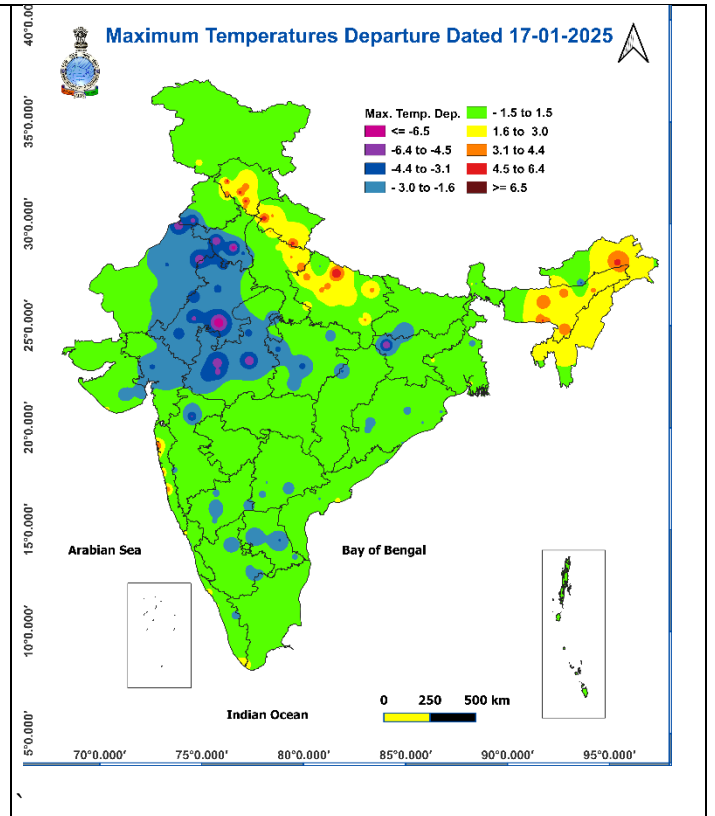


Fig. 3: Minimum Temperatures

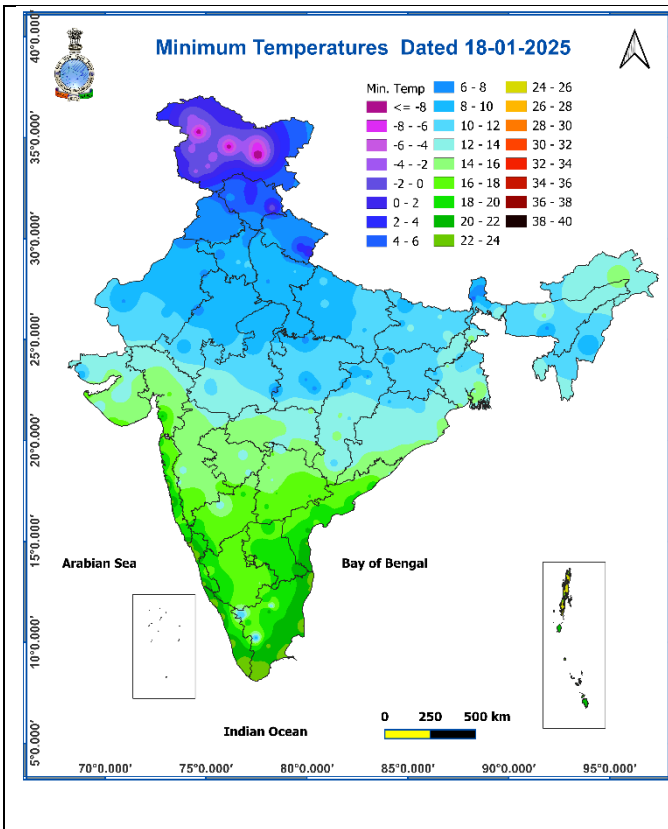
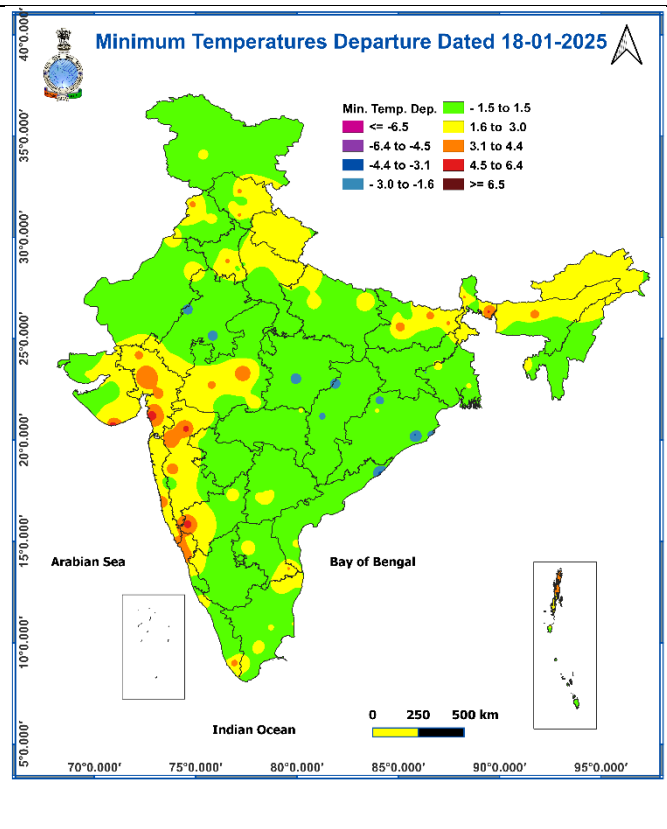
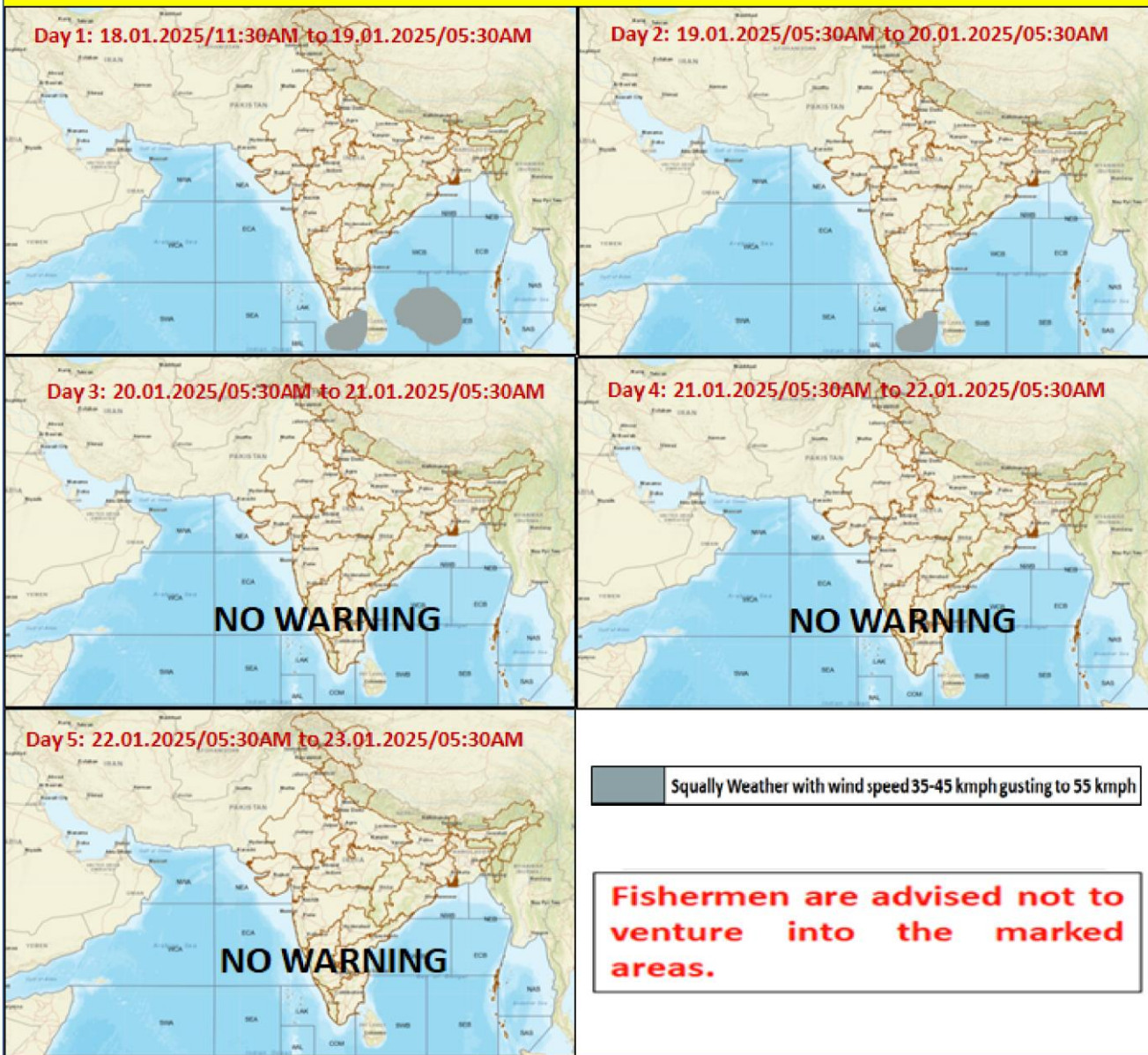


Fig. 4: Departure of Minimum Temperatures





Fishermen Warning Graphics



Weather forecast over Delhi/NCR during 18th to 21st Jan. 2025

Past Weather:

There has been a rise in minimum temperature upto 01°C over Delhi/NCR during past 24hr. The Maximum and Minimum temperatures over Delhi are in the range of 15 to 18°C and 9 to 10°C respectively. The minimum temperature was above normal upto 04°C and maximum temperature was below normal upto 04°C over most places. Moderate fog was reported at Palam airport. Palam airport recorded the lowest visibility 200m from 0330 hours to 0430 hours IST which improved thereafter becoming 250 m at 0500 hours IST. Safdarjung airport recorded the lowest visibility 500 m from 0330 hours to 0800 hours IST which improved thereafter becoming 800 m at 0830 hours IST. Mainly smog/mist conditions with predominant surface wind from the northwest direction with wind speed reaching 12 to 16 kmph prevailed during past 24hr. Mainly smog/mist conditions with wind speed less than 08 kmph southwest direction prevailed over the region in the forenoon today.

Weather Forecast:

18.01.2024: Partly cloudy sky. The predominant surface wind will likely be in the northwest direction with a wind speed of less than 08 kmph till evening. It would decrease thereafter becoming less than 06 kmph from the northwest direction during the night. Smog/shallow fog is likely in the evening/night.

19.01.2025: Partly cloudy sky. The predominant surface wind is likely to be from the northwest direction with a wind speed less than 06 kmph during morning hours. Smog/moderate fog in most of the places very likely to commence during early morning hours with dense fog in isolated places during morning hours. The wind speed will gradually increase thereafter becoming 10-12 kmph from northwest direction during afternoon. It will decrease becoming less than 08 kmph from northwest direction during evening and night. Smog/shallow fog is likely in the evening/night.

20.01.2025: Mainly clear sky. The predominant surface wind is likely to be from northwest direction with wind speed less than 08 kmph during morning hours. Smog/shallow fog in most of the places very likely to commence during early morning hours with moderate fog in few places during morning hours. The wind speed will increase thereafter becoming 16-18 kmph from northwest direction during afternoon. It will gradually increase becoming less than 12 kmph from northwest direction during evening and night. Smog/shallow fog is likely in the evening/night.

21.01.2025: Partly cloudy sky. The predominant surface wind will likely be in the northwest direction with a wind speed of less than 08 kmph during morning hours. Smog/ shallow fog in most of the places very likely to commence during early morning hours with moderate fog in few places during morning hours. 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 northwest 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 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 likely impact of Heavy Rainfall / Cold Wave

- In **Himachal Pradesh**, 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.
- Make necessary arrangements to drain out excess water from standing crop fields and vegetables, as well as orchards in **Tamil Nadu** and **Kerala**.
- 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.

Livestock

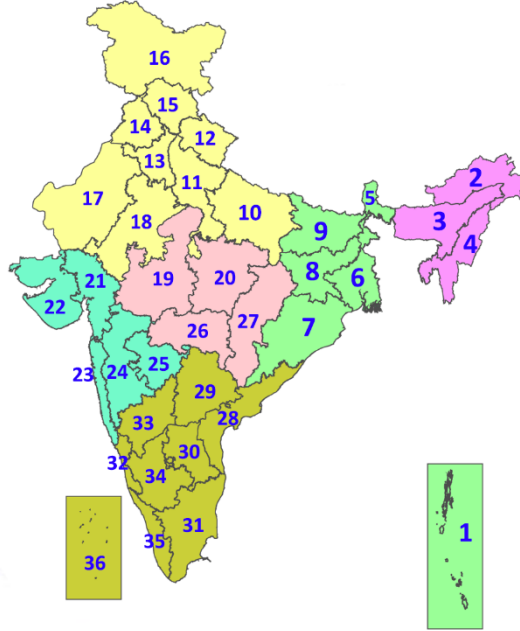
- Keep the animals inside the shed during heavy rainfall period and provide them balanced feed. Store feed and fodder in a safe place to prevent spoilage.
- To protect from cold, keep cattle inside the sheds during night and provide dry bedding. Also keep the chicks warm by providing artificial light 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. 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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