



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 19th January, 2025

Time of Issue: 1315 hours IST

Subject: Wet spell likely to continue over Western Himalayan Region till 23rd and likely over plains of northwest India on 22nd & 23rd January, 2025.

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

- ❖ **Heavy to very heavy rainfall** observed at isolated places over Tamilnadu.
- ❖ **Dense to very dense fog (visibility < 50 m)** reported in many parts of Uttar Pradesh; in isolated pockets of West Rajasthan, Punjab, West Madhya Pradesh and **dense fog (visibility 50-199 m)** reported in isolated pockets of Uttarakhand, Haryana, East Madhya Pradesh, Meghalaya, Manipur, Bihar, Odisha.
- ❖ **Visibility reported (<200 m)** (in meter): **Punjab:** Amritsar 00; **West Rajasthan:** Churu 00, Ganganagar 00; **East Uttar Pradesh:** Kanpur 00, Prayagraj Airport 00; **West Uttar Pradesh:** Agra 00, Meerut 00, Bareilly 00; **West Madhya Pradesh:** Gwalior 00; **East Madhya Pradesh:** Rewa 50; **Uttarakhand:** Pant Nagar 50; **Haryana:** Bhiwani 50; **Bihar:** Valmiki Nagar 50; **Odisha:** Nayagarh 60; **Manipur:** Imphal 100; **Meghalaya:** Barapani 50.

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

- ❖ The Western Disturbance now seen as a trough in lower tropospheric level roughly along Long. 65°E to the north of Lat. 30°N. An induced cyclonic circulation lies over southwest Rajasthan & adjoining Pakistan at lower tropospheric level. A fresh Western Disturbance as a trough in middle & upper tropospheric levels runs roughly along Long. 52°E to the north of Lat. 28°N. Under the influence of these systems:
 - ✓ Isolated to Scattered rainfall/snowfall very likely over Western Himalayan Region till 21st; scattered to fairly widespread rainfall/snowfall on 22nd & 23rd; and isolated to scattered rainfall accompanied with thunderstorm & lightning likely over Punjab, Haryana Chandigarh & Delhi, north Rajasthan & West Uttar Pradesh on 22nd & 23rd January.
- ❖ Due to strong northeasterly winds over Tamilnadu coast, scattered Light to moderate rainfall accompanied with **heavy to very heavy rainfall** over coastal Tamilnadu Puducherry & Karaikal on 19th; **Heavy Rainfall** over Kerala & Mahe on 19th; **Thunderstorm & lightning** at isolated places very likely over coastal Tamil Nadu, Puducherry on 19th & 20th and 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 few parts of Himachal Pradesh & Punjab; **6-12°C** over many parts of Northwest, Northeast & Central India; **12-16°C** over many parts of East & West India. Today, the lowest minimum temperature of **4.8°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 isolated parts of East Madhya Pradesh, Chhattisgarh, Vidarbha, Telangana, Odisha, Gangetic West Bengal, Assam & Meghalaya, Maharashtra & North interior Karnataka and **rise by 3-6°C** in some parts West Madhya Pradesh; in isolated places of Himachal Pradesh West Uttar Pradesh, Saurashtra & Kutch, Gujarat State; **by 1-3°C** in some parts of Coastal Andhra Pradesh & Yanam, Kerala; in isolated places of Rajasthan, Haryana.
- ❖ Minimum temperatures are **markedly above normal (5°C or more)** at a few places over Gujarat Region; **appreciably above normal (3°C to 5°C)** at many places over West Rajasthan; at a few places over East Rajasthan, West Madhya Pradesh, Saurashtra & Kutch, Coastal Karnataka and Kerala & Mahe; at isolated places

over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttar Pradesh, Bihar, Madhya Pradesh, Maharashtra, Tamil Nadu, Puducherry & Karaikal and Coastal Andhra Pradesh & Yanam; **above normal (1°C to 3°C)** at many places over Punjab and Assam & Meghalaya; at a few places over Haryana-Chandigarh-Delhi, Konkan & Goa, South Interior Karnataka and Rayalaseema; at isolated places over East Madhya Pradesh and Gangetic West Bengal. These are **below normal (-1°C to -3°C)** at isolated places over Chhattisgarh and near normal over rest parts of the country.

Forecast of temperature:

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

Dense Fog Warnings:

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

Cold Day Warnings:

Cold day conditions very likely in isolated pockets of Himachal Pradesh on 23rd January.

Fishermen Warnings (Annexure V):

Fishermen are advised not to venture into Comorin area & adjoining Gulf of Mannar, South Sri Lanka coast on 19th & 20th; southwest Bay of Bengal on 19th January.

iii. Weather conditions and forecast over Delhi/NCR during 19th Jan. to 22nd 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>

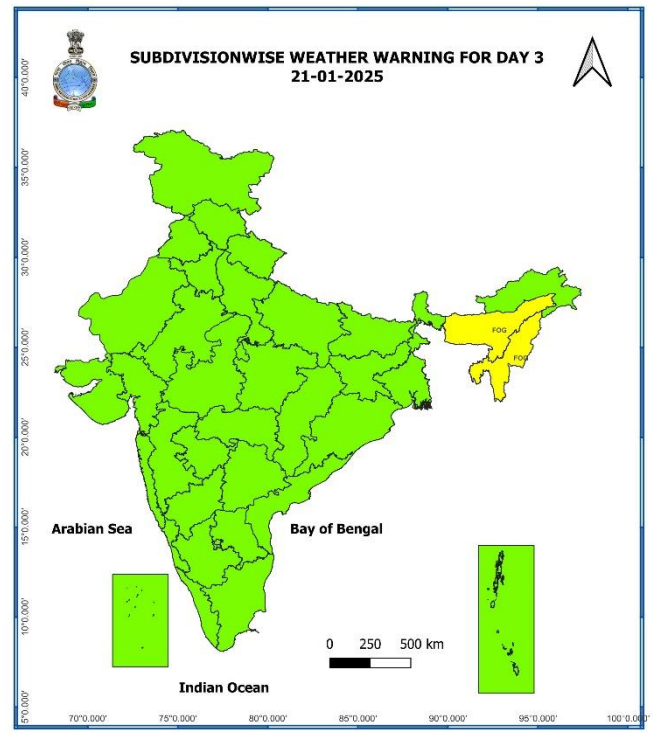
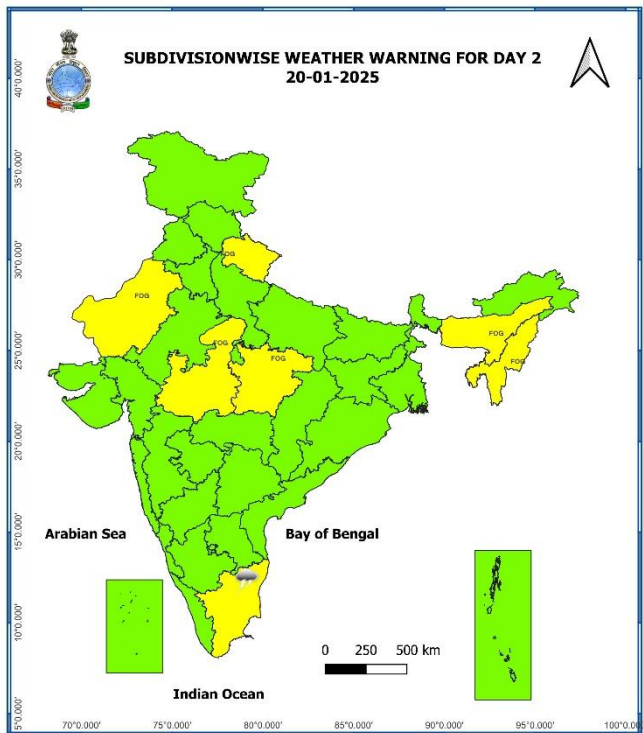
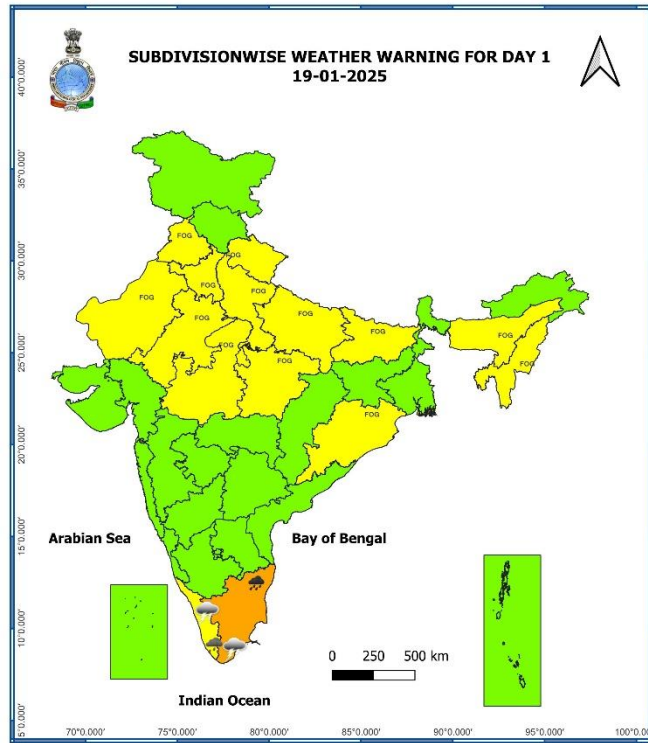
ANNEXURE I

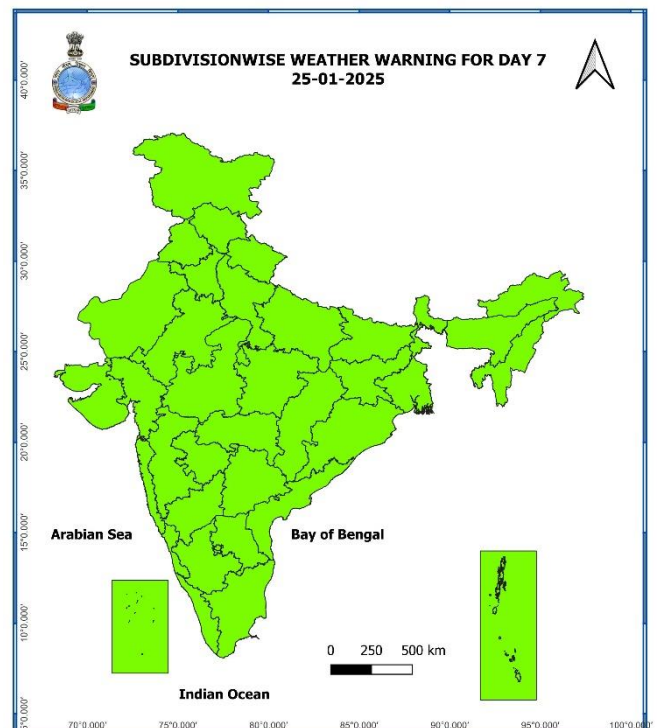
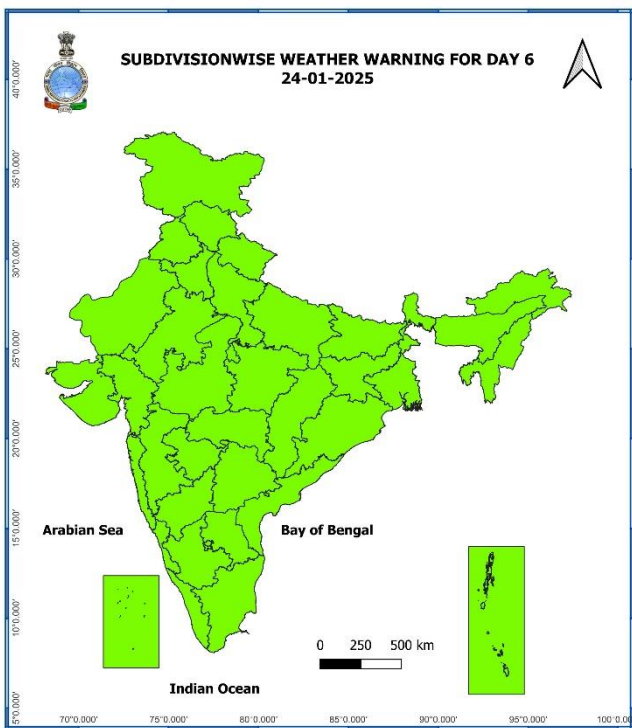
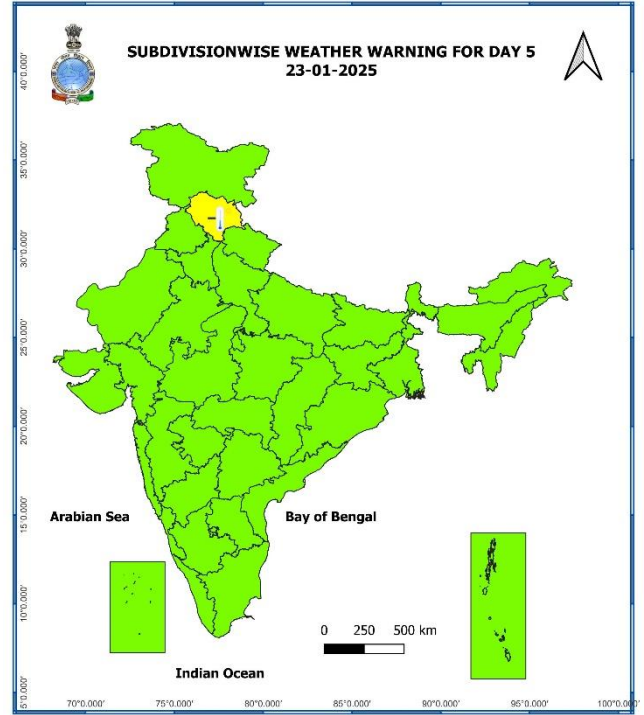
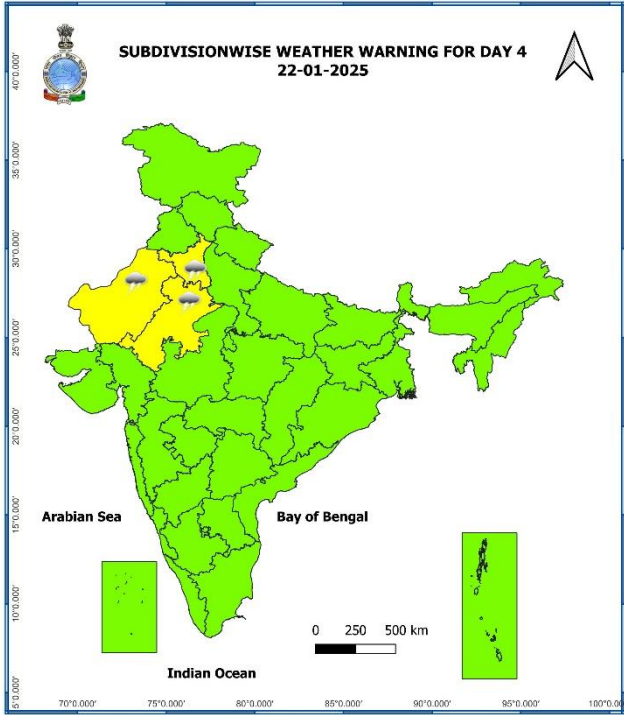
Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 19.01.2025 (in cm):

- ❖ **Tamilnadu Puducherry & Karaikal:** Oothu (dist Tirunelveli) 15; Nalumukku (dist Tirunelveli) 14; Kakkachi (dist Tirunelveli), Tarangambadi (dist Mayiladuthurai) 12 each; Sembanarkoil PWD (dist Mayiladuthurai), Manjolai (dist Tirunelveli), Mayiladuthurai (dist Mayiladuthurai) 11 each; Mayiladuthurai AWS (dist Mayiladuthurai) 10 each; Tirupoondi (dist Nagapattinam) 8 each; Thalaigayyer (dist Nagapattinam), Ponneri (dist Tiruvallur) 7 each;

7 Days Rainfall Forecast								
S. No.	Subdivision	19-Jan	20-Jan	21-Jan	22-Jan	23-Jan	24-Jan	25-Jan
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	ISOL	ISOL	ISOL	ISOL	ISOL	SCT	SCT
2	ARUNACHAL PRADESH	DRY	DRY	DRY	DRY	ISOL	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	ISOL	ISOL	ISOL
6	GANGETIC WEST BENGAL	DRY	DRY	DRY	DRY	ISOL	ISOL	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	DRY	DRY	DRY	ISOL	ISOL	DRY	DRY
12	UTTARAKHAND	ISOL	ISOL	ISOL	FWS	FWS	DRY	DRY
13	HARYANA CHANDIGARH & DELHI	DRY	DRY	ISOL	SCT	ISOL	DRY	DRY
14	PUNJAB	DRY	DRY	ISOL	SCT	DRY	DRY	DRY
15	HIMACHAL PRADESH	ISOL	DRY	ISOL	SCT	FWS	ISOL	DRY
16	JAMMU & KASHMIR AND LADAKH	ISOL	SCT	SCT	FWS	SCT	SCT	ISOL
17	WEST RAJASTHAN	DRY	DRY	DRY	ISOL	DRY	DRY	DRY
18	EAST RAJASTHAN	DRY	DRY	DRY	ISOL	DRY	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	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	FWS	SCT	ISOL	ISOL	ISOL	DRY	DRY
32	COASTAL KARNATAKA	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
33	NORTH INTERIOR KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
34	SOUTH INTERIOR KARNATAKA	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
35	KERALA & MAHE	ISOL	ISOL	ISOL	ISOL	ISOL	DRY	DRY
36	LAKSHADWEEP	WS	FWS	SCT	DRY	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

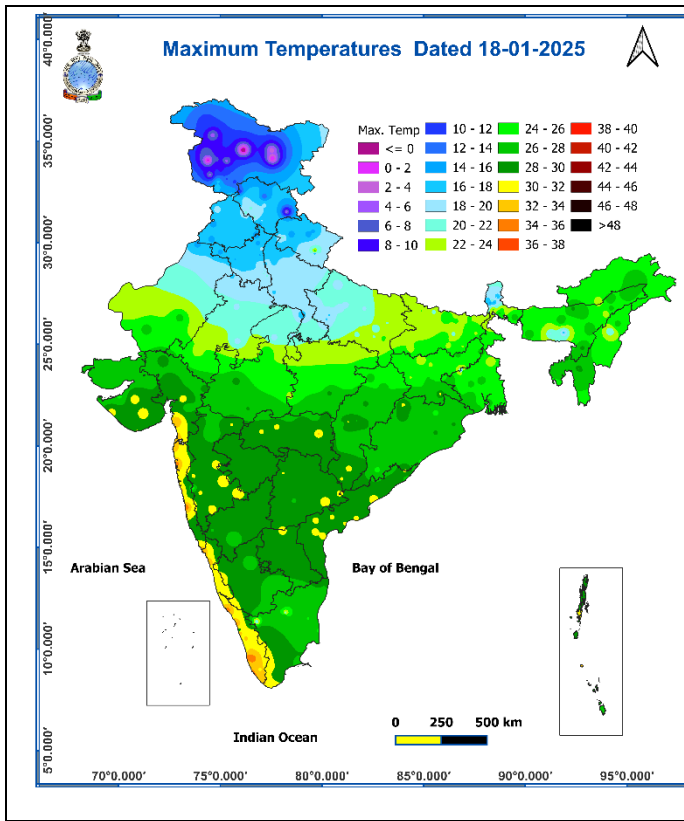


Fig. 2: Departure of Maximum Temperatures

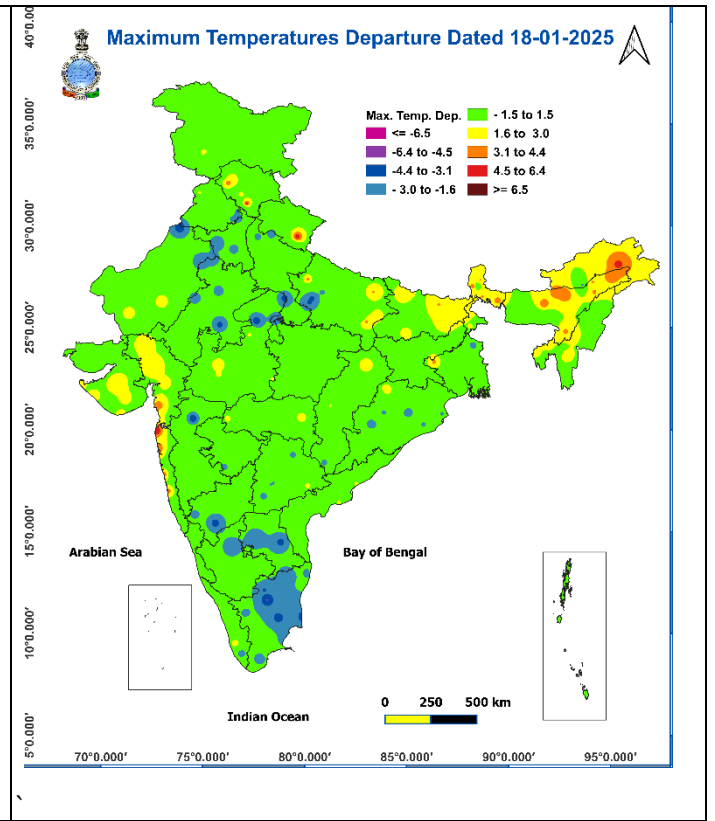


Fig. 3: Minimum Temperatures

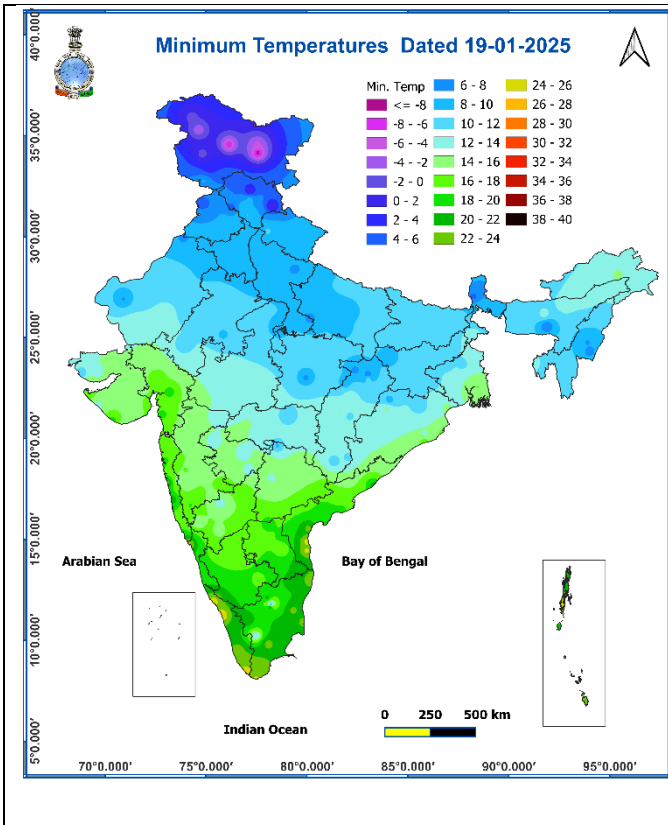
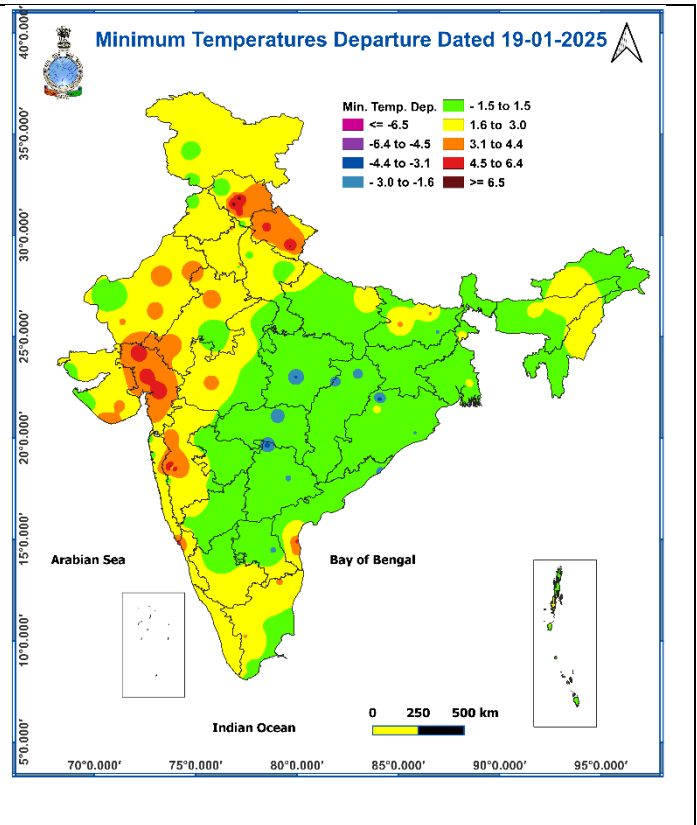
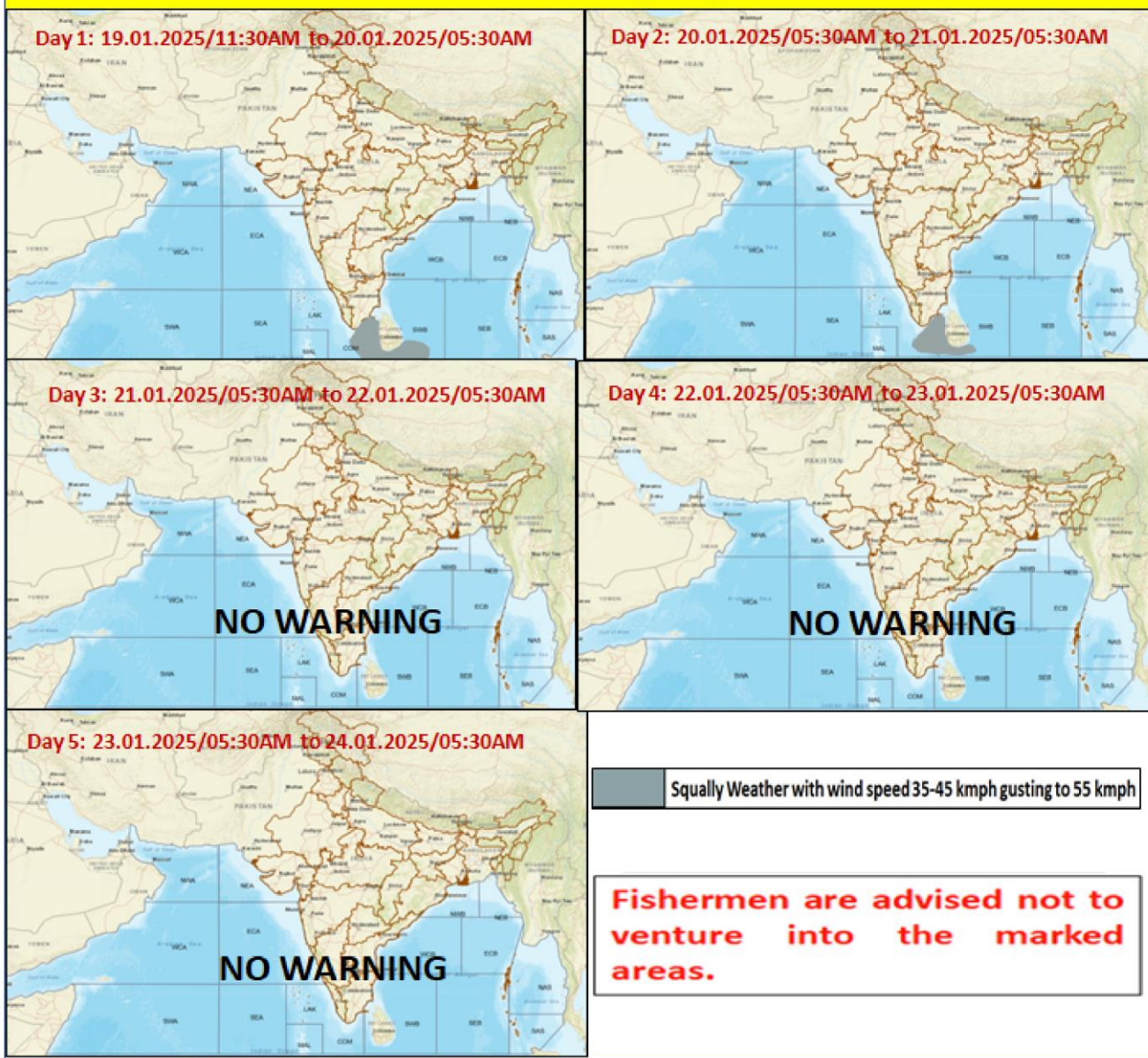


Fig. 4: Departure of Minimum Temperatures





Fishermen Warning Graphics



Weather forecast over Delhi/NCR during 19th to 22th Jan. 2025**Past Weather:**

There has been a fall in minimum temperature upto 01°C over Delhi/NCR during past 24hr. The Maximum and Minimum temperatures over Delhi are in the range of 18 to 21°C and 8 to 10°C respectively. The minimum temperature was above normal upto 03°C and maximum temperature was near normal over most places. Moderate fog was reported at Safdarjung airport. Safdarjung airport recorded the lowest visibility 200m from 0700 hours to 0730 hours IST which improved thereafter becoming 300 m at 0800 hours IST. Palam airport recorded the lowest visibility 600 m from 0830 hours to 0900 hours IST which improved thereafter becoming 800 m at 0930 hours IST. Mainly smog/mist conditions with predominant surface wind from the northwest direction with wind speed reaching 06 to 08 kmph prevailed during daytime and calm wind during night time on 18.01.2025. Mainly smog/mist conditions with wind speed less than 04 kmph variable direction prevailed over the region in the forenoon today.

Weather Forecast:

19.01.2024: 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 increase thereafter becoming less than 10 kmph from the northwest direction during the 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 the northwest direction with a wind speed less than 10 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 12-14 kmph from northwest direction during afternoon. It will decrease becoming less than 10 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 is likely to be from northwest direction with wind speed less than 10 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 10-12 kmph from northwest direction during afternoon. It will gradually increase becoming less than 08 kmph from northwest direction during evening and night. Smog/shallow fog is likely in the evening/night.

22.01.2025: Generally cloudy sky. Possibility of one or two spell of very light to light rain with thunderstorm during evening/night. The predominant surface wind will likely be in the north direction with a wind speed of less than 04 kmph during morning hours. Smog/moderate fog very likely during morning hours. The wind speed will gradually increase thereafter becoming 06-08 kmph from southeast 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.

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.

Agromet advisories for likely impact of Heavy Rainfall / Cold Wave

- Drain out excess water from rice, sugarcane, cotton, turmeric, vegetables, and other standing crop fields, as well as coconut and banana orchards in **Tamil Nadu** and from rice, coffee, banana, coconut, arecanut, ginger, pepper, cardamom and other standing crops in **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

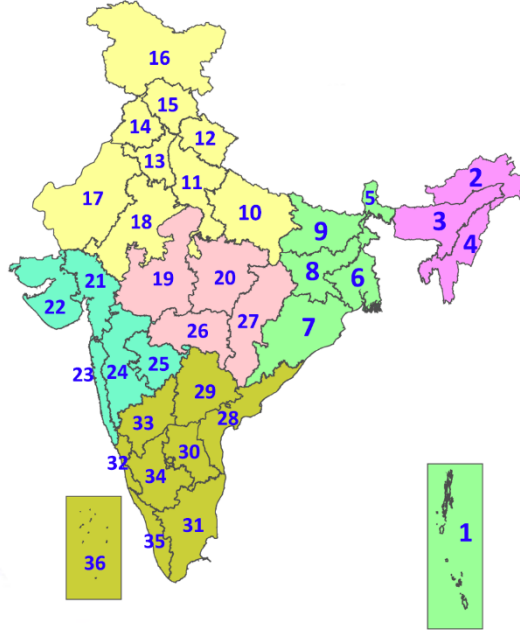
- Keep the animals inside the shed during heavy rainfall period and provide them balanced feed.
- Store feed and fodder in a safe place to prevent spoilage.
- Check and disinfect poultry houses to prevent disease outbreaks due to dampness.

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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