

Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 11th January, 2025

Time of Issue: 1315 hours IST

Subject: (i) In association with the Western disturbance and its interaction with easterly winds, wet spell likely over Northwest & adjoining Central India accompanied with thunderstorm & hail on 11th and 12th January.
(ii) Dense to very dense fog conditions likely to continue over North, East & Northeast India during next 2- 5 days.

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

- ❖ **Cold day conditions** prevailed in isolated pockets of Punjab and Haryana.
- ❖ **Ground Frost conditions** reported in isolated pockets of Himachal Pradesh and Uttarakhand.
- ❖ **Dense to very dense fog (visibility < 50 m)** reported in some parts of Punjab and Uttar Pradesh; in isolated pockets of Haryana, West Madhya Pradesh and **dense fog (visibility 50-200 m)** reported in isolated pockets of East Madhya Pradesh, Himachal Pradesh and Tripura.
- ❖ **Visibility reported (<200 m)** (in meter): **Punjab:** Ludhiana, Patiala, Adampur 00 each; **Haryana:** Ambala 00; **East Uttar Pradesh:** Kushinagar, Varanasi, Kanpur 00 each; **West Madhya Pradesh:** Gwalior 00; **West Uttar Pradesh:** Shahjahanpur 10, Meerut, Agra 30 each, **Tripura:** Agartala 50, Kailashahar 200; **Himachal Pradesh:** Bilaspur, Una, Dehradun 50 each.
- ❖ **Heavy rainfall** recorded at isolated places over Tamilnadu Puducherry & Karaikal.

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

- ❖ A Western Disturbance as a Cyclonic Circulation lies over central Pakistan & neighbourhood in lower & upper tropospheric levels. An induced cyclonic circulation lies over West Rajasthan & neighbourhood with a trough extending from it to northeast Arabian Sea in lower tropospheric levels. There is likely interaction of westerly in association with Western Disturbance and easterly winds at lower tropospheric levels. Under its influence, Light/moderate isolated to scattered rainfall likely over the plains of Northwest India and adjoining central India and rainfall/snowfall likely over Western Himalayan region on 11th & 12th January.
- ✓ Thunderstorm activity accompanied by hailstorms at isolated places likely over Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh, West Uttar Pradesh, Rajasthan, West Madhya Pradesh on 11th and Thunderstorm activity over East Uttar Pradesh & Madhya Pradesh on 11th & 12th and Chhattisgarh on 12th January.
- ✓ Light to moderate rainfall accompanied with thunderstorm, lightning very likely at a few places over Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura and Assam & Meghalaya on 13th January.
- ❖ A cyclonic circulation lies over Southwest & adjoining Southeast Bay of Bengal in lower tropospheric levels. Under its influence,
 - ✓ Light to moderate rainfall accompanied with thunderstorm, lightning very likely at a few places over Tamil Nadu, Puducherry & Karaikal during 11th - 15th; Coastal Andhra Pradesh & Yanam during 12th-14th and Rayalaseema on 13th & 14th; and Kerala & Mahe during 13th-15th January with Isolated **heavy rainfall** likely over Tamilnadu, Puducherry & Karaikal during next 5 days.
- ❖ A fresh **western disturbance** is likely to affect northwest India from the night of 14th January, 2025. Under its influence, Isolated rainfall/snowfall activity likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh during 15th -17th and Isolated rainfall activity over East Rajasthan on 14th & 15th 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; in isolated places of Himachal Pradesh; **1-5°C** over some parts of Himachal Pradesh; in isolated places of Uttar Pradesh; **6-12°C** over many parts of Northwest, Central & East India; **12-16°C** over many parts of West India. Today, the lowest minimum temperature of **4.5°C** is reported at **Dehri (Bihar)** over the plains of the country.
- ❖ During the past 24 hours, there has been **fall in minimum temperatures** by 1-2°C in isolated places over Himachal Pradesh and Uttarakhand and **rise by 3-6°C** over isolated places of Rajasthan; by 1-3°C over many parts of Madhya Pradesh; in some parts of Bihar, Maharashtra, Tamilnadu, Puducherry & Karaikal; in isolated places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Gujarat State, Chhattisgarh, Odisha and Telangana.
- ❖ Minimum temperatures are **below normal (-1°C to -3°C)** at many places over Uttar Pradesh; at a few places over Jharkhand, West Bengal & Sikkim, Odisha; at isolated places over East Madhya Pradesh and Coastal Andhra Pradesh & Yanam. These are **appreciably above normal (3°C to 5°C)** at a few places over Rajasthan, Gujarat State, Madhya Maharashtra, Tamilnadu Puducherry & Karaikal; **above normal (1°C to 3°C)** at isolated places over Haryana, Chandigarh & Delhi, West Madhya Pradesh, Bihar, Marathwada, Vidarbha, Konkan & Goa, Telangana, Rayalaseema and near normal over rest part of the country.

Forecast of temperature:

- ❖ No significant change in minimum temperatures likely over Northwest India during next 24 hours and gradual fall by about 2°C during subsequent 2 days, thereafter rise by about 2°C.
- ❖ Gradual rise in minimum temperatures by 2-3°C likely over Central India during next 2 days and no significant change thereafter.
- ❖ Gradual rise in minimum temperatures by 2-3°C likely over East India during next 3 days and gradual fall by 2-3°C thereafter.
- ❖ No significant change in minimum temperatures likely over 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 Punjab, Haryana-Chandigarh on 12th & 13th; in isolated pockets of Rajasthan and East Uttar Pradesh till 12th January.

Dense fog conditions very likely to continue to prevail during night/early morning hours in isolated pockets of Punjab, Haryana, Chandigarh on 11th & during 14th-16th; Himachal Pradesh, Uttarakhand, West Uttar Pradesh during 12th-16th; East Uttar Pradesh during 12th-16th; West Rajasthan during 12th-15th; East Rajasthan during 12th-14th; Gangetic West Bengal till 12th; Bihar during 12th-14th; Assam & Meghalaya during 12th-16th; Chhattisgarh during 13th-15th; Sub West Bengal & Sikkim, Odisha till 14th; Nagaland, Manipur, Mizoram & Tripura till 14th January.

Cold Day Warnings:

Cold day conditions very likely in isolated pockets of Himachal Pradesh and Rajasthan on 11th & 12th January.

Fishermen Warnings (Annexure V):

Fishermen are advised not to venture into southwest Bay of Bengal, north of Sri Lanka coast on 11th; Gulf of Mannar and adjoining Comorin area on 11th & 12th January.

iii. Weather conditions and forecast over Delhi/NCR during 11th Jan. to 14th 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>

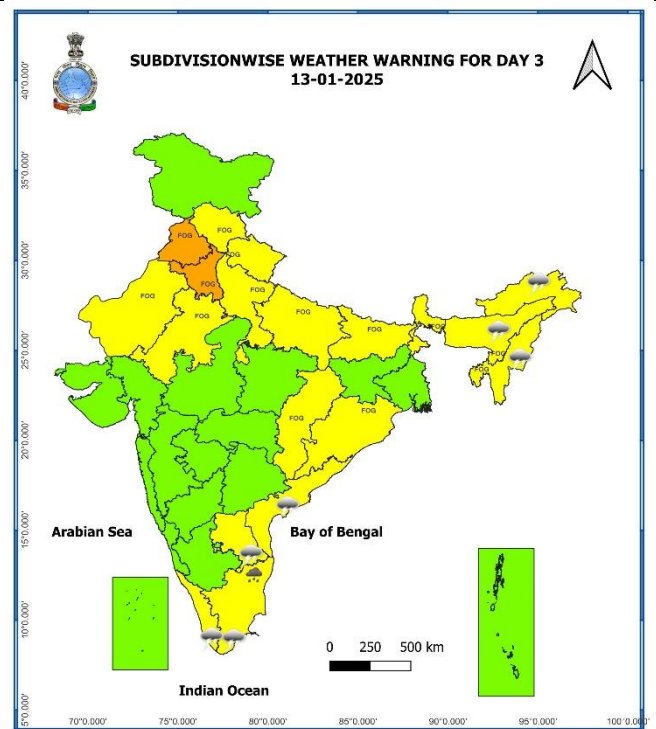
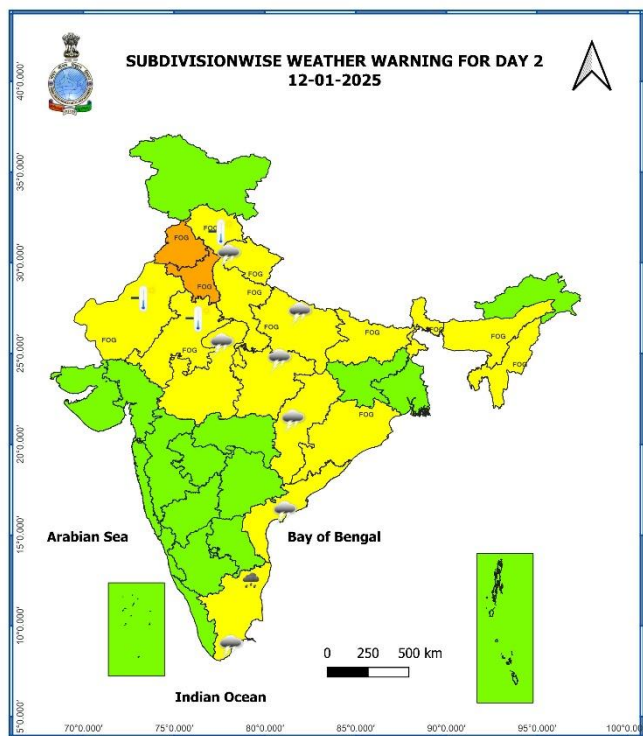
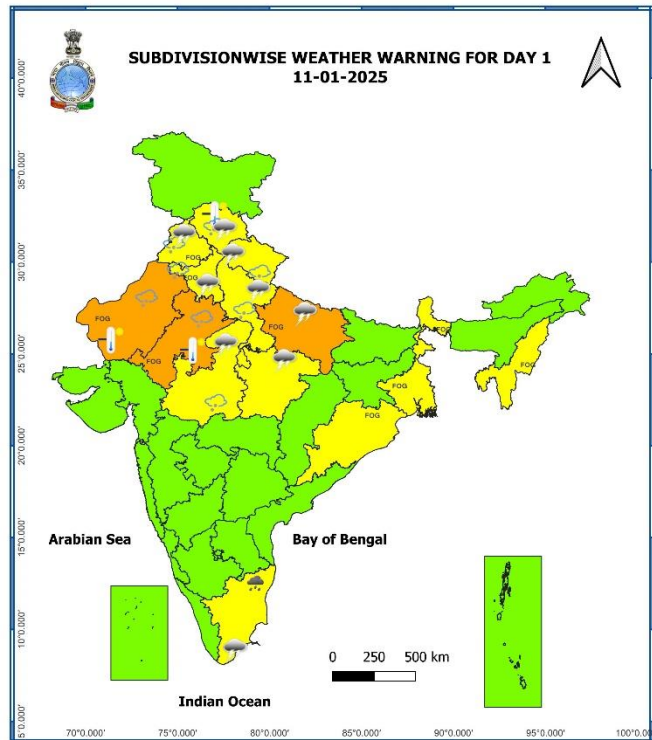
ANNEXURE I

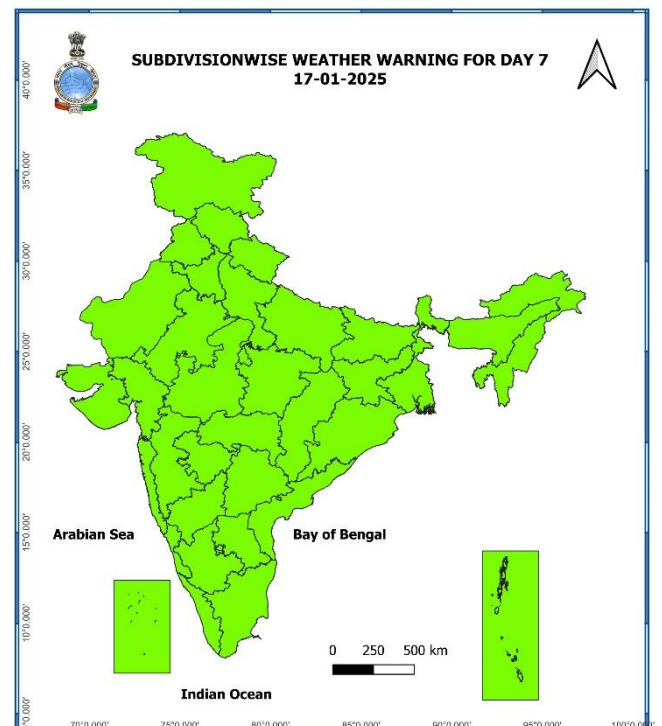
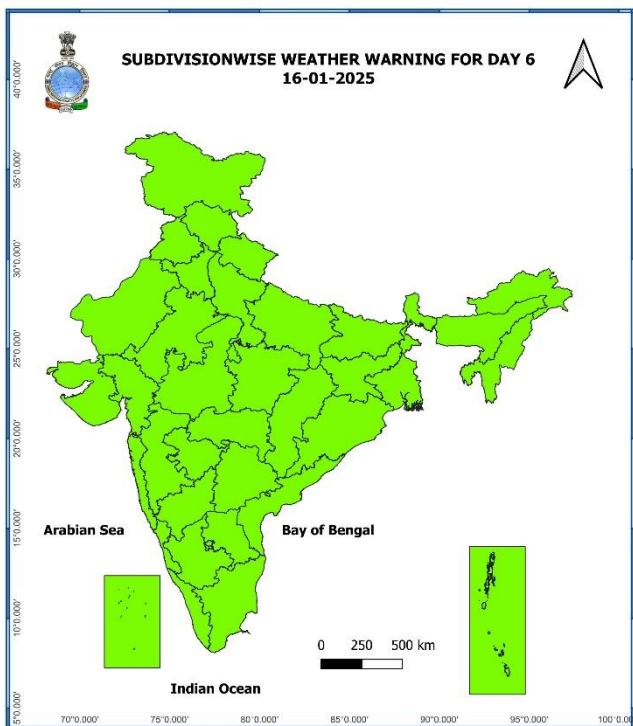
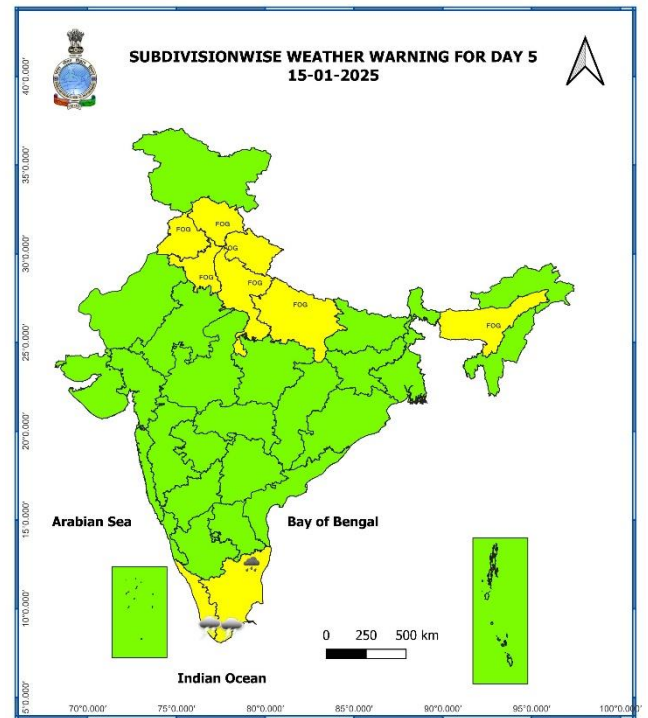
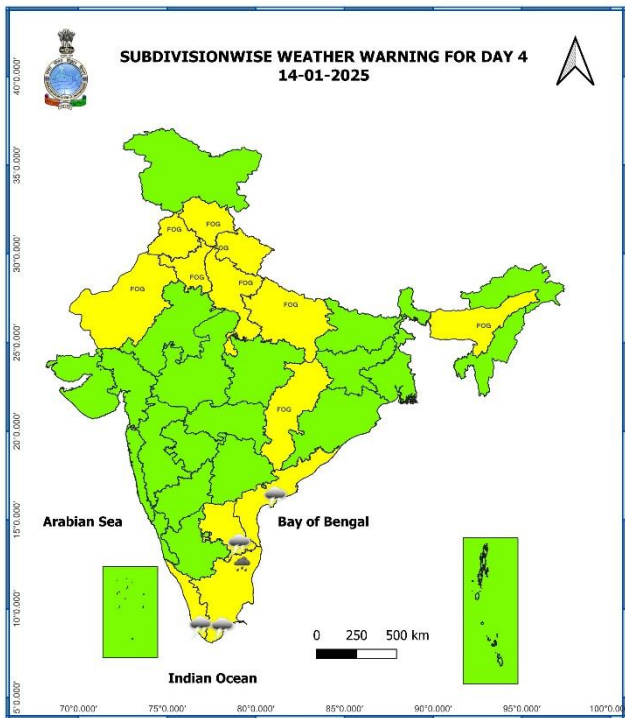
Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 11.01.2025 (in cm):

- ❖ **Tamilnadu Puducherry & Karaikal:** Oothu (dist Tirunelveli), Nalumukku (dist Tirunelveli) 7 each;

7 Days Rainfall Forecast								
S. No.	Subdivision	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	16-Jan	17-Jan
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	SCT	SCT	ISOL	ISOL	ISOL	SCT	SCT
2	ARUNACHAL PRADESH	ISOL	SCT	FWS	ISOL	DRY	DRY	DRY
3	ASSAM & MEGHALAYA	DRY	ISOL	ISOL	ISOL	DRY	DRY	DRY
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	DRY	DRY	ISOL	DRY	DRY	DRY	DRY
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	ISOL	ISOL	ISOL	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	ISOL	DRY	DRY	DRY	DRY	DRY
10	EAST UTTAR PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
11	WEST UTTAR PRADESH	SCT	ISOL	DRY	DRY	DRY	DRY	DRY
12	UTTARAKHAND	FWS	SCT	DRY	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	SCT	SCT	DRY	DRY	DRY	ISOL	ISOL
16	JAMMU & KASHMIR AND LADAKH	ISOL	ISOL	DRY	DRY	DRY	ISOL	ISOL
17	WEST RAJASTHAN	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	SCT	DRY	DRY	ISOL	ISOL	DRY	DRY
19	WEST MADHYA PRADESH	DRY	ISOL	DRY	DRY	ISOL	DRY	DRY
20	EAST MADHYA PRADESH	DRY	ISOL	DRY	DRY	ISOL	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	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
24	MADHYA MAHARASHTRA	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
25	MARATHAWADA	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
26	VIDARBHA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
27	CHHATTISGARH	DRY	ISOL	DRY	DRY	DRY	DRY	DRY
28	COASTAL ANDHRA PRADESH & YANAM	ISOL	ISOL	ISOL	ISOL	DRY	DRY	DRY
29	TELANGANA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
30	RAYALASEEMA	DRY	ISOL	ISOL	ISOL	DRY	DRY	DRY
31	TAMILNADU PUDUCHERRY & KARAIKAL	ISOL	SCT	SCT	SCT	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	ISOL	ISOL	DRY	DRY	DRY
35	KERALA & MAHE	ISOL	ISOL	SCT	SCT	SCT	ISOL	ISOL
36	LAKSHADWEEP	SCT	SCT	SCT	SCT	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

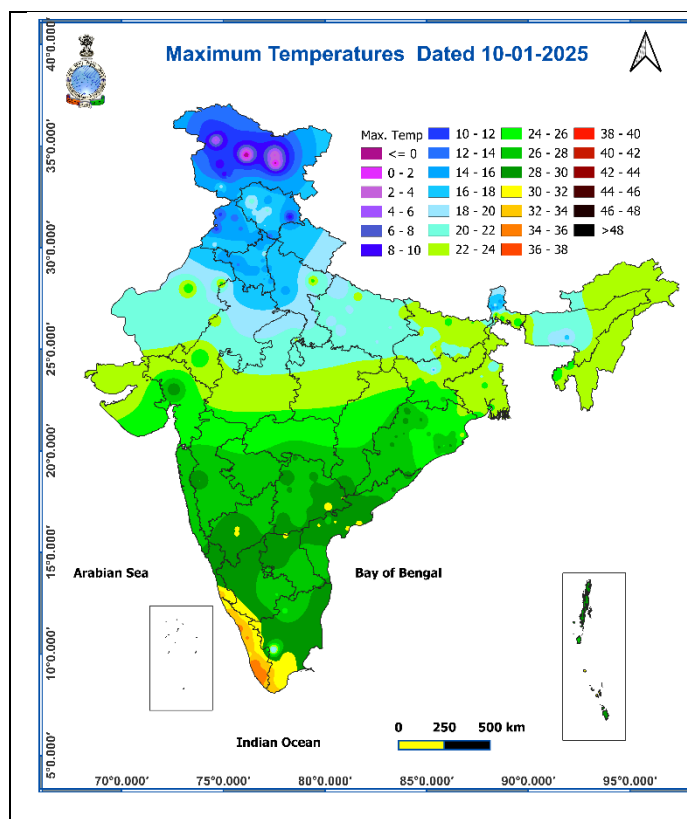


Fig. 2: Departure of Maximum Temperatures

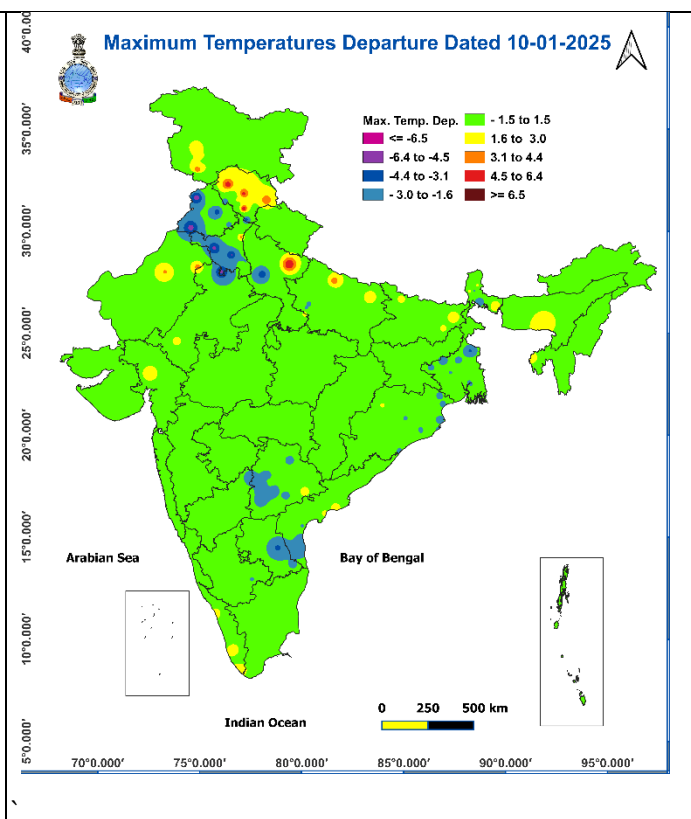


Fig. 3: Minimum Temperatures

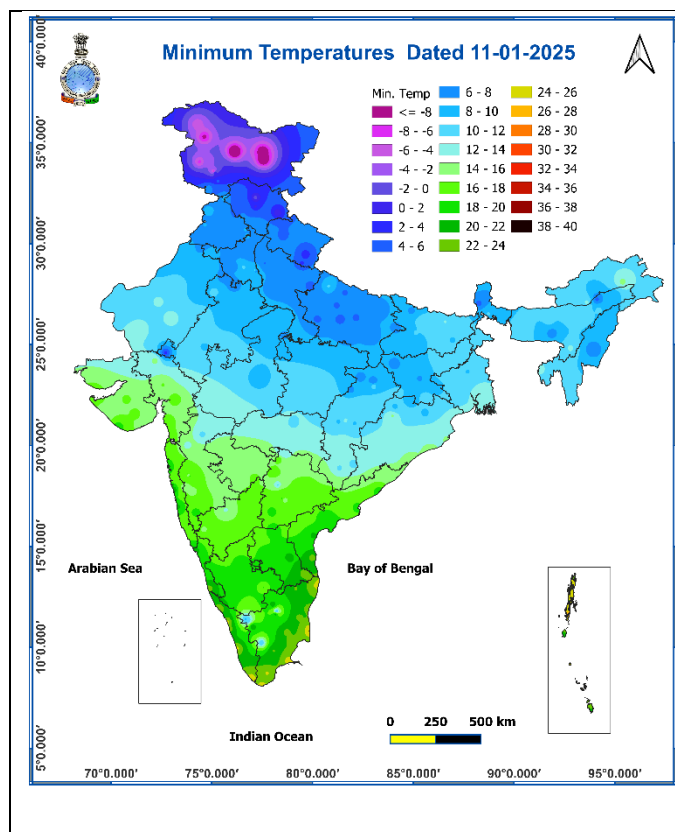
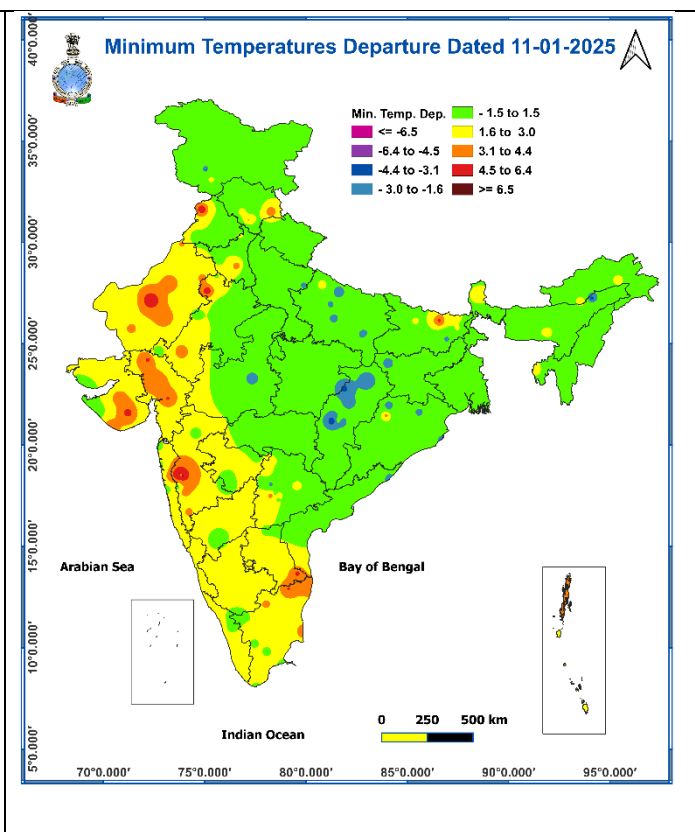


Fig. 4: Departure of Minimum Temperatures



Fishermen Warning Graphics



Weather forecast over Delhi/NCR during 11th to 14th Jan. 2025**Past Weather:**

There has been a rise in minimum temperature upto 02°C over Delhi/NCR during past 24hr. The Maximum and Minimum temperatures over Delhi are in the range of 16 to 18°C and 8 to 9°C respectively. The minimum and maximum temperature was near normal over most places. Very Dense fog was reported at Palam airport. Palam airport recorded the lowest visibility 00 m from 2330 hours on 10.01.2025 to 0200 hours IST on 11.01.2025 which improved thereafter becoming 100 m at 0230 hours IST on 11.01.2025. Safdarjung airport recorded the lowest visibility 50 m from 0030 hours to 0130 hours IST which improved thereafter becoming 200 m at 0230 hours IST. Mainly smog/mist conditions with predominant surface wind from the east direction with wind speed reaching 06 to 10 kmph prevailed during past 24hr. Mainly smog/mist conditions with wind speed less than 14 kmph east direction prevailed over the region in the forenoon today.

Weather Forecast:

11.01.2024: Generally cloudy sky. Light rain/thunderstorm. The predominant surface wind will likely be in the southeast direction with a wind speed of less than 14 kmph till evening. It would decrease thereafter becoming less than 06 kmph from the southeast direction during the night. Smog/shallow to moderate fog is likely in the evening/night.

12.01.2025: Generally cloudy sky. Very light rain/drizzle during morning hours. The predominant surface wind is likely to be from the southeast direction with a speed of less than 04 kmph during morning hours. Smog/ shallow fog in most of the places and moderate fog in few places is likely in the morning. The wind speed will gradually increase thereafter becoming 06-08 kmph from the northeast direction during the afternoon. It will decrease thereafter becoming less than 04 kmph from the northeast direction during evening and night. Smog/shallow to moderate fog is likely in the evening/night.

13.01.2025: Mainly clear sky. The predominant surface wind is likely to be from the northeast direction with a 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 gradually increase thereafter becoming 08-10 kmph from northwest direction during afternoon. It will decrease becoming less than 04 kmph from northwest direction during evening and night. Smog/ shallow to moderate fog is likely in the evening/night.

14.01.2025: 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 few places is likely in the morning. The wind speed will gradually increase thereafter becoming 06-08 kmph from northwest direction during afternoon. It will decrease becoming less than 04 kmph from northeast direction during evening and night. Smog/ shallow to moderate 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 Hailstorms / Cold Wave

- In **Himachal Pradesh, Uttarakhand, Haryana, West Uttar Pradesh, Rajasthan, and West Madhya Pradesh**, harvest matured fruits & vegetables at the earliest. Use hail net or hail cap in fruit orchards and fruit-bearing vegetables to prevent mechanical damage
- In **Jammu & Kashmir, Himachal Pradesh and Rajasthan**, 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 arrangements to drain out excess water from crop fields in **Tamilnadu**.
- Provide mechanical support to horticultural crops and staking to vegetables.

Livestock

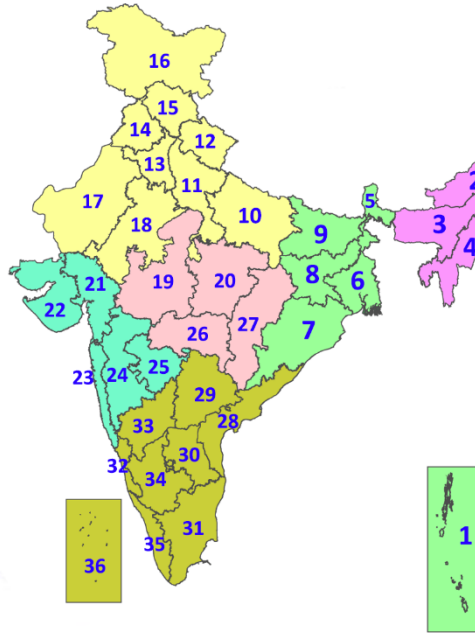
- To protect from cold, keep cattle inside the sheds during night and provide dry bedding. Also keep the chicks warm by providing artificial light in the poultry sheds.

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 Strom: 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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