Government of India
Ministry of Earth Sciences
India Meteorological Department

Press Release
Date: 15th February, 2025
Time of Issue: 1350 hours IST

Subject: Gradual rise in both minimum and maximum temperatures likely over plains of Northwest India and adjoining Central India by 2-4℃ during 16th -19th February, 2025.

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

Temperature:

- During Past 24 hours, Day temperatures have fallen by 1-2°C at many places over East India, Peninsular India, Saurashtra & Kutch; It has increased by 1-3°C at many places over Northwest India and Madhya Pradesh.
- Day temperatures continued to be **markedly above normal (5.1°C or more)** at isolated places over West Rajasthan; **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Punjab and East Rajasthan; **above normal (1.6°C to 3.0°C)** at a few places over Coastal Karnataka; at isolated places over Western Himalayan Region, Haryana-Chandigarh-Delhi, Konkan & Goa, Saurashtra & Kutch and Kerala & Mahe.
- During Past 24 hours, Night temperatures has raised by 3-6°C over many parts of Rajasthan and East Madhya Pradesh; by 1-3°C over many places in remaining parts of Northwest India, Bihar. It was fallen by 1-3°C at many places over Gangetic West Bengal, Odisha, Maharashtra, Telangana.
- Night temperatures were **markedly above normal (5.1°C or more)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan Muzaffarabad, Himachal Pradesh, Rajasthan and Saurashtra & Kutch; **appreciably above normal (3.1°C to 5.0°C)** at a few places over Punjab, Uttarakhand, Konkan & Goa and Gujarat Region; at isolated places over East Madhya Pradesh. Coastal Andhra Pradesh & Yanam and Kerala & Mahe; **above normal (1.6°C to 3.0°C)** at most places over North Interior Karnataka; at many places over Haryana-Chandigarh-Delhi, West Uttar Pradesh, Central India, East India, Peninsular India; at isolated places over West Uttar Pradesh
- Further detailed temperature observations during past 24 hours till 0830 hours IST of today are provided in **Annexure II**.

Rainfall

- Light to moderate **Rainfall/Snowfall** at some places over Arunachal Pradesh; Light to moderate **Rainfall** at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim and Andaman & Nicobar Islands.

ii. Weather Systems, Forecast and warning (Annexure III & IV):

- The cyclonic circulation over Nagaland and neighbourhood at 1.5 km above mean sea level. Under its influence,
  - ✓ Scattered to Fairly widespread light to moderate rainfall/snowfall activity likely over Arunachal Pradesh during 15th-21st February with thunderstorm & lightning activity on 15th, 16th & 19th and over Assam & Meghalaya on 19th February.
  - ✓ Isolated to scattered light rainfall activity likely over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal & Sikkim during next 7 days.
- A Western Disturbance as a trough in middle tropospheric westerlies with its axis at 5.8 km above mean sea level runs roughly along Long. 67°E to the north of Lat. 34°N with an Induced cyclonic circulation over Northwest Rajasthan & adjoining area of South Punjab and Pakistan in lower tropospheric levels. Under its influence,
  - ✓ Isolated to scattered light rainfall/snowfall activity likely over Himachal Pradesh. Isolated light rainfall activity likely over Punjab and Haryana on 15th February.

- A fresh **Western Disturbance** is likely to affect Western Himalayan Region from 17th February, 2025. Under its influence,
  - ✓ Isolated to scattered light rainfall/snowfall activity likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Himachal Pradesh during 17th-21st; Uttarakhand on 19th & 20th. Isolated light rainfall activity likely over Rajasthan during 17th-19th; Punjab, Haryana & West Uttar Pradesh on 19th & 20th February.

Temperature, Cold wave and Fog Forecast:

Forecast of temperature:

Minimum Temperature:

- Gradual fall in minimum temperatures by 2-3°C likely over Northwest India next 2 days and gradual rise by 2-3°C thereafter.
- Gradual rise in minimum temperature by 2-3°C likely over Uttar Pradesh & Central India during next 4 days.
- No significant change in minimum temperature likely over East India during next 24 hours and gradual rise by 2-3°C thereafter.
- Rise in minimum temperature by 2-3°C likely over West India during next 4-5 days.

Maximum temperature:

- Gradual fall in maximum temperatures by 2-3°C likely over Northwest India next 24 hours and gradual rise by 2-3°C thereafter.
- Gradual rise in maximum temperature by 2-3°C likely over Uttar Pradesh & Chhattisgarh during next 4 days.
- No significant change in maximum temperature likely over East India during next 24 hours and gradual rise by 2-3°C thereafter.
- Rise in maximum temperature by 2-3°C likely over West India during next 4-5 days.
- No significant change in maximum temperature likely over Telangana, Interior Karnataka, Rayalaseema during next 2 days and gradual rise by 2-3°C thereafter.

Dense Fog Warnings:

- **Dense fog conditions** very likely to continue to prevail during early morning hours in isolated pockets of Odisha till 16th and over Sub-Himalayan West Bengal & Sikkim till 17th February.

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

For more details, kindly refer National Weather Bulletin:
https://mausam.imd.gov.in/responsive/all_india_forcast_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 15.02.2025 (in cm):

- **Arunachal Pradesh:** Tawang Chamgbu Kvk Aws (dist Tawang) 4, Tawang_ Aws (dist Tawang) 3, Mukto_arg (dist Tawang) 3, Jung_arg (dist Tawang) 1,
- **Assam & Meghalaya:** Jia Bharali N T Xing (dist Shonitpur) 1,
- **Sub-Himalayan West Bengal & Sikkim:** Gangtok (dist Gangtok) 1, Kabi (dist Mangan) 1, Yuksom (dist Gyalshing) 1,Tadong (dist Gangtok) 1.

Visibility reported (≤200 m) (in meter):

- **Dense fog (visibility 50-199 m)** reported in isolated pockets of **Assam & Meghalaya** (Jorhat, Barapani 150); **Sub-Himalayan West Bengal & Sikkim** (Darjeeling, Gangtok, Pakyong, Tadong 50 each).

ANNEXURE II

- Minimum temperatures are in the range of **6-10°C** over many parts of Uttar Pradesh, Punjab, Haryana; **10-15°C** over many parts of Rajasthan, Madhya Pradesh, East and West India. Today, the lowest minimum temperature of **7.7°C** is reported at **Ambikapur (Chhattisgarh)**over the plains of the country.

- During the past 24 hours, **minimum temperatures** has rose by 3-6°C over many parts of Rajasthan, East Madhya Pradesh; by 1-3°C over many parts of Northwest India, Bihar and fallen by 1-3°C at many places over Gangetic West Bengal, Odisha, Maharashtra, Telangana.

- Minimum temperatures are **markedly above normal (5.1°C or more)** at isolated places over West Rajasthan; **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Punjab and East Rajasthan; **above normal (1.6°C to 3.0°C)** at a few places over Coastal Karnataka; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Haryana-Chandigarh-Delhi, Konkan & Goa, Saurashtra & Kutch and Kerala & Mahe. These are **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Telangana; **below normal (-1.6°C to -3.0°C)** at many places over Gangetic West Bengal and Jharkhand; at a few places over Chhattisgarh; at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Bihar, Uttar Pradesh, Odisha, Vidarbha, Marathwada and Tamil Nadu, Puducherry & Karaikal and near normal over rest parts of the country

- Maximum temperatures are in the range of **34-38°C** over many parts of Odisha, Saurashtra & Kutch, Maharashtra and Peninsular India. Yesterday, the highest **maximum temperature of 38.0°C** was reported at **Palakkad (Kerala)** over the plains of the country.

- Maximum temperatures were **markedly above normal (5.1°C or more)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan Muzaffarabad, Himachal Pradesh, Rajasthan and Saurashtra & Kutch; **appreciably above normal (3.1°C to 5.0°C)** at a few places over Punjab, Uttarakhand, Konkan & Goa and Gujarat Region; at isolated places over East Madhya Pradesh. Coastal Andhra Pradesh & Yanam and Kerala & Mahe; **above normal (1.6°C to 3.0°C)** at most places over North Interior Karnataka; at many places over Haryana-Chandigarh-Delhi, West Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, Odisha, Vidarbha, Madhya Maharashtra, Marathwada, Telangana, Rayalaseema, South Interior Karnataka and Tamil Nadu, Puducherry & Karaikal and Tamil Nadu, Puducherry & Karaikal; at isolated places over West Uttar Pradesh, Gangetic West Bengal, Jharkhand and Coastal Karnataka. These were **below normal (-1.6°C to -3.0°C)** at many places over Arunachal Pradesh and at isolated places over Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim and Nagaland, Manipur, Mizoram & Tripura and near normal over rest parts of the country

Fig. 1: Maximum Temperatures

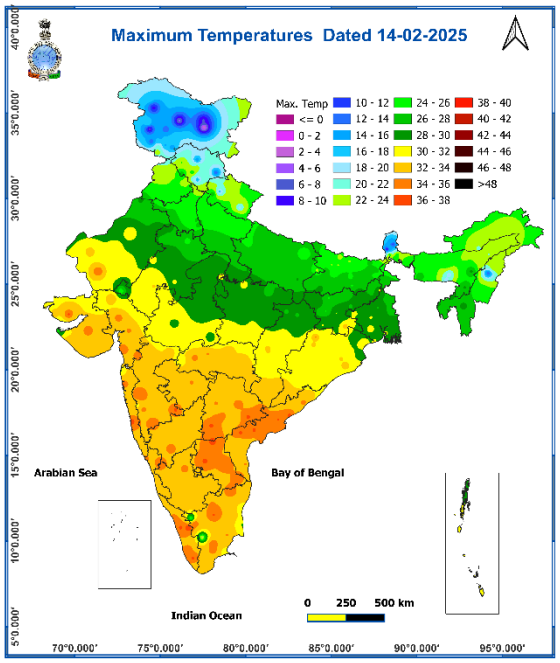


Fig. 2: Departure of Maximum Temperatures

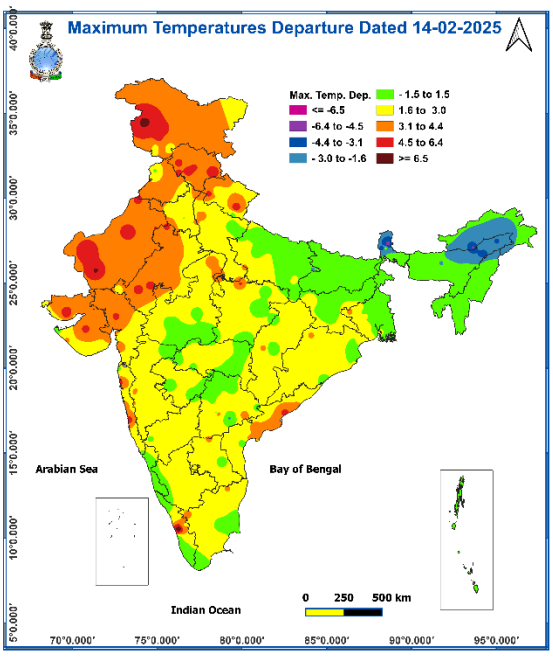


Fig. 3: Minimum Temperatures

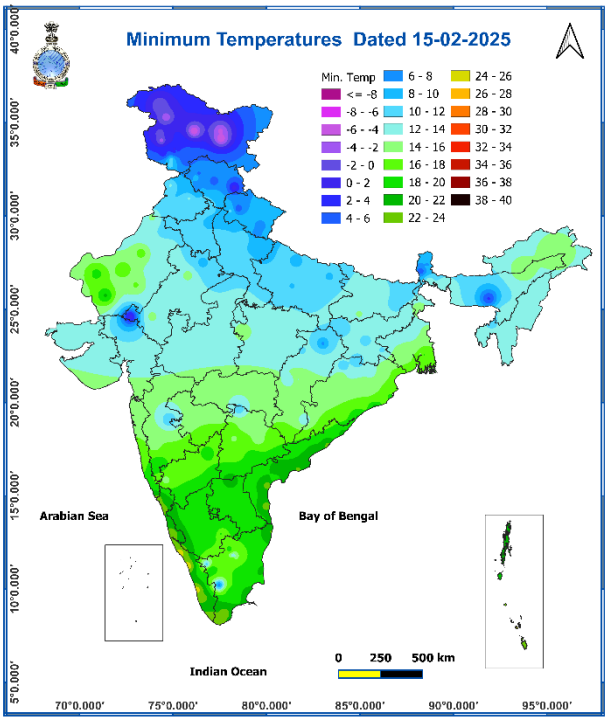
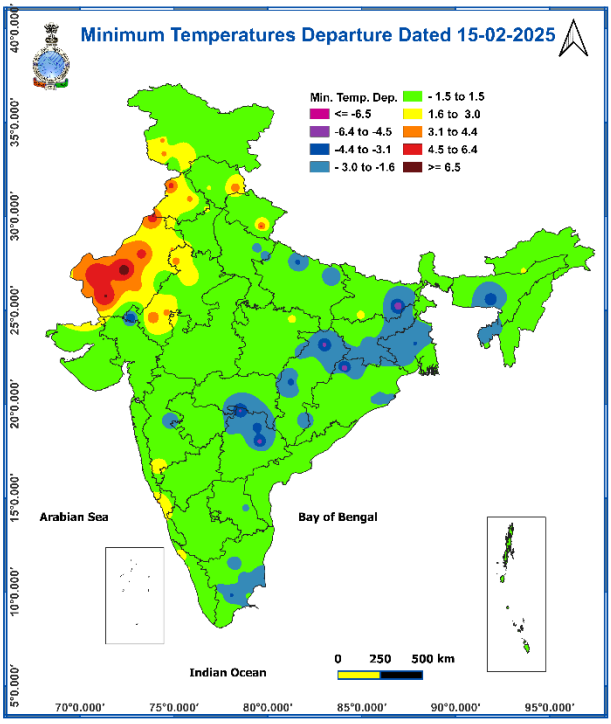


Fig. 4: Departure of Minimum Temperatures

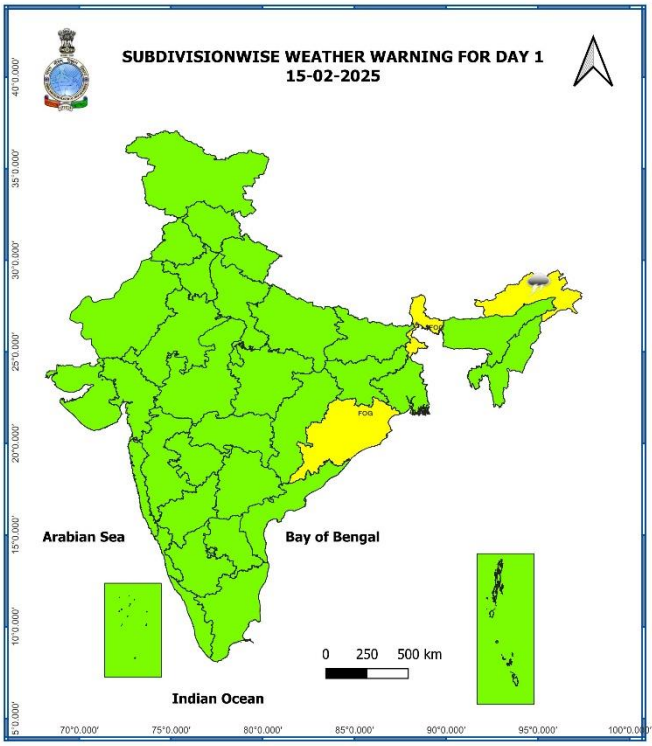


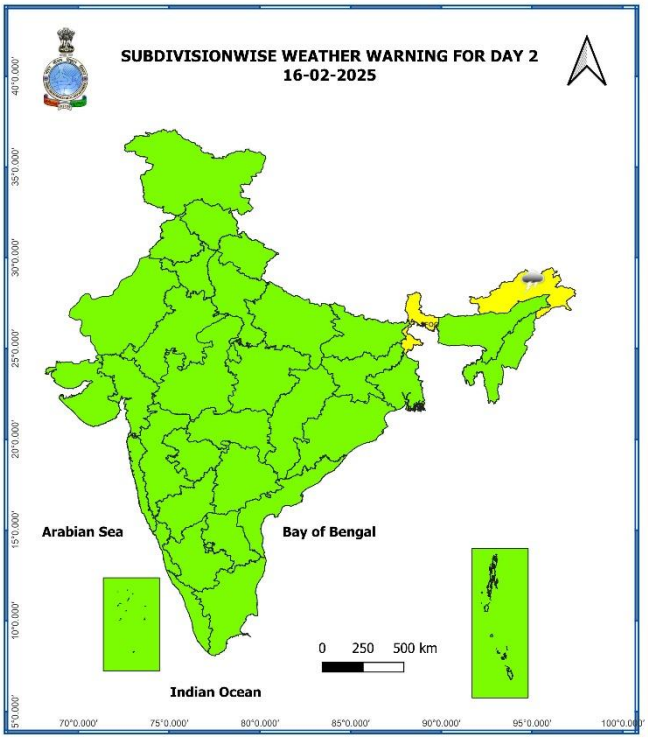
ANNEXURE III

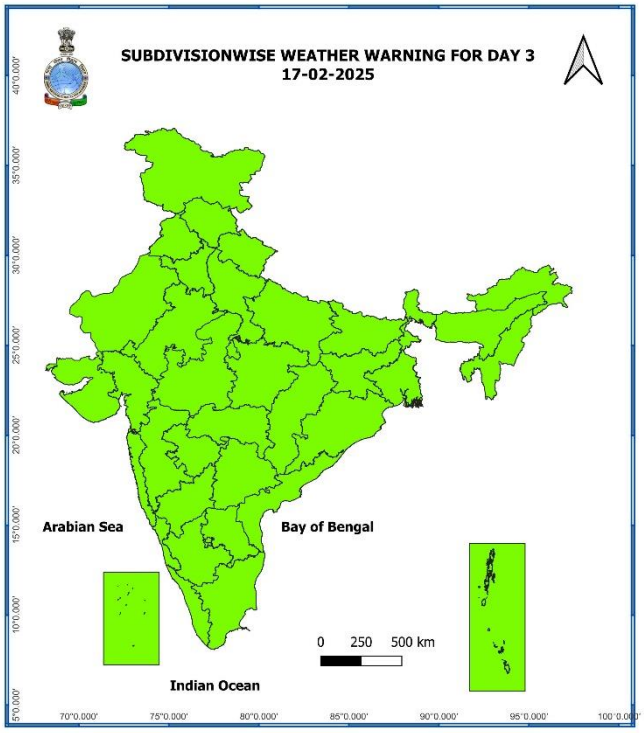
7 Days Rainfall Forecast								
S. No.	Subdivision	15-Feb	16-Feb	17-Feb	18-Feb	19-Feb	20-Feb	21-Feb
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	ISOL	DRY	DRY	ISOL	ISOL	ISOL	ISOL
2	ARUNACHAL PRADESH	SCT	SCT	SCT	SCT	FWS	FWS	FWS
3	ASSAM & MEGHALAYA	ISOL	ISOL	ISOL	ISOL	SCT	SCT	FWS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	ISOL	ISOL	ISOL	ISOL	SCT	SCT	SCT
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	ISOL	ISOL	ISOL	ISOL	ISOL	SCT	SCT
6	GANGETIC WEST BENGAL	DRY	DRY	DRY	DRY	ISOL	ISOL	ISOL
7	ODISHA	DRY	DRY	DRY	DRY	ISOL	ISOL	ISOL
8	JHARKHAND	DRY	DRY	DRY	DRY	DRY	ISOL	ISOL
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	DRY	DRY	ISOL	DRY
12	UTTARAKHAND	ISOL	ISOL	DRY	DRY	ISOL	SCT	DRY
13	HARYANA CHANDIGARH & DELHI	ISOL	DRY	DRY	DRY	ISOL	ISOL	DRY
14	PUNJAB	ISOL	DRY	DRY	DRY	ISOL	ISOL	DRY
15	HIMACHAL PRADESH	SCT	DRY	DRY	ISOL	SCT	FWS	ISOL
16	JAMMU & KASHMIR AND LADAKH	DRY	ISOL	ISOL	ISOL	ISOL	SCT	ISOL
17	WEST RAJASTHAN	DRY	DRY	ISOL	ISOL	ISOL	DRY	DRY
18	EAST RAJASTHAN	DRY	DRY	ISOL	ISOL	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	DRY	DRY	DRY	DRY	DRY	ISOL	ISOL
29	TELANGANA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
30	RAYALASEEMA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
31	TAMILNADU PUDUCHERRY & KARAIKAL	DRY	DRY	DRY	DRY	DRY	DRY	DRY
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	DRY	DRY	DRY	DRY	DRY	ISOL	ISOL
36	LAKSHADWEEP	DRY	DRY	DRY	DRY	DRY	DRY	DRY

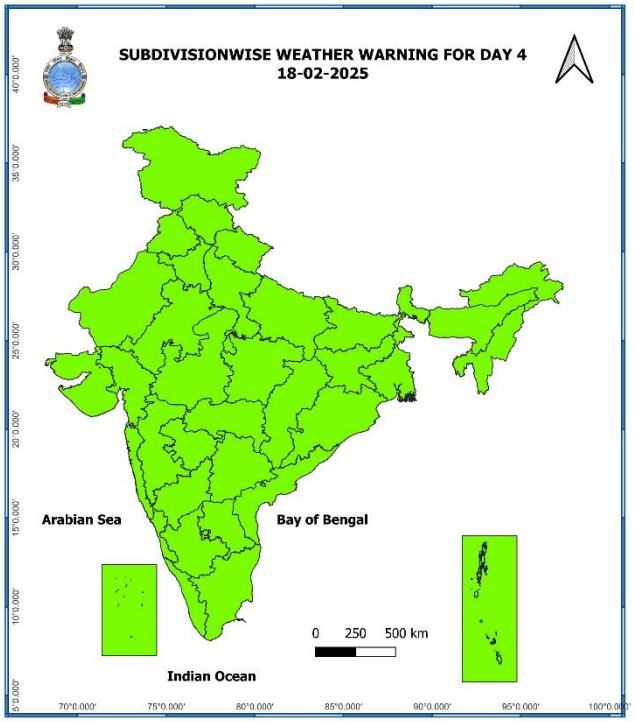
- **As the lead period increases forecast accuracy decreases.**

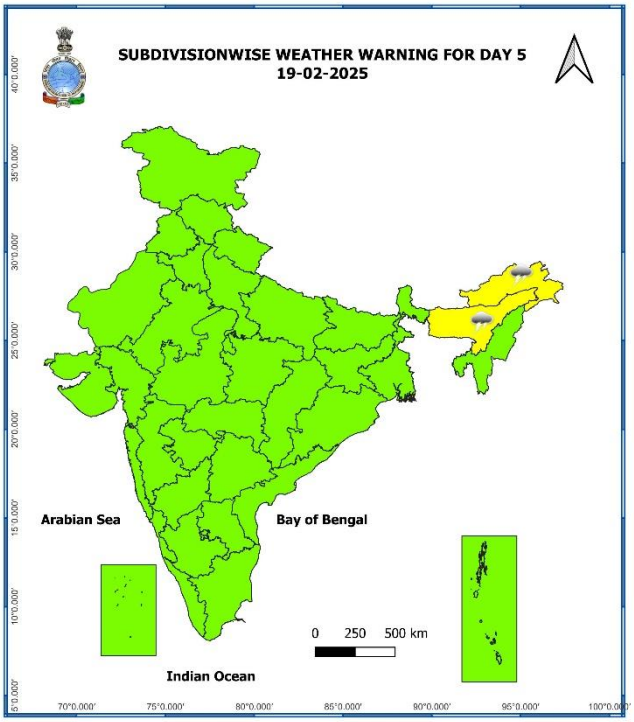
ANNEXURE IV

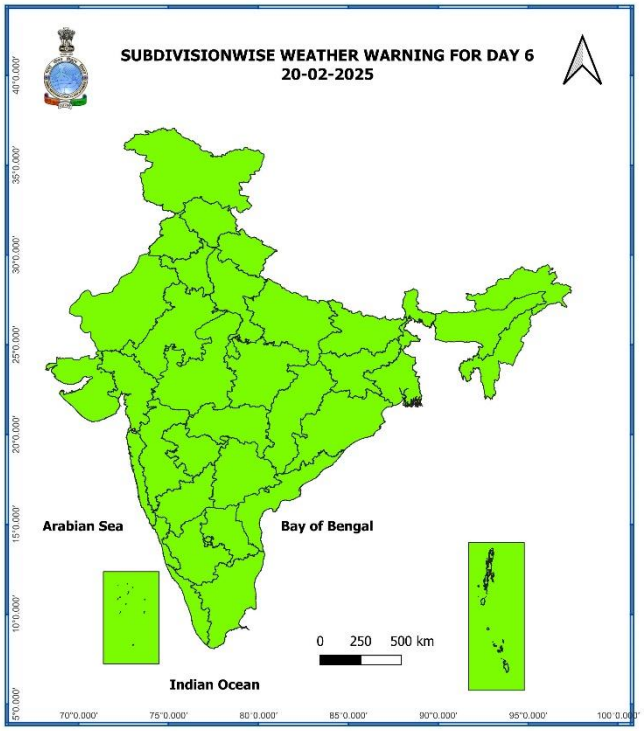

SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
15-02-2025
FOG
Arabian Sea
Bay of Bengal
Indian Ocean
0 250 500 km

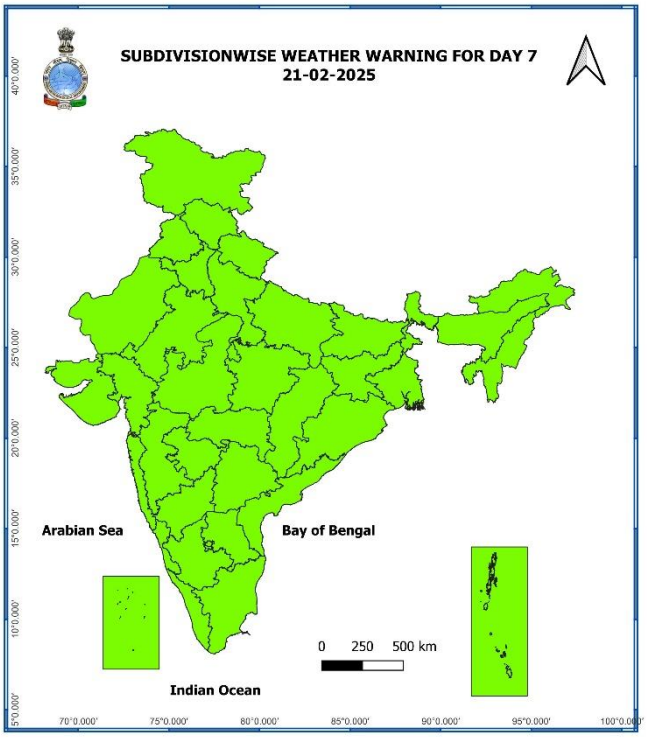

SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
16-02-2025
Arabian Sea
Bay of Bengal
Indian Ocean
0 250 500 km


SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
17-02-2025
Arabian Sea
Bay of Bengal
Indian Ocean
0 250 500 km









- **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.**

Detailed district wise Multi Hazard weather warning for next five days available at
https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php

ANNEXURE V

Weather forecast over Delhi/NCR during 15th Feb. to 18th Feb. 2025

Past Weather:

There has been a slight rise in minimum temperature and rise in maximum temperature upto 01°Cover Delhi/NCR during the past 24 hours. The Maximum and Minimum temperatures over Delhi are in the range of 25 to 27°C and 10 to 11°C respectively. The minimum temperature was near normal and maximum temperature was above normal upto 03°C over most places. Mainly clear sky conditions with predominant surface wind from the west direction with wind speed reaching 20 to 22 kmph prevailed during the past 24 hours. Partly cloudy sky conditions with wind speed less than 06 kmph variable direction prevailed over the region in the forenoon today.

Weather Forecast:

15.02.2025: Partly cloudy sky. The maximum temperature over Delhi is likely to be in the range of 26 to 28°C.The predominant surface wind will likely to be from northwest direction with a wind speed of less than 10 kmph till evening. It would decrease thereafter becoming less than 06 kmph from the north direction during the night.

16.02.2025: Partly cloudy sky. Smog/mist likely in the morning. The maximum and minimum temperatures over Delhi are likely to be in the range of 28 to 30°C and 10 to 12°C respectively. The predominant surface wind is likely to be from the north direction with a wind speed less than 04 kmph during morning hours. The wind speed will gradually increase thereafter becoming 06-08 kmph from the northeast direction during the afternoon. It will decrease further becoming less than 06 kmph from the north direction during evening and night.

17.02.2025: Partly cloudy sky. Smog/mist likely in the morning. The maximum and minimum temperatures over Delhi are likely to be in the range of 28 to 30°C and 12 to 14°C respectively. The predominant surface wind will likely to be from the northeast direction with a wind speed of less than 06 kmph during morning hours. The wind speed will gradually increase thereafter becoming 10-12 kmph from the northwest direction during the afternoon. It will decrease becoming less than 08 kmph from north direction during evening and night.

18.02.2025: Partly cloudy sky. Smog/mist likely in the morning. The maximum and minimum temperatures over Delhi are likely to be in the range of 28 to 30°C and 13 to 15°C respectively. The predominant surface wind will likely to be from northeast direction with a wind speed of less than04 kmph during morning hours. The wind speed will gradually increase thereafter becoming 10-12 kmph from the northwest direction during the afternoon. It will decrease becoming less than 08 kmph from northwest direction during evening and night.

Likely Impact of prevailing above-normal temperatures on Agriculture

- Above normal temperatures in parts of Northwest and Central India may lead to forced maturity, sterile spikelets, and chaffy grains, reducing yields during critical growth stages like flowering and grain filling in crops like wheat and barley. Crops like mustard and chickpea may also experience early harvest.
- Vegetables like onions, garlic, and tomatoes may be affected during bulb formation or flowering, resulting in tip burning, bolting, and mismatched pollination, reducing their quality and yield. Horticultural crops like apples and stone fruits may experience early blooming due to warmer temperatures, resulting in poor fruit setting and quality.
- Livestock may experience heat stress, requiring adjustments in care and feeding practices, while fisheries face challenges in maintaining water quality.

Agromet Advisories

- Provide light and life-saving irrigation during sensitive growth stages such as grain filling, flowering, and tuber formation.
- Apply mulching to retain optimum soil moisture and regulate temperature.
- Chemical sprays like potassium chloride and mineral nutrients are recommended to manage heat stress.

Legends & abbreviations:

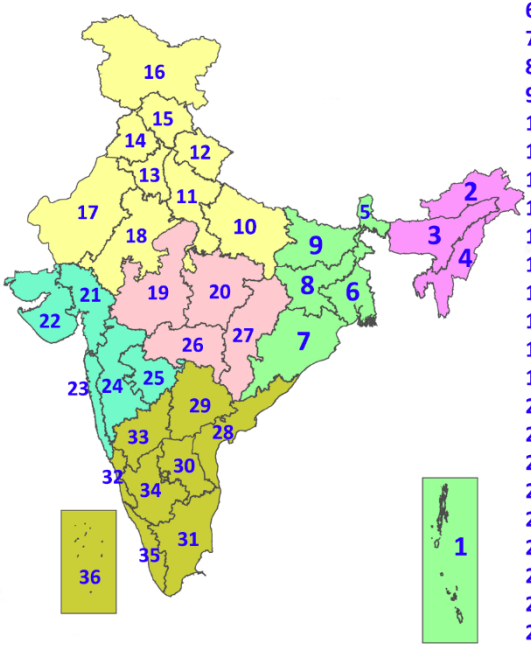
- **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- **Obsy:** Observatory; **AWS:** Automatic Weather Station; **ARG:** Automatic Rain Gauge; **dist:** District: **NH:** National Highway; **KVK**: Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **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.

राष्ट्रीय मौसम पूर्वानुमान केन्द्र
भारत मौसम विज्ञान विभाग
पृथ्वी विज्ञान मंत्रालय

National Weather Forecasting Centre
India Meteorological Department
Ministry of Earth Sciences

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 Rain
Very Heavy Rain
Extremely Heavy Rain
Thunder & Lightning
Hailstorm
Dust Raising Winds

Heavy Snow
Dust Storm
Heat Wave
Warm Night
Hot Day
Hot & Humid
Strong Surface Winds

Cold Wave
Cold Day
Ground Frost

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

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(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 ≥40° C for plains and ≥30° 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 ≥6.5° C

(b). Based on Actual maximum temperature

- **Heat Wave:** When actual maximum temperature ≥45°C.
- **Severe Heat Wave:** When actual maximum temperature ≥47°C

(c). Criteria for heat wave for coastal stations

When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum temperature ≥37°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 °C.

Cold Wave

When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C

(b) Based on actual Minimum Temperature (for Plains only)

- **Cold Wave :** When Minimum Temperature is ≤ 4.0 °C
- **Severe Cold Wave:** When Minimum Temperature is ≤ 2.0 °C

(c) For Coastal Stations

When Minimum Temperature departure is ≤-4.5 °C & actual Minimum Temperature is ≤ 15 °C

Cold Day

When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C

Fog

Phenomenon of small droplets suspended in air and the horizontal visibility < 1km

- **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 ≤4°C (over Plains)

Squall

A strong wind that rises suddenly, lasts for atleast 1 minute.

- **Moderate**: Wind speed 52-61 kmph
- **Severe**: Wind speed 62-87 kmph
- **Very Severe**: Wind speed >87 kmph

Sea State

Effect of various waves in the sea over specific area

- **Rough to very rough**: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre
- **High to very high**: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre
- **Phenomenal**: Wind speed >117 kmph (>63 knots) & Wave height >14 metre

Cyclone

- **Cyclonic Storm**: Wind speed 62-87 kmph (34-47 knots)
- **Severe Cyclonic Storm**: Wind speed 88-117 kmph (48-63 knots)
- **Very Severe Cyclonic Storm**: Wind speed 118-165 kmph (64 - 89 knots)
- **Extremely Severe Cyclonic Storm**: Wind speed 166-220 kmph (90 -119 knots)
- **Super Cyclone Strom**: Wind speed >220 kmph (>119 knots)

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