

Saturday, February 1, 2025
Time of Issue: 1330 hours IST
(MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems, Forecast and warning:

- ❖ A Western Disturbance seen as a cyclonic circulation over north Pakistan in lower & middle tropospheric levels with an induced cyclonic circulation over East Rajasthan in lower tropospheric levels. Another fresh Western Disturbance is likely to affect Northwest India from 03rd February, 2025. Under the influence of these systems,
 - ✓ Scattered to Fairly widespread light/moderate rainfall/snowfall activity likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 01st & 02nd; and isolated activity over Himachal Pradesh & Uttarakhand on 01st February, 2025.
 - ✓ Scattered to Fairly widespread light/moderate rainfall/snowfall likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh & Uttarakhand during 03rd - 05th and isolated to scattered light rainfall activity likely over Punjab, Haryana & Chandigarh, Rajasthan on 03rd & 04th and Uttar Pradesh during 03rd-05th February.
- ❖ Light to moderate rainfall accompanied with thunderstorm & lightning very likely at a few places over Lakshadweep on 01st February.

Temperature Conditions:

- ❖ Minimum temperatures are in the range of **6-12°C** over many parts of plains of Northwest India; **12-20°C** in many parts of Central, East & West India. Today, the lowest minimum temperature of **6.1°C** is reported at **Ganganagar (West Rajasthan)** over the plains of the country.
- ❖ During the past 24 hours, **minimum temperatures has fallen by 1-3°C** at isolated places over Assam & Meghalaya & Madhya Maharashtra and **rise by 1-3°C** in many parts of Uttar Pradesh, East & Central India; in some parts of Jammu-Kashmir, Himachal Pradesh, Coastal Andhra Pradesh & Yanam, Karnataka; at isolated places over Punjab, Rajasthan, Gujrat State, Rayalaseema and Kerala & Mahe.

Forecast of temperature:

- ❖ No significant change in minimum temperatures likely over Western Himalayan region during next 2 days and gradual rise by 2-3°C during subsequent 3 days.
- ❖ Gradual rise in minimum temperatures by 3-4°C likely over plains of Northwest India during next 5 days.
- ❖ No significant change in minimum temperatures likely over Central India during next 24 hours and gradual rise by 2-3°C during subsequent 4 days.

Dense Fog Warnings:

- ❖ **Dense fog conditions** very likely to continue to prevail during night/early morning hours in isolated pockets of Punjab, Haryana, Chandigarh, Uttar Pradesh, Gangetic West Bengal, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura till 02nd, Sub-Himalayan West Bengal & Sikkim & Odisha till 03rd, Bihar till 04th February.

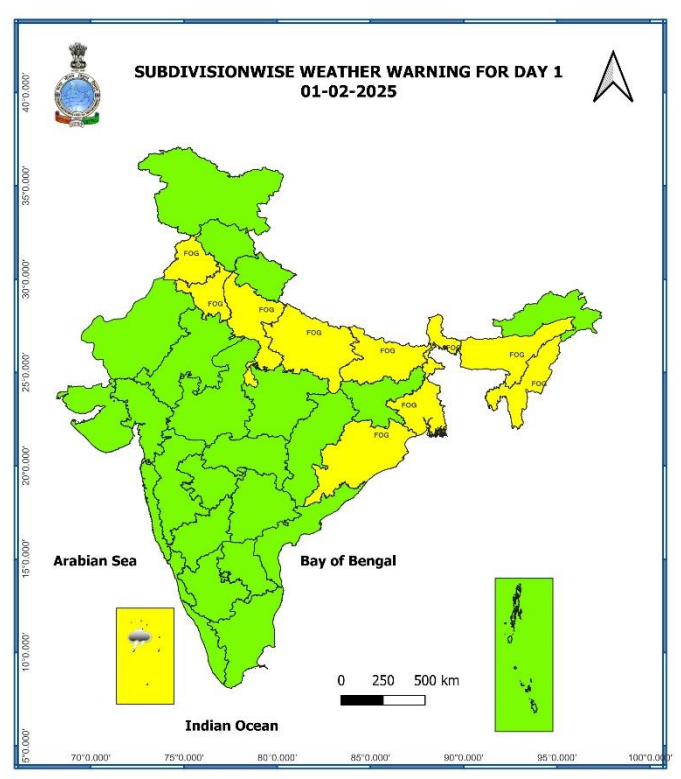
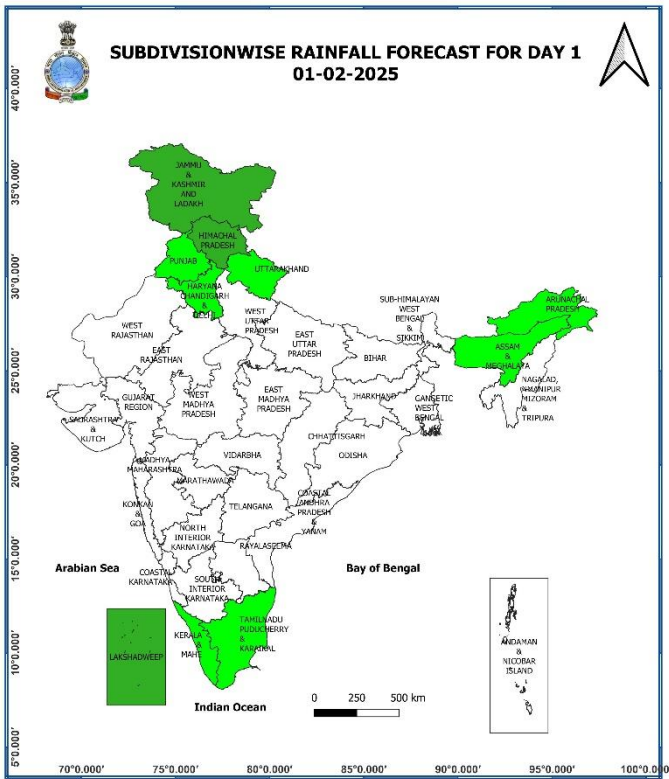
Main Weather Observations:

- ❖ **Rainfall/Snowfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at many places over** Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; **at a few places over** Arunachal Pradesh; **at isolated places over** West Bengal & Sikkim, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): **Kerala & Mahe:** Laha (dist Pathanamthitta) 3, Kottarakkara (dist Kollam) 3;
- ❖ **Heavy rainfall recorded** (from 0830 hours IST of yesterday to 0830 hours IST of today): **NIL.**
- ❖ **Fog reported** (upto 0830 hours IST of today): **Dense to very dense fog conditions (visibility < 50 m)** reported in isolated pockets of Punjab, Haryana, Delhi, Uttar Pradesh, Odisha, Bihar, Andhra Pradesh, Meghalaya and **dense fog (visibility 50-199 m)** reported in isolated pockets of Chandigarh and Sikkim.
- ❖ **Visibility reported** (upto 0830 hours IST of today) (≤ 200 m): **Punjab:** Patiala 0, Ballawal Saunkri 4, Ludhiana 20; **Haryana:** Karnal 0, Ambala 0, Hisar 40; **Delhi:** Safdarjung 0, Palam 50; **Odisha:** Balasore, Gopalpur, Bhubaneswar 0 each; **Andhra Pradesh:** Visakhapatnam, Vijayawada 0 each; **Bihar:** Purnea 0; **East Uttar Pradesh:** Kushinagar 0; **West Uttar Pradesh:** Aligarh 40; **Meghalaya:** Barapani 40; **Chandigarh** 50; **Sikkim:** Pakyong 50.
- ❖ **Minimum Temperature Departures (as on 01-02-2025):** Minimum temperatures are **markedly above normal (5.1°C or above)** at a few places over Odisha; **appreciably above normal (3.1°C to 5.0°C)** at a few places over Assam & Meghalaya, Vidarbha and East Madhya Pradesh; at isolated places over Gangetic West Bengal, Chhattisgarh, Nagaland, Manipur, Mizoram & Tripura, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Rayalaseema; **above normal (1.6°C to 3.0°C)** at a few places over Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Madhya Pradesh, Coastal Karnataka; at isolated places over Gujarat Region, East Rajasthan, Delhi, East Uttar Pradesh, Bihar, Madhya Maharashtra and Andaman & Nicobar Islands. These are **below normal (-1.6°C to -3.0°C)** at isolated places over Saurashtra & Kutch and near normal over rest parts of the country (Fig. 4). Today, the **lowest minimum temperature** of 6.1°C is reported at **Ganganagar (West Rajasthan)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 31-01-2025):** Maximum temperatures were **markedly above normal (5.1°C or above)** at a few places over Chhattisgarh; **appreciably above normal (3.1°C to 5.0°C)** at most places over East Madhya Pradesh; at a few places over East Uttar Pradesh; at isolated places over Gangetic West Bengal, Odisha, Telangana, Madhya Maharashtra, West Madhya Pradesh; **above normal (1.6°C to 3.0°C)** at many places over Delhi; at isolated places over Jammu-Kashmir-Ladakh Gilgit-Baltistan-Muzaffarabad, Haryana, West Uttar Pradesh, East Rajasthan, Bihar, Vidarbha, North Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, Lakshadweep. These are **appreciably below normal (3.1°C to -5.0°C)** at isolated places over Assam & Meghalaya; **below normal (-1.6°C to -3.0°C)** at isolated places over Saurashtra & Kutch and near normal over rest parts of the country (Fig. 2). Yesterday, the highest **maximum temperature** of 36.6°C was reported at **Kurnool (Rayalaseema)** over the plains of the country.

Meteorological Analysis (Based on 0830 hours IST)

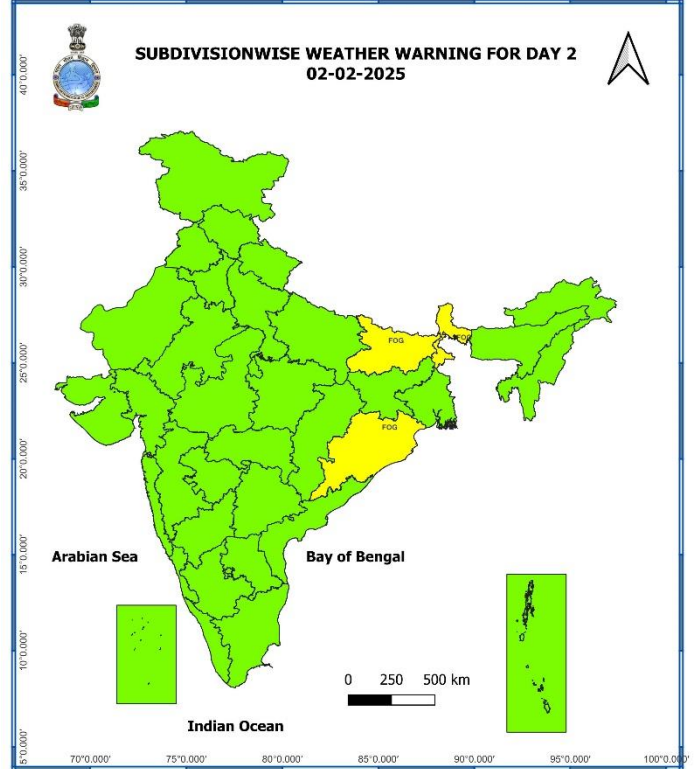
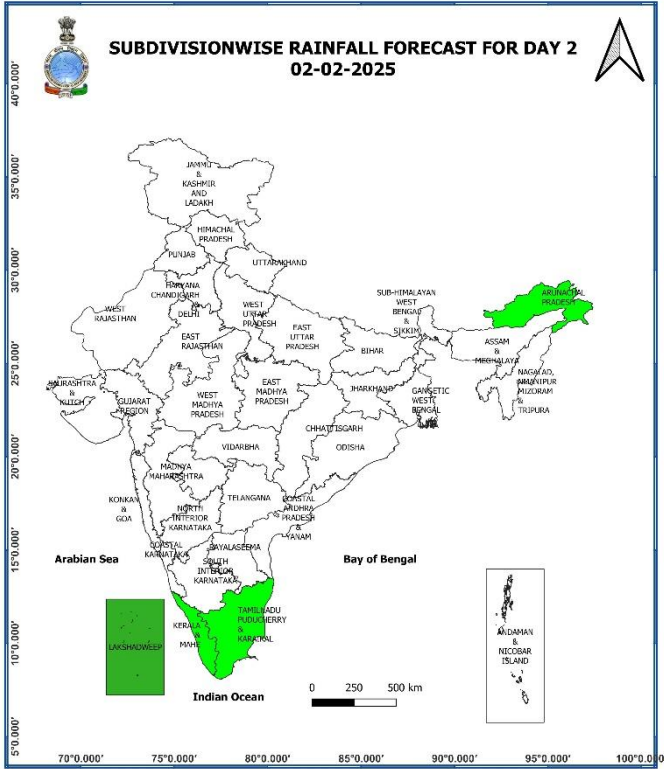
- ❖ The **Western Disturbance** as a cyclonic circulation over east Afghanistan & adjoining Pakistan now lies over north Pakistan & neighbourhood between 3.1 & 7.6 km above mean sea level.
- ❖ The induced **cyclonic circulation** over central parts of Rajasthan now lies over East Rajasthan and extends upto 1.5 km above mean sea level.
- ❖ Subtropical **westerly Jet Stream** with core winds of the order upto 130 knots at 12.6 km above mean sea level continues to prevail over Northwest India.
- ❖ The **cyclonic circulation** over northeast Assam & neighbourhood persists and now extends upto 3.1 km above mean sea level.
- ❖ A fresh **Western Disturbance** is likely to affect Northwest India from 03rd February, 2025.
- ❖ The **trough** in easterlies over Southwest Bay of Bengal extending upto 0.9 km above mean sea level has become less marked.
- ❖ The **cyclonic circulation** over south Kerala at 0.9 km above mean sea level has become less marked.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 08th February, 2025)



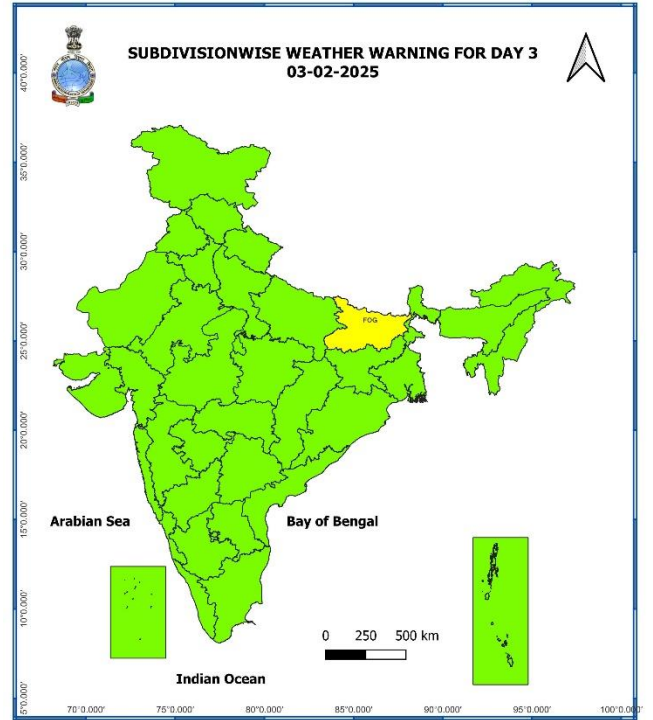
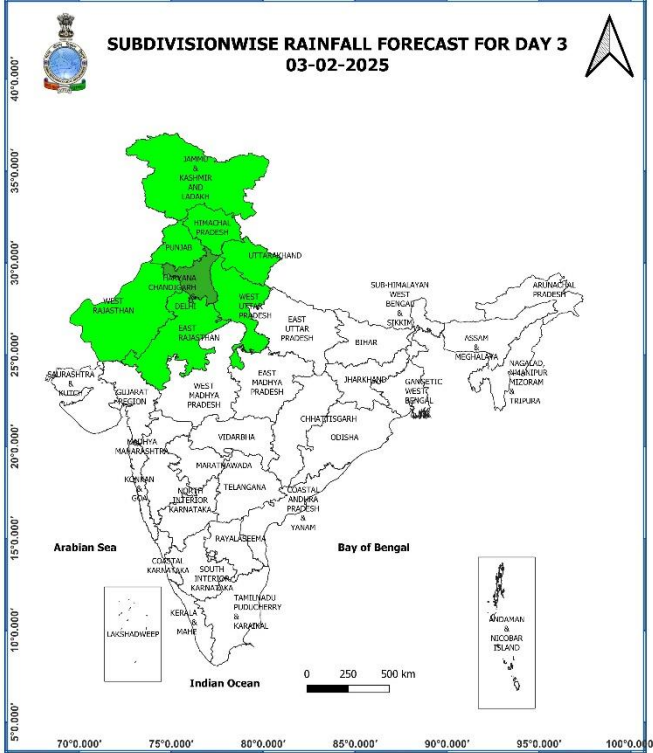
01st February (Day 1):

- ❖ **Dense fog conditions** very likely in isolated pockets of Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, West Bengal & Sikkim, Bihar, Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Thunderstorm accompanied with lighting** very likely in isolated places over Lakshadweep.



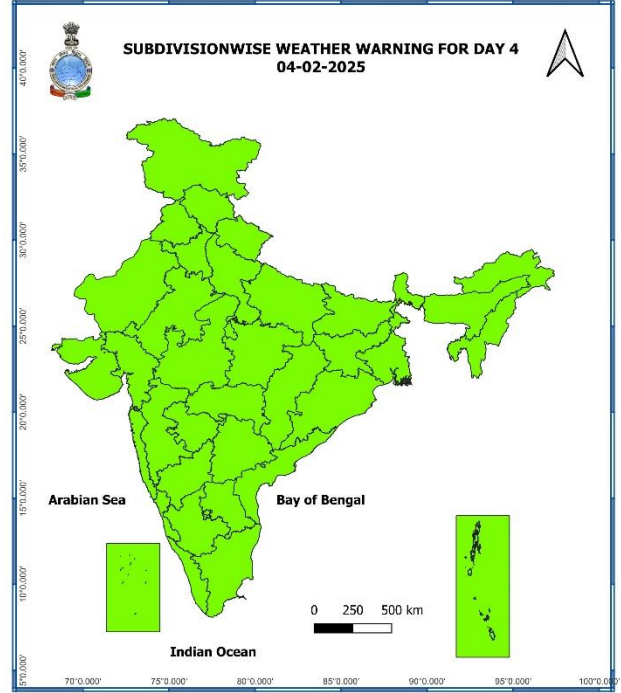
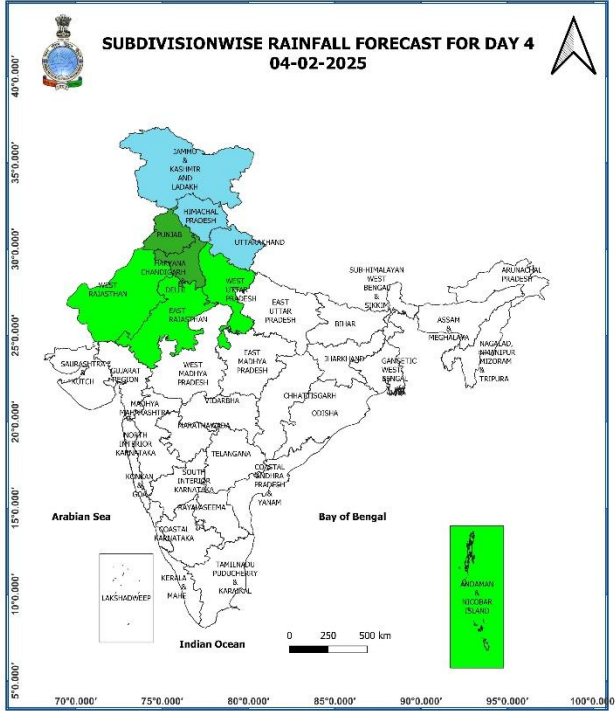
02nd February (Day 2):

- ❖ **Dense fog conditions** very likely in isolated pockets of Sub-Himalayan West Bengal, Bihar and Odisha.



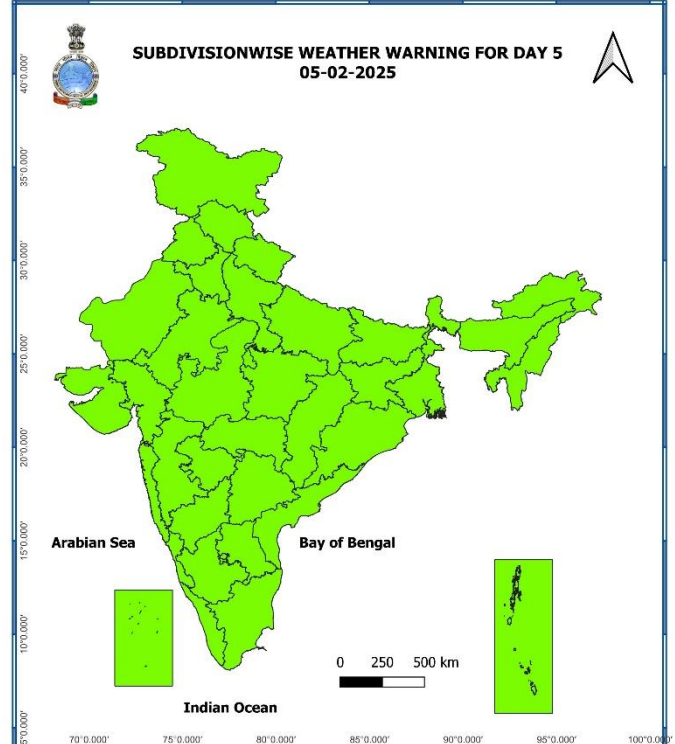
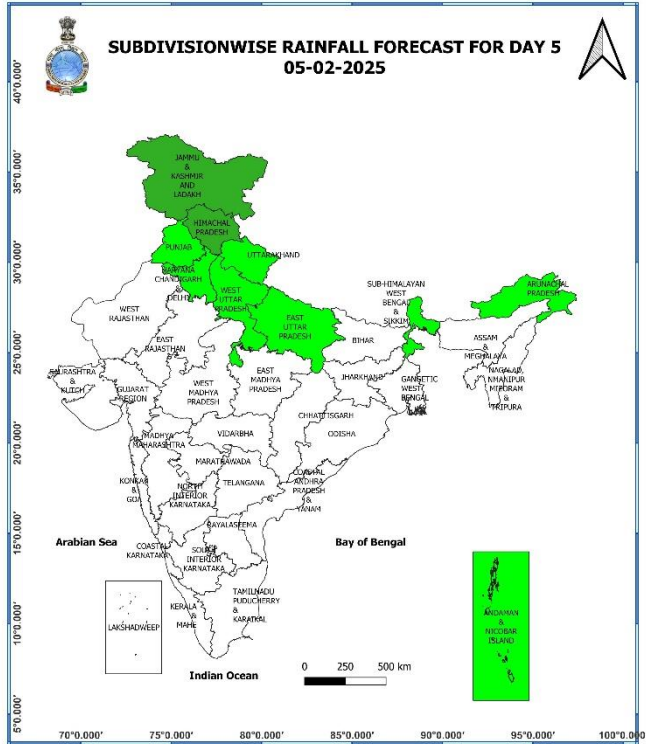
03rd February (Day 3):

- ❖ Dense fog conditions very likely in isolated pockets of Bihar.



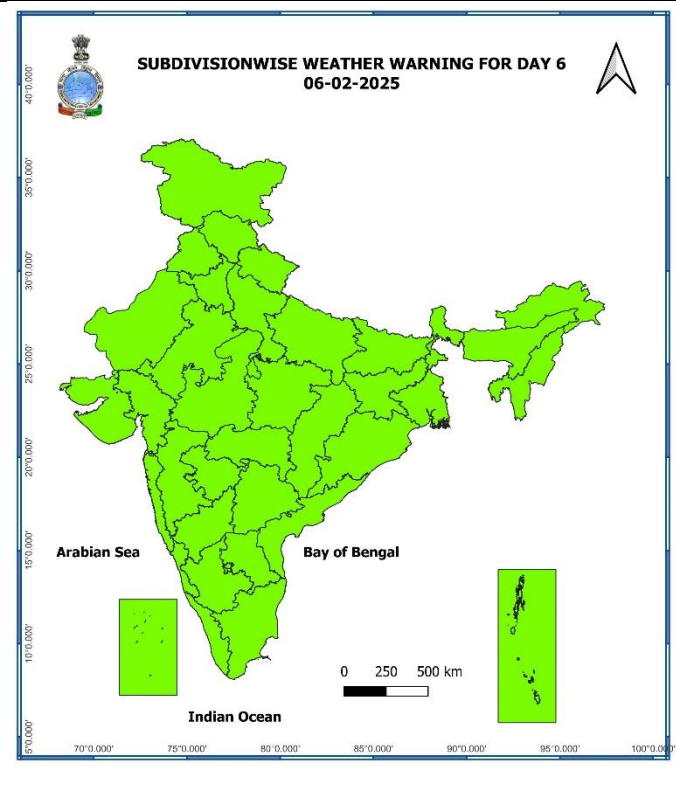
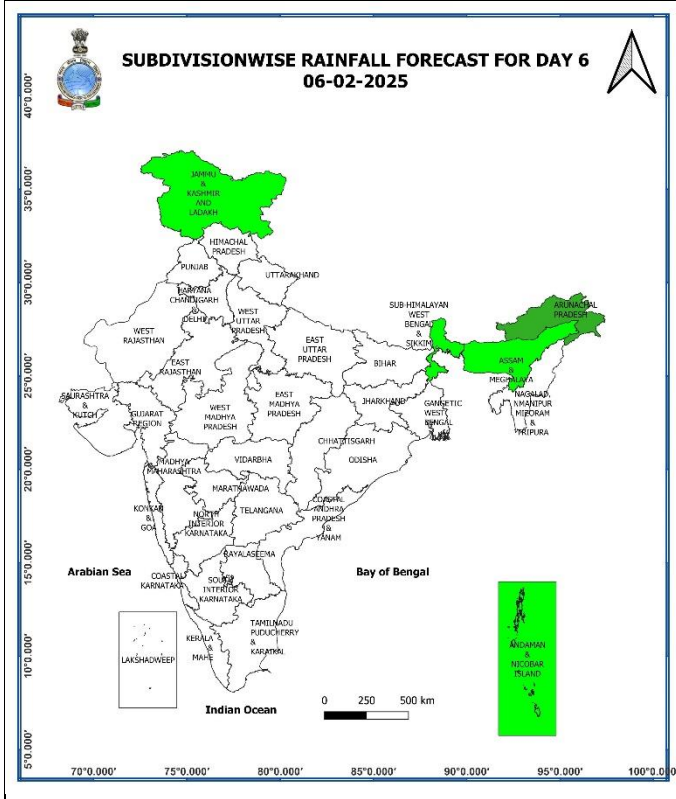
04th February (Day 4):

- ❖ **Thunderstorm accompanied with lighting** likely at isolated places over Himachal Pradesh and Uttarakhand.



05th February (Day 5):

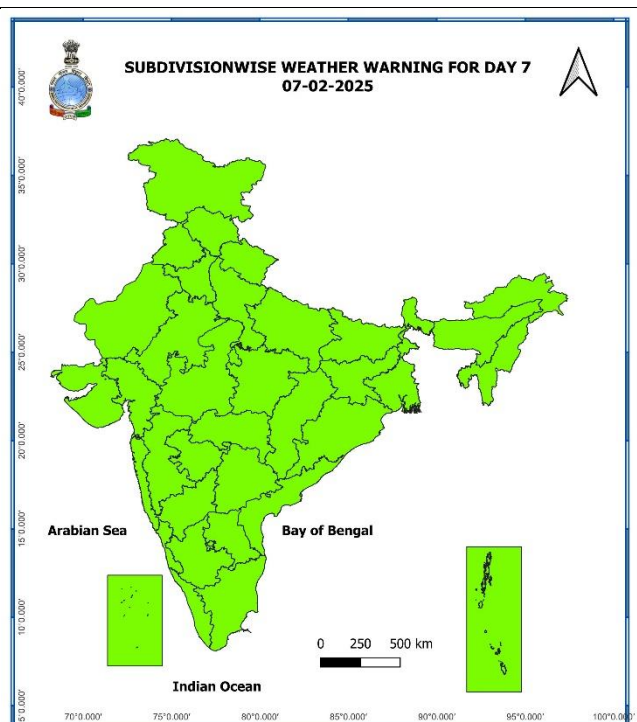
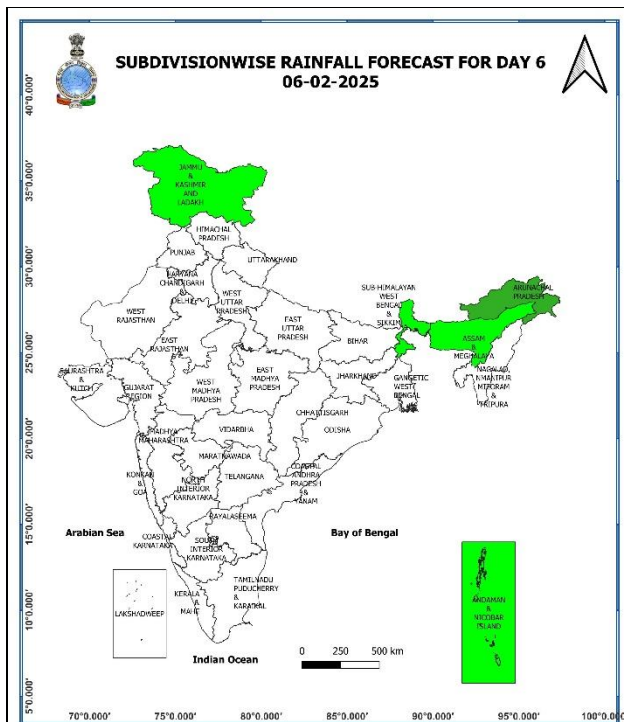
❖ **No Weather Warning.**



06th February (Day 6):

❖ No Weather Warning.

* 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)



07th February (Day 7):

❖ **No Weather Warning.**

Weather Outlook for subsequent 3 days (During 08th February- 10th February, 2025)

- ❖ **Scattered to fairly widespread rainfall likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh.**
- ❖ **Isolated to scattered rainfall likely over Uttarakhand, Arunachal Pradesh and Nicobar Islands.**

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

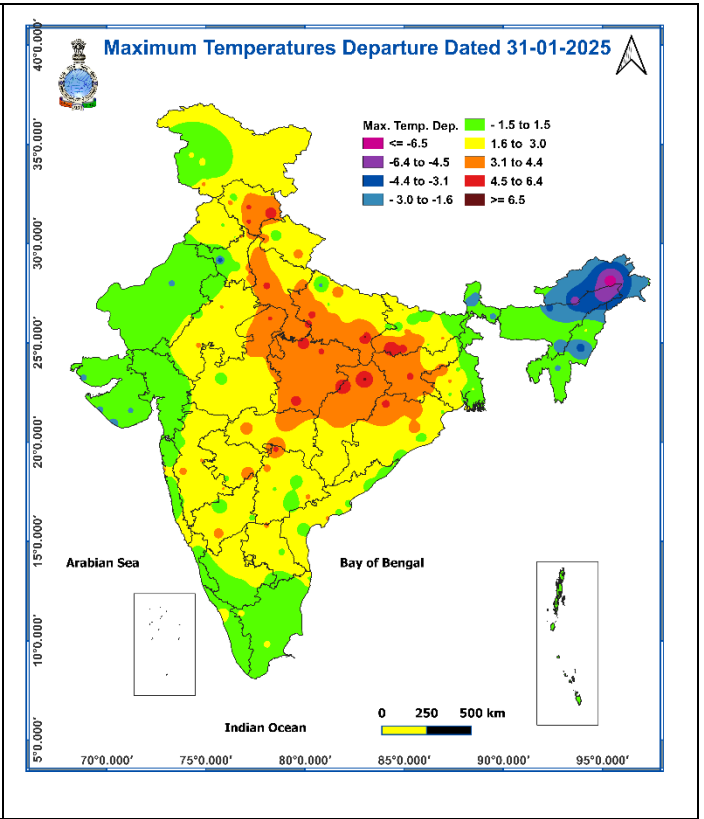
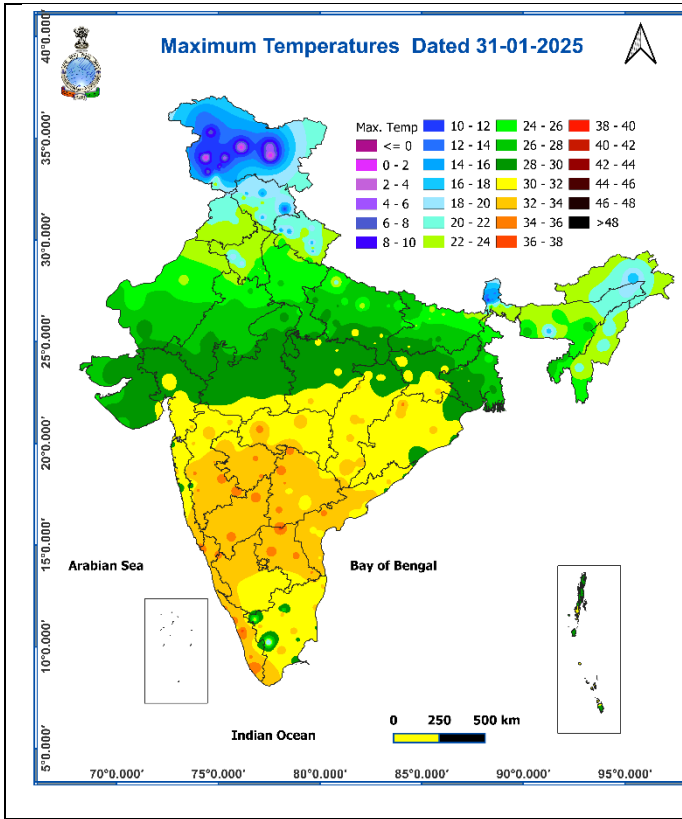
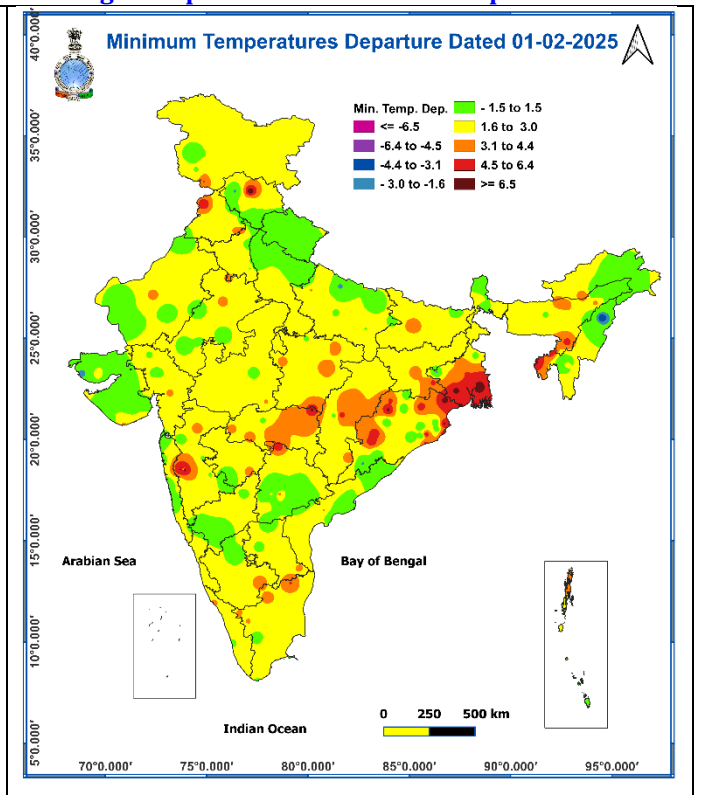
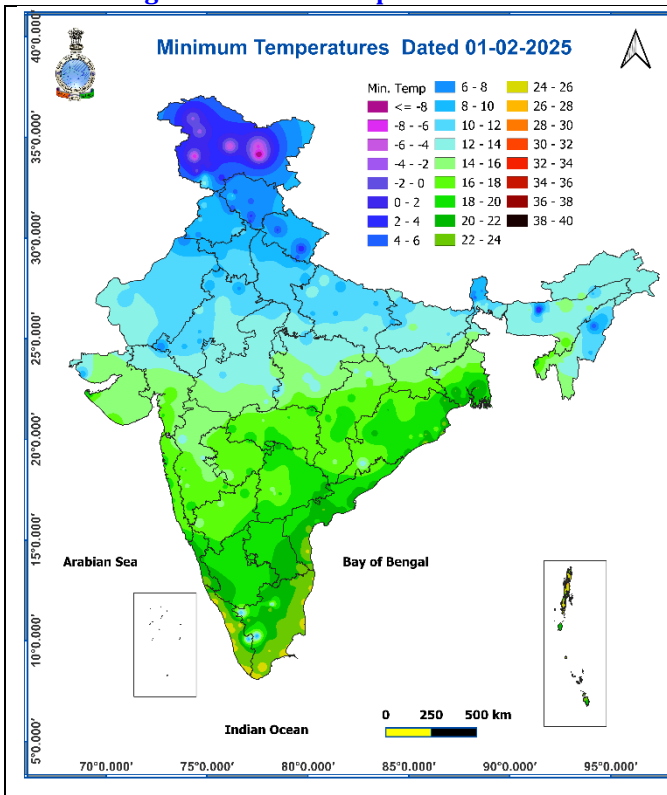


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures



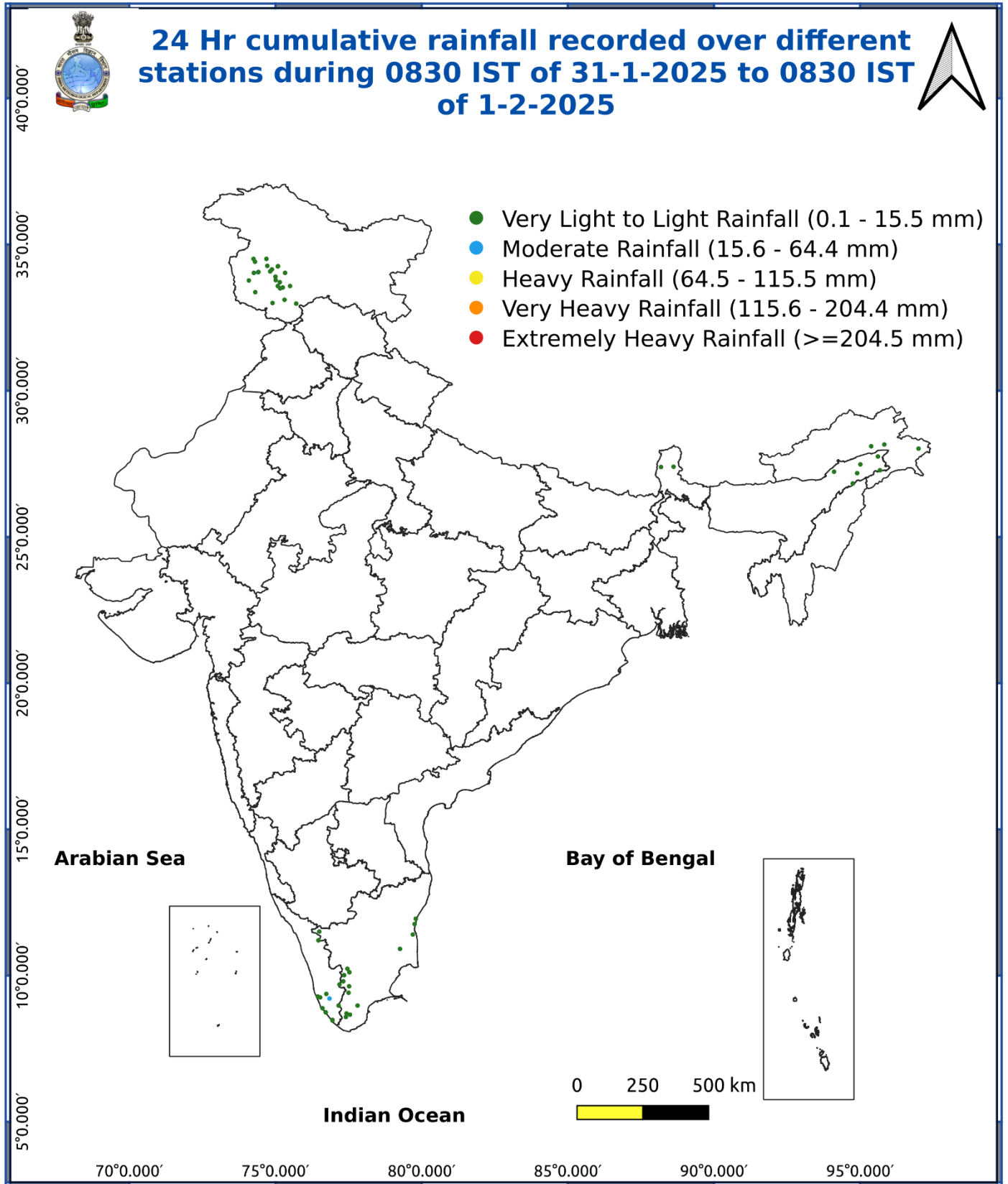
Impact expected due to dense fog in the night /morning hours over plains of North Uttar Pradesh, East India:

- ❖ 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.

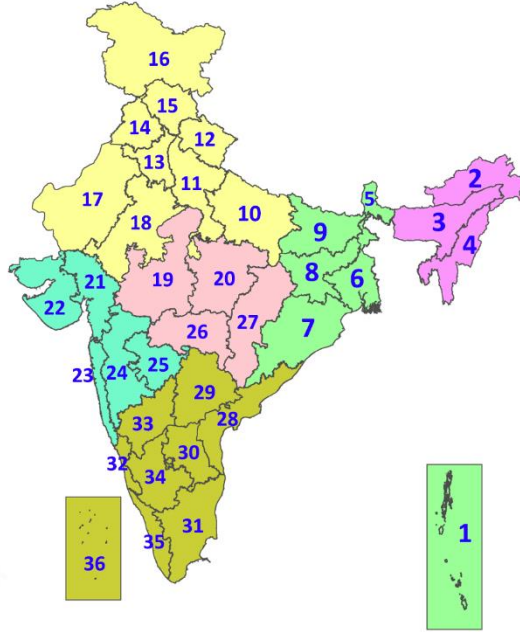
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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. रायलसेमा
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

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)