

Sunday, February 2, 2025
Time of Issue: 0745 hours IST
(MORNING)

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 tomorrow, the 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 02nd 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.

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 on 02nd, Sub-Himalayan West Bengal & Sikkim & Odisha till 03rd, Bihar till 04th February.

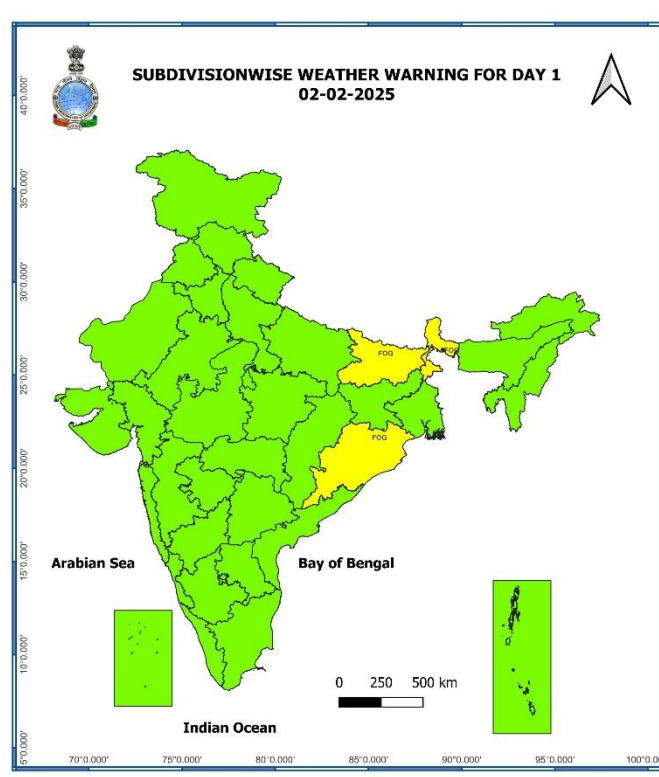
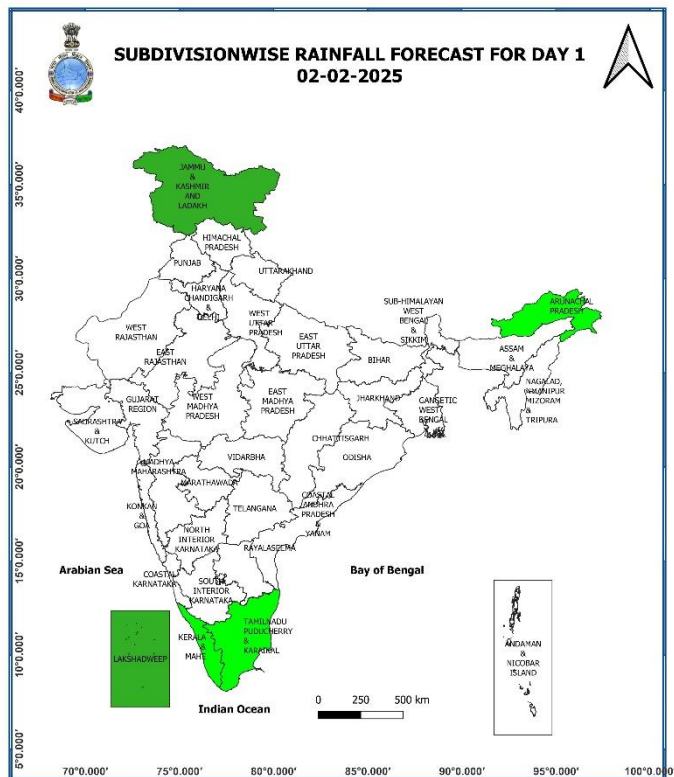
Main Weather Observations:

- ❖ **Rainfall/Snowfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **at isolated places** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Tamil Nadu, Puducherry & Karaikal.
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): **Nil.**
- ❖ **Heavy rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday): **NIL.**
- ❖ **Fog reported** (upto 0530 hours IST of today): **Very dense fog reported** in isolated pockets of West Rajasthan, Punjab, West Madhya Pradesh; **Dense Fog** reported in isolated pockets of East Uttar Pradesh & Delhi.
- ❖ **Visibility reported** (upto 0530 hours IST of today) (≤ 200 m): **West Rajasthan:** Churu 00; **Punjab:** Amritsar Airport 00; Patiala 200; **Bihar:** Bhagalpur 00, Purnea 200; **West Madhya Pradesh:** Gwalior Airport 00; **Coastal Andhra Pradesh:** Vijaywada Airport 100; **East Uttar Pradesh:** Gorakhpur Airport 100; **Delhi:** Palam 150.
- ❖ **Minimum Temperature Departures (as on 01-02-2025):** Minimum temperatures were **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 were **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**). Yesterday, the **lowest minimum temperature** of 6.1°C was reported at **Ganganagar (West Rajasthan)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 01-02-2025):** Maximum temperatures were **markedly above normal (5.1°C or above)** at a few places over Jharkhand; at isolated places over Chhattisgarh, Uttar Pradesh; **appreciably above normal (3.1°C to 5.0°C)** at most places over East Madhya Pradesh, Vidarbha; at many places over Marathwada, North Interior Karnataka; at a few places over Madhya Maharashtra, Rayalaseema, Uttarakhand; at isolated places over West Madhya Pradesh, Haryana-Chandigarh-Delhi, Telangana, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal, Himachal Pradesh; **above normal (1.6°C to 3.0°C)** at a few places over South Interior Karnataka; at isolated places over Odisha. These were **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 most places over Saurashtra & Kutch; at many places over Punjab; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Gujarat Region and near normal over rest parts of the country (**Fig. 2**). Yesterday, the highest **maximum temperature** of 37.0°C was reported at **Kurnool (Rayalaseema)** over the plains of the country.

Meteorological Analysis (Based on 0530 hours IST)

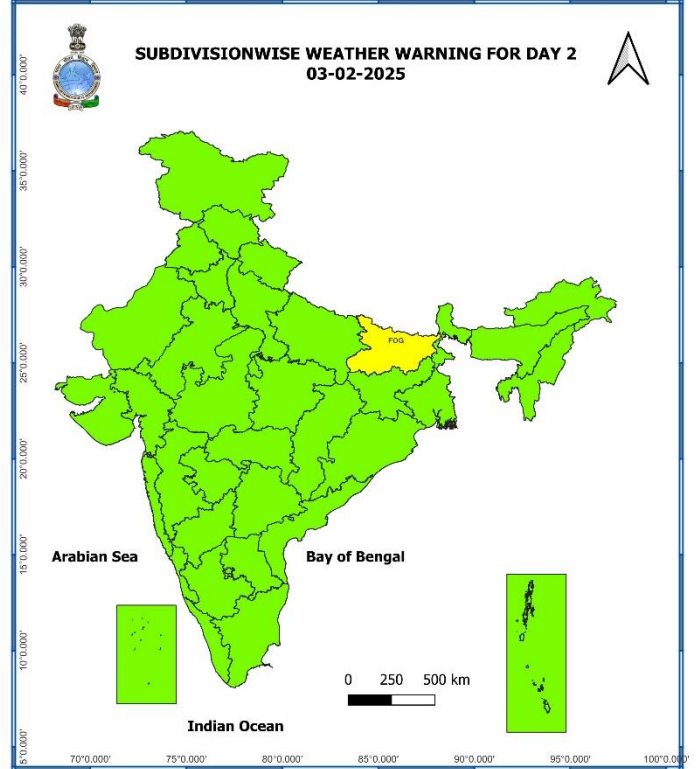
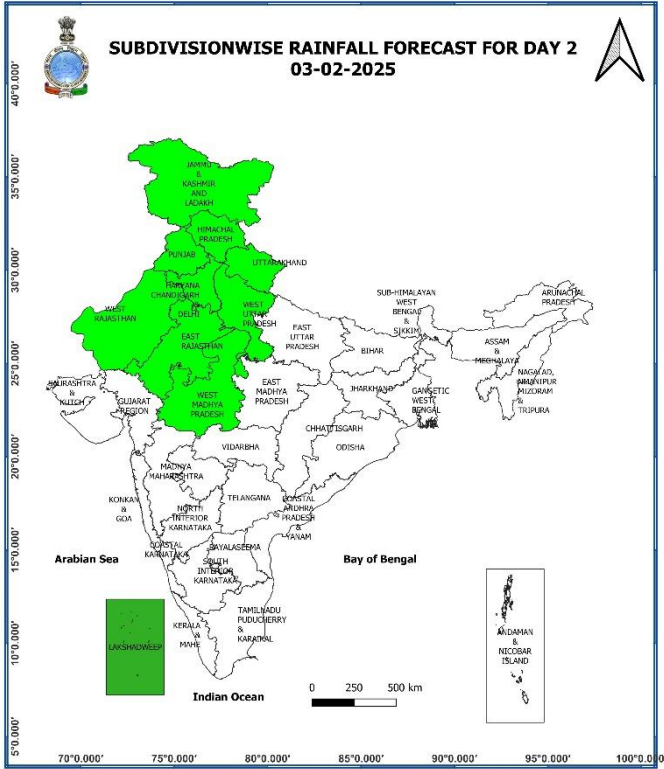
- ❖ The **Western Disturbance** as a cyclonic circulation over north Pakistan & neighbourhood between 3.1 & 7.6 km above mean sea level persists.
- ❖ The induced **cyclonic circulation** over East Rajasthan extending upto 1.5 km above mean sea level persists.
- ❖ Subtropical **westerly Jet Stream** with core winds of the order upto 130 knots at 12.6 km above mean sea level is prevailing over Northwest India.
- ❖ The **cyclonic circulation** over northeast Assam & neighbourhood extending upto 3.1 km above mean sea level persists.
- ❖ A fresh **Western Disturbance** is likely to affect Northwest India from tomorrow, the 03rd February, 2025.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 09th February, 2025)



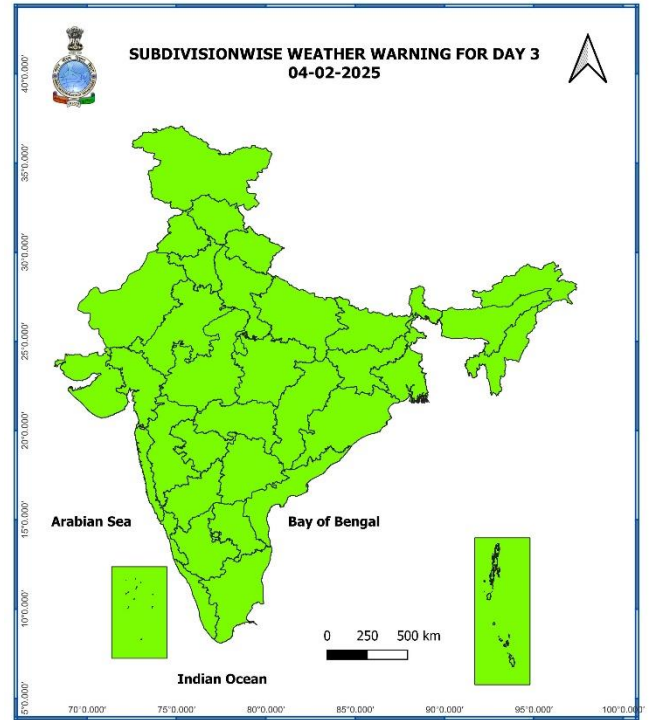
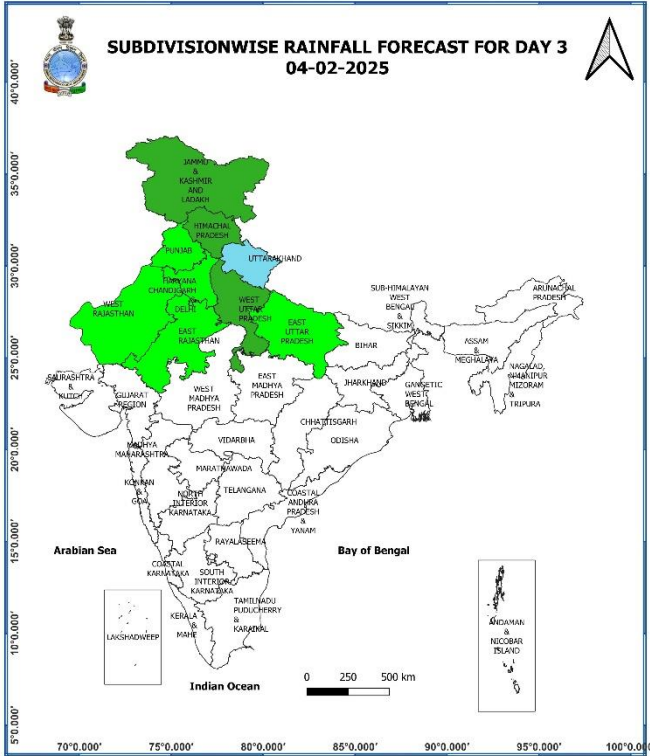
02nd February (Day 1):

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



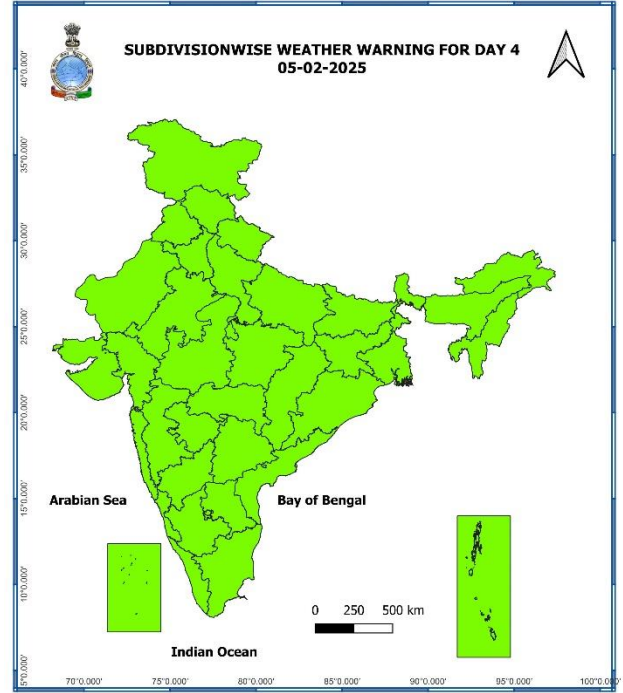
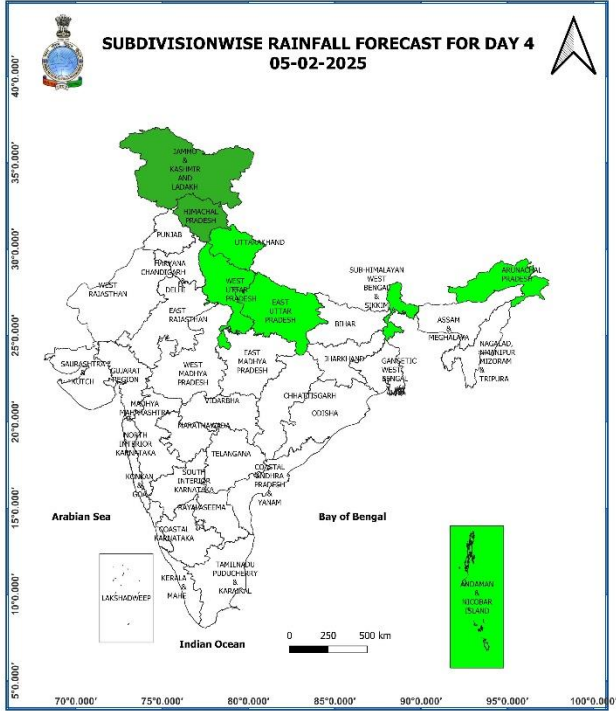
03rd February (Day 2):

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



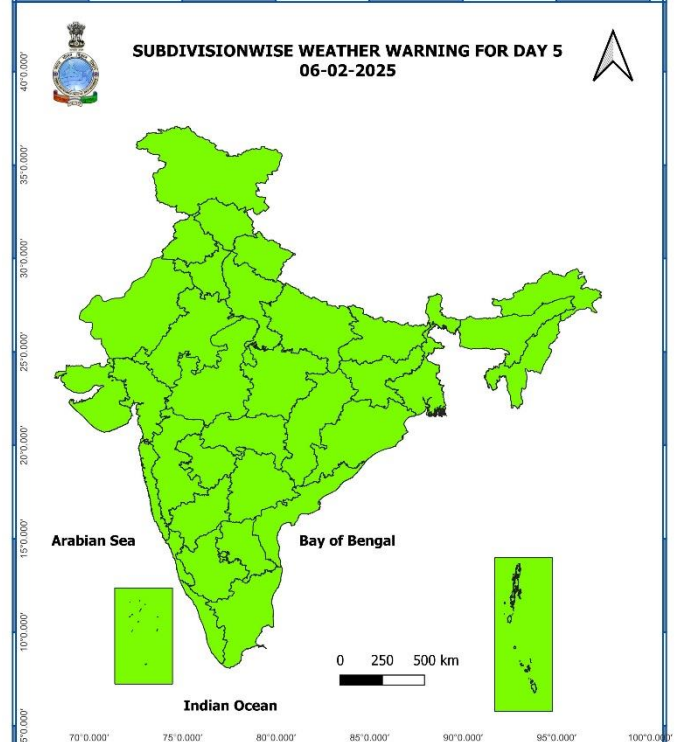
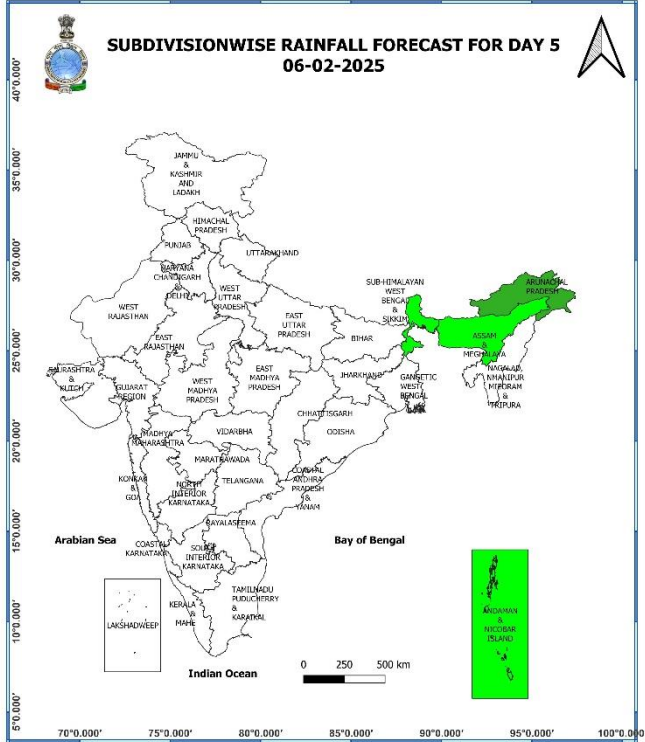
04th February (Day 3):

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



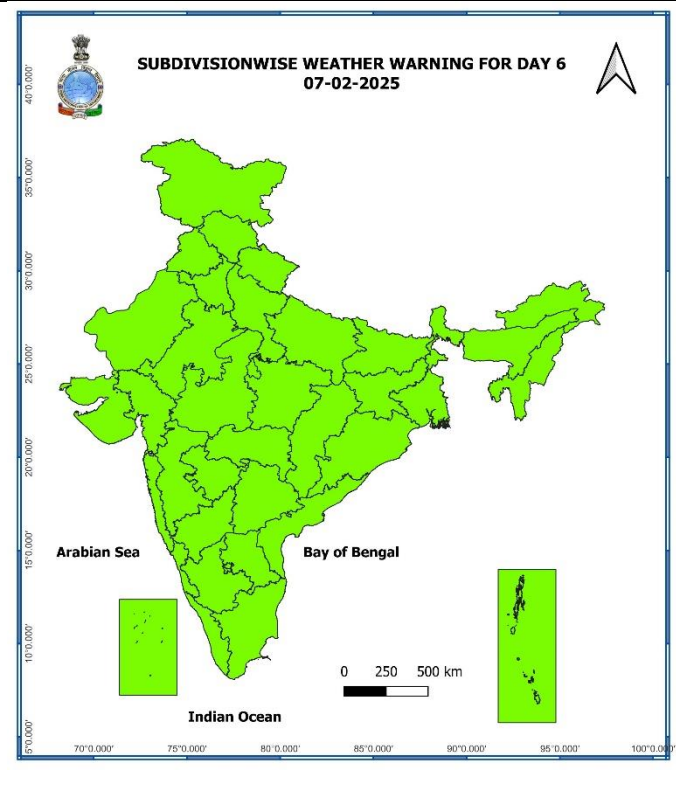
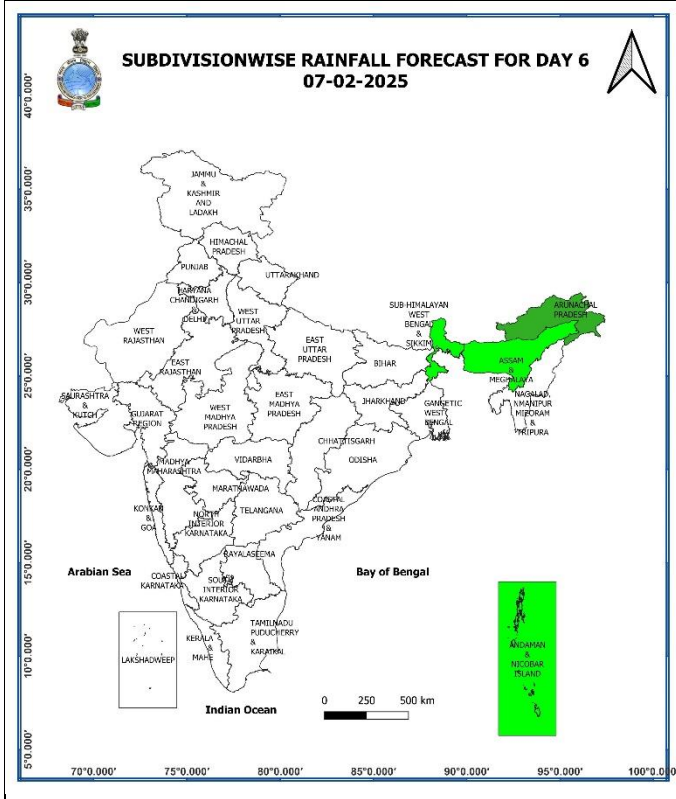
05th February (Day 4):

❖ **No Weather Warning.**



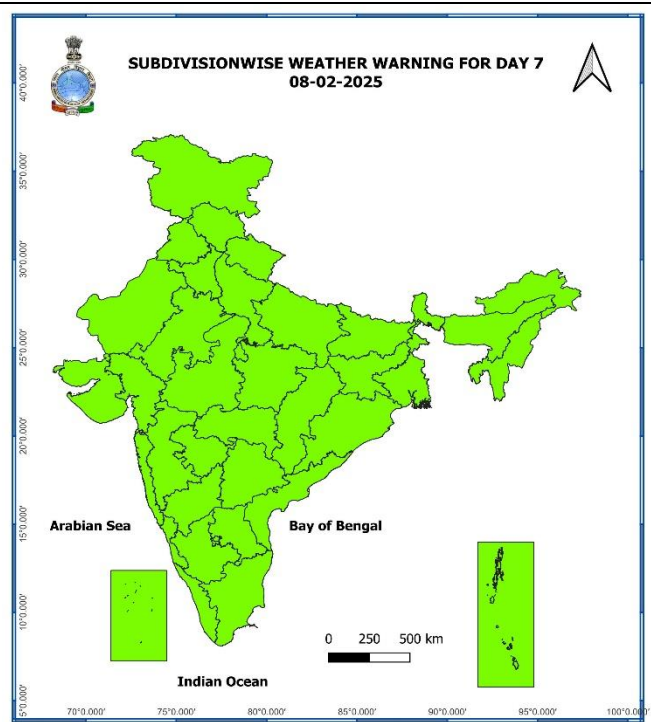
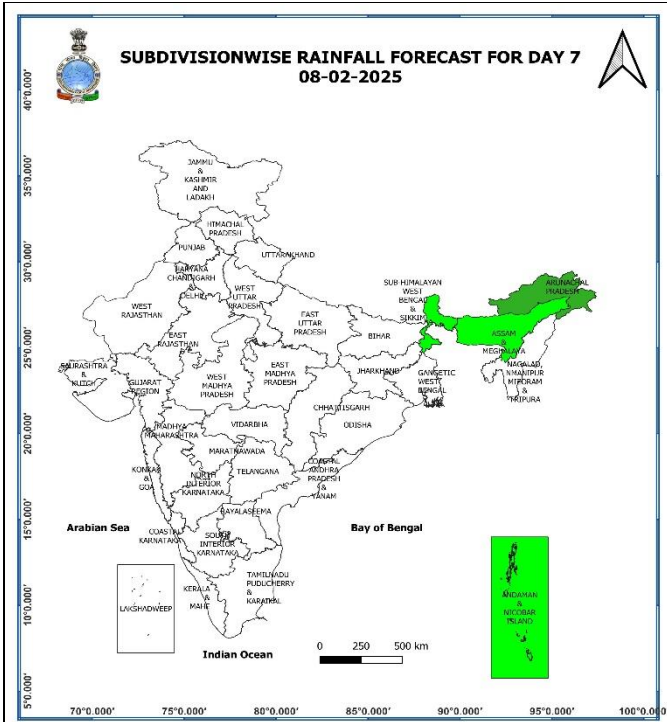
06th February (Day 5):

❖ **No Weather Warning.**



07th February (Day 6):

❖ No Weather Warning.



08th February (Day 7):

❖ **No Weather Warning.**

Weather Outlook for subsequent 3 days (During 09th February- 11th 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

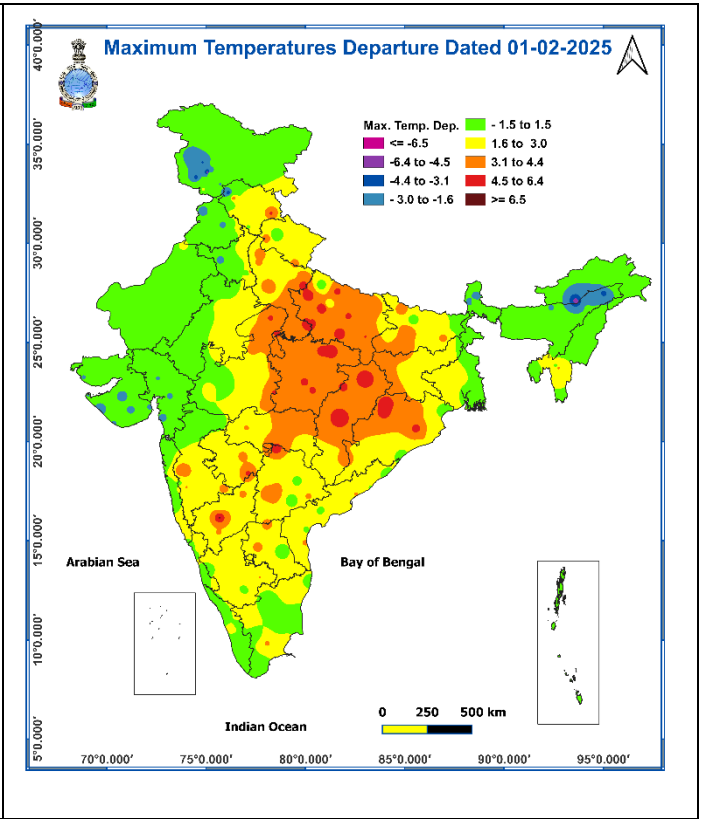
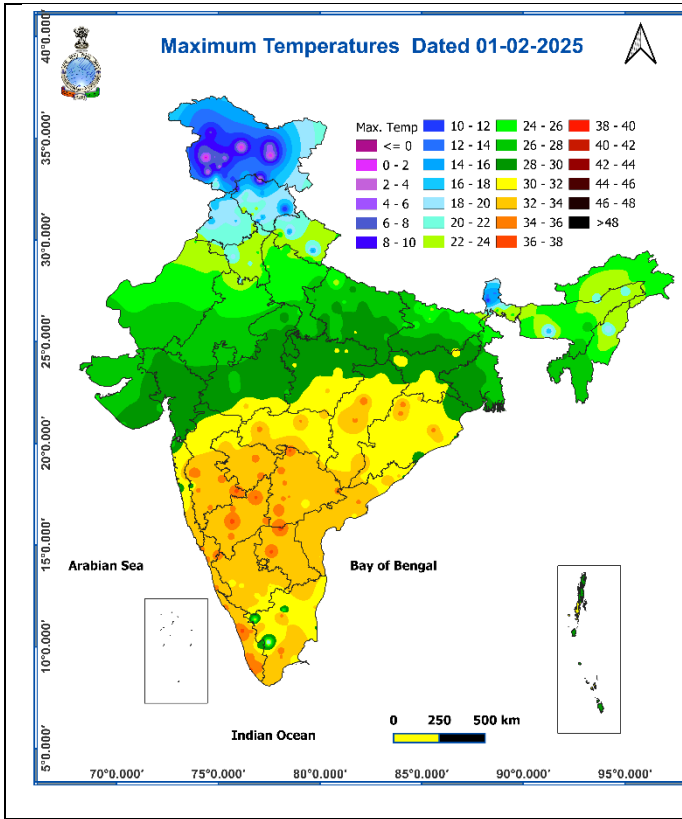
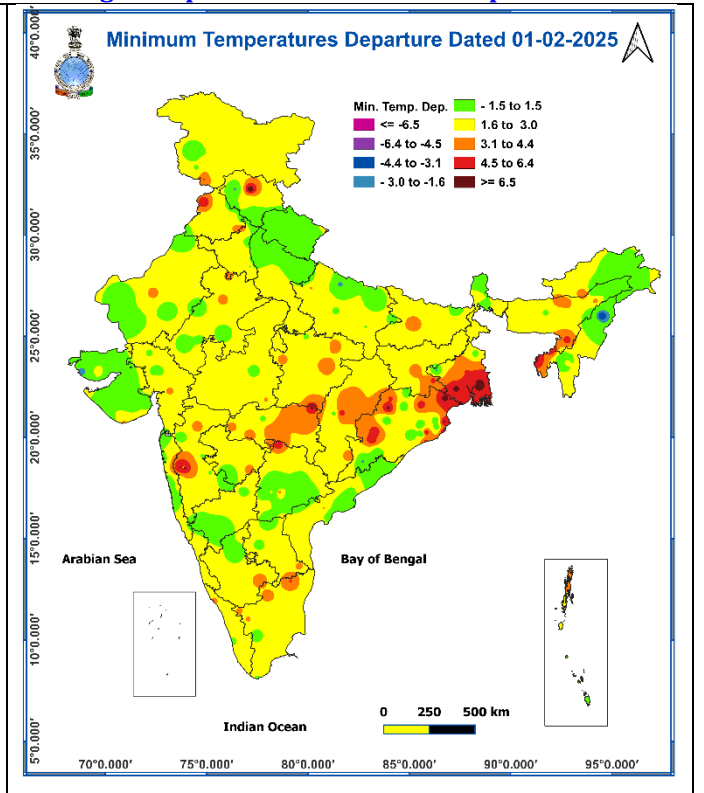
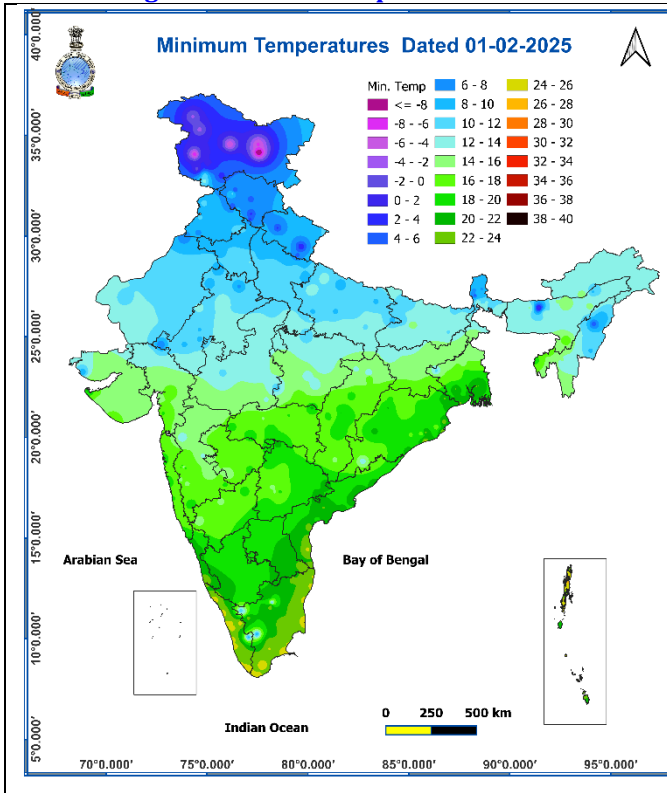


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures



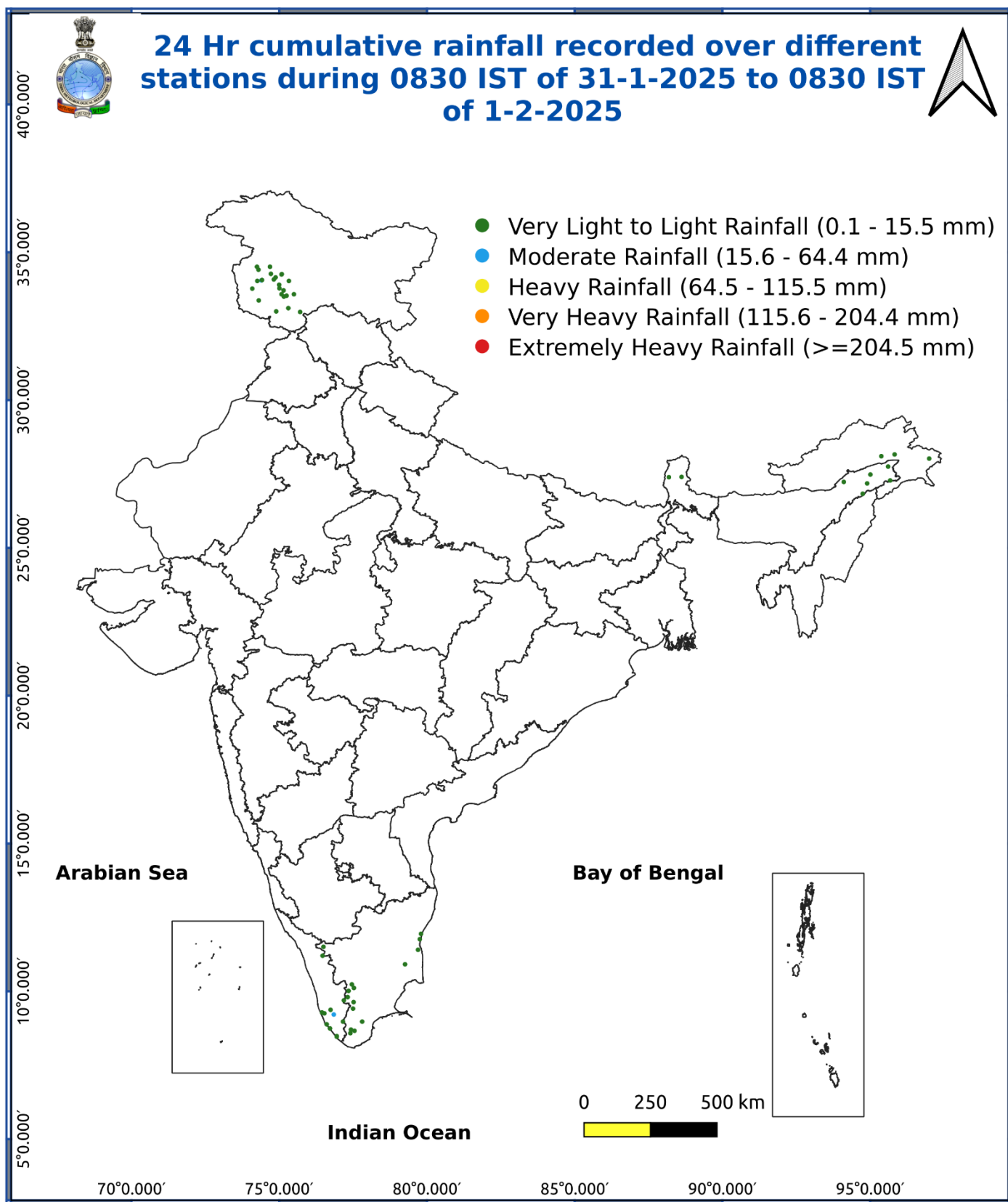
Impact expected due to dense fog in the night /morning hours over plains of North Uttar Pradesh, East India:

- ❖ 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.

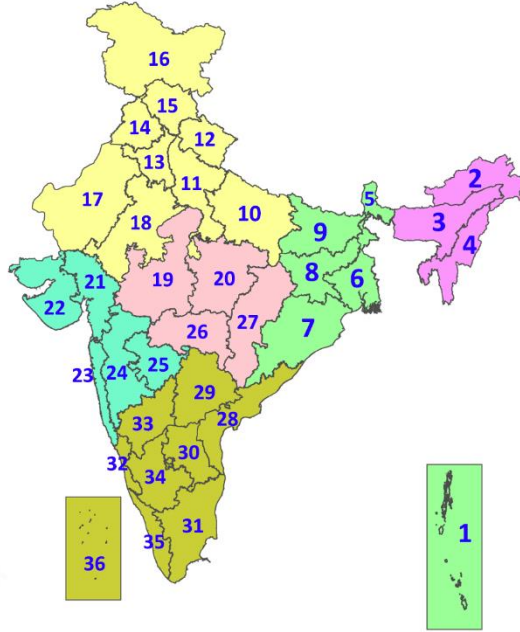
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



* 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)

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

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)