Friday, January 31, 2025
Time of Issue: 0800 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems, Forecast and warning:

- The **Western disturbance** seen as a cyclonic circulation over central Pakistan in lower tropospheric levels. Two fresh **Western Disturbances** are likely to affect Northwest India between 01st to 03rd February, 2025. Under the influence of these systems,
  - ✓ Scattered to fairly widespread light to moderate rainfall/snowfall activity likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad during 31st January- 05th February; isolated to scattered rainfall/snowfall over Himachal Pradesh during 31st January- 05th February, Uttarakhand during 01st February-05th February and isolated to scattered light to moderate rainfall over Punjab, Haryana during 31st January- 05th February, Uttar Pradesh, Rajasthan during 03rd -05th February.
- A **cyclonic circulation** lies over northeast Assam in lower tropospheric levels. Under its influence,
  - ✓ Light to moderate rainfall accompanied with thunderstorm & lightning very likely at a few places over Arunachal Pradesh, northeast Assam, Nagaland on 31st January.
  - ✓ Isolated light to moderate rainfall likely over Sub-Himalayan West Bengal & Sikkim on 31st January.
- Under the influence of a trough in easterly, Light to moderate rainfall accompanied with thunderstorm & lightning very likely at a few places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe till 02nd February with isolated **heavy rainfall** likely over Tamil Nadu, Puducherry & Karaikal on 31st January.

Temperature and Fog Forecast:

Forecast of temperature:

- Gradual rise in minimum temperatures by 2-3°C likely over the Northwest, East, Central and West India during next 3 days and no significant change thereafter.

Dense Fog Warning:

Dense to very Dense fog Conditions very likely to continue to prevail during night/early morning hours in isolated pockets of Uttar Pradesh till 01st February

Dense fog conditions very likely to continue to prevail during night/early morning hours in isolated pockets of Gangetic West Bengal till 31st January; Sub-Himalayan West Bengal & Sikkim till 01st February; Bihar, Odisha, Assam & Meghalaya till 02nd 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, Sikkim, Arunachal Pradesh, Assam and 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** (at 0530 hours IST of today): **Dense to very dense fog conditions** in isolated pockets of East Rajasthan, Uttar Pradesh, Bihar, Chhattisgarh; **Moderate fog** in isolated pockets of Delhi.

- **Visibility reported** (at 0530 hours IST of today) (≤500 m): **East Rajasthan:** Churu 0; **West Uttar Pradesh:** Bareilly 0; **East Uttar Pradesh:** Gorakhpur 0, Varanasi 200; **Bihar:** Purnea 0; **Chhattisgarh:** Jagdalpur 0; **Delhi:** Safdarjung 200.

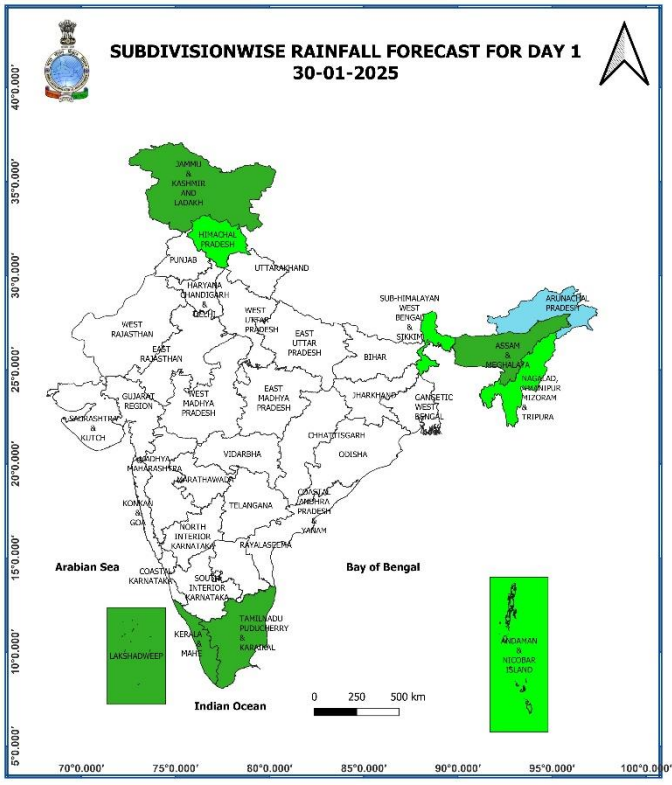
- **Minimum Temperature Departures (as on 30-01-2025):** Minimum temperatures were **markedly above normal (5.1°C or above)** at isolated places over Gangetic West Bengal and Madhya Maharashtra; **appreciably above normal (3.1°C to 5.0°C)** at some places over Vidarbha; at isolated places over Arunachal Pradesh, Assam & Meghalaya, Himachal Pradesh, Punjab, Chhattisgarh, East Madhya Pradesh, Marathwada, kg and Saurashtra & Kutch; **above normal (1.6°C to 3.0°C)** at most places over Gujarat Region; at many places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Rajasthan, Bihar, Nagaland, Manipur, Mizoram & Tripura, East Madhya Pradesh, Jharkhand, and Sub-Himalayan West Bengal & Sikkim; at a few places over p and Haryana-Chandigarh-Delhi; at isolated places over Uttarakhand, Coastal Andhra Pradesh & Yanam, North Interior Karnataka, Telangana, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe. These were **below normal (-1.6°C to -3.0°C)** at many places over Delhi; at isolated places over East Madhya Pradesh, Konkan & Goa, Rayalaseema and near normal over rest parts of the country **(Fig. 4)**. Yesterday, the **lowest minimum temperature** of **6.1°C** was reported at **Fursatganj (East Uttar Pradesh)** over the plains of the country.

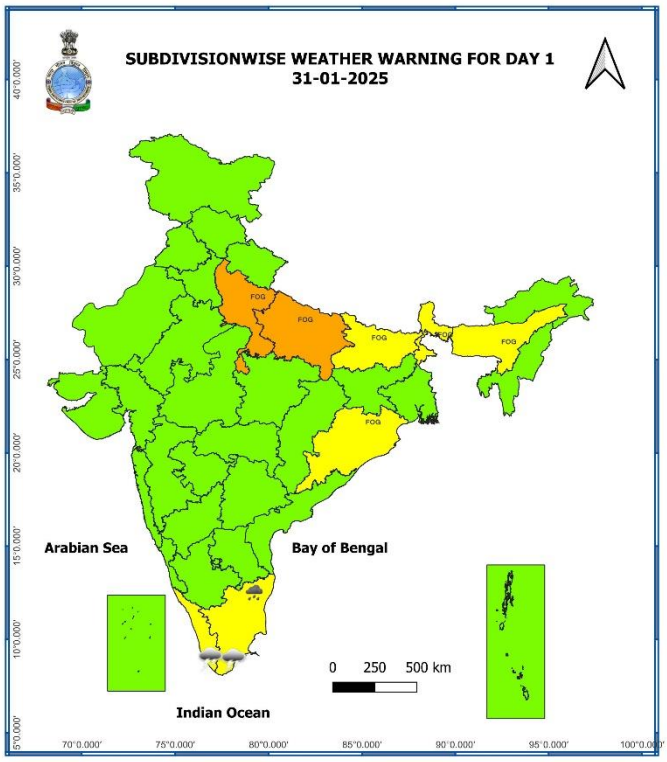
- **Maximum Temperature Departures (as on 30-01-2025**): Maximum temperatures were **markedly above normal (5.1°C or above)** at a few places over Chhattisgarh; **appreciably above normal (3.1°C to 5.0°C)**at most places over East Rajasthan, Vidarbha, East Madhya Pradesh and Jharkhand; at many places over Marathwada and Gangetic West Bengal; at a few places over West Rajasthan, Haryana-Chandigarh-Delhi, Uttar Pradesh, West Madhya Pradesh, Madhya Maharashtra, Odisha and Gujarat Region; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Saurashtra & Kutch; **above normal (1.6°C to 3.0°C)** at most places over Bihar; at many places over Punjab, Konkan & Goa, Rayalaseema and North Interior Karnataka; at a few places over Telangana and Coastal & South Interior Karnataka; at isolated places over Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal. These were **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Assam & Meghalaya and near normal over rest parts of the country **(Fig. 2).** Yesterday, the **highest maximum temperature** of **36.2°C** was reported at **Washim (Marathwada) & Kannur Airport (Kerala)** over the plains of the country.

Meteorological Analysis (Based on 0530 hours IST)

- The **Western Disturbance** as a cyclonic circulation over central Pakistan & neighbourhood at 3.1 km above mean sea level with the trough aloft in middle & upper tropospheric westerlies with its axis at 5.8 km above mean sea level roughly along Long. 71°E to the north of Lat. 33°N persists.
- The induced **cyclonic circulation** over west Rajasthan extending upto 1.5 km above mean sea level persists.
- Subtropical **westerly Jet Stream** with core winds of the order upto 140 knots at 12.6 km above mean sea level are prevailing over Northwest India.
- The **cyclonic circulation** over northeast Assam & neighbourhood extending upto 1.5 km above mean sea level persists.
- The **trough** in easterlies over Southwest Bay of Bengal extending upto 0.9 km above mean sea level persists.
- Two fresh **Western Disturbances** are likely to affect Northwest India during 01st & 03rd February, 2025.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 06th February, 2025)

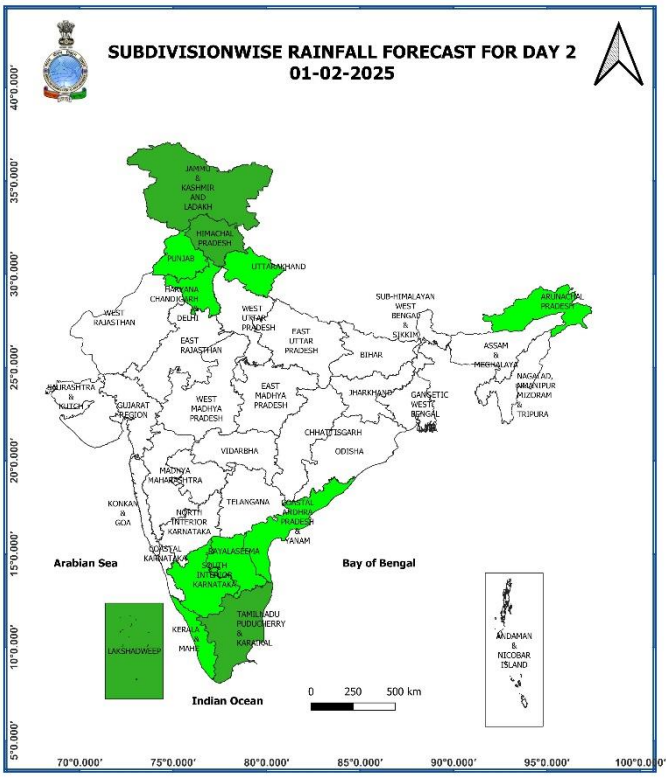


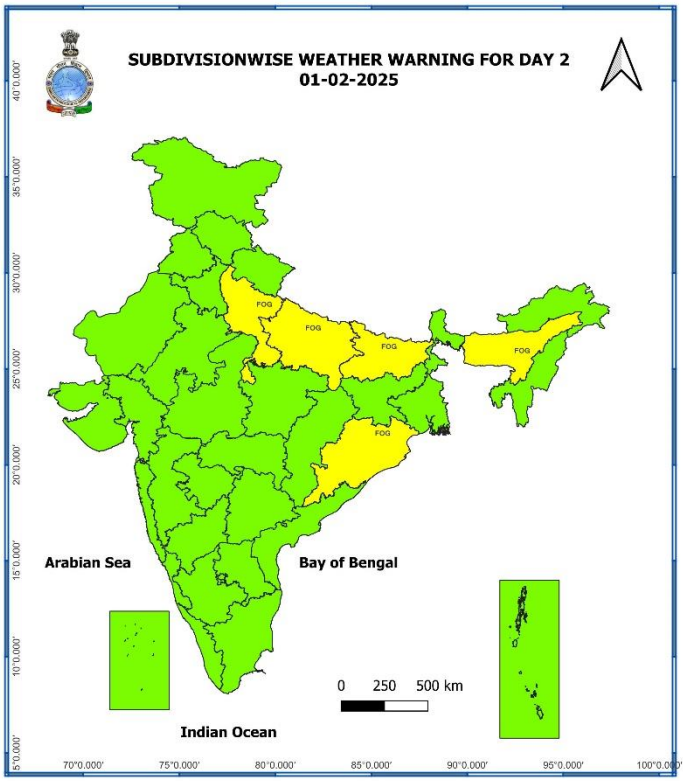


31st January (Day 1):

- **Dense to very dense fog conditions** very likely in isolated places over Uttar Pradesh; **Dense fog conditions** very likely in isolated pockets of Sub- Himalayan West Bengal & Sikkim, Bihar, Assam & Meghalaya and Odisha.
- **Heavy Rainfall** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal.

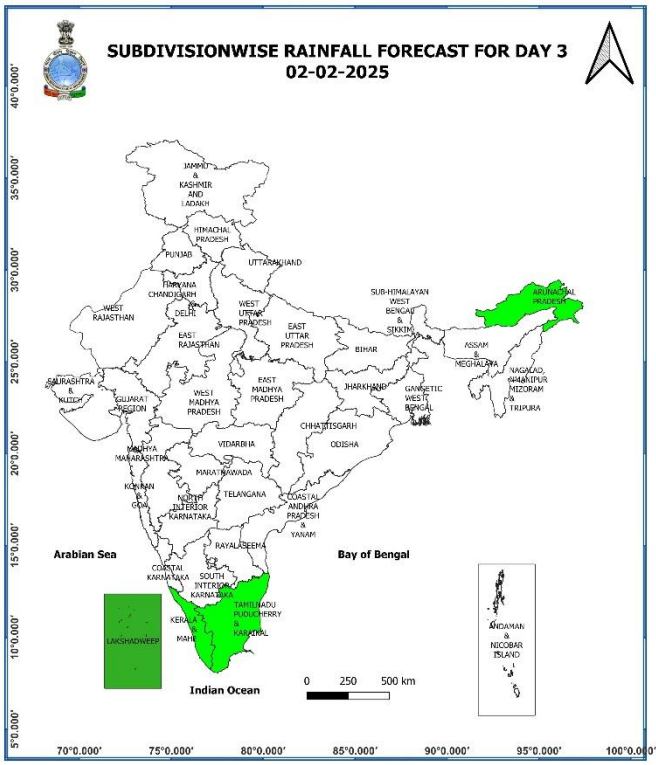
  Thunderstorm accompanied with lightning very likely at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

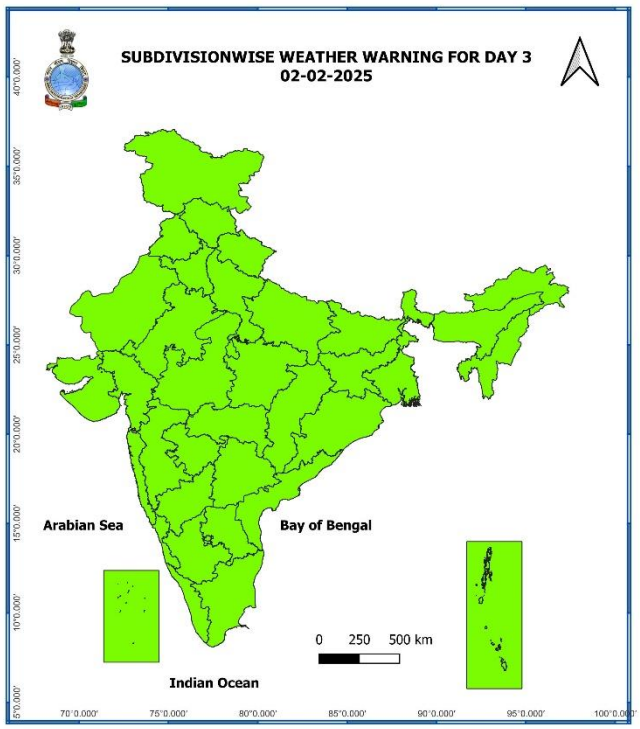




01st February (Day 2):

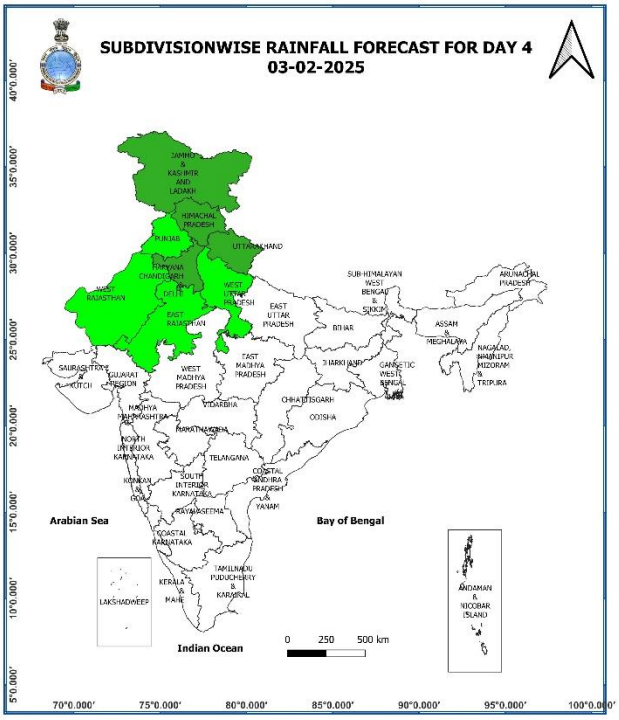
- **Dense fog conditions** likely in isolated pockets of Uttar Pradesh, Odisha, Bihar, Assam & Meghalaya.

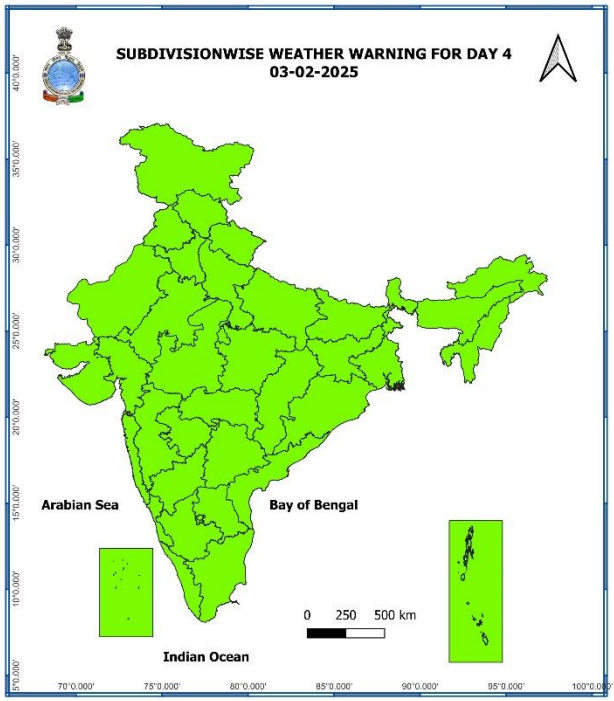




02nd February (Day 3):

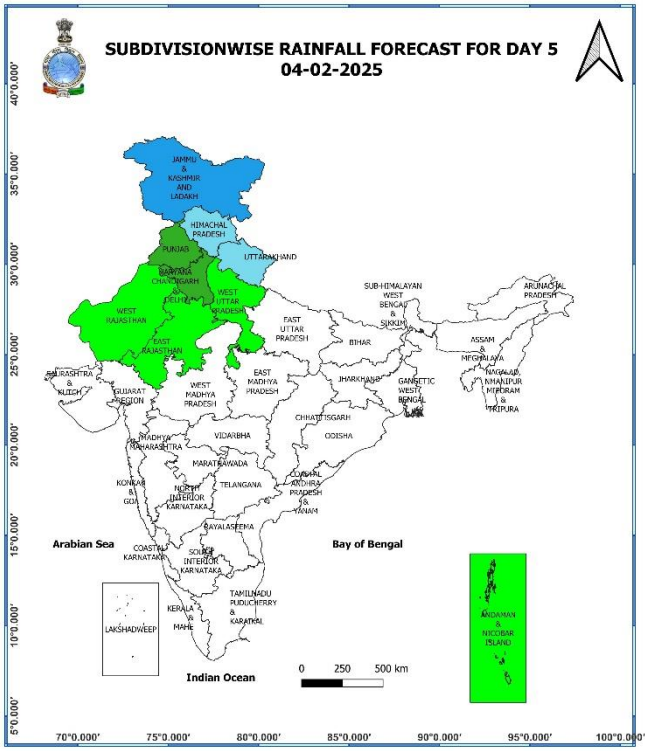
- **No Weather Warning.**

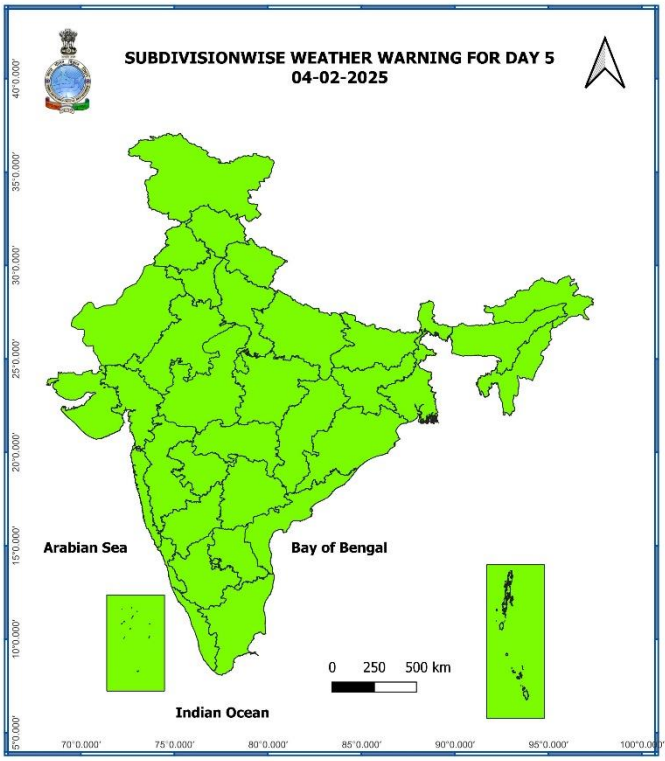




03rd February (Day 4):

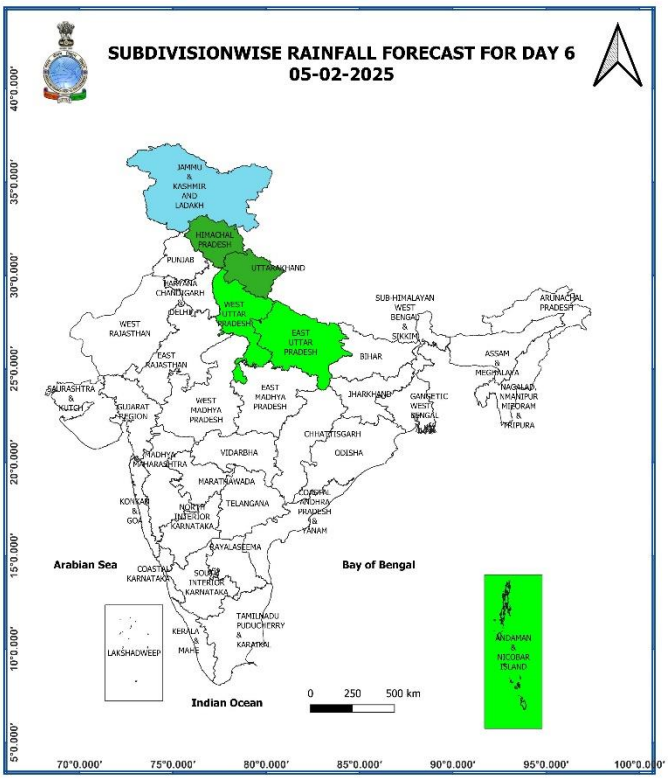
- **No Weather Warning.**

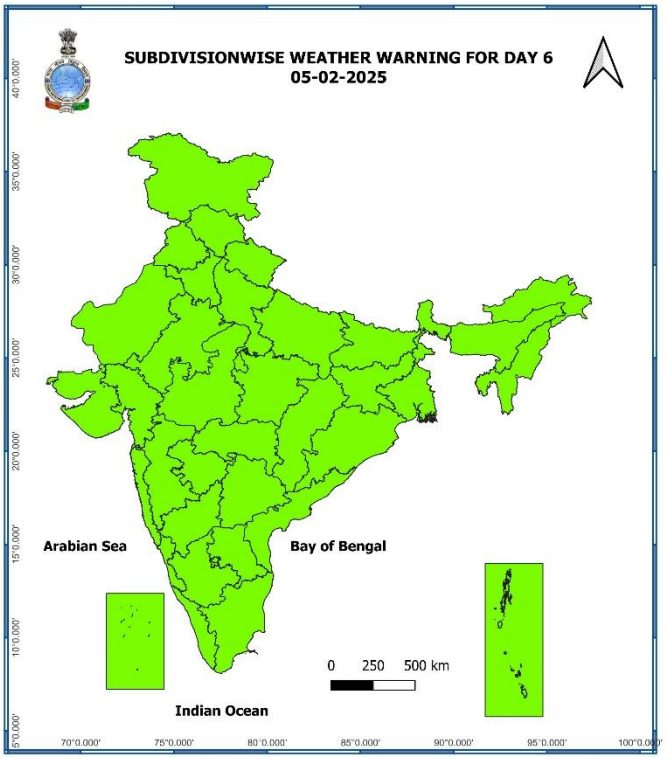




04th February (Day 5):

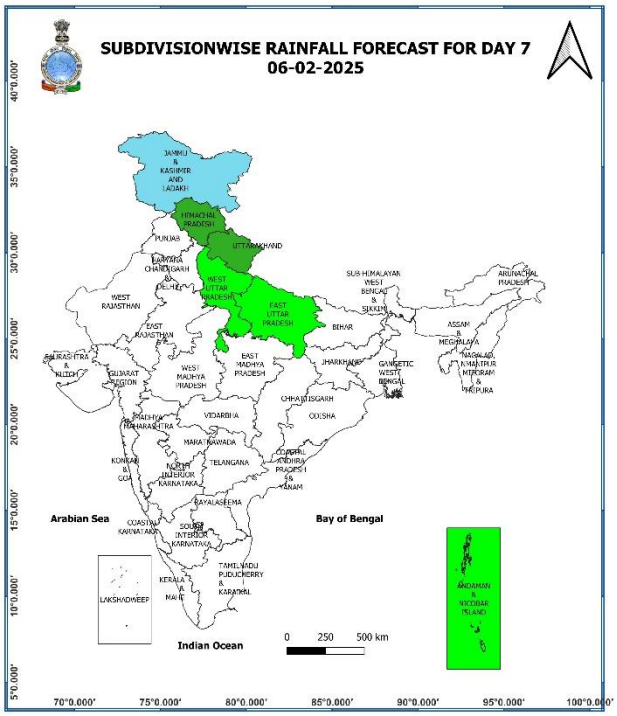
- **No Weather Warning.**

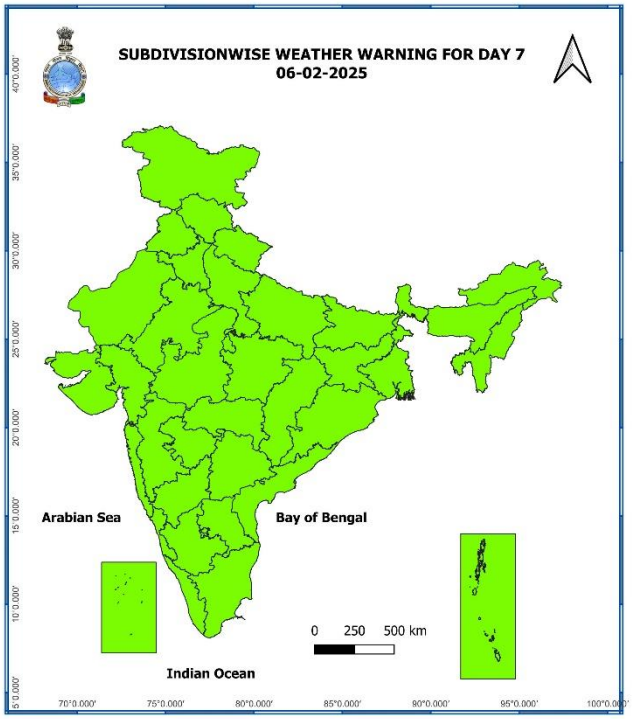




05th February (Day 6):

- **No Weather Warning.**





06th February (Day 7):

❖ **No Weather Warning**.

Weather Outlook for subsequent 3 days (During 07th February- 09th February, 2025)

❖ **Isolated to scattered rainfall likely** over western Himalayan region, Uttar Pradesh, adjoining Central India, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep and Andaman & 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

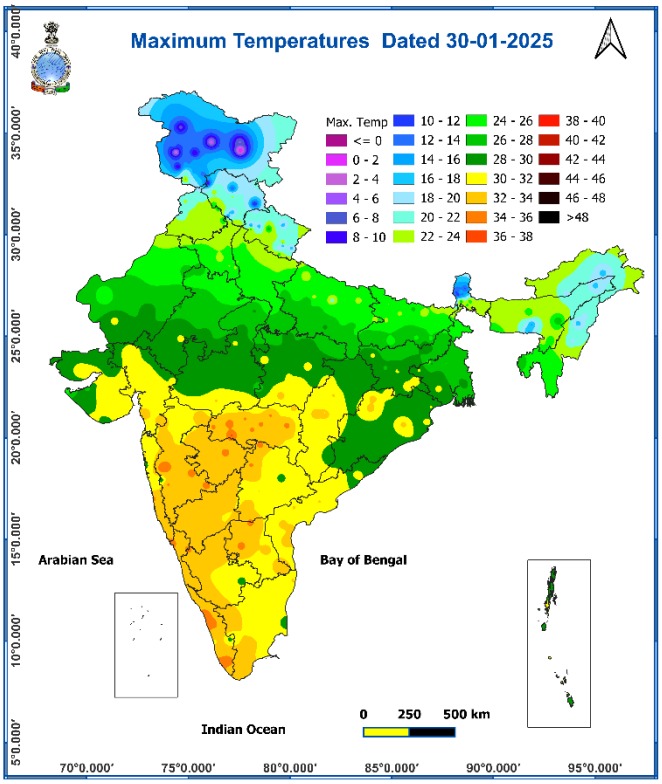


Fig. 2: Departure of Maximum Temperatures

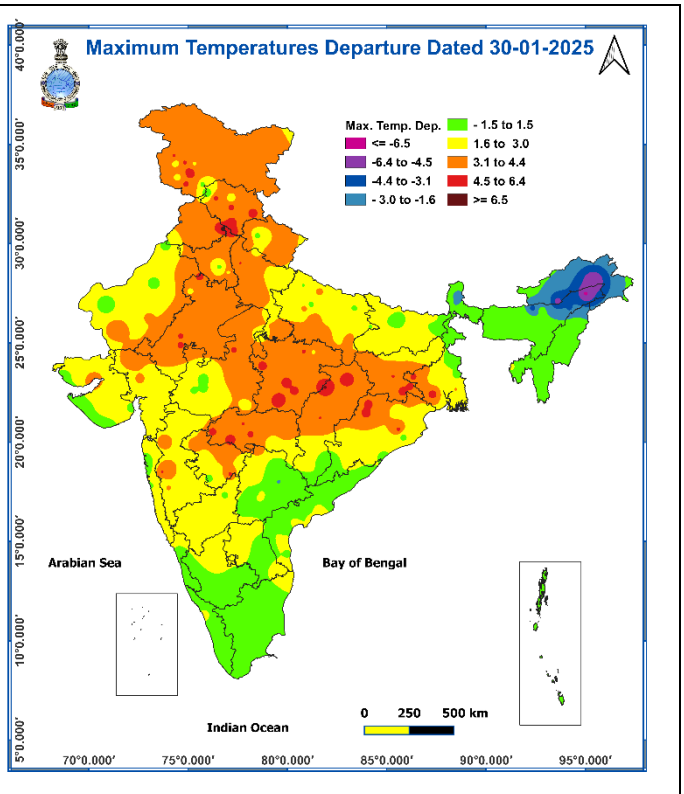


Fig. 3: Minimum Temperatures

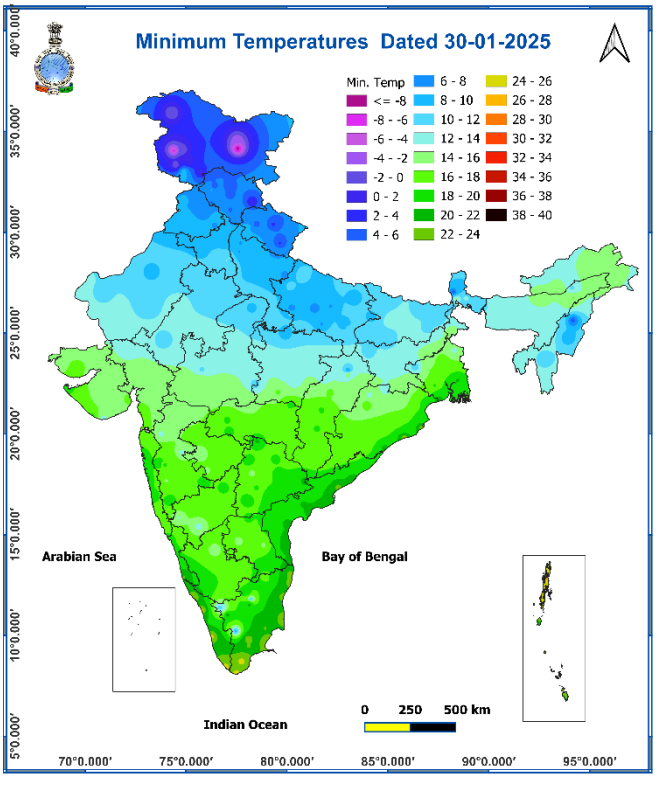
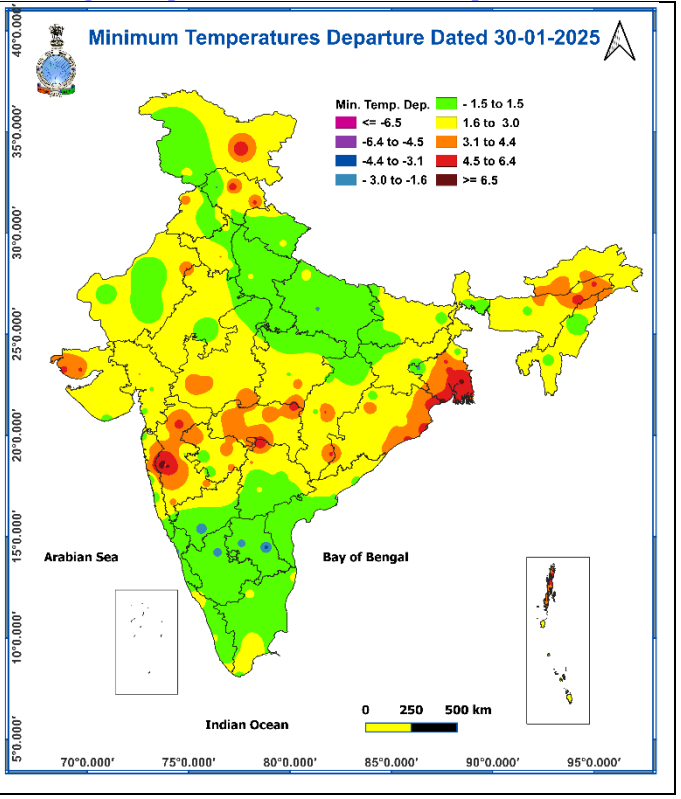


Fig. 4: Departure of Minimum Temperatures



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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.

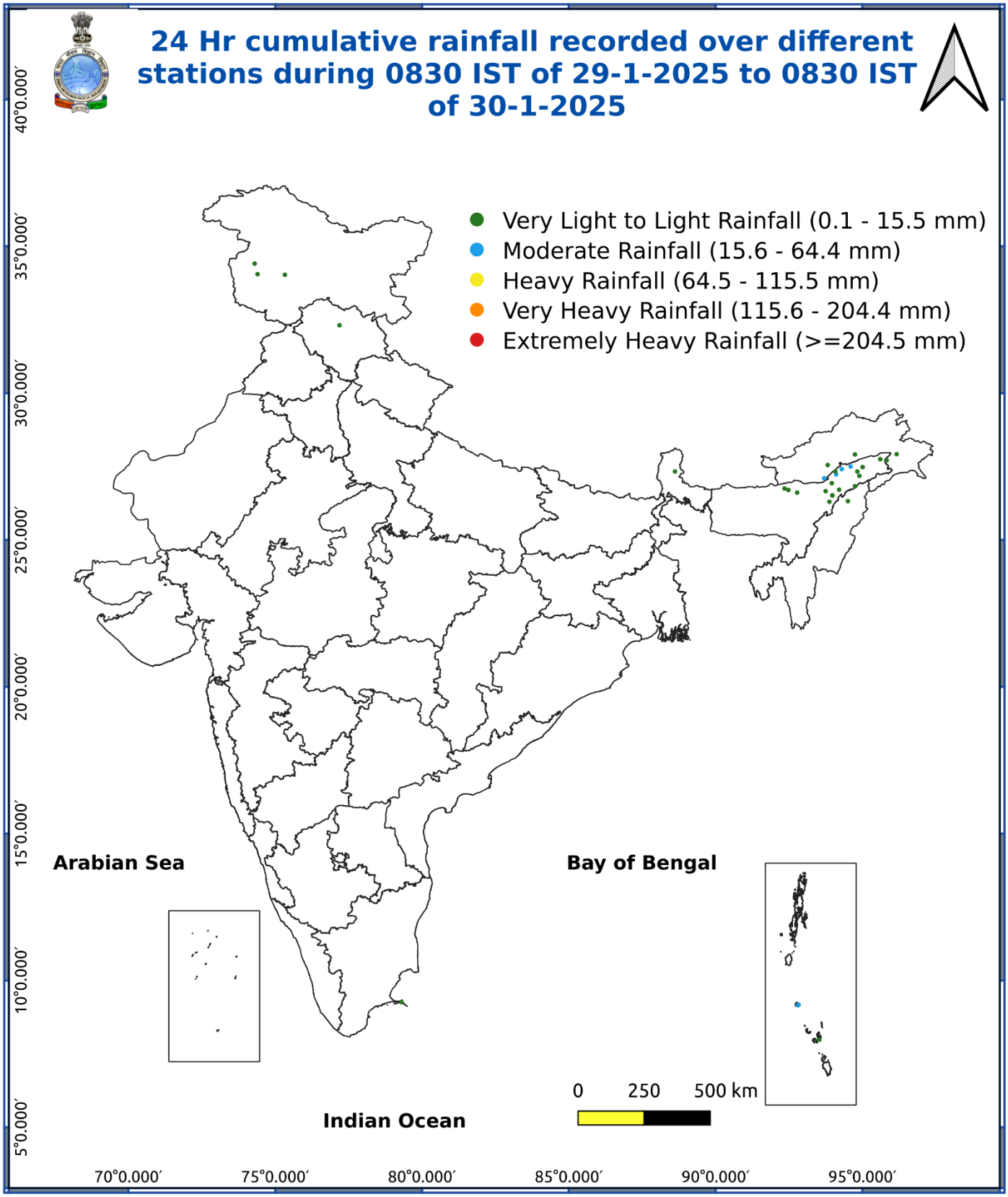
❖ Power Sector:

- To keep ready Maintenance Team.
- Human Health: To avoid outing until unless emergency and to cover the face.

Agromet advisories for likely impact of Heavy Rainfall

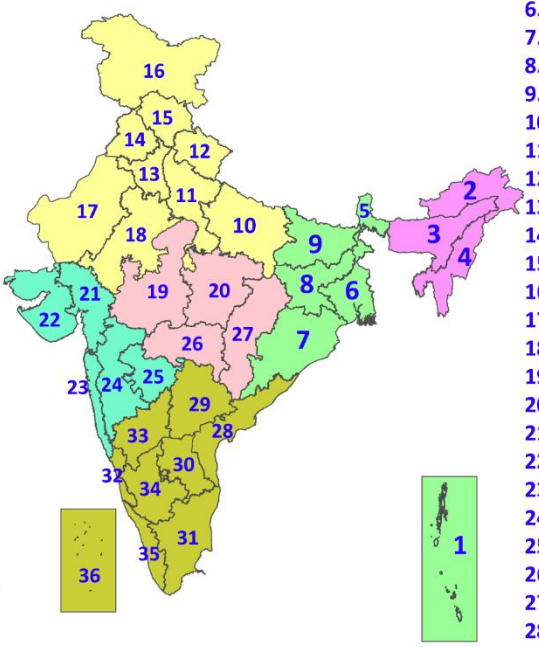
- In **Tamil Nadu,** harvest the matured paddy immediately in order to protect from rainfall. Provide support to banana plants with wooden poles to avoid lodging due to rain and wind. Ensure adequate drainage facility in turmeric and sugarcane fields.
- In **Arunachal Pradesh**, immediately harvest matured rice and store the harvested produce in proper covered shelters. Provide extensive drainage in the fields of mustard, pea, vegetables, potato and horticultural crops.

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



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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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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