Saturday, January 4, 2025
Time of Issue: 0830 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems, Forecast and warning:

- A **Western disturbance** as a cyclonic circulation over Afghanistan in lower to upper tropospheric levels. It is very likely to cause

  - ✓ Light to moderate fairly widespread to widespread rainfall/snowfall likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad from 04th to 06th and over Himachal Pradesh on 05th & 06th January**. Isolated heavy rainfall (≥6.5 cm)/snowfall (≥65 cm) very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 04th & 05th and over Himachal Pradesh on 05th & 06th January, 2025.**
  - ✓ Isolated to scattered light to moderate rainfall accompanied with thunderstorm, lightning likely over Punjab, Haryana, Chandigarh & Uttarakhand on 05th- 06th January.

ii. Temperature, Cold Wave and Fog Forecast:

Temperature Conditions during past 24 hours till 0830 hours IST of 03.01.2025:

- Minimum temperatures were **below 0°C** over many parts of Jammu, Kashmir & Ladakh; **6-11°C** over many parts of Northwest India; **9-14°C** over many parts of Central & East India and **15-20°C** over many parts of West India. Today, the lowest minimum temperature of **4.4°C** is reported at **Nowgong (East Madhya Pradesh)** over the plains of the country.
- There had been a fall in minimum temperature by 1-3^{0}C over many parts of Telangana, Madhya Maharashtra, North interior Karnataka, Bihar & isolated pockets of Uttar Pradesh; rise by 3-4°C over isolated pockets of Vidarbha, Gujarat, Sub-Himalayan West Bengal & Sikkim. There has been rise in minimum temperature by 1-3^{0}C over some parts of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Madhya Pradesh, Uttar Pradesh; rise by 3-4^{0}C over some parts of Rajasthan and Himachal Pradesh.

Forecast of temperature:

- Gradual rise in minimum temperatures by 2-3°C likely over Northwest India during next 3 days and fall thereafter by 2-4°C.
- No significant change in minimum temperatures likely over East Inda during next 4 days.
- Rise in minimum temperatures by 2-3°C likely over central India during next 2-3 days.
- No significant change in minimum temperatures likely over West India during next 4 days except Gujarat state where no significant change during next 2 days and fall thereafter by 2-3°C.

Cold Wave Warnings:

Cold wave conditions very likely in isolated pockets of Telangana & North Interior Karnataka on 04th January.

Cold Day Warnings:

Cold Day conditions very likely in isolated pockets of East Uttar Pradesh on 04th January.

Dense Fog Warnings:

Very Dense fog Condition very likely to prevail during late night/early morning hours in isolated pockets of Punjab, Haryana Chandigarh & Delhi and some parts of Uttar Pradesh; **Dense fog conditions** very likely to prevail during late night/early morning hours in isolated pockets of Himachal Pradesh, Sub-Himalayan West Bengal & Sikkim, Odisha, Assam & Meghalaya; in isolated pockets of north Madhya Pradesh, Bihar on 04th January; Assam & Meghalaya during 04th–05th January; Uttar Pradesh during 07th–09th January.

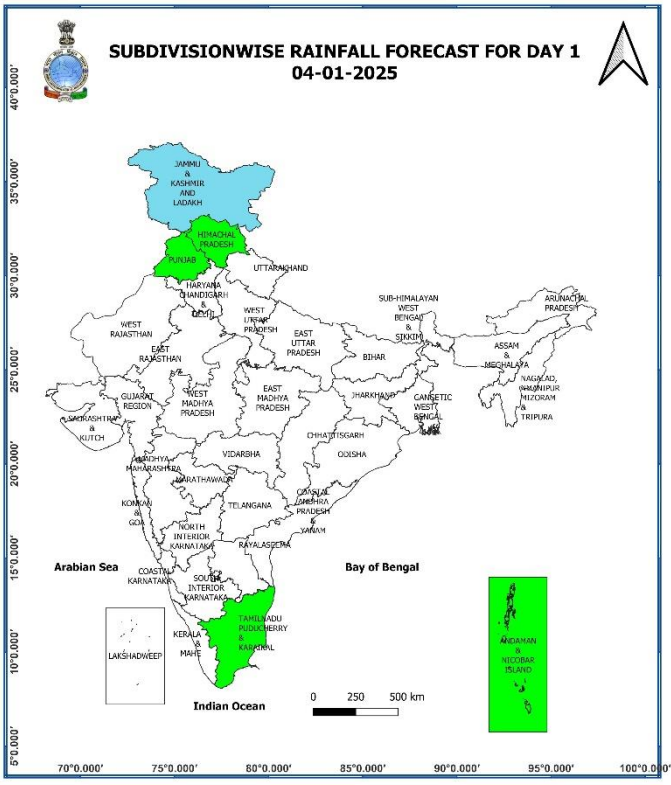
Main Weather Observations:

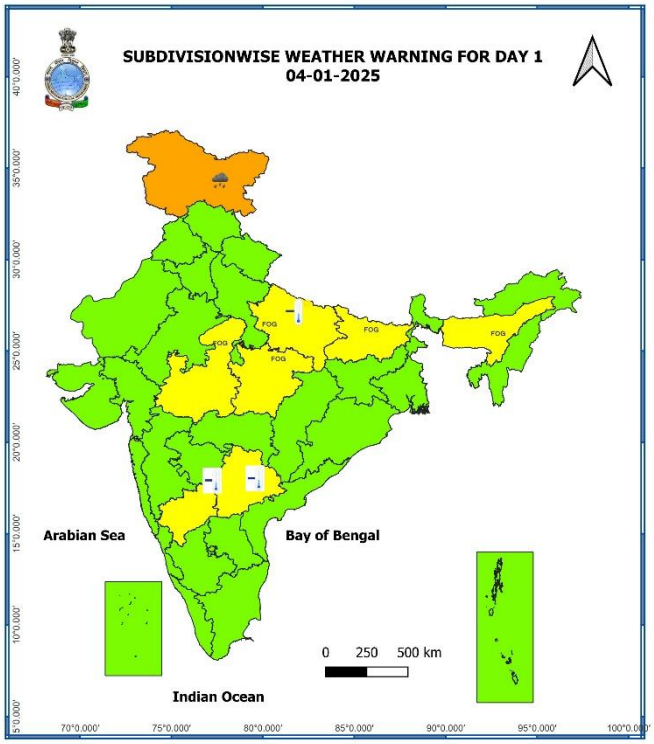
- **Rainfall/Snowfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **NIL**.
- **Heavy rainfall** (from 0830 hours IST to 1730 hours IST of yesterday): **NIL**.
- **Fog reported** (upto 0530 hours IST of today): **Very dense fog** in isolated pockets of Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, north Madhya Pradesh, West Rajasthan, Bihar and Assam; **moderate fog** in isolated pockets of Tripura.
- **Visibility reported** (upto 0530 hours IST of today) (≤ 200 meter)**: Punjab:** Patiala & Amritsar-0 each; **Haryana:** Ambala & Hissar-0 each, Chandigarh-0; **Delhi**: Safdarjung & Palam-0 each; **Uttar Pradesh:** Bareilly, Jhansi, Bahraich, Lucknow & Varanasi- 0 each; **West Rajasthan:** Ganganagar-0; **north Madhya Pradesh:** Gwalior & Satna- 0 each; **Bihar:** Purnea & Bhagalpur-0 each, Patna-200**; Assam**: Guwahati-0; **Tripura**: Agartala & Kailashahar-200 each.
- Yesterday, **Cold day conditions** reported in isolated pockets of East Uttar Pradesh.
- **Minimum Temperature Departures (as on 03-01-2025):** Minimum temperatures were **appreciably above normal (3°C to 5°C)** at a few places over Punjab and Haryana-Chandigarh; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Saurashtra & Kutch; **above normal (1°C to 3°C)** at a few places over West Uttar Pradesh; at isolated places over West Rajasthan, Gujarat Region, Konkan & Goa, East Madhya Pradesh, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal. These were **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over East Madhya Pradesh and Vidarbha; **below normal (-1.6°C to -3.0°C)** at many places over North Interior Karnataka**;** at a few places over Gangetic West Bengal and Telangana; at isolated places over East Uttar Pradesh, Bihar and Chhattisgarh and near normal over rest part of the country. Yesterday, the **lowest minimum temperature** of **4.4°C** was reported at **Nowgong (East Madhya Pradesh)** over the plains of the country (Fig. 4).
- **Maximum Temperature Departures (as on 03-01-2025):** Maximum temperatures were **Markedly above normal (5.1°C or above)** at a few places over East Rajasthan, West Madhya Pradesh, Uttarakhand; at isolated places over West Rajasthan, Gujarat state, Konkan & Goa; **appreciably above normal (3.1°C to 5.0°C)** at a few places over Vidarbha, Delhi**;** at isolated places over East Madhya Pradesh, Madhya Maharashtra, Marathwada, Chhattisgarh, Himachal Pradesh, Arunachal Pradesh, Assam & Meghalaya; **above normal (1.6°C to 3.0°C)** at a few places over Telangana, Odisha, Kerala & Mahe; at isolated places over Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad. These were **markedly below normal (-5.1° C or less)** at a few places over East Uttar Pradesh; **appreciably below normal (-3.1°C to -5.0°C)** at a few places over West Uttar Pradesh; at isolated places over Gangetic West Bengal; **below normal (-1.6°C to -3.0°C)** at isolated places over Bihar, Jharkhand, Haryana-Chandigarh and near normal over rest part of the country. Yesterday, **the highest maximum temperature of 36.0°C** was reported at **Kannur Airport (Kerala)** and **Santacruz (Konkan & Goa)** over the plains of the country (Fig. 2).

Meteorological Analysis (Based on 0530 hours IST)

- The **Western Disturbance** as a cyclonic circulation over west Afghanistan & neighbourhood now lies over Afghanistan between 3.1 & 9.4 km above mean sea level.
- Subtropical **westerly Jet Stream** with core winds of the order upto 120 knots at 12.6 km above mean sea level continues to prevail over North India.

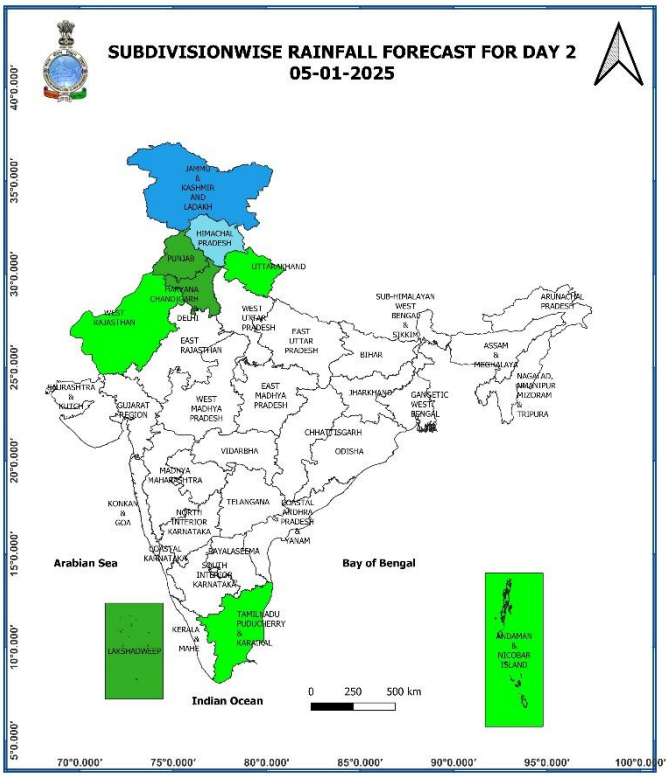
Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 10th January, 2025)

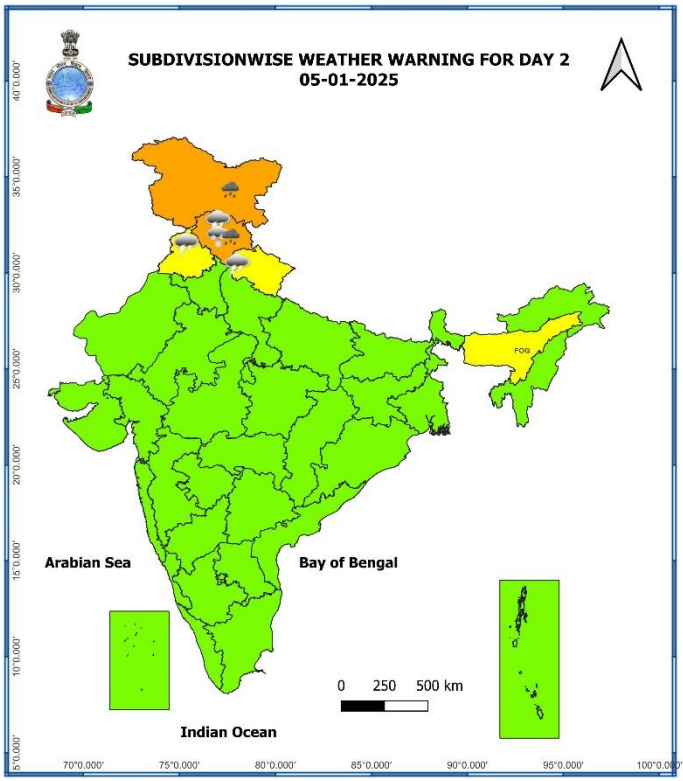




04th January (Day 1):

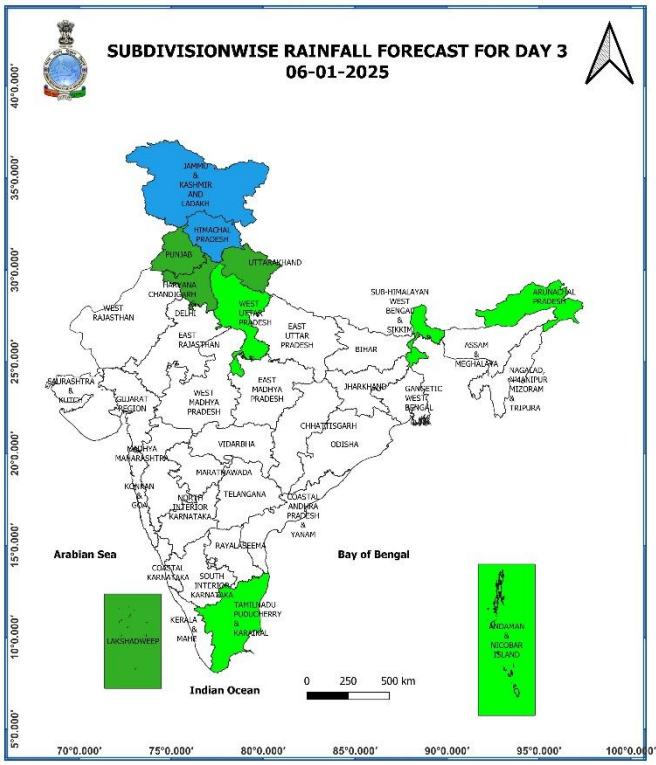
- **Heavy Rainfall (≥7cm)/snowfall (≥70 cm)** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- **Dense fog conditions** very likely in isolated pockets of East Uttar Pradesh, north Madhya Pradesh, Bihar and Assam & Meghalaya in night/morning hours.
- **Cold Day conditions** very likely in isolated pockets of East Uttar Pradesh.
- **Cold wave conditions** very likely in isolated pockets of North Interior Karnataka and Telangana.
- **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over gulf of Mannar, Comorin area and Maldives area, over southern parts of southeast Arabian sea. **Squally wind with speed 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea, along and off Somalia coast, over western parts of westcentral Arabian sea, along and off Oman coast. Fisherman are advised not to venture in to these areas.

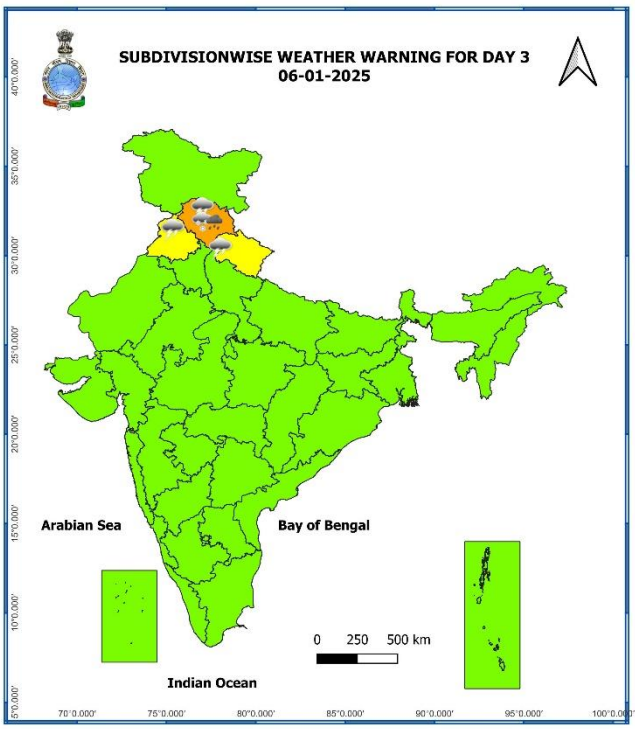




05th January (Day 2):

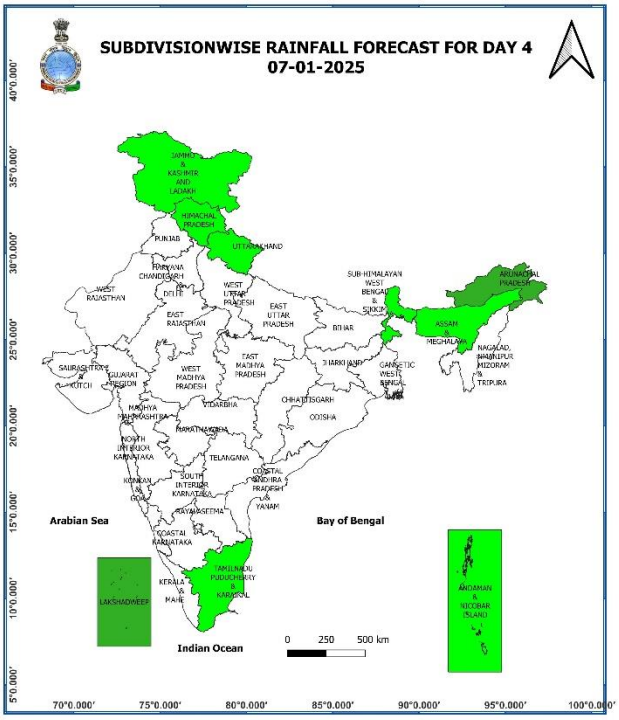
- **Heavy Rainfall (≥7cm)/snowfall (≥70 cm)** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh.
- **Thunderstorm accompanied with lightning** very likely at isolated places over Himachal Pradesh, Uttarakhand and Punjab.
- **Dense fog conditions** very likely in isolated pockets of Assam & Meghalaya in night/morning hours.
- **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over parts of Comorin area, over Maldives area, over southern parts of southeast Arabian sea. **Squally wind with speed 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea, along and off Somalia coast, over western parts of westcentral Arabian sea. Fisherman are advised not to venture in to these areas.

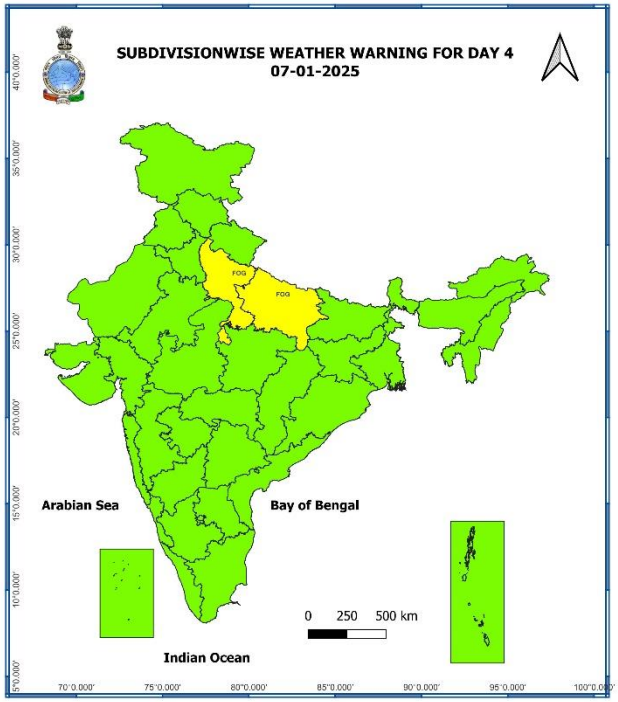




06th January (Day 3):

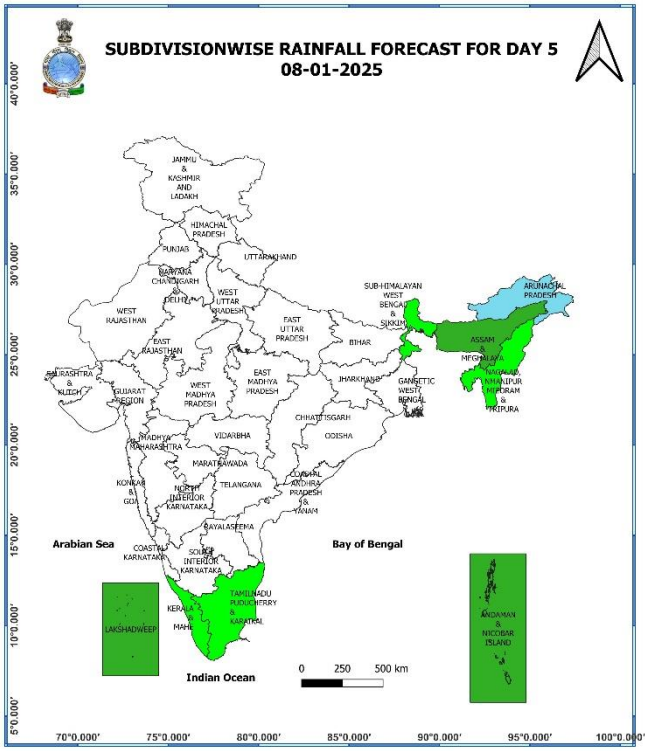
- **Heavy Rainfall (≥7cm)/snowfall (≥70 cm)** very likely at isolated places over Himachal Pradesh.
- **Thunderstorm accompanied with lightning** likely at isolated places over Himachal Pradesh, Uttarakhand and Punjab.
- **Squally wind with speed 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea, along and off Somalia coast, western parts of westcentral Arabian sea. Fisherman are advised not to venture in to these areas.

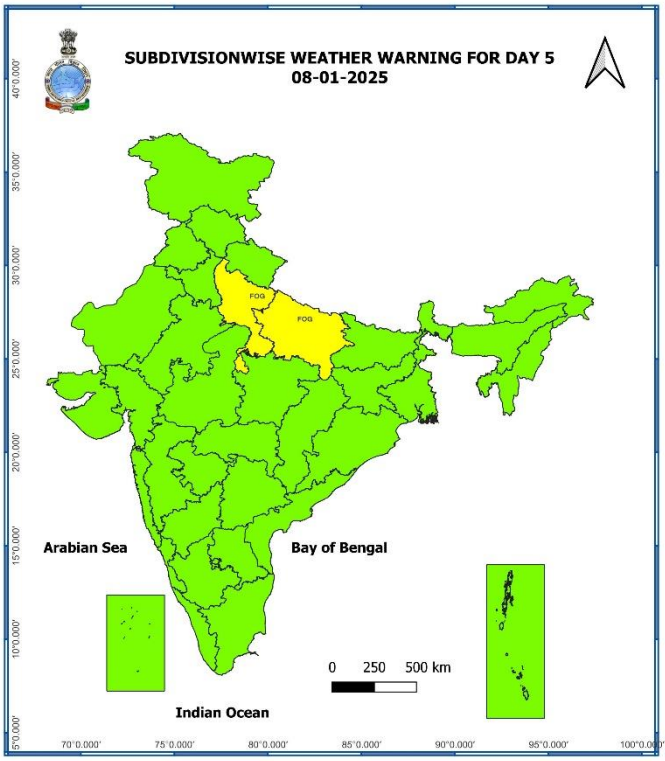




07th January (Day 4):

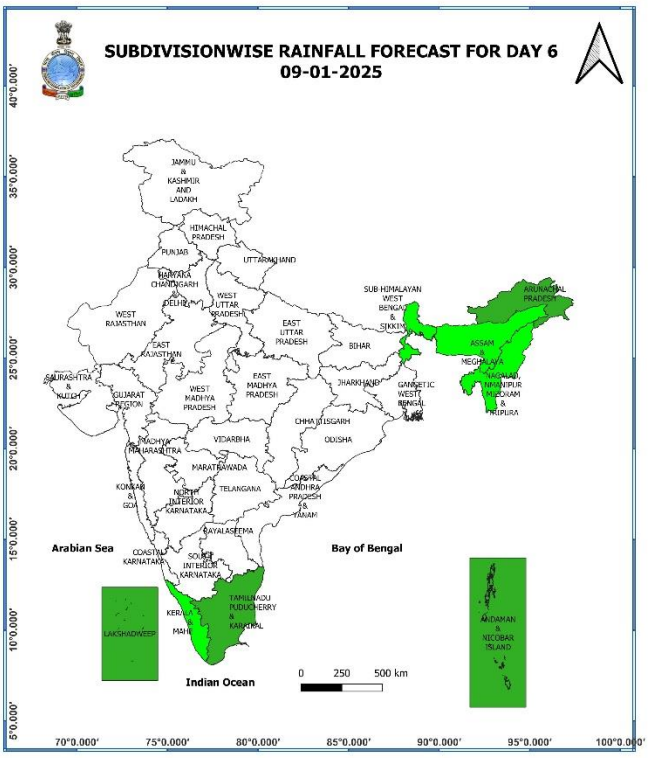
- **Dense fog** likely in isolated pockets of Uttar Pradesh in night/morning hours.

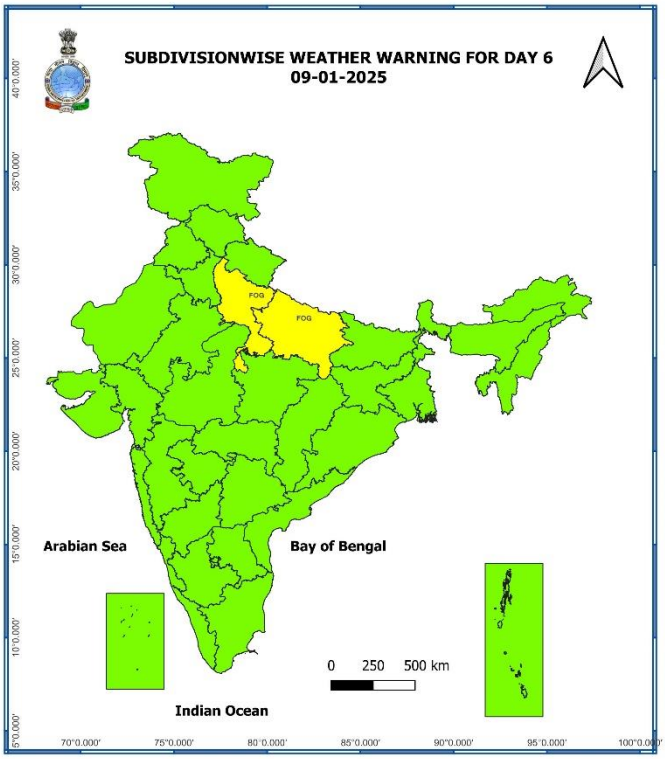




08th January (Day 5):

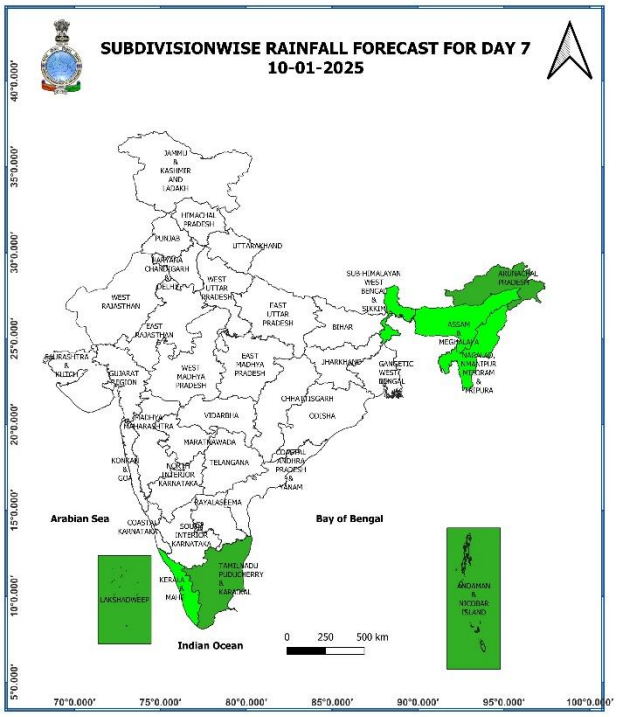
- **Dense fog** likely in isolated pockets of Uttar Pradesh in night/morning hours.

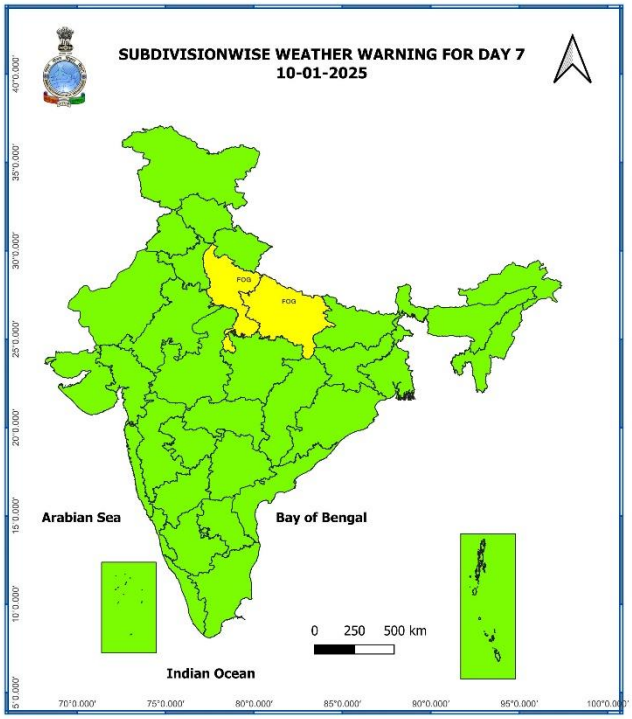




09th January (Day 6):

- **Dense fog** likely in isolated pockets of Uttar Pradesh in night/morning hours.





10th January (Day 7):

- **Dense fog** likely in isolated pockets of Uttar Pradesh in night/morning hours.

Weather Outlook for subsequent 3 days (During 11th January– 13th January, 2025)

- Isolated to scattered light to moderate rainfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Andaman & Nicobar Islands.
- Mainly dry weather will prevail over rest parts of country.

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

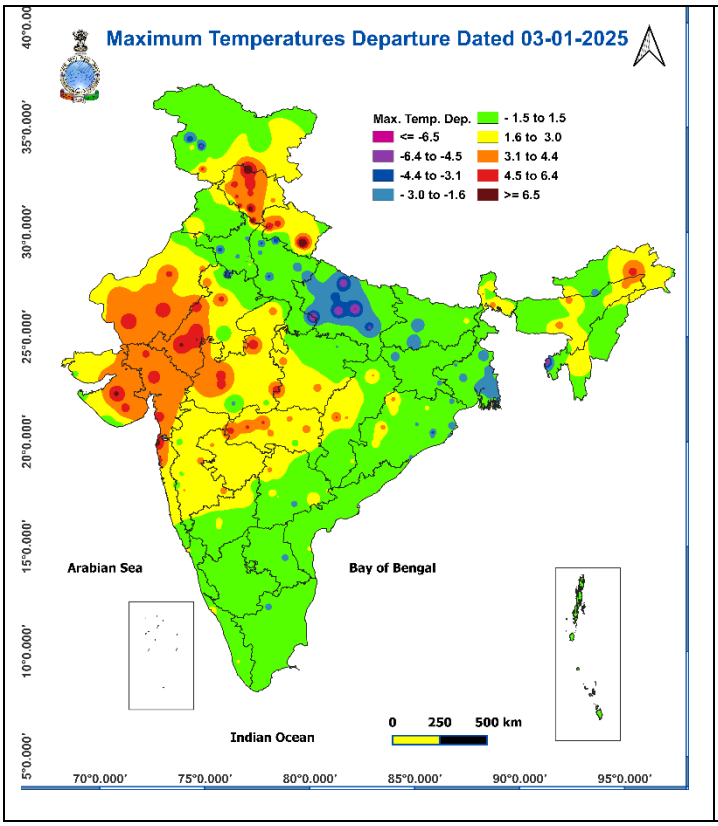


Fig. 2: Departure of Maximum Temperatures

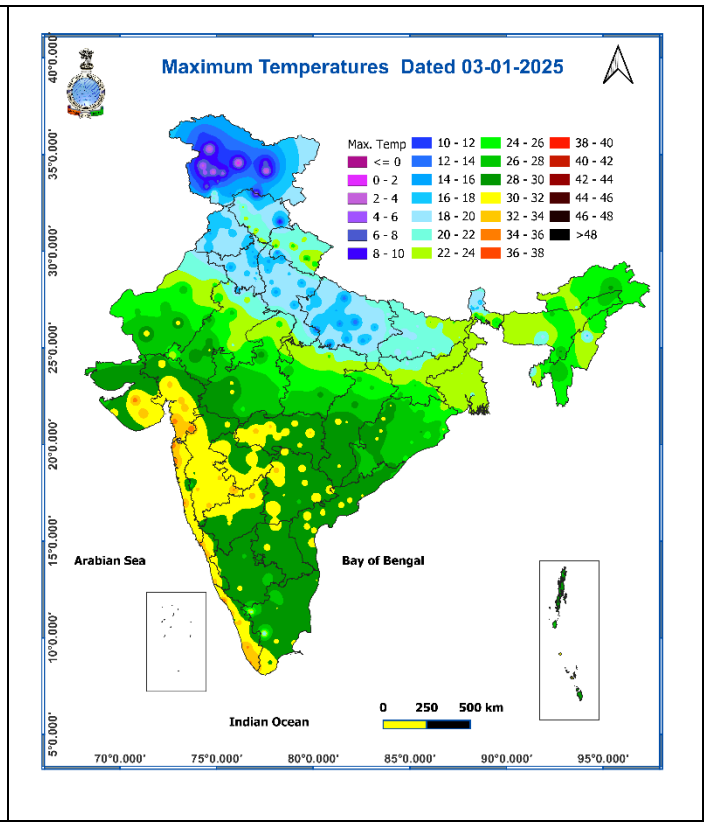


Fig. 3: Minimum Temperatures

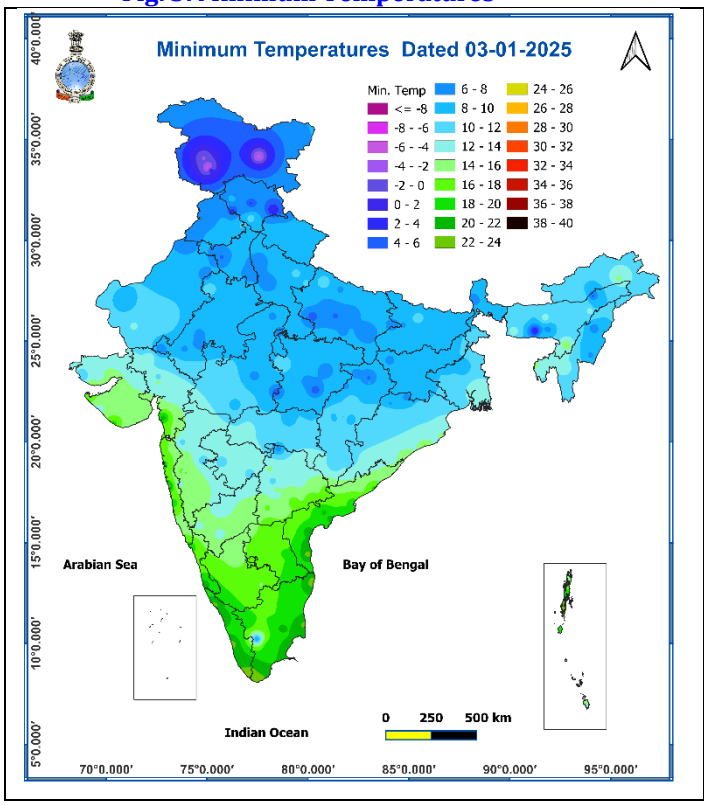
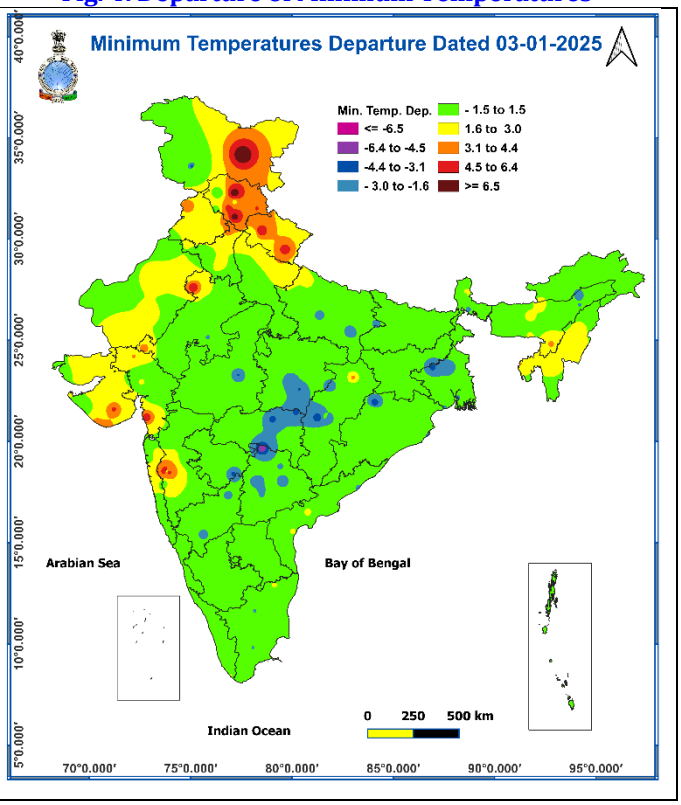


Fig. 4: Departure of Minimum Temperatures



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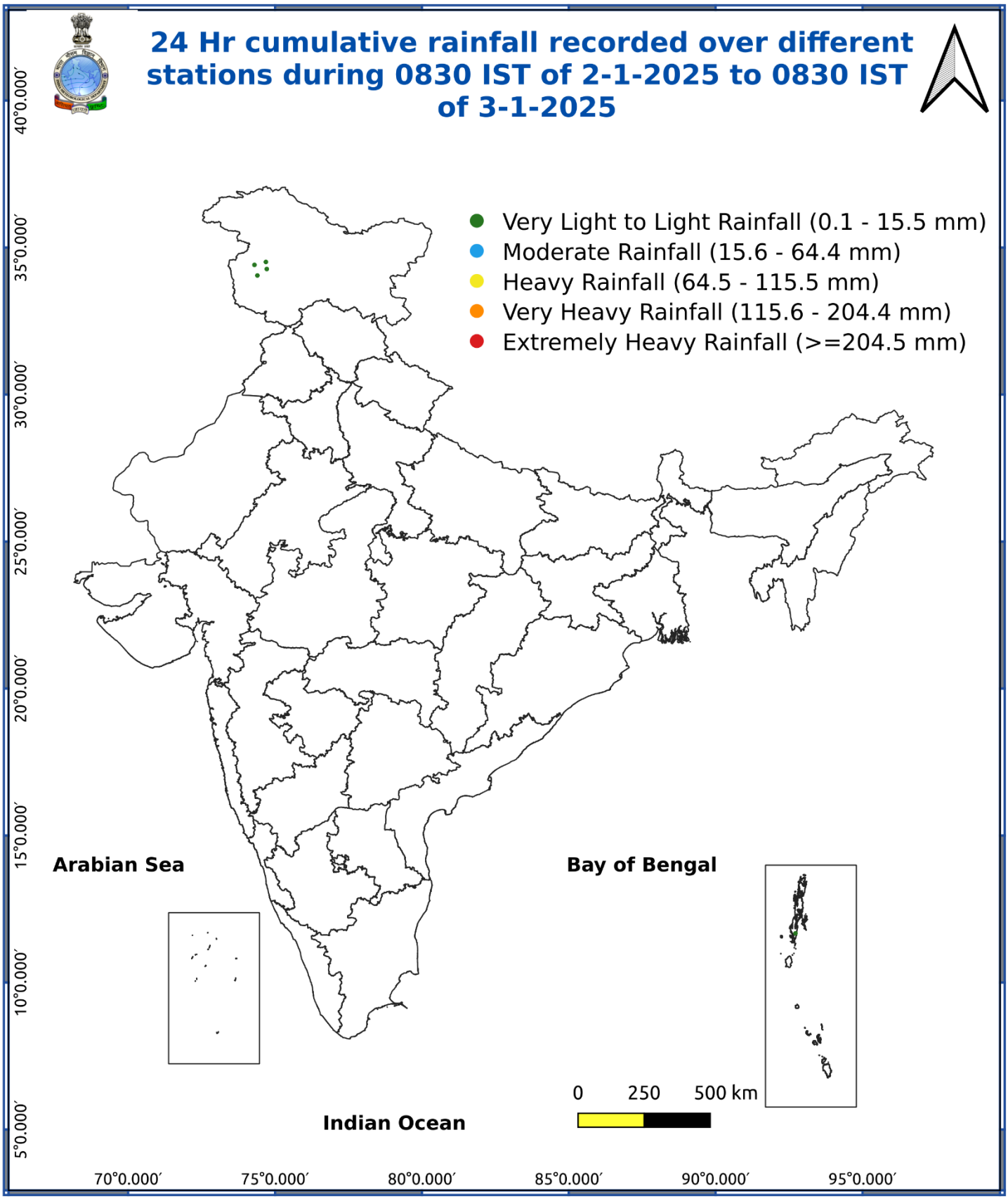
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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 Woolen 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 Heavy Rainfall / Cold Wave/ Ground Frost

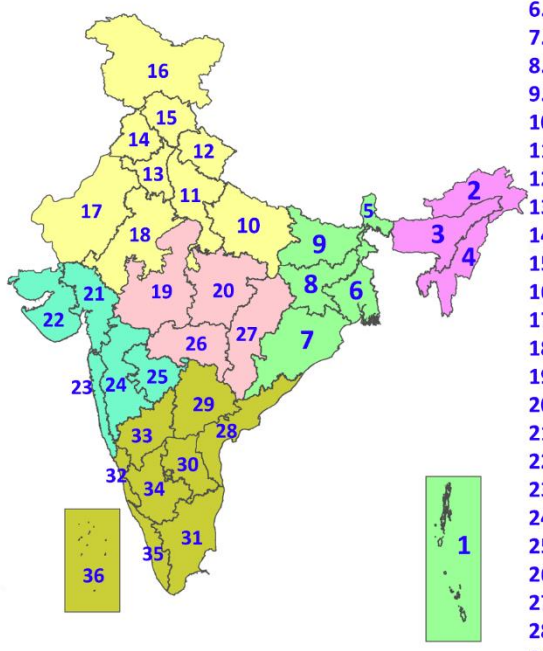
- Drain out excess water from rice, sugarcane, cotton, turmeric, vegetables, and other standing crop fields, as well as coconut and banana orchards in **Tamil Nadu.**
- In **North Eastern States**, apply light and frequent irrigation to the standing crops in the evening to protect them from low temperature stress or cold injuries. Use mulching and cover vegetable nurseries and young fruit plants with straw/polythene sheets to maintain optimum soil temperature.

Livestock

- Keep the animals inside the shed during heavy rainfall period and provide them balanced feed. Store feed and fodder in a safe place to prevent spoilage.
- 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

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)

* 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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