

Wednesday, January 15, 2025
Time of Issue: 1315 hours IST
(MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems, Forecast and warnings:

- ❖ A Western Disturbance seen as a cyclonic circulation over north Pakistan & neighbourhood with a trough aloft in middle & upper tropospheric levels runs roughly along Long. 65°E to the north of Lat. 25°N. An induced cyclonic circulation lies over Punjab & adjoining Pakistan in lower tropospheric levels. Another cyclonic circulation lies over southwest Rajasthan & neighbourhood in lower tropospheric levels. Under their influence,
 - ✓ Isolated to scattered rainfall/snowfall activity likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Uttarakhand on 15th & 16th; Himachal Pradesh during 15th-17th and Isolated rainfall activity over Punjab, Haryana, Chandigarh, Uttar Pradesh, East Rajasthan & Madhya Pradesh on 15th & 16th; West Rajasthan on 15th and Vidarbha on 16th January.
 - ✓ Thunderstorm activity at isolated places likely over West Uttar Pradesh & Madhya Pradesh on 15th & West Rajasthan during 15th-17th January.
- ❖ A fresh Western Disturbance is likely to affect Western Himalayan Region from 18th January, 2025. Under its influence, isolated to scattered rainfall/snowfall activity likely over Western Himalayan region during 18th-21st January.
- ❖ Isolated **heavy rainfall** likely over Nicobar Islands on 16th January.
- ❖ Light to moderate rainfall accompanied with thunderstorm, lightning very likely at a few places over Tamil Nadu, Puducherry & Karaikal on 18th & 19th and Kerala & Mahe on 19th January with isolated **heavy rainfall** likely over Tamilnadu, Puducherry & Karaikal on 18th & 19th and Kerala & Mahe on 19th January.

ii. Temperature, Cold Wave and Fog Forecast:

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

- ❖ Minimum temperatures are **below 0°C** over many parts of Jammu, Kashmir & Ladakh; **1-4°C** over some parts of Himachal Pradesh; **5-10°C** over many parts of Northwest India; **10-15°C** over many parts of Central & East India; **15-20°C** over many parts of West India. Today, the lowest minimum temperature of **2.8°C** is reported at **Amritsar (Punjab)** over the plains of the country.
- ❖ During the past 24 hours, there has been **fall in minimum temperatures by 1-3°C** in many parts of West Bengal & Sikkim; in some parts over Assam & Meghalaya; in isolated pockets of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Haryana Chandigarh & Delhi, South Interior Karnataka, Tamilnadu Puducherry & Karaikal and **rise by 3-6°C** in some parts of West Madhya Pradesh and Gujarat Region; by **1-3°C** in some parts of Uttar Pradesh, East Madhya Pradesh, Odisha, Telangana, Vidarbha; in isolated pockets of Chhattisgarh.
- ❖ Minimum temperatures are **below normal (-1°C to -3°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Haryana, Chandigarh & Delhi and Saurashtra & Kutch. These are **appreciably above normal (3°C to 5°C)** at many places over Odisha; at a few places over East Uttar Pradesh, Kerala & Mahe; at isolated places over Telangana, Rayalaseema, Madhya Maharashtra, Marathawada, Gujarat Region, Tamilnadu Puducherry & Karaikal; **above normal (1°C to 3°C)** at a few places over West Uttar Pradesh, West Bengal & Sikkim, Vidarbha, Madhya Pradesh, Andaman & Nicobar Islands; at isolated places over Rajasthan, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and near normal over rest part of the country.

Forecast of temperature:

- ❖ Gradual rise in minimum temperatures by 2-4°C likely over Northwest India during next 5 days.
- ❖ Gradual rise in minimum temperatures by about 2°C likely over Central India during next 24 hours and no significant change thereafter.
- ❖ No significant change in minimum temperatures likely over East & West India during next 5 days.

Dense Fog Warnings:

Dense to very Dense fog Condition very likely to continue to prevail during night/early morning hours in some parts of Uttar Pradesh on 15th; Punjab, Haryana, Chandigarh during 16th & 17th; in isolated pockets of Uttar Pradesh on 16th; Punjab, Haryana, Chandigarh on 15th; Rajasthan on 15th & 16th January.

Dense fog conditions very likely to continue to prevail during night/early morning hours in isolated pockets of Himachal Pradesh on 15th & during 17th-20th; Gangetic West Bengal till 16th; Sub-Himalayan West Bengal & Sikkim, Odisha till 17th; Uttar Pradesh during 17th-20th; Rajasthan on 17th & 18th; Punjab, Haryana, Chandigarh during 18th-20th; Madhya Pradesh, Assam & Meghalaya & Nagaland, Manipur, Mizoram & Tripura till 18th January.

Cold Day Warnings:

Cold day conditions very likely in isolated pockets of Himachal Pradesh on 16th January.

Ground Frost Warnings:

Ground frost conditions very likely in isolated pockets of Arunachal Pradesh, Meghalaya and Nagaland, Manipur, Mizoram & Tripura during 15th- 17th January.

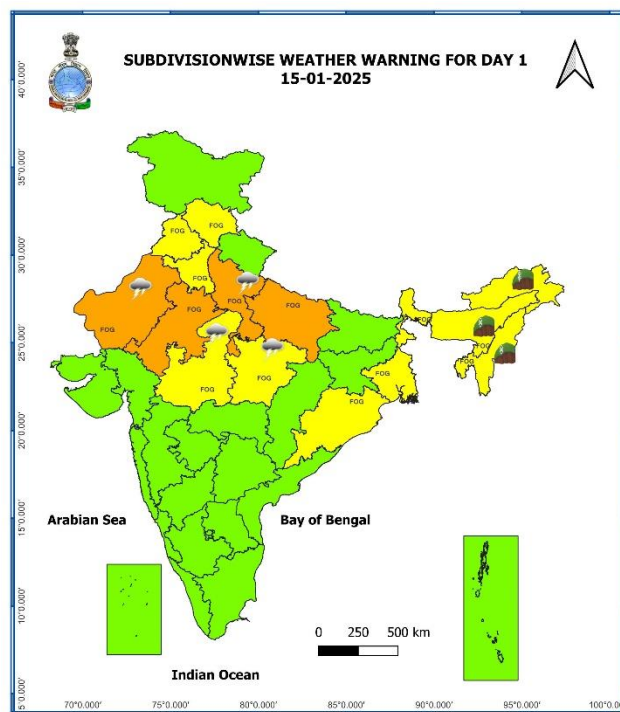
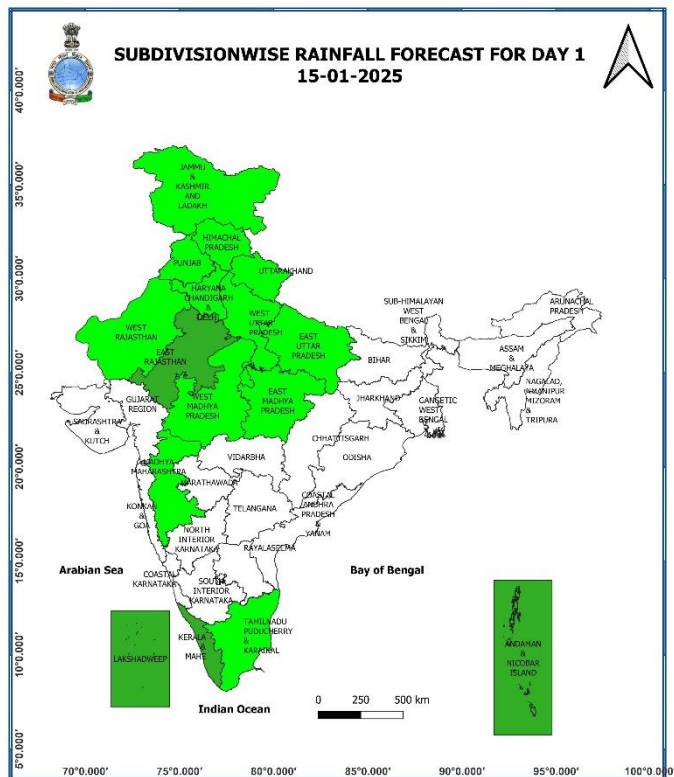
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at a few places** over Lakshadweep; **at isolated places** over Arunachal Pradesh, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Karnataka and Rayalaseema.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): **Tamil Nadu:** Oothu (dist Tirunelveli) 7.
- ❖ **Heavy rainfall recorded** (from 0830 hours IST of yesterday to 0830 hours IST of today): Heavy rainfall at isolated places over Tamilnadu.
- ❖ **Cold wave to severe cold wave conditions** prevailed in isolated pockets of Himachal Pradesh.
- ❖ **Dense fog (upto 0830 hours IST of today):** **Dense to very dense fog** in isolated pockets of Haryana, Delhi, Rajasthan, Uttar Pradesh, West Madhya Pradesh, Meghalaya and **Dense fog** in isolated pockets of Uttarakhand, Punjab, East Madhya Pradesh, Odisha and Gangetic West Bengal.
- ❖ **Visibility reported (upto 0830 hours IST of today)(<200 m):****Haryana:** Karnal 00, Ambala 40, Bhiwani 40; **Delhi:** Safdarjung 00, Palam 00; **Rajasthan:** Churu 0; **Madhya Pradesh:** Gwalior 00, Rewa 50; **East Uttar Pradesh:** Kanpur IAF 00; **West Uttar Pradesh:** Meerut 20; **Meghalaya:** Barapani 30; **Punjab:** Amritsar 50, Patiala 50, Bhatinda 50; **Uttarakhand:** Khatima 50, Pantnagar-100; **Odisha:** Nayagarh 60; **Gangetic West Bengal:** Durgapur 150.
- ❖ **Minimum Temperature Departures (as on 15-01-2025):** Minimum temperatures are **appreciably above normal (3.1°C to 5.0°C)** at a few places over East Uttar Pradesh, Gujarat Region, Telangana and Rayalaseema; at isolated places over West Madhya Pradesh, Odisha, Madhya Maharashtra, Konkan & Goa, Vidarbha, Coastal Andhra Pradesh & Yanam, I and Kerala & Mahe; **above normal (1.6°C to 3.0°C)** at many places over Tamil Nadu, Puducherry & Karaikal ;at a few places over Gangetic West Bengal; at isolated places over West Uttar Pradesh, Saurashtra & Kutch and Chhattisgarh. These are near normal over rest part of the country (Fig. 4). Today, the **lowest minimum temperature** of **2.8°C** is reported at **Amritsar (Punjab)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 14-01-2025):** Maximum temperatures were **appreciable above normal (3.1°C to 5.0°C)** at isolated places over Himachal Pradesh, Sub-Himalayan West Bengal & Sikkim, Konkan & Goa; **above normal (1.6°C to 3.0°C)** at a few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Assam & Meghalaya; at isolated places over Punjab, Uttarakhand, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, North Interior Karnataka, Coastal Andhra Pradesh & Yanam. These were **markedly below normal (-5.1°C or less)** at isolated places over East Uttar Pradesh, Bihar; **appreciable below normal(-3.1°C to -5.0°C)** at a few places over Rajasthan; at isolated places over Saurashtra & Kutch, Tamil Nadu, Puducherry & Karaikal;**below normal (-1.6°C to -3.0°C)** at a few places over Gujarat Region, Madhya Pradesh; at isolated places over Haryana-Chandigarh-Delhi, West Uttar Pradesh and near normal over rest part of the country (Fig. 2). Yesterday, the **highest maximum temperature** of **36.3°C** was reported at **Kannur Airport (Kerala)** over the plains of the country.

Meteorological Analysis (Based on 0830 hours IST)

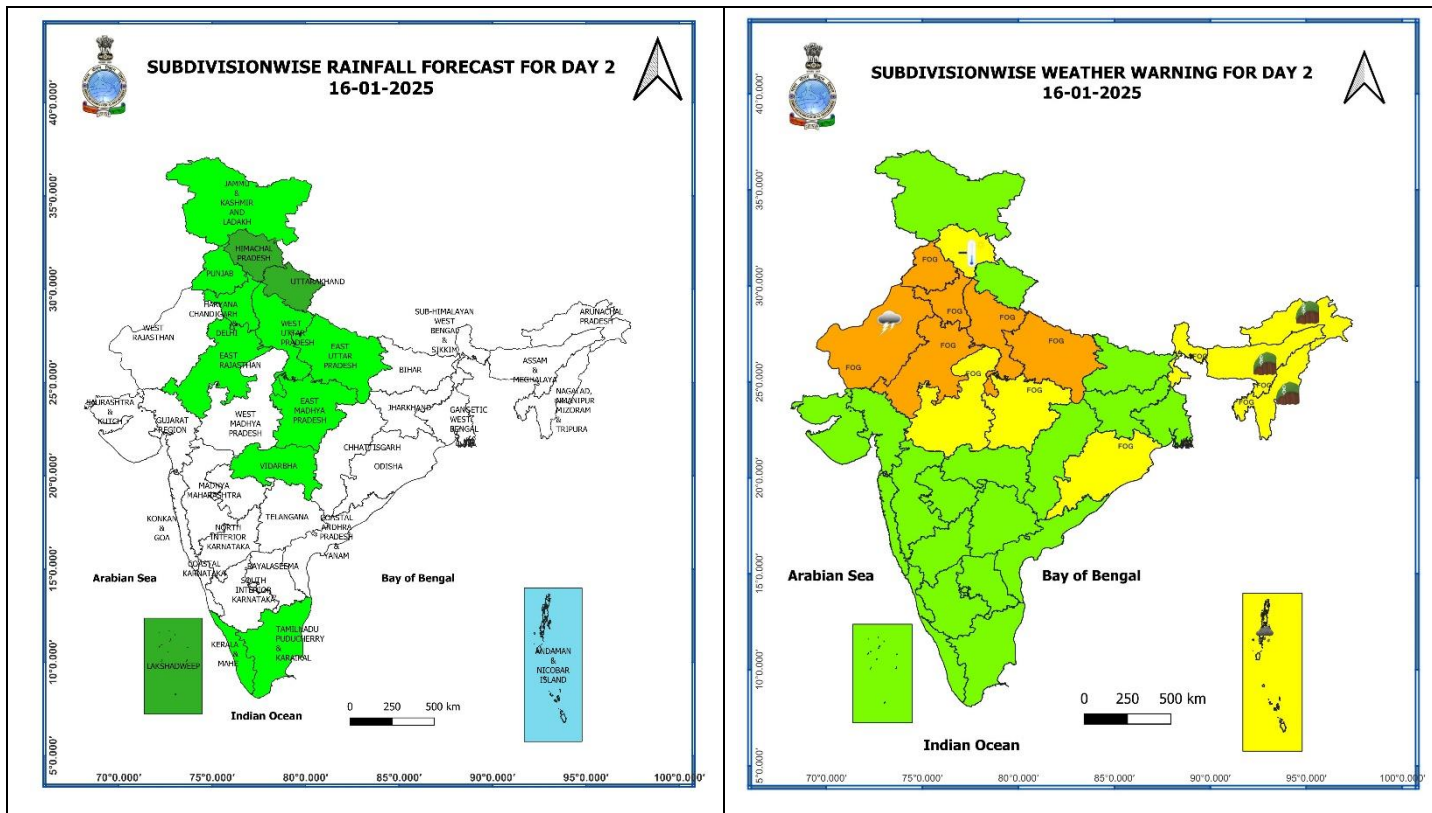
- ❖ The **Western Disturbance** now seen as a cyclonic circulation over north Pakistan & neighbourhood at 3.1 km above mean sea level with a trough aloft in middle & upper tropospheric levels with its axis at 5.8 km above mean sea level roughly along Long. 65°E to the north of Lat. 25°N.
- ❖ An induced **cyclonic circulation** lies over Punjab & adjoining Pakistan at 1.5 km above mean sea level.
- ❖ Another **cyclonic circulation** lies over southwest Rajasthan & neighbourhood at 1.5 km above mean sea level.
- ❖ Subtropical **westerly Jet Stream** with core winds of the order upto 155 knots at 12.6 km above mean sea level is prevailing over North India.
- ❖ A fresh **Western Disturbance** is likely to affect Western Himalayan Region from 18th January, 2025.
- ❖ The **cyclonic circulation** over central parts of south Arabian Sea and adjoining equatorial Indian Ocean at 0.9 km above mean sea level has become less marked.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 22nd January, 2025)



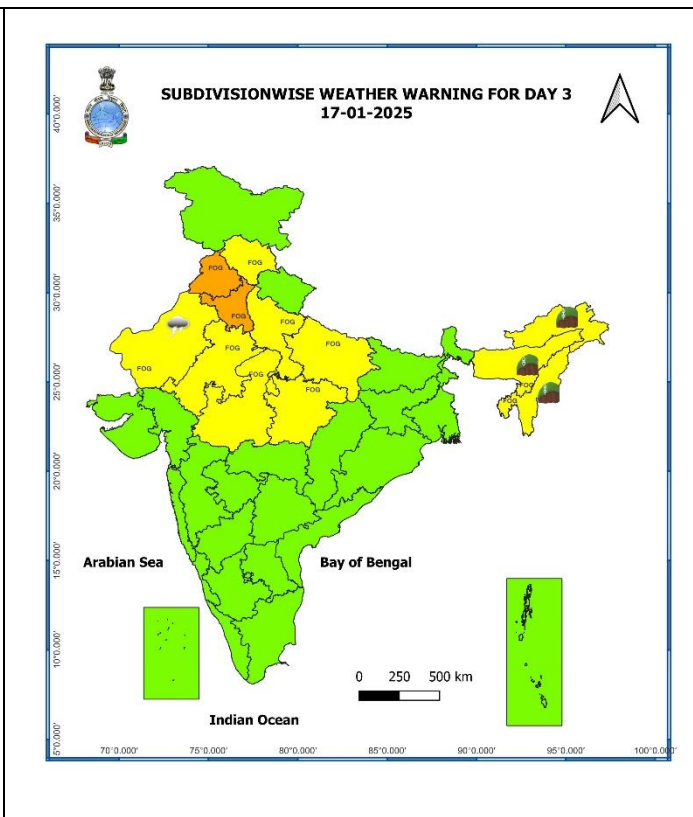
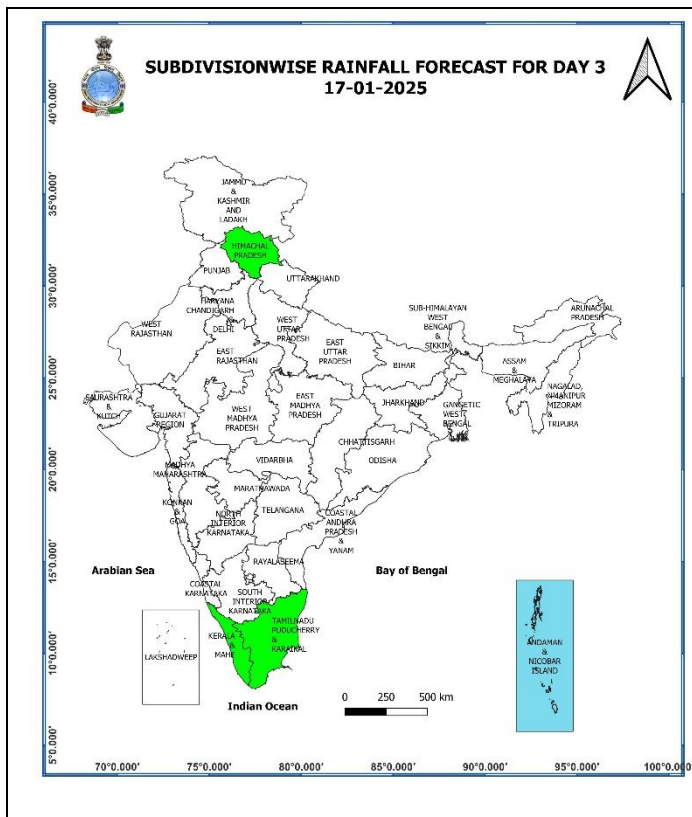
15th January (Day 1):

- ❖ **Dense to very dense fog conditions** very likely in some parts of Uttar Pradesh; in isolated pockets of Punjab, Haryana-Chandigarh-Delhi and Rajasthan; **Dense fog conditions** in isolated pockets of Himachal Pradesh, Madhya Pradesh, West Bengal & Sikkim, Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during night/morning hours.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over West Uttar Pradesh, West Rajasthan and Madhya Pradesh.
- ❖ **Ground frost conditions** very likely in isolated pockets of Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over Comorin area and adjoining gulf of Mannar. **Squally wind with speed 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over Somalia coast and adjoining sea area. Fishermen are advised not to venture in to these areas.



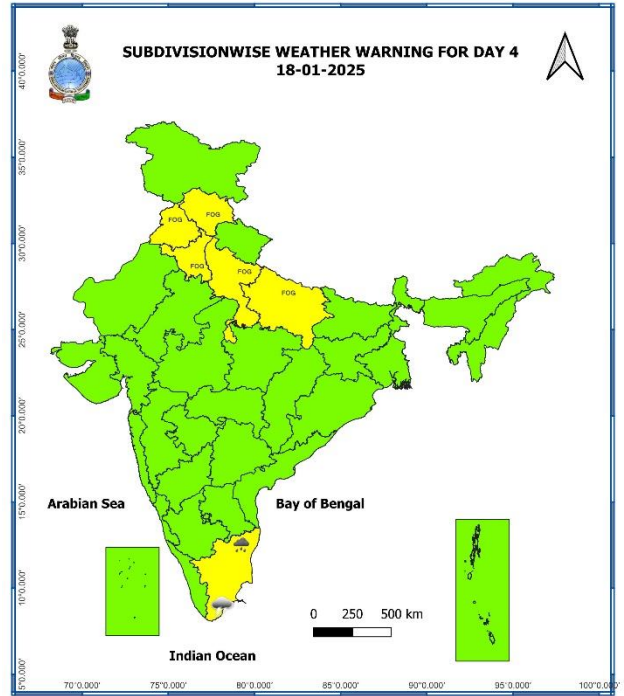
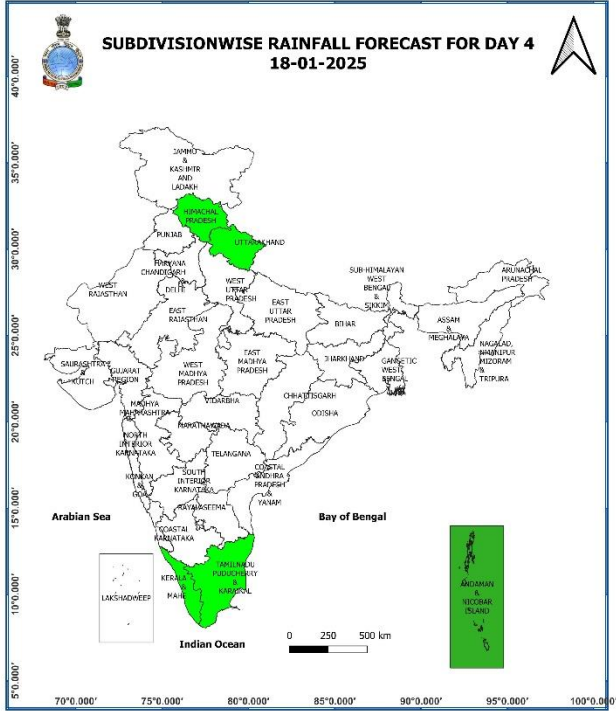
16th January (Day 2):

- ❖ **Heavy rainfall (≥ 7 cm)** very likely at isolated places over Nicobar Islands.
- ❖ **Dense to very dense fog conditions** very likely in some parts of Punjab, Haryana-Chandigarh-Delhi and Uttar Pradesh; in isolated pockets of Rajasthan; **Dense fog conditions** in isolated pockets of Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during night/morning hours.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over West Rajasthan.
- ❖ **Cold day conditions** very likely in isolated pockets of Himachal Pradesh.
- ❖ **Ground frost conditions** very likely in isolated pockets of Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over Comorin area and adjoining gulf of Mannar. **Squally wind with speed 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over Somalia coast and adjoining sea area. Fishermen are advised not to venture in to these areas.



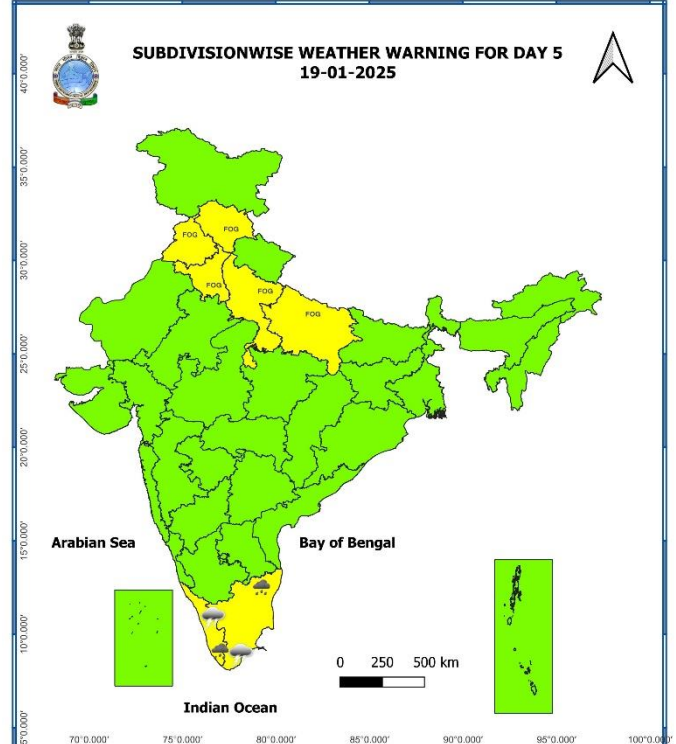
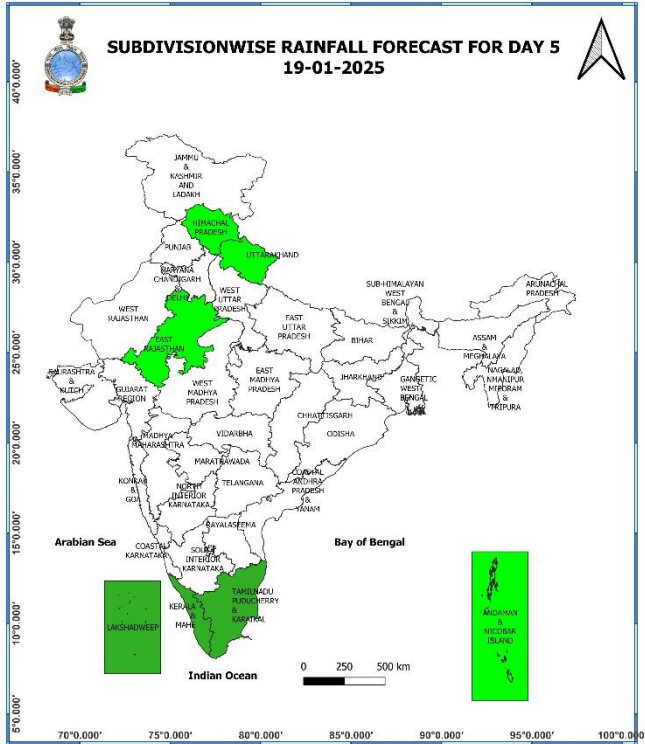
17th January (Day 3):

- ❖ **Dense to very dense fog conditions** very likely in some parts of Punjab and Haryana-Chandigarh-Delhi; **Dense fog conditions** in isolated pockets of Himachal Pradesh, Uttar Pradesh, Rajasthan, Madhya Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during night/morning hours.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over West Rajasthan.
- ❖ **Ground frost conditions** very likely in isolated pockets of Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.



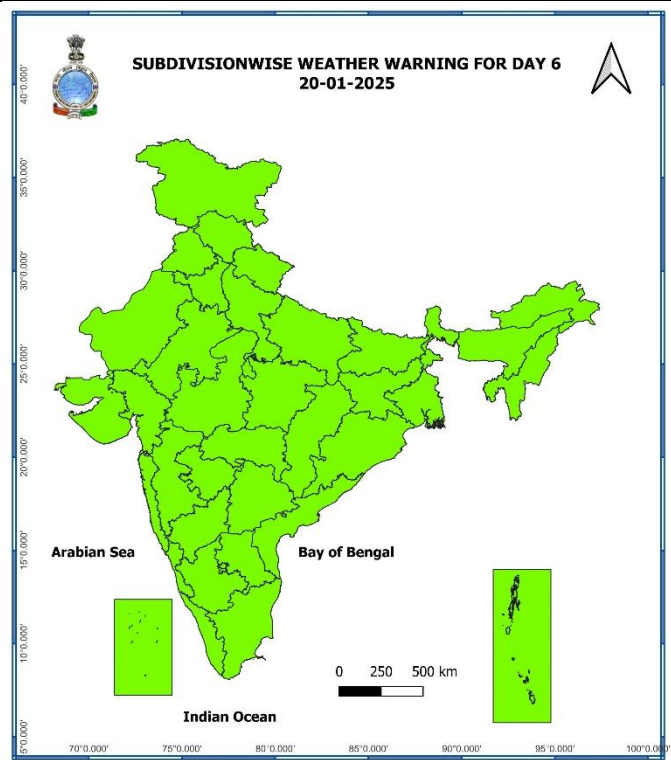
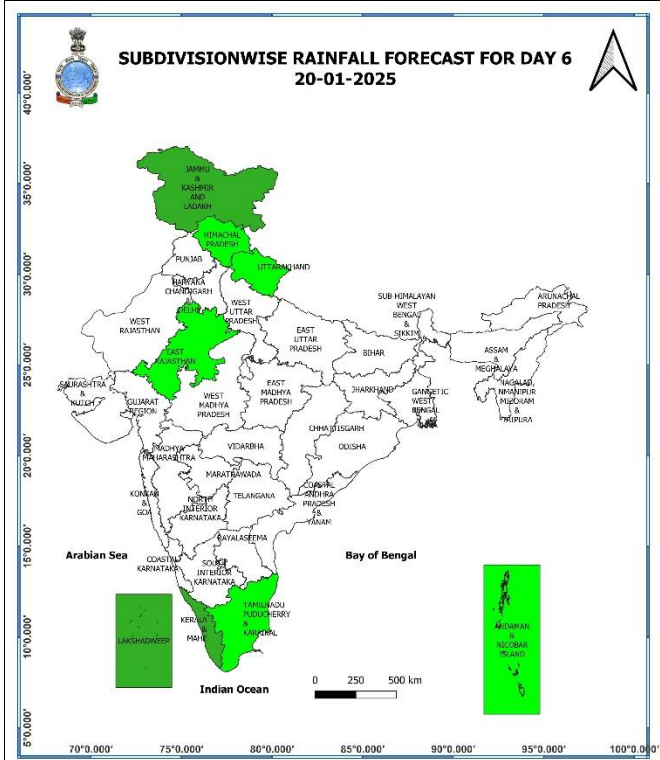
18th January (Day 4):

- ❖ **Heavy rainfall (≥ 7 cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖ **Dense fog conditions** likely in isolated pockets of Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi and Uttar Pradesh during night/morning hours.



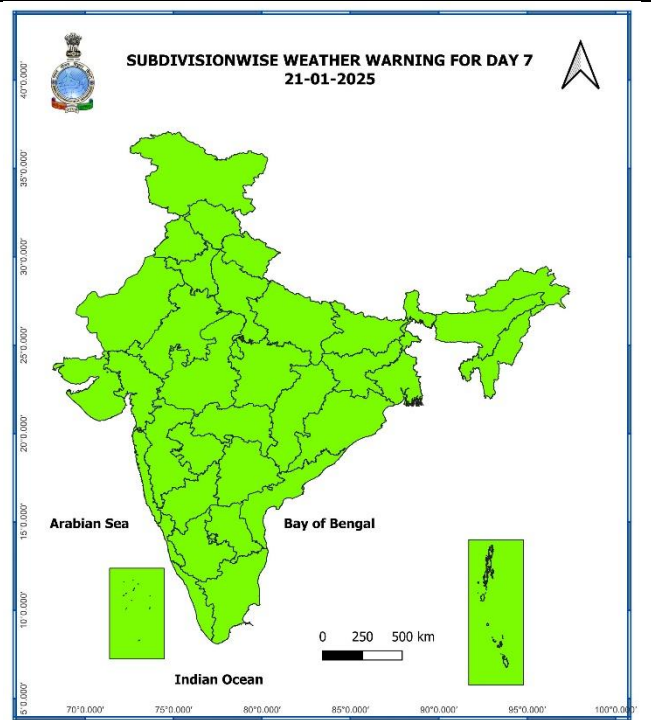
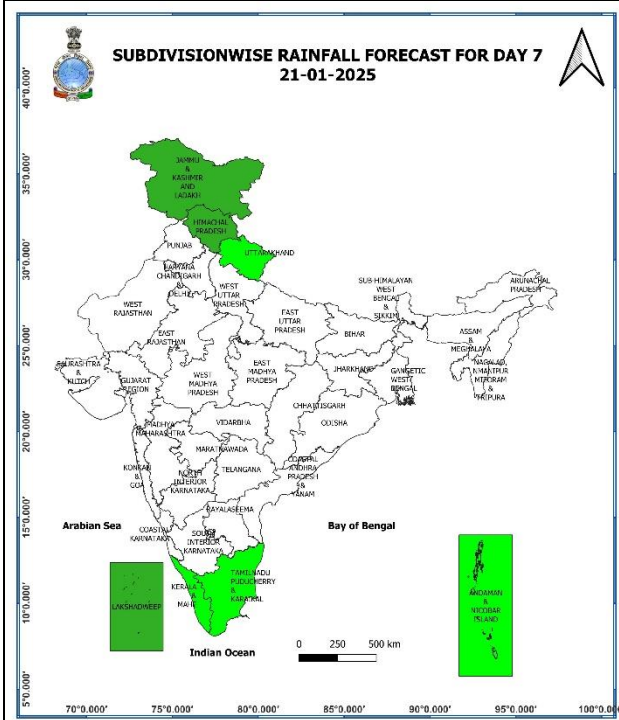
19th January (Day 5):

- ❖ **Heavy rainfall (≥ 7 cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Dense fog conditions** likely in isolated pockets of Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi and Uttar Pradesh during night/morning hours.



20th January (Day 6):

❖ **No Weather Warning.**



21st January (Day 7):

❖ **No Weather Warning.**

Weather Outlook for subsequent 3 days (During 22nd January- 24th January, 2025)

- ❖ Isolated rainfall over Tamil Nadu & Kerala and scattered to fairly widespread rainfall over Nicobar Islands.
- ❖ Isolated rainfall/snowfall over higher reaches of Jammu & Kashmir & Himachal Pradesh.
- ❖ 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

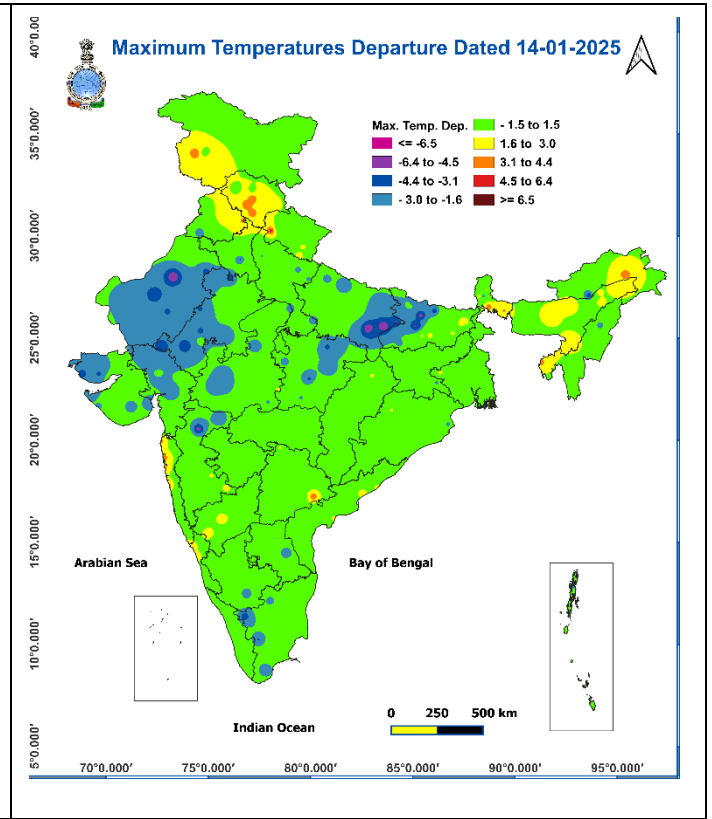
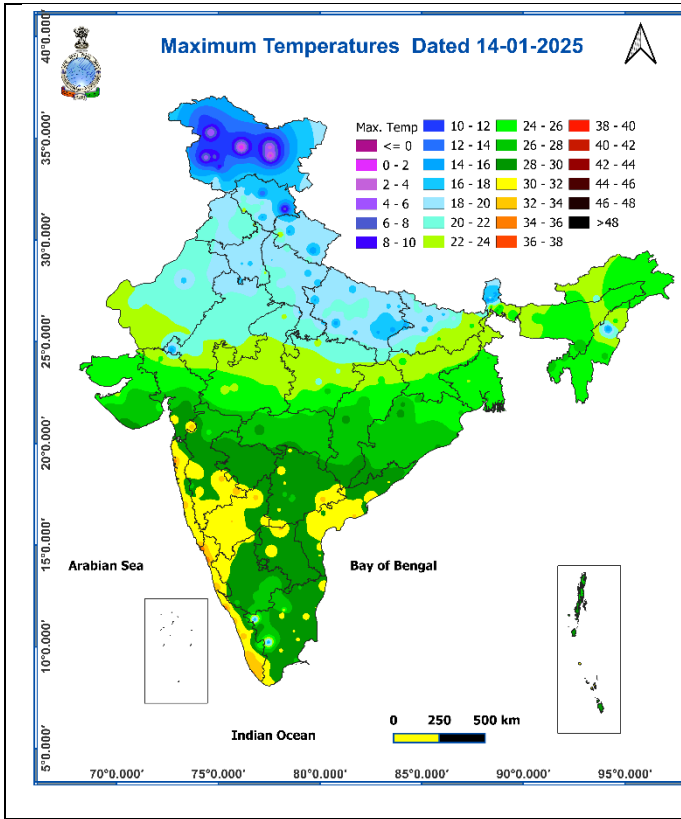
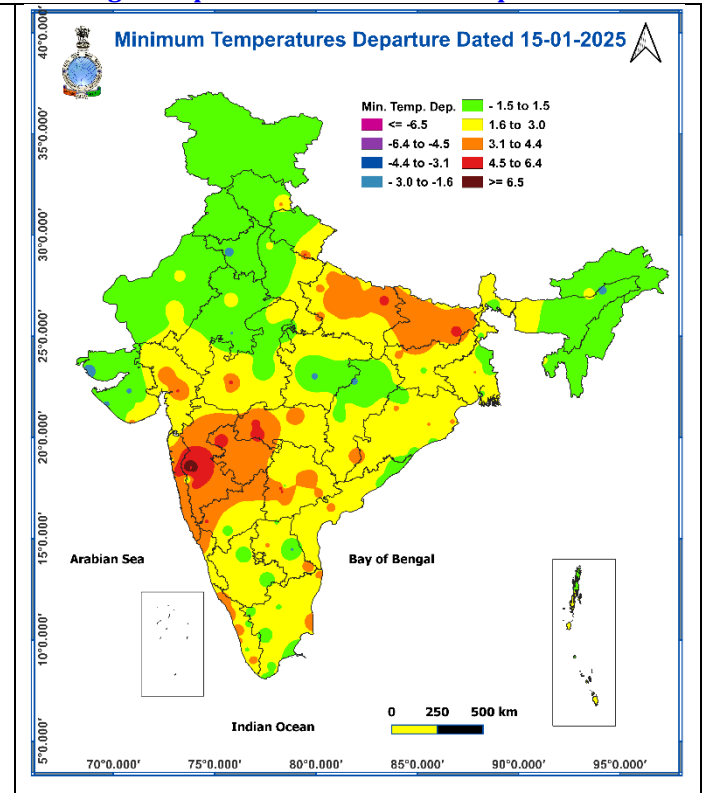
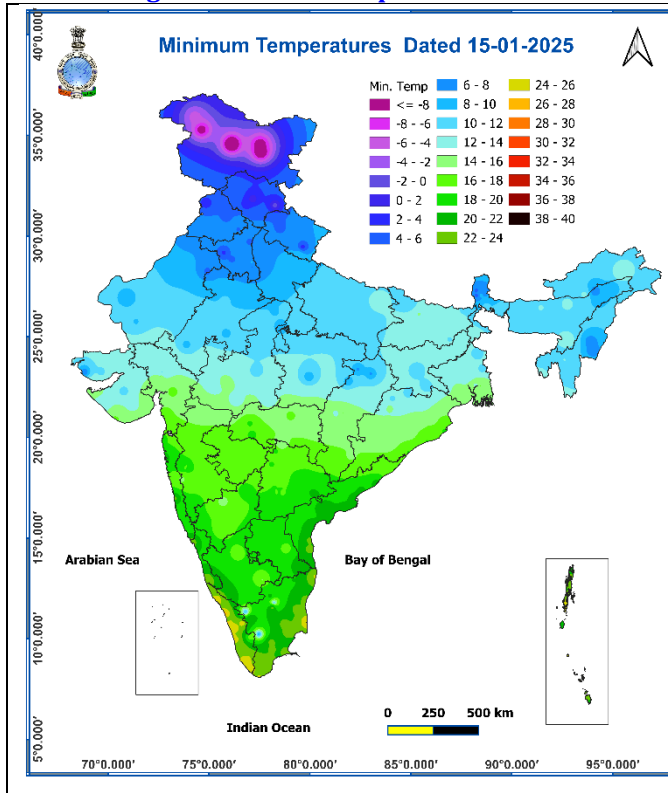


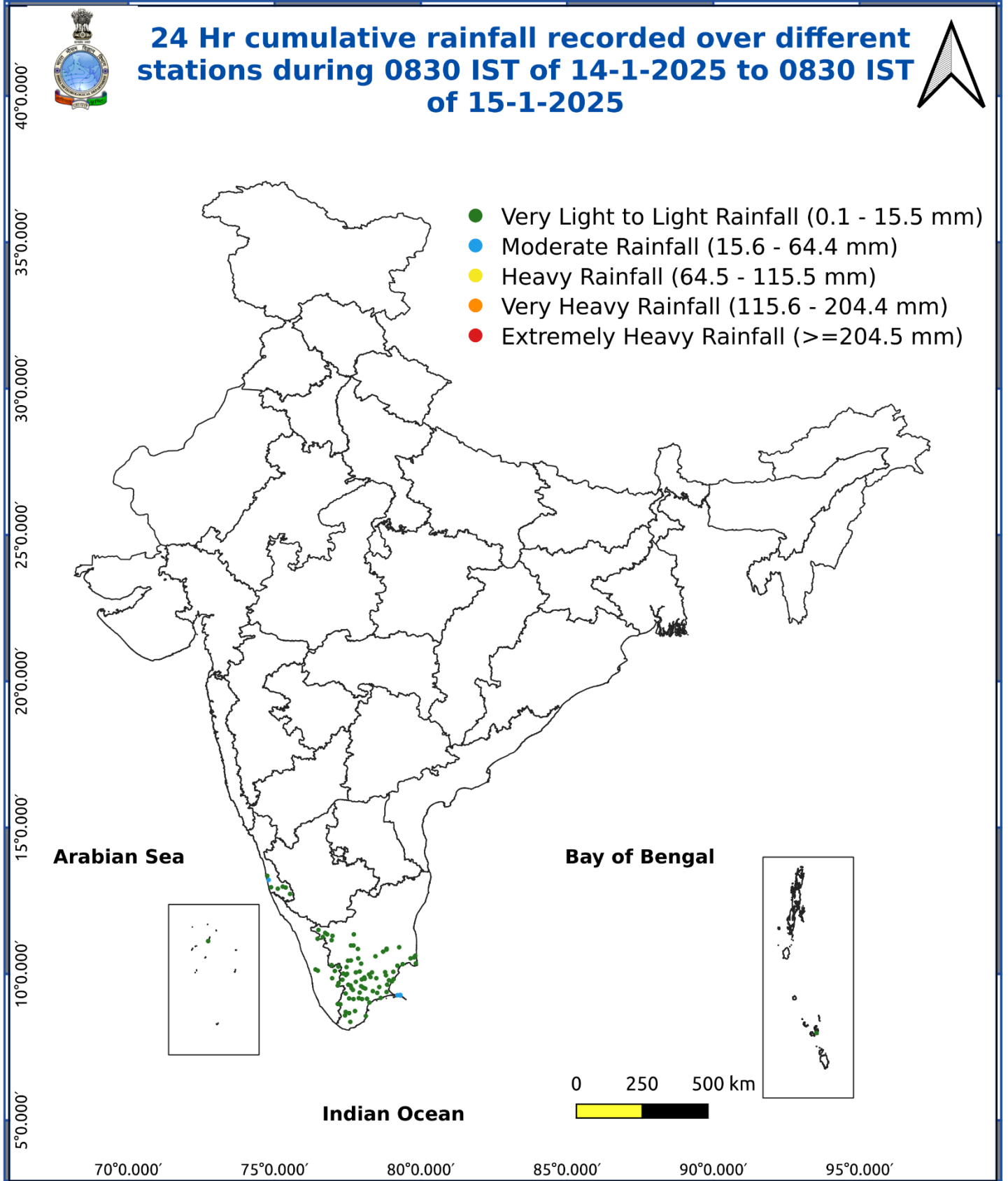
Fig. 3: Minimum Temperatures

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.
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599
(Service to the Nation since 1875)

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



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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

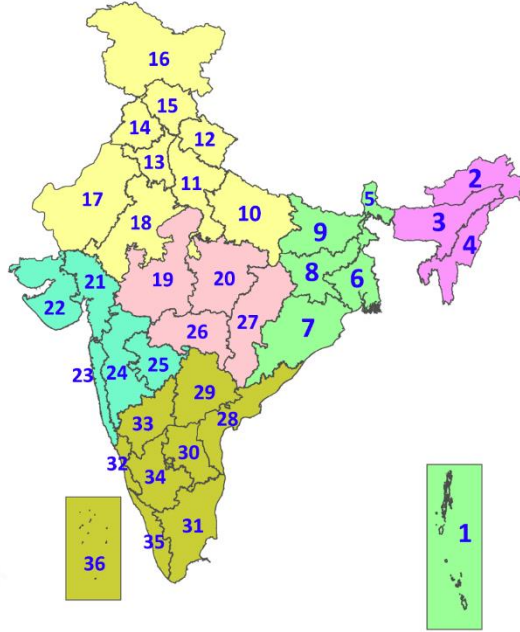
- ❖ An increased likelihood of various illnesses like flu, running/ stuffy nose or nosebleed, which usually set in or get aggravated due to prolonged exposure to cold.
- ❖ Do not ignore shivering. It is the first sign that the body is losing heat. Get Indoors.
- ❖ Frostbite can occur due to prolonged 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.

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 *	<p>Heavy: 64.5 to 115.5 mm/cm *</p> <p>Very Heavy: 115.6 to 204.4 mm/cm*</p> <p>Extremely Heavy: > 204.4 mm/cm *</p>
Heat Wave	<p>When maximum temperature of a station reaches $\geq 40^\circ\text{C}$ for plains and $\geq 30^\circ\text{C}$ for hilly regions</p> <p>(a) Based on Departure from normal</p> <p>Heat Wave: Maximum Temperature Departure from normal 4.5°C to 6.4°C.</p> <p>Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^\circ\text{C}$</p> <p>(b). Based on Actual maximum temperature</p> <p>Heat Wave: When actual maximum temperature $\geq 45^\circ\text{C}$.</p> <p>Severe Heat Wave: When actual maximum temperature $\geq 47^\circ\text{C}$</p> <p>(c). Criteria for heat wave for coastal stations</p> <p>When maximum temperature departure is $>4.5^\circ\text{C}$ from normal. Heat Wave may be described provided maximum temperature $\geq 37^\circ\text{C}$</p>
Warm Night	<p>When maximum temperature remains 40°C</p> <p>Warm Night: When minimum temperature departure 4.5°C to 6.4°C.</p> <p>Severe Warm Night: When minimum temperature departure $>6.4^\circ\text{C}$.</p>
Cold Wave	<p>When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions.</p> <p>(a). Based on departure</p> <p>Cold Wave: Minimum Temperature Departure from normal -4.5°C to -6.4°C.</p> <p>Severe Cold Wave: Minimum Temperature Departure from normal $\leq -6.5^\circ\text{C}$</p> <p>(b) Based on actual Minimum Temperature (for Plains only)</p> <p>Cold Wave : When Minimum Temperature is $\leq 4.0^\circ\text{C}$</p> <p>Severe Cold Wave: When Minimum Temperature is $\leq 2.0^\circ\text{C}$</p> <p>(c) For Coastal Stations</p> <p>When Minimum Temperature departure is $\leq -4.5^\circ\text{C}$ & actual Minimum Temperature is $\leq 15^\circ\text{C}$</p>
Cold Day	<p>When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions</p> <p>Based on departure</p> <p>Cold Day: Maximum Temperature Departure from normal -4.5°C to -6.4°C.</p> <p>Severe Cold Day: Maximum Temperature Departure from normal $\leq -6.5^\circ\text{C}$</p>
Fog	<p>Phenomenon of small droplets suspended in air and the horizontal visibility $< 1\text{km}$</p> <p>Moderate Fog: When the visibility between 500-200 metres</p> <p>Dense Fog: when the visibility between 50- 200 metres</p> <p>Very Dense Fog: when the visibility < 50 metres</p>
Thunderstorm	<p>Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)</p>
Dust/Sand Storm	<p>An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.</p>
Frost	<p>Ice deposits on ground</p> <p>Air temperature $\leq 4^\circ\text{C}$ (over Plains)</p>
Squall	<p>A strong wind that rises suddenly, lasts for atleast 1 minute.</p> <p>Moderate: Wind speed 52-61 kmph</p> <p>Severe: Wind speed 62-87 kmph</p> <p>Very Severe: Wind speed >87 kmph</p>
Sea State	<p>Effect of various waves in the sea over specific area</p> <p>Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre</p> <p>High to very high: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre</p> <p>Phenomenal: Wind speed >117 kmph (>63 knots) & Wave height >14 metre</p>
Cyclone	<p>Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)</p> <p>Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)</p> <p>Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)</p> <p>Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)</p> <p>Super Cyclone Strom: Wind speed >220 kmph (>119 knots)</p>