राष्ट्रीय मौसम पूर्वानुमान केन्द्र
भारत मौसम विज्ञान विभाग
पृथ्वी विज्ञान मंत्रालय

National Weather Forecasting Centre
India Meteorological Department
Ministry of Earth Sciences

Monday, January 20, 2025
Time of Issue: 1945 hours IST
(NIGHT)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems, Forecast and warning

- The **Western Disturbance** as cyclonic circulation lies over North Pakistan & neighbourhood in lower tropospheric levels. The **induced cyclonic circulation** lies over West Rajasthan in lower tropospheric levels. Another **Western Disturbance** as a trough in middle & upper tropospheric levels with its axis at 5.8 km above mean sea level runs roughly along Long. 60°E to the north of Lat. 28°N. Under the influence of these systems:
  - ✓ Isolated to Scattered rainfall/snowfall very likely over Western Himalayan Region till 21st and scattered to fairly widespread rainfall/snowfall on 22nd & 23rd; isolated to scattered rainfall accompanied with thunderstorm & lightning likely over Punjab, Haryana Chandigarh & Delhi, East Rajasthan & West Uttar Pradesh on 22nd & 23rd January.
- A **cyclonic circulation** lies over Gulf of Mannar & adjoining Sri Lanka at middle tropospheric levels and strong northeasterly winds over Tamilnadu coast. Under the influence of these systems:
  - ✓ isolated Light to moderate rainfall Tamilnadu Puducherry & Karaikal & Kerala & Mahe during 20th-23rd and Scattered Light to moderate rainfall over Lakshadweep on 20th & 21st January.

ii. Temperature, Cold Wave, Cold Day and Fog Forecast:

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

- Minimum temperatures are **below 0°C** over few parts of Jammu, Kashmir & Ladakh; **8-12°C** over many parts of plains of northwest India; **13-18°C** in many parts of central & adjoining peninsular India. Today, the lowest minimum temperature of **5.0°C** is reported at **Mandla (East Madhya Pradesh)** over the plains of the country.
- During the past 24 hours, there has been **rise in minimum temperatures by 1-4^{0}C** in many parts of plains of northwest India & East Madhya Pradesh and **fall by 1-2^{0}C** in many parts of Gangetic West Bengal; in a few parts of Coastal Karnataka; in isolated places of Odisha, Marathawada, Madhya Maharashtra and Interior Karnataka.
- Minimum temperatures are above **normal by 2-4 °C** at many places over plains of northwest & adjoining central India, Maharashtra and Gujarat State. These are **below normal by 1-3°C** at many places over East India, Chhattisgarh and Telangana and near normal over rest parts of the country.

Forecast of temperature:

- No significant change in minimum temperatures likely over Central India during next 24 hours and gradual rise by 2-4°C during subsequent 4 days.
- No significant change in minimum temperatures likely over East India & East Uttar Pradesh during next 2 days and gradual rise by 2-3°C during subsequent 3 days.
- Gradual rise in minimum temperatures by 2-3°C likely over Maharashtra during next 3 days and no significant change during subsequent 2 days.
- No significant change in minimum temperatures likely Gujarat region during next 2 days and fall by 2-3°C during subsequent 3 days.
- No significant change in minimum temperatures likely over rest parts of the country.

Dense Fog Warnings:

Dense fog conditions very likely to continue to prevail during night/early morning hours in isolated pockets of Rajasthan on 20th, 23rd & 24th; East Uttar Pradesh during 20th-24th; West Uttar Pradesh, Haryana, Chandigarh, Punjab on 23rd & 24th; Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim & Odisha during 20th-22nd; Gangetic West Bengal on 21st & 22nd January.

Cold Day Warnings:

Cold day conditions very likely in a few pockets of Himachal Pradesh on 23rd January.

Main Weather Observations:

- **Rainfall distribution** (from 0830 hours IST to1730 hours IST of today): **at isolated places** over Lakshadweep.

- **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of today) (in cm): **Nil**

- **Fog recorded (at 1730 hours IST of today):** Shallow fog in isolated pockets of East Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Assam.

- **Visibility reported (at 1730 hours IST of today) (≤500 m): East Uttar Pradesh:** Gorakhpur 500; **Sub-Himalayan West Bengal & Sikkim:** Cooch Behar 500; **Assam:** Haflong 500.

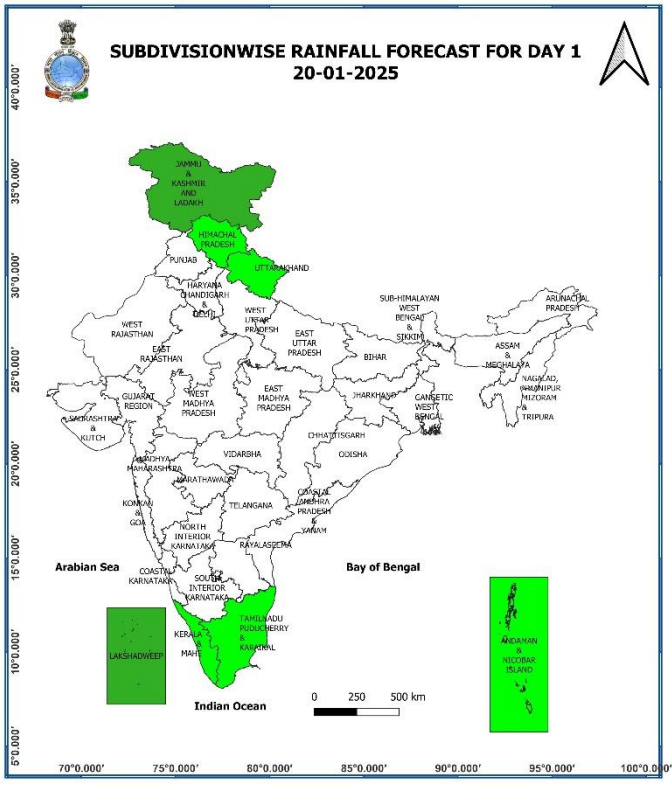
- **Minimum Temperature Departures (as on 20-01-2025):** Minimum temperatures are **markedly above normal (5.0°C or more)** at isolated places over West Rajasthan, Gujarat Region; **appreciably above normal (3.1°C to 5.0°C)** at many places over Saurashtra & Kutch; at a few places over East Rajasthan, West Madhya Pradesh; at isolated places over West Uttar Pradesh, East Rajasthan, Bihar, Assam ; **above normal (1.6°C to 3.0°C)** at isolated places over Konkan & Goa, Madhya Maharashtra, Coastal Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, East Uttar Pradesh. These are **below normal (-1.6°C to -3.0°C)** at isolated places over Telangana, Odisha, Chhattisgarh and near normal over rest parts of the country (Fig. 4). Today, the lowest minimum temperature of **5.0°C** is reported at **Mandla (East Madhya Pradesh)** over the plains of the country.

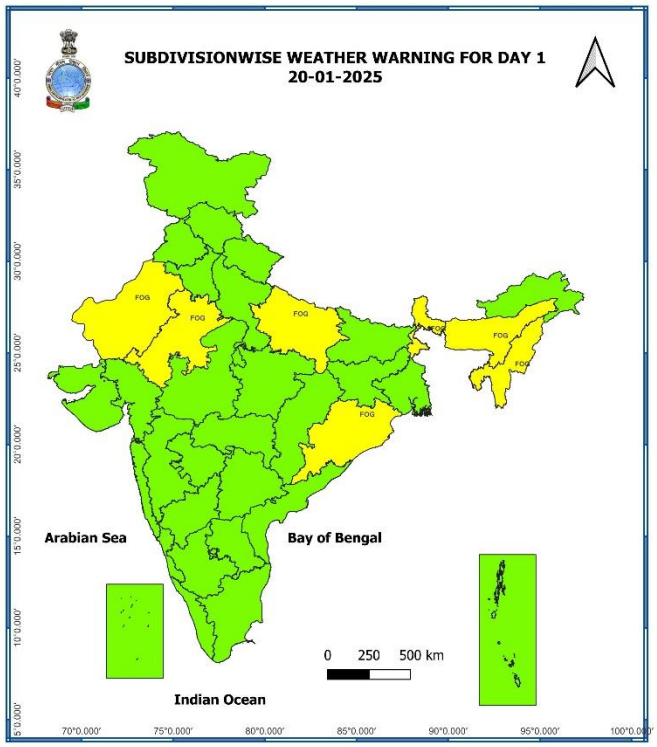
- **Maximum Temperature Departures (as on 20-01-2025**): Maximum temperatures are **markedly above normal (-5.1°C or more)** at a few places over Punjab; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttar Pradesh, East Rajasthan, Saurashtra & Kutch; **appreciably above normal (3.1°C to 5.0°C)** at isolated places West Rajasthan, Uttarakhand, Madhya Pradesh, Gujarat Region, Assam & Meghalaya; **above normal (1.6°C to 3.0°C)** at isolated places over Jharkhand, Gangetic West Bengal, Odisha, Chhattisgarh, Coastal Andhra Pradesh & Yanam, Vidarbha, Madhya Maharashtra, Nagaland, Manipur, Mizoram & Tripura, Haryana-Chandigarh-Delhi. These are **below normal (-1.6°C to -3.0°C)** at isolated places over Tamil Nadu, Puducherry & Karaikal, Sub-Himalayan West Bengal & Sikkim and near normal over rest part of the country (Fig. 2). Today, the **highest maximum temperature** of **35.4°C** is reported at **Bombay Santacruz (Konkan & Goa)** over the plains of the country.

Meteorological Analysis (Based on 1730 hours IST)

- The **Western Disturbance** as a cyclonic circulation over North Pakistan & neighbourhood at 3.1 km above mean sea level.
- The induced **cyclonic circulation** over West Rajasthan & adjoining Pakistan at 1.5 km above mean sea level persists.
- Another **Western Disturbance** as a trough in middle & upper tropospheric levels with its axis at 5.8 km above mean sea level now runs roughly along Long. 60°E to the north of Lat. 28°N.
- Subtropical **westerly Jet Stream** with core winds of the order upto 140 knots at 12.6 km above mean sea level continues to prevail over Northwest India.
- The **cyclonic circulation** over northeast Assam & neighbourhood at 3.1 km above mean sea level persists.
- The **cyclonic circulation** over Gulf of Mannar & adjoining Sri Lanka at 5.8 km above mean sea level persists.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 27th January, 2025)

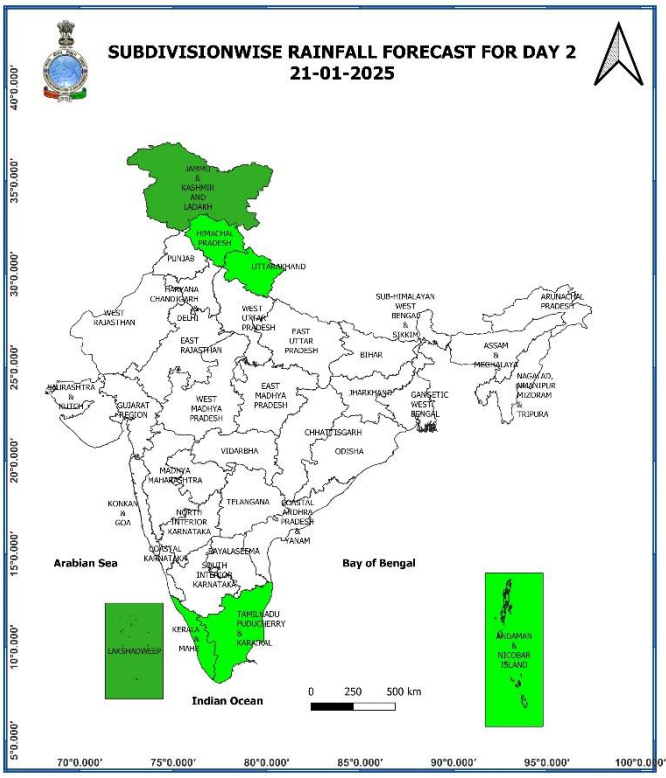


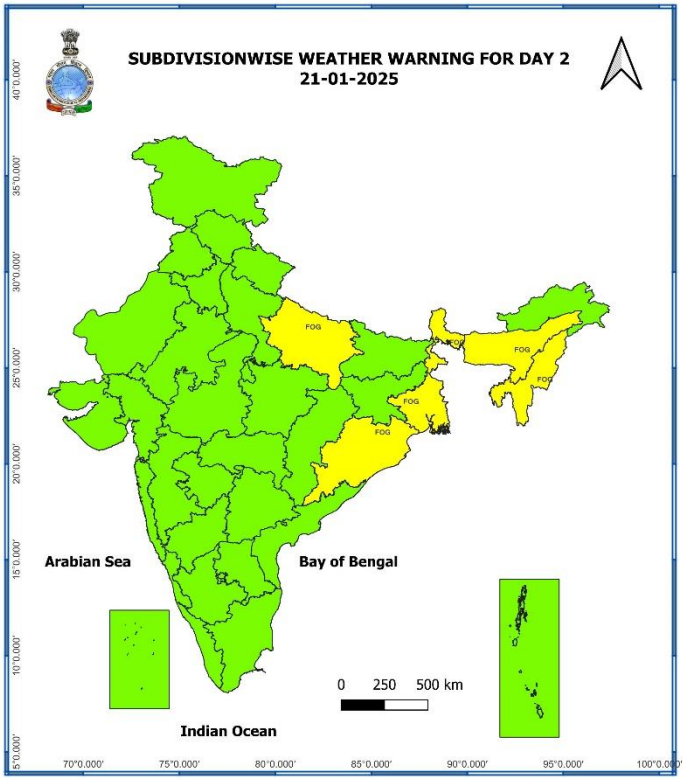


20th January (Day 1):

- **Dense fog conditions** very likely in isolated pockets of East Uttar Pradesh, Rajasthan, Sub-Himalayan West Bengal & Sikkim, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during night/morning hours.

- **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over gulf of Mannar and adjoining Comorin area, adjoining south Sri Lanka coast, adjoining southwest Bay of Bengal. Fishermen are advised not to venture in to these areas.

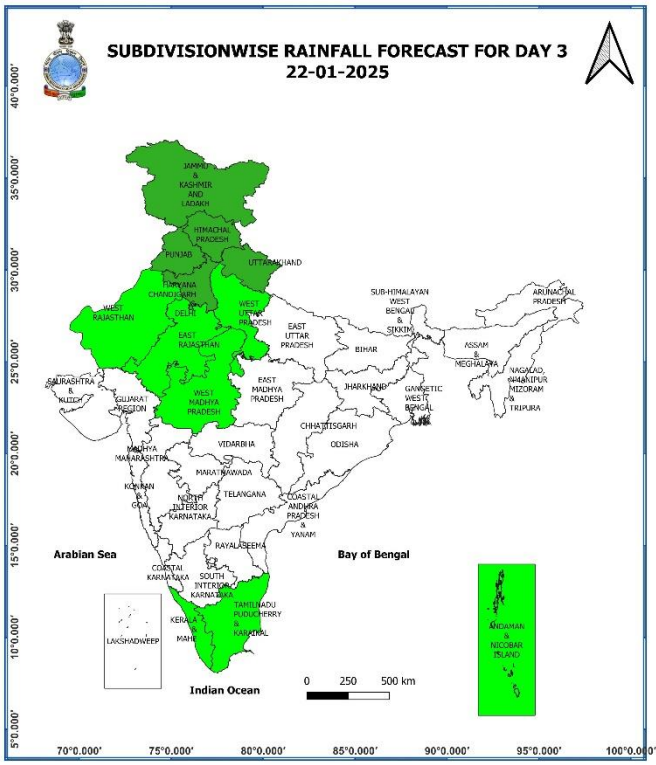


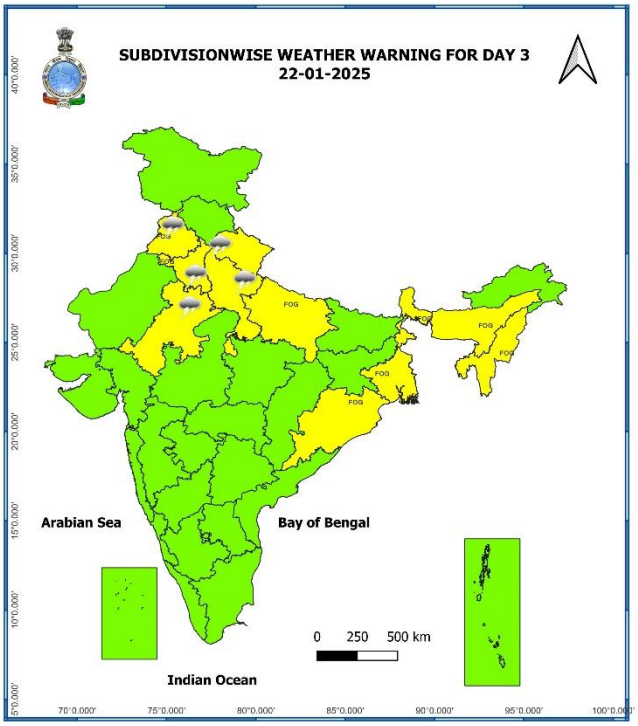


21st January (Day 2):

- **Dense fog conditions** very likely in isolated pockets of East Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Gangetic West Bengal, Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during night/morning hours.

- **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over gulf of Mannar and adjoining Comorin area, adjoining south Sri Lanka coast, adjoining southwest Bay of Bengal. Fishermen are advised not to venture in to these areas.



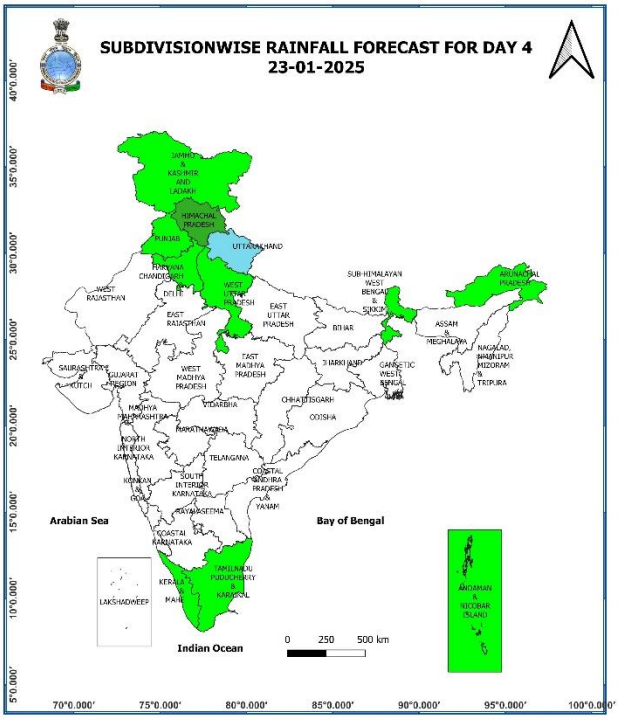


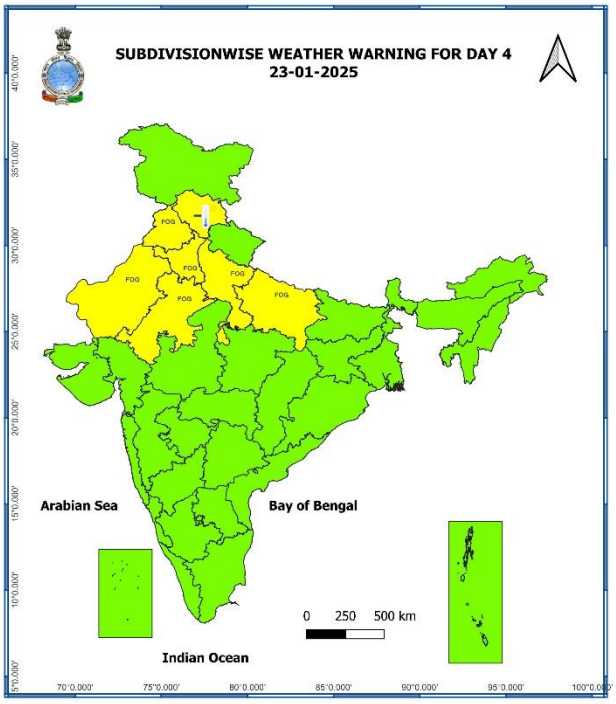
22nd January (Day 3):

- **Dense fog conditions** very likely in isolated pockets of Punjab, Haryana-Chandigarh-Delhi, East Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Gangetic West Bengal, Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during night/morning hours.

- **Thunderstorm accompanied with lightning** likely at isolated places over Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, West Uttar Pradesh, East Rajasthan.

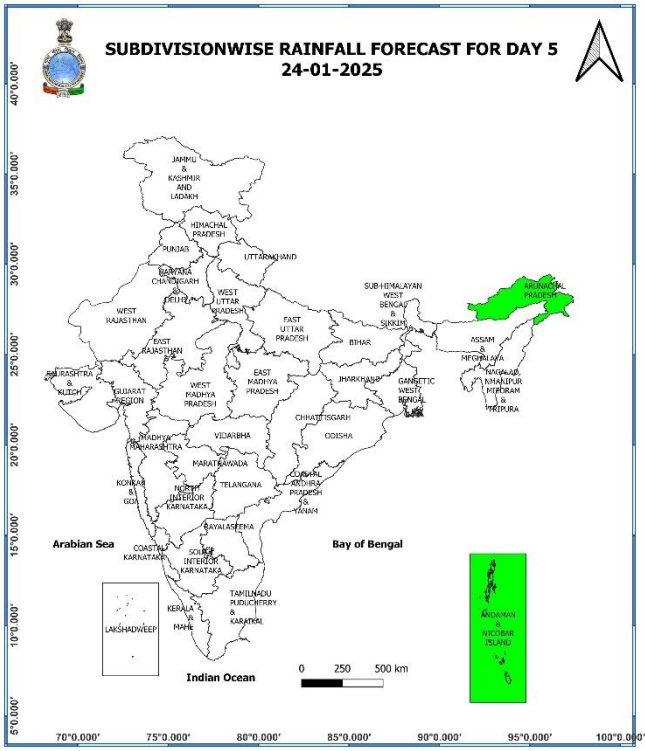
- **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over Comorin area adjoining gulf of Mannar. Fishermen are advised not to venture in to these areas.

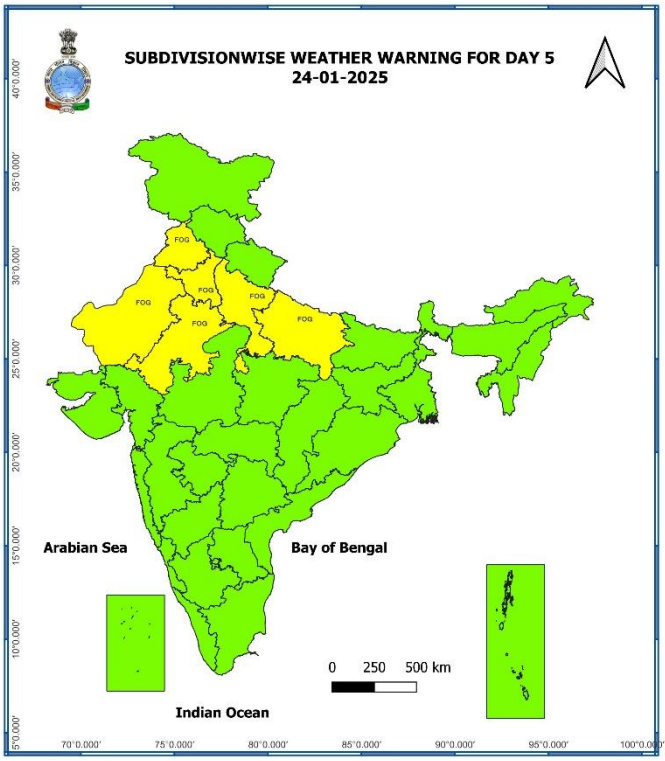




23rd January (Day 4):

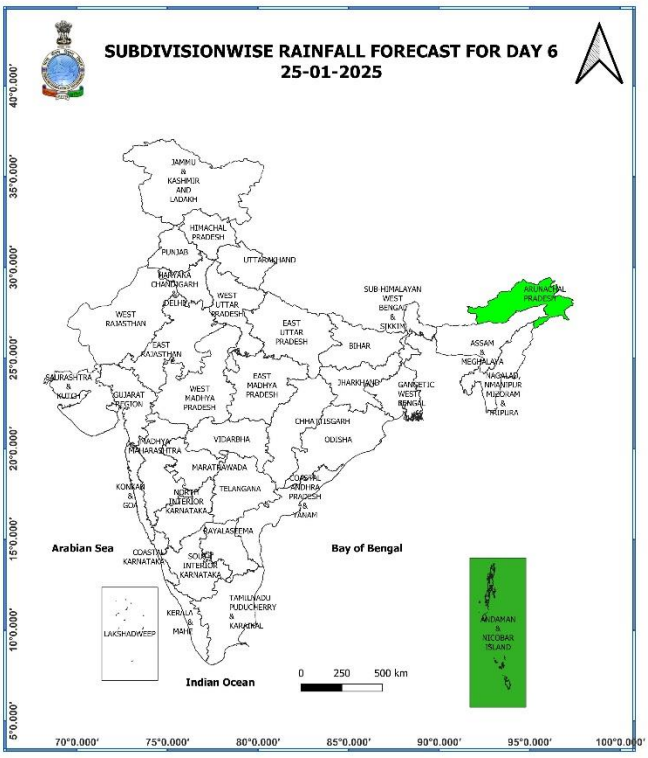
- **Dense fog conditions** very likely in isolated pockets of Punjab, Haryana-Chandigarh, Uttar Pradesh & Rajasthan.
- **Cold day conditions** likely in some pockets of Himachal Pradesh.

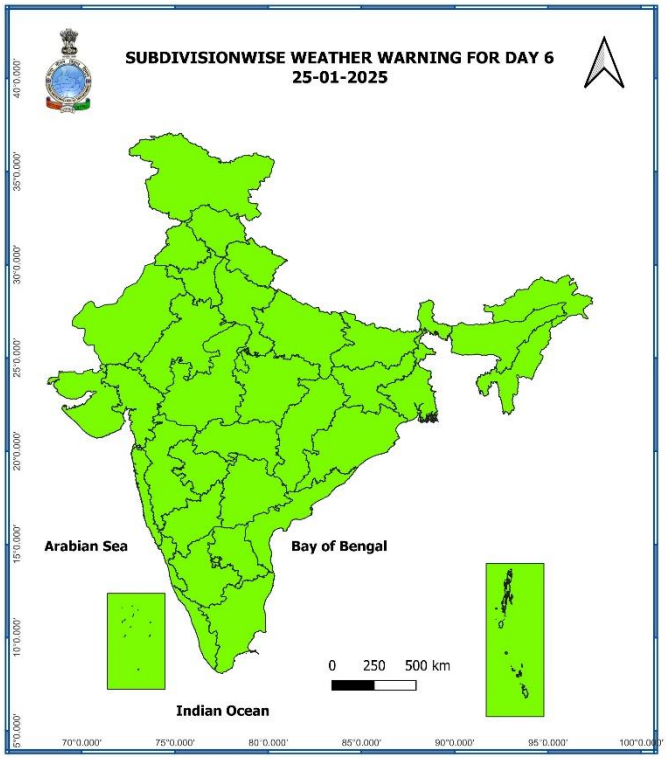




24th January (Day 5):

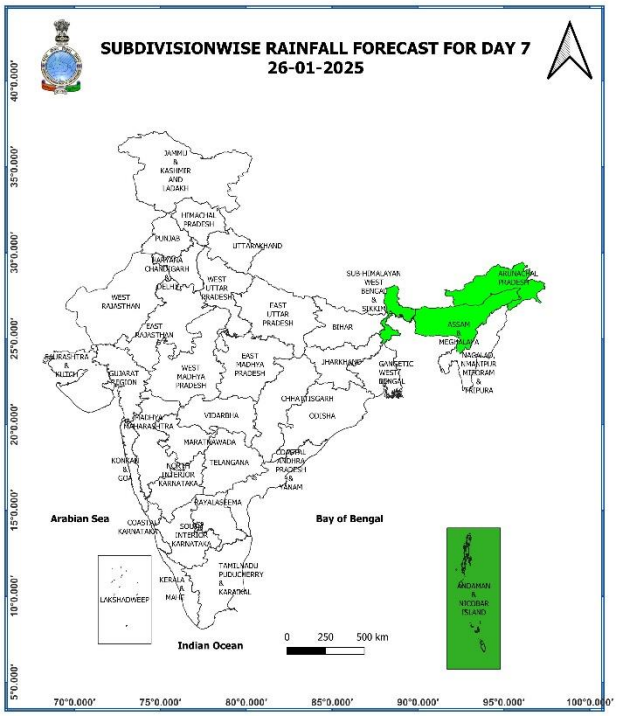
- **Dense fog conditions** very likely in isolated pockets of Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh & Rajasthan.

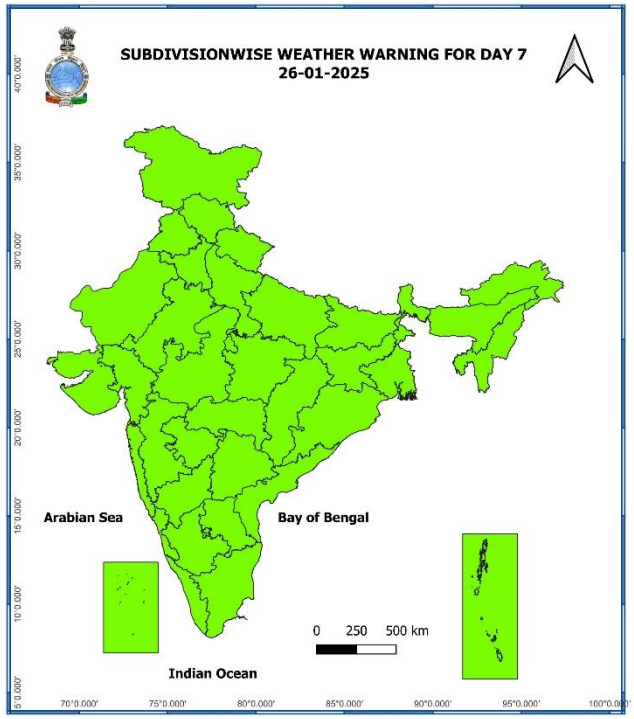




25th January (Day 6):

- **No Weather Warning.**





26th January (Day 7):

- **No Weather Warning.**

Weather Outlook for subsequent 3 days (During 27th January– 29th January, 2025)

- Isolated to scattered rainfall over Tamil Nadu & South Kerala and scattered to fairly widespread rainfall over Nicobar Islands.
- Scattered to Fairly widespread rainfall/snowfall over Arunachal Pradesh.

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

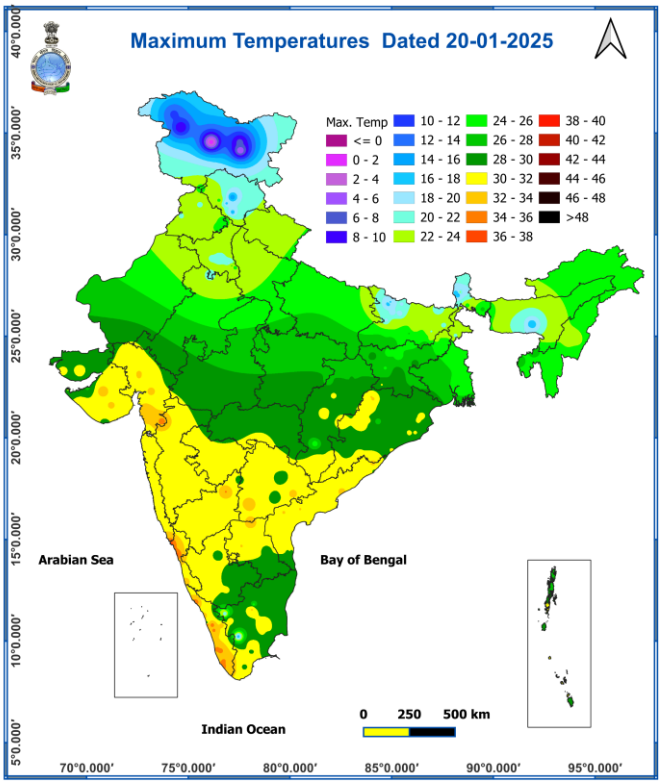


Fig. 2: Departure of Maximum Temperatures

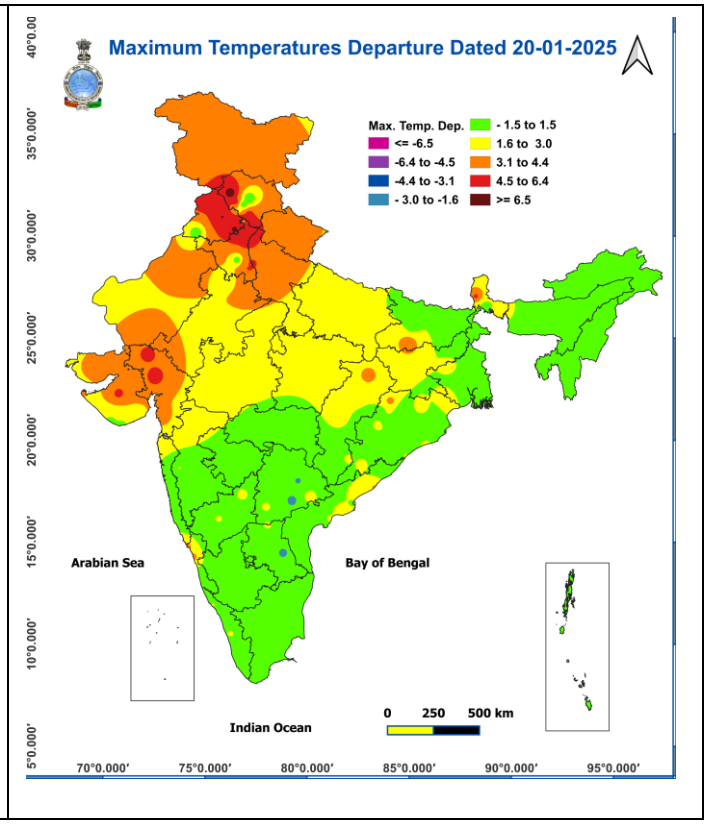


Fig. 3: Minimum Temperatures

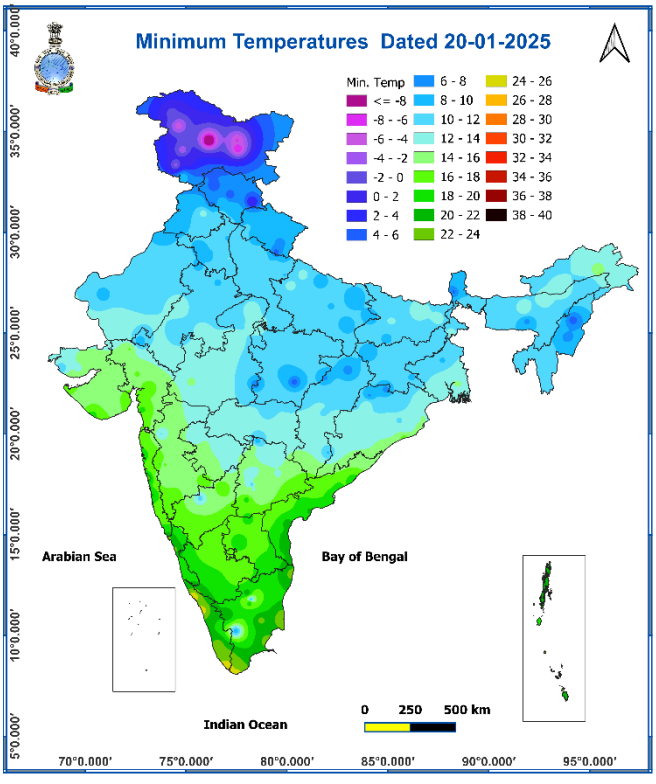
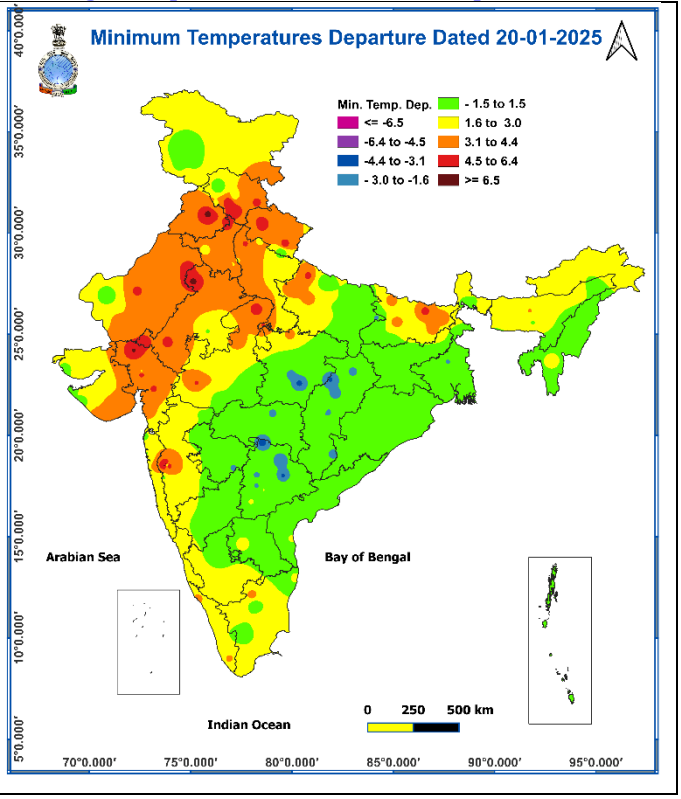


Fig. 4: Departure of Minimum Temperatures



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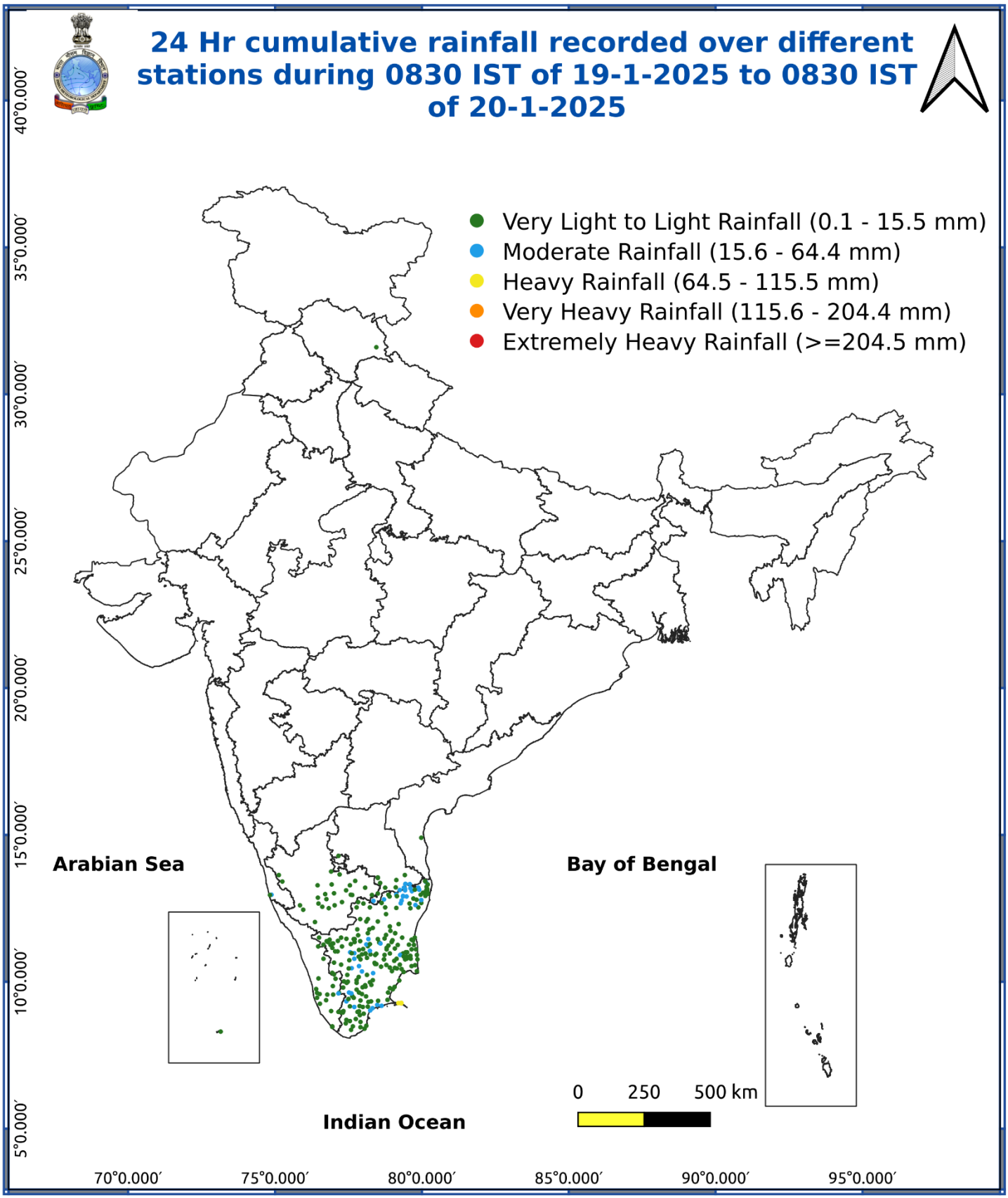
For more details, kindly visit https://mausam.imd.gov.in or contact: 011-2434-4599
(Service to the Nation since 1875)

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



Impact expected due to 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 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 over Tamil Nadu and Kerala

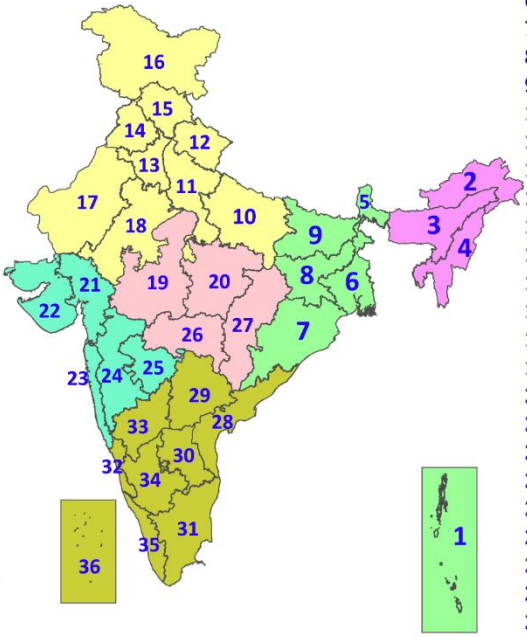
- ➢ Drain out excess water from rice, sugarcane, cotton, turmeric, vegetables, and other standing crop fields, as well as coconut and banana orchards in **Tamil Nadu** and from rice, coffee, banana, coconut, areca nut, ginger, pepper, cardamom and other standing crops in **Kerala.**
- ➢ Keep the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields.
- ➢ Provide mechanical support to horticultural crops and staking to vegetables.

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.
- ➢ Check and disinfect poultry houses to prevent disease outbreaks due to dampness.

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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