



National Weather Forecasting Centre India Meteorological Department Ministry of Earth Sciences

# Wednesday, January 22, 2025 Time of Issue: 1315 hours IST (MID-DAY)

# ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

## Significant Weather Features:

### Weather Systems, Forecast and warning:

- The Western Disturbance as a cyclonic circulation lies over Punjab & neighbourhood in lower tropospheric levels. The induced cyclonic circulation lies over Haryana & neighbourhood in lower tropospheric levels. Another cyclonic circulation lies over southeast Rajasthan and neighbourhood in lower tropospheric levels. Another Western Disturbance as a trough in middle & upper tropospheric westerlies runs roughly along Long. 65°E to the north of Lat. 30°N. Under the influence of these systems:
  - Isolated to Scattered rainfall/snowfall very likely over Western Himalayan Region till 23<sup>rd</sup> and isolated rainfall likely over Punjab, Haryana, Chandigarh & West Uttar Pradesh on 22<sup>nd</sup> & 23<sup>rd</sup> and Rajasthan on 22<sup>nd</sup> January.
  - ✓ Thunderstorm activity at isolated places likely over Himachal Pradesh, Uttarakhand, Haryana, Chandigarh and West Uttar Pradesh on 22<sup>nd</sup> January.
- Thunderstorm activity at isolated places likely over Arunachal Pradesh, Assam & Meghalaya and Tamilnadu Puducherry & Karaikal on 22<sup>nd</sup> January.
- ii. Temperature, Cold Day and Fog Forecast:

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

- Minimum temperatures are below 0°C over isolated places of Jammu, Kashmir & Ladakh; 7-14°C over many parts of plains of northwest, Central & East India; 14-18°C in many parts of West India. Today, the lowest minimum temperature of 3.8°C is reported at Adampur (Punjab) over the plains of the country.
- During the past 24 hours, there has been fall in minimum temperatures by 1-3°C in some parts of Himachal Pradesh & Uttar Pradesh; in isolated places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Chhattisgarh, Saurashtra & Kutch, Kerala & Mahe and rise by 1-3°C in many parts of Odisha and Gangetic West Bengal; in some parts of Madhya Pradesh; in isolated places of Assam & Meghalaya, Vidarbha and Tamil Nadu.

### **Forecast of temperature:**

- Rise in minimum temperatures by about 2°C likely over plains of Northwest India during next 24 hours and gradual fall by 2-4°C thereafter.
- Rise in minimum temperatures by 2-3°C likely over East India during next 3 days and gradual fall by 2-4°C thereafter.
- No significant change in minimum temperatures likely over Central India during next 48 hours and gradual fall by 2-3°C thereafter.
- No significant change in minimum temperatures likely over Maharashtra during next 24 hours and gradual fall by 2-3°C thereafter.
- Gradual fall in minimum temperatures by 2-3°C likely over Gujarat Region during next 24 hours and no significant change thereafter.

### **Cold Wave Warnings:**

**Cold Wave** conditions very likely in isolated pockets of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh on 23<sup>rd</sup> & 24<sup>th</sup> January.

### **Dense Fog Warnings:**

**Dense to very Dense fog Condition** very likely to continue to prevail during night/early morning hours in isolated pockets of East Uttar Pradesh on 22<sup>nd</sup> January.

**Dense fog conditions** very likely to continue to prevail during night/early morning hours in isolated pockets of Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura till 23<sup>rd</sup>; Rajasthan, West Bengal & Sikkim, Bihar, Odisha till 24<sup>th</sup>; West Uttar Pradesh till 26<sup>th</sup>; East Uttar Pradesh during 23<sup>rd</sup>-26<sup>th</sup> January.

### **Cold Day Warnings:**

**Cold day** conditions very likely in isolated pockets of Himachal Pradesh on 23<sup>rd</sup> and Bihar on 22<sup>nd</sup> & 23<sup>rd</sup> January.





Main Weather Observations:

- Rainfall distribution (from 0830 hours IST of yesterday to 0830 hours IST of today): at a few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- Significant amount of rainfall (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad: Gulmarg -1.
- Light rainfall/snowfall at a few places occurred over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- Rainfall/Snowfall (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): Jammu & Kashmir: Raj Pura Arg (dist Poonch) 1, Gulmarg (dist Baramula) 1, Lolab (dist Kupwara)1, Buhama (dist Kupwara) 1.
- Fog recorded (at 0830 hours IST of today): Dense to very dense fog reported in isolated pockets of Uttar Pradesh, West Bengal, Haryana and Meghalaya; Moderate Fog reported in isolated pockets of Bihar.
- Visibility reported (at 0830 hours IST of today) (≤200 m): Uttar Pradesh: Gorakhpur, Bahraich & Najibabad-0 each; West Bengal: Cooch Behar-0, Sri Niketan & Asansol-200 each; Haryana: Karnal-0; Meghalaya- Barapani-0; Bihar: Bhagalpur-200.
- Minimum Temperature Departures (as on 22-01-2025): Minimum temperatures are markedly above normal (5.0°C or more) at isolated places over East Uttar Pradesh, Uttarakhand; appreciably above normal (3.1°C to 5.0°C) at many places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, West Uttar Pradesh; at a few places over Punjab; at isolated places over East Rajasthan, Gujarat Region, Madhya Maharashtra, Bihar; above normal (1.6°C to 3.0°C) at most places over Saurashtra & Kutch, Sub-Himalayan West Bengal & Sikkim; at many places over West Rajasthan, Kerala & Mahe; at a few places over Madhya Pradesh, Jharkhand, Assam & Meghalaya, Konkan & Goa; at isolated places over Tamil Nadu, Puducherry & Karaikal. These are below normal (-1.6°C to -3.0°C) at many places over Telangana; at isolated places over Odisha, Vidarbha, Marathwada, Coastal Andhra Pradesh & Yanam and near normal over rest parts of the country (Fig. 4). Today, the lowest minimum temperature of 3.8°C is reported at Adampur IAF (Punjab) over the plains of the country.
- Maximum Temperature Departures (as on 21-01-2025): Maximum temperatures were markedly above normal (-5.1°C or more) at isolated places over Uttar Pradesh and Uttarakhand; appreciably above normal (3.1°C to 5.0°C) at a few places over Punjab and East Rajasthan; at isolated places Arunachal Pradesh, Himachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Madhya Pradesh, Chhattisgarh. Odisha and Gangetic West Bengal; above normal (1.6°C to 3.0°C) at most places over Vidarbha; at many places over East Rajasthan, Gujarat state and Jharkhand; at a few places over Assam & Meghalaya and Konkan & Goa; at isolated places over Madhya Maharashtra, Marathwada, Telangana, Coastal Andhra Pradesh & Yanam and Coastal & South Interior Karnataka. These were markedly below normal (-5.1°C or less) at isolated places over Bihar and near normal over rest parts of the country (Fig. 2). Yesterday, the highest maximum temperature of 37.5°C was reported at Kannur Airport (Kerala) over the plains of the country.





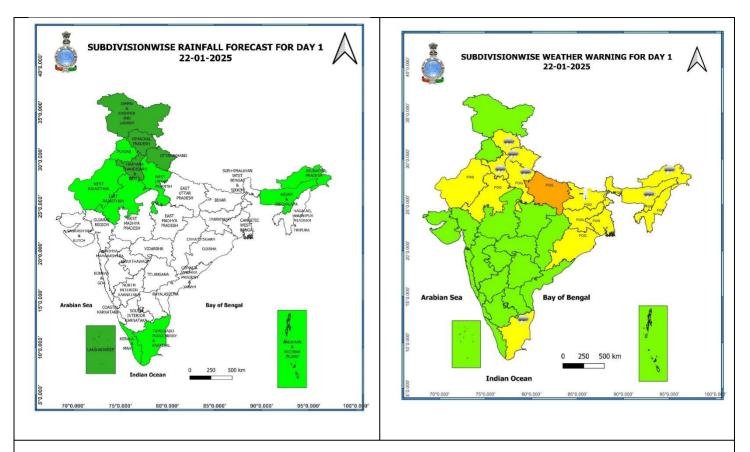
# Meteorological Analysis (Based on 0830 hours IST)

- The Western Disturbance as a cyclonic circulation over Punjab & neighbourhood at 3.1 km above mean sea level persists. However, the trough aloft in middle tropospheric levels with its axis at 5.8 km above mean sea level roughly along Long. 73°E to the north of Lat. 30°N has moved away eastnortheastwards.
- The induced cyclonic circulation over West Rajasthan now lies over Haryana & neighbourhood at 1.5 km above mean sea level.
- The cyclonic circulation over southeast Rajasthan & neighbourhood at 0.9 km above mean sea level persists.
- ✤ The other Western Disturbance as a trough in middle & upper tropospheric westerlies with its axis at 5.8 km above mean sea level now runs roughly along Long. 65°E to the north of Lat. 30°N.
- Subtropical westerly Jet Stream with core winds of the order upto 145 knots at 12.6 km above mean sea level is prevailing over Northwest India.
- The cyclonic circulation over northeast Assam & neighbourhood between 1.5 & 3.1 km above mean sea level has become less marked.



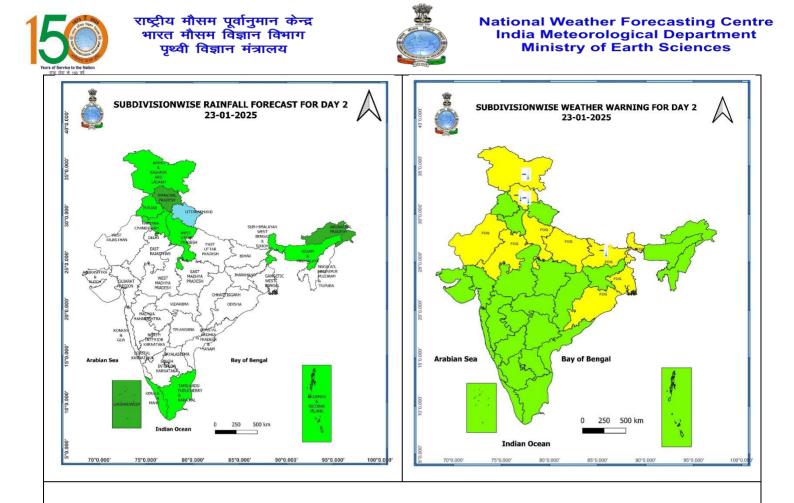


Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 29th January, 2025)



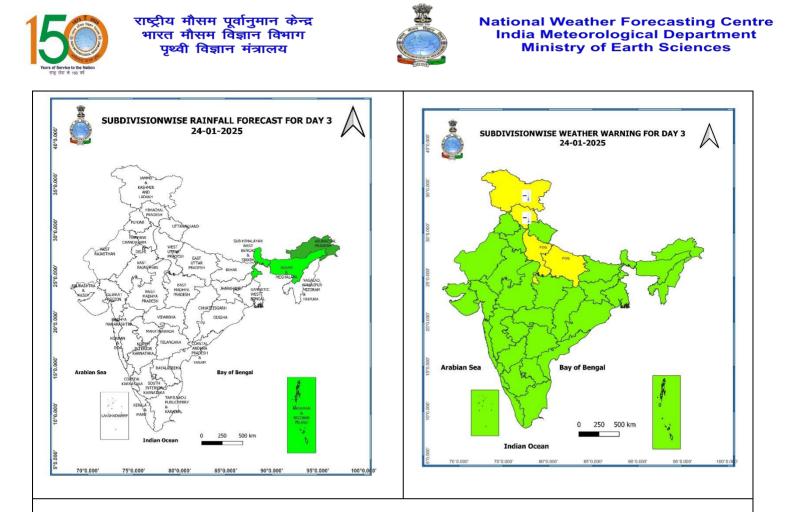
# 22<sup>nd</sup> January (Day 1):

- Dense to very dense fog conditions very likely in isolated pockets of East Uttar Pradesh; dense fog conditions in isolated pockets of West Uttar Pradesh, Rajasthan, Bihar, West Bengal & Sikkim, Jharkhand, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during night/morning hours.
- **Cold day** conditions very likely in isolated pockets of Bihar.
- Thunderstorm accompanied with lightning likely at isolated places over Himachal Pradesh, Uttarakhand, Haryana-Chandigarh, West Uttar Pradesh, Arunachal Pradesh, Assam & Meghalaya, Tamil Nadu, Puducherry & Karaikal.
- Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph likely to prevail over gulf of Mannar, Comorin area, over south of Sri Lanka coast and adjoining southwest Bay of Bengal. Squally wind with wind speed 45 kmph to 55 kmph gusting to 65 kmph likely to prevail over northwest Arabian sea and adjoining Gulf of Oman. Fishermen are advised not to venture in to these areas.



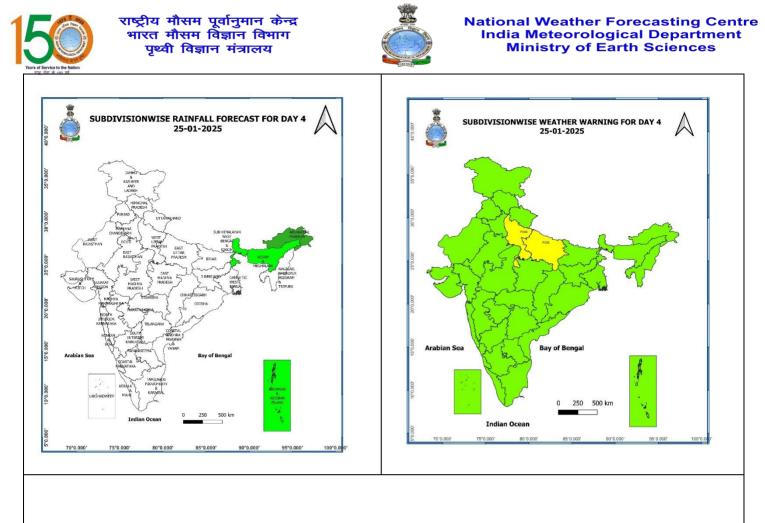
# 23<sup>rd</sup> January (Day 2):

- Dense fog conditions very likely in isolated pockets of Uttar Pradesh, Rajasthan, Bihar, West Bengal & Sikkim, Odisha.
- **Cold day** conditions very likely in isolated pockets of Himachal Pradesh and Bihar.
- Cold wave conditions very likely in isolated pockets of Himachal Pradesh and Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- Squally wind with wind speed 45 kmph to 55 kmph gusting to 65 kmph likely to prevail over Comorin area and adjoining Gulf of Mannar.



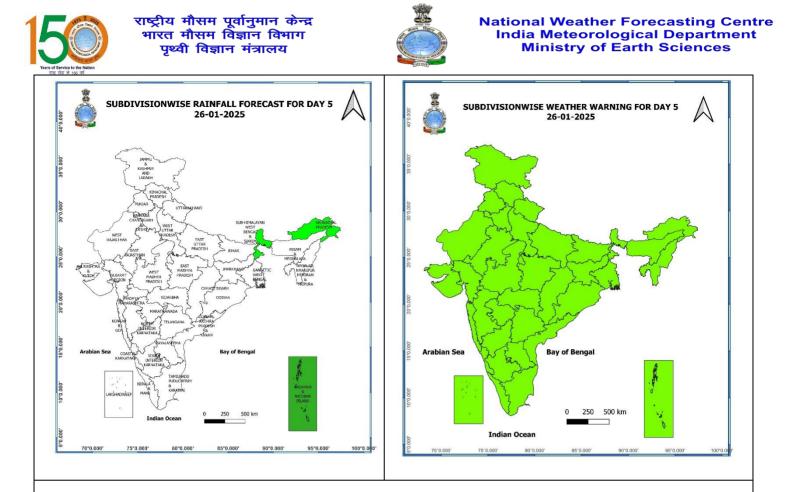
# 24<sup>th</sup> January (Day 3):

- **Constitutions** very likely in isolated pockets of Uttar Pradesh.
- ✤ Cold wave conditions very likely in isolated pockets of Himachal Pradesh and Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.



# 25<sup>th</sup> January (Day 4):

**Dense fog conditions** likely in isolated pockets of Uttar Pradesh.



# 26<sup>th</sup> January (Day 5):

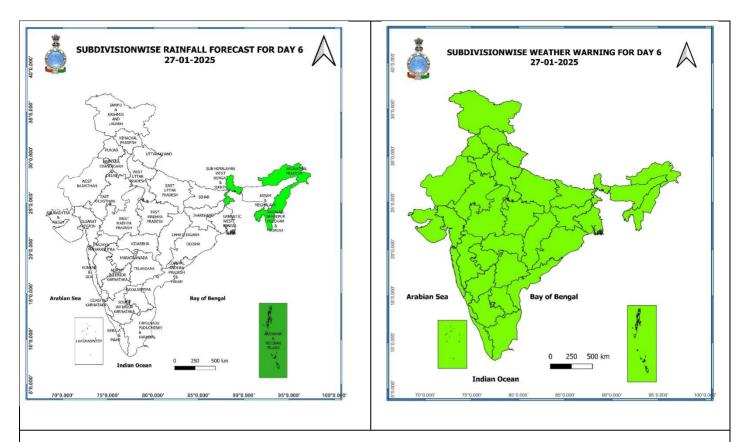
# \* No Weather Warning.



#### राष्ट्रीय मौसम पूर्वानुमान केन्द्र भारत मौसम विज्ञान विभाग पृथ्वी विज्ञान मंत्रालय

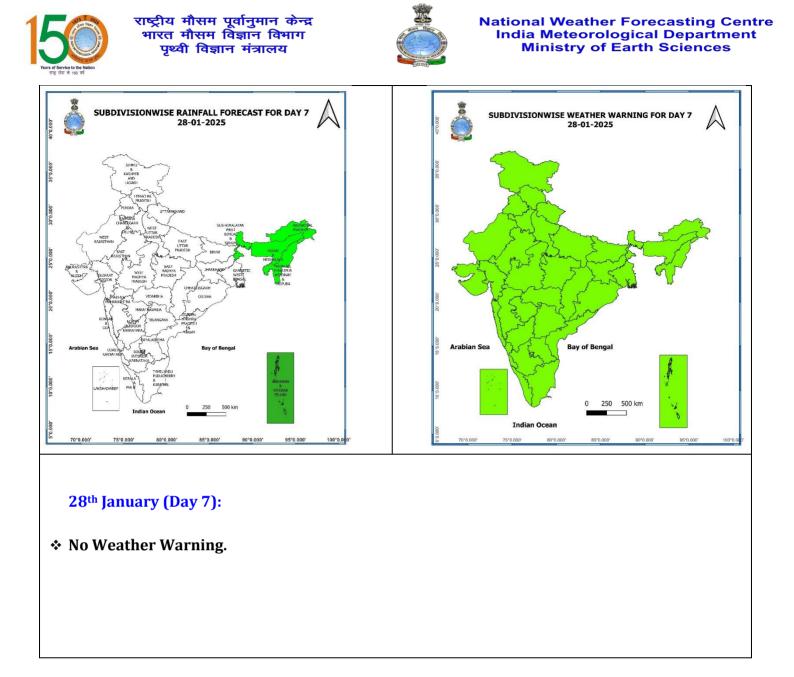


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# 27th January (Day 6):

## \* No Weather Warning.



## Weather Outlook for subsequent 3 days (During 29th January- 31th 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.



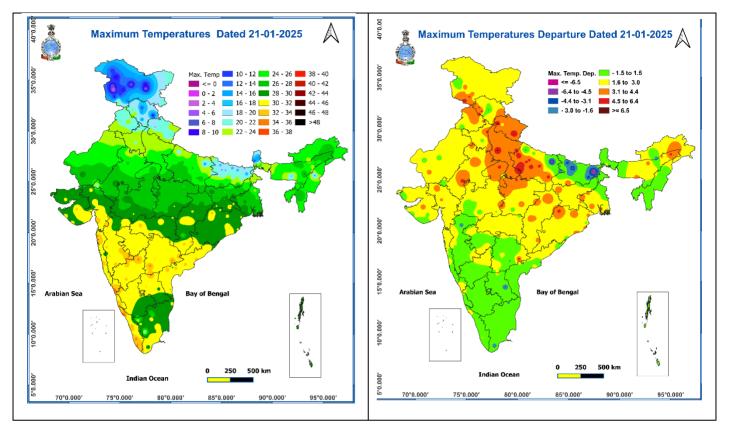
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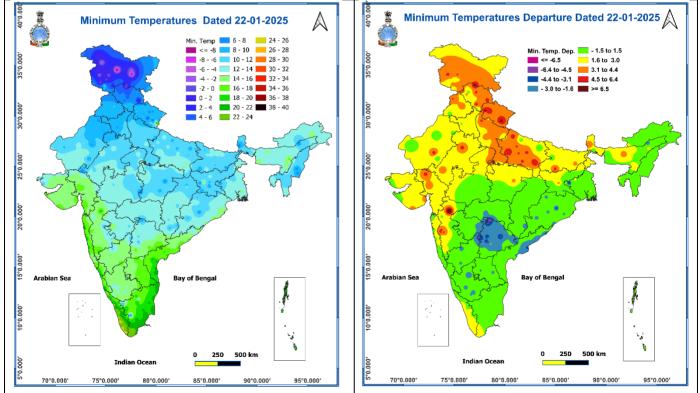
Fig. 2: Departure of Maximum Temperatures

#### Fig. 1: Maximum Temperatures



**Fig. 3: Minimum Temperatures** 

Fig. 4: Departure of Minimum Temperatures

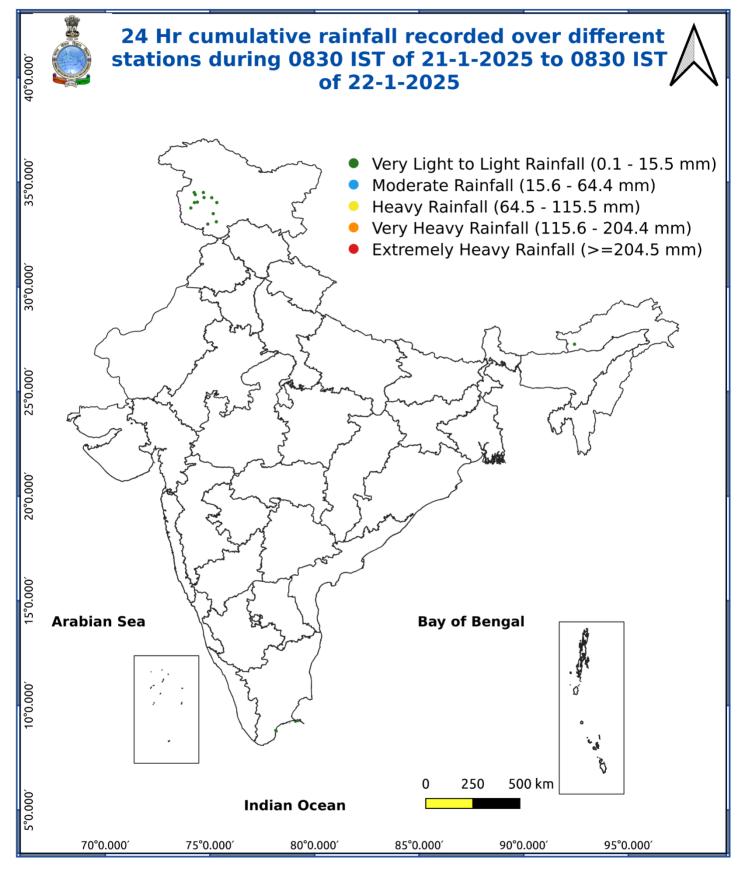


\* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action". Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day. For more details, kindly visit https://mausam.imd.gov.in or contact: 011-2434-4599 (Service to the Nation since 1875)





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





राष्ट्रीय मौसम पूर्वानुमान केन्द्र भारत मौसम विज्ञान विभाग पृथ्वी विज्ञान मंत्रालय



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# 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

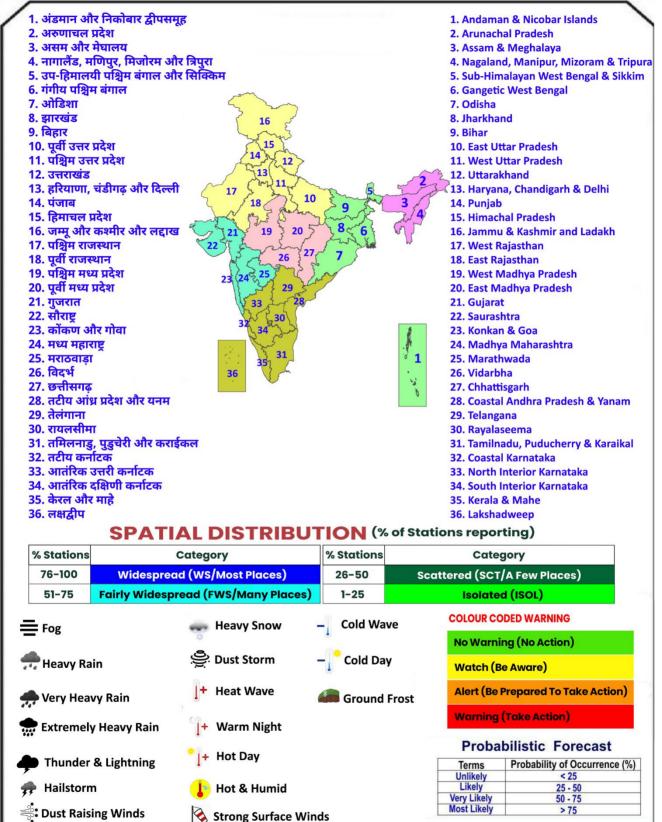
- > Keep the animals inside the shed during heavy rainfall period and provide them balanced feed.
- > Store feed and fodder in a safe place to prevent spoilage.
- > Check and disinfect poultry houses to prevent disease outbreaks due to dampness.





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# **LEGENDS**







Rain/ Snow *	Heavy: 64.5 to 115.5 mm/cm *
	Very Heavy: 115.6 to 204.4 mm/cm* Extremely Heavy: > 204.4 mm/cm *
Heat Wave	When maximum temperature of a station reaches $\geq$ 40° C for plains and $\geq$ 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 ≥47°C When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum temperature ≥37°C
	When maximum temperature remains 40°C
Warm Night	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 $\leq 4.0$ °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 $\le 10^\circ$ C for plains and $\le 0^\circ$ 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
understorm	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 62-67 Kingh (34-47 Kinds) 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)
	Cuper Cyclone Stront. Wind Speed 220 Milph (2113 MID(S)