राष्ट्रीय मौसम पूर्वानुमान केन्द्र
भारत मौसम विज्ञान विभाग
पृथ्वी विज्ञान मंत्रालय

National Weather Forecasting Centre
India Meteorological Department
Ministry of Earth Sciences

Thursday, January 23, 2025
Time of Issue: 0800 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems, Forecast and warning:

- The Western Disturbance 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 Western Disturbance as a trough in middle & upper tropospheric westerlies runs roughly along Long. 70°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 and isolated rainfall over Punjab, Haryana, Chandigarh & West Uttar Pradesh on 23rd 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^{0}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^{0}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 23rd & 24th January.

Dense Fog Warnings:

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 on 23rd; Rajasthan, West Bengal & Sikkim, Bihar, Odisha till 24th; West Uttar Pradesh till 26th; East Uttar Pradesh during 23rd-26th January.

Cold Day Warnings:

Cold day conditions very likely in isolated pockets of Himachal Pradesh and Bihar on 23rd January.

Main Weather Observations:

- **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): at isolated places over Tamil Nadu, Puducherry & Karaikal.

- **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): **Tamil Nadu, Puducherry & Karaikal:** Pamban 2.

- **Fog recorded** (at 0530 hours IST of today): **Dense to very dense Fog** reported in isolated pockets of East Uttar Pradesh, Gangetic West Bengal, Assam, Tripura, Bihar, Odisha.

- **Visibility reported** (at 0530 hours IST of today) (≤200 m): **East Uttar Pradesh:** Bahraich, Lucknow, Sultanpur, Varanasi 0 each; **Gangetic West Bengal:** Kolkata 0, Haldia 200; **Assam:** Tezpur 0, Guwahati 200**; Tripura:** Agartala 0, Kailashahar 200; **Bihar:** Purnea, Bhagalpur 200 each; **Odisha:** Chandbali, Balasore 200 each.

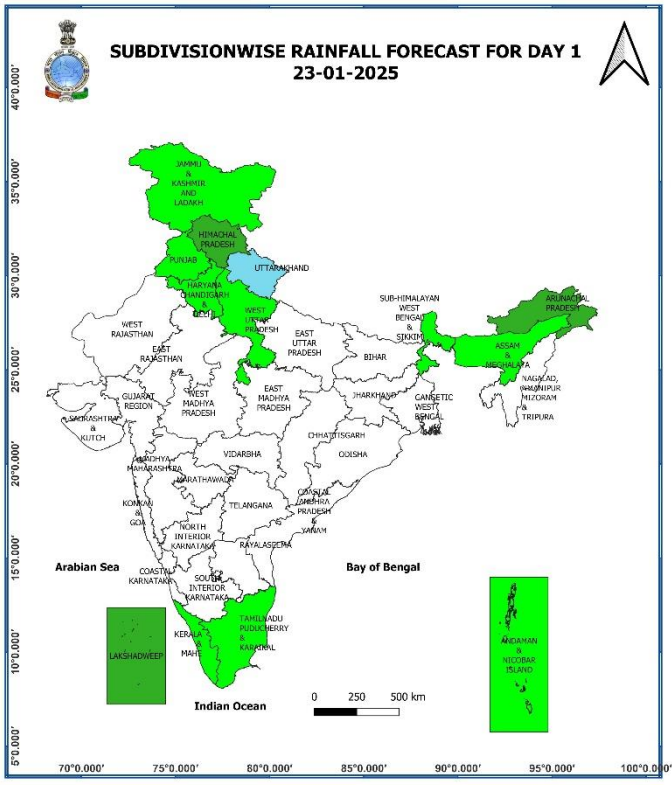
- **Minimum Temperature Departures (as on 22-01-2025):** Minimum temperatures were **markedly above normal (5.1°C or more)** at isolated places over East Uttar Pradesh, Uttarakhand; **appreciably above normal (3.1°C to 5.0°C)** at many places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal 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 were **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)**. Yesterday, the lowest minimum temperature of **3.8°C** was reported at **Adampur IAF (Punjab)** over the plains of the country.

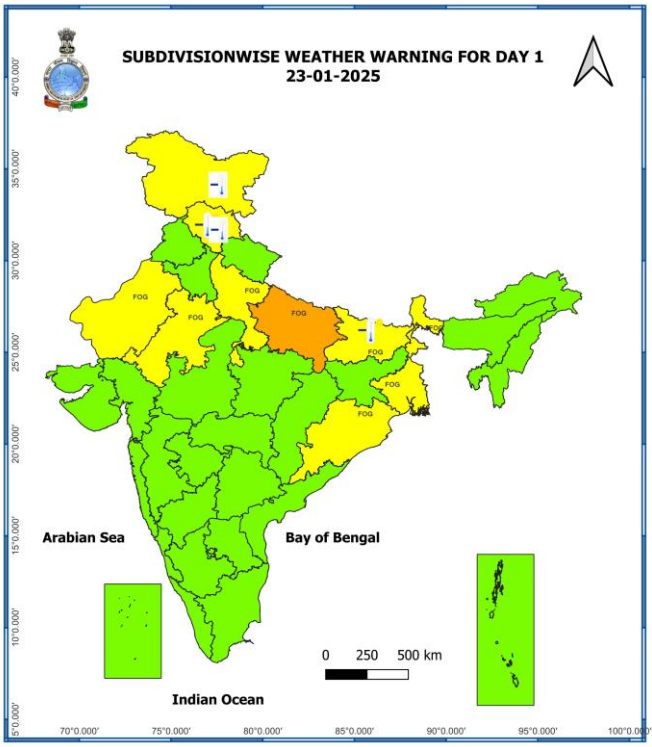
- **Maximum Temperature Departures (as on 22-01-2025**): Maximum temperatures were **markedly above normal (5.1°C or more)** at most places over Himachal Pradesh; at many places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; at few places over Punjab, Uttarakhand, West Uttar Pradesh; at isolated places over East Uttar Pradesh, Haryana-Chandigarh-Delhi; **appreciably above normal (3.1°C to 5.0°C)** at most places over East Madhya Pradesh; at many places over Vidarbha, Chhattisgarh, Jharkhand; at a few places over East Rajasthan, East Madhya Pradesh, Odisha; at isolated places over West Rajasthan, Gangetic West Bengal, Arunachal Pradesh, Assam & Meghalaya, Bihar; **above normal (1.6°C to 3.0°C)** at most places over Telangana, Madhya Maharashtra, Marathwada, North Interior Karnataka; at many places over Gujarat state, Konkan & Goa; at a few places over Saurashtra & Kutch, Coastal Andhra Pradesh & Yanam; at isolated places over Coastal Karnataka, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim. These were **below normal (-1.6°C to -3.0°C)** at isolated places over Tamil Nadu, Puducherry & Karaikal, Rayalaseema and near normal over rest parts of the country **(Fig. 2).** Yesterday, the **highest maximum temperature** of **36.4°C** was reported at **Karwar (Coastal Karnataka)** over the plains of the country.

Meteorological Analysis (Based on 0530 hours IST)

- The **Western Disturbance** as a cyclonic circulation over Punjab & neighbourhood at 3.1 km above mean sea level persists.
- The induced **cyclonic circulation** over Haryana & neighbourhood at 1.5 km above mean sea level persists.
- 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. 70°E to the north of Lat. 28°N.
- Subtropical **westerly Jet Stream** with core winds of the order upto 135 knots at 12.6 km above mean sea level is prevailing over Northwest India.

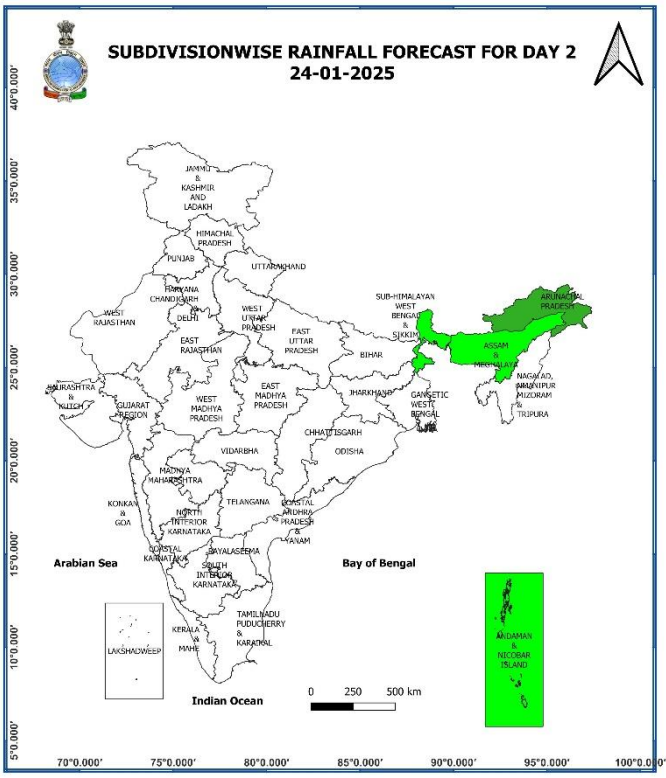
Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 29th January, 2025)

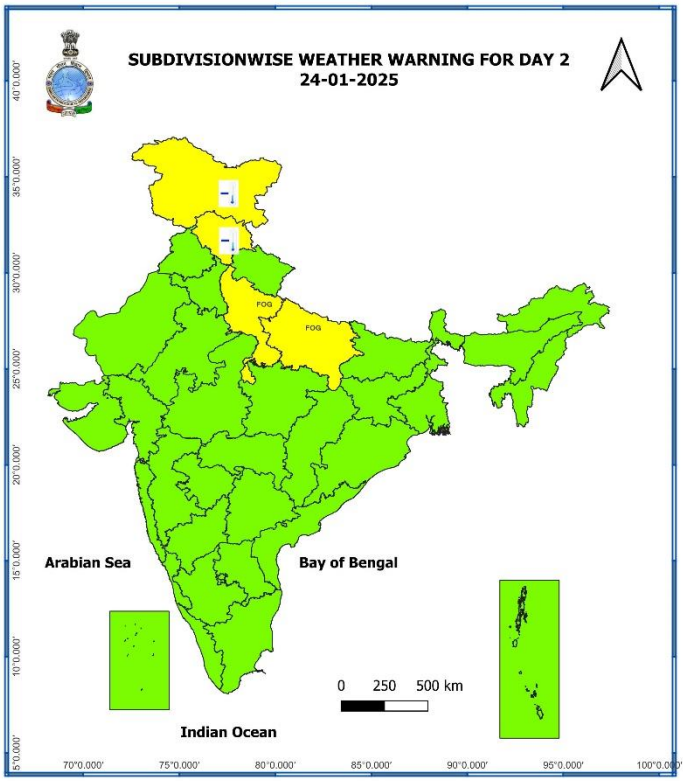




23rd January (Day 1):

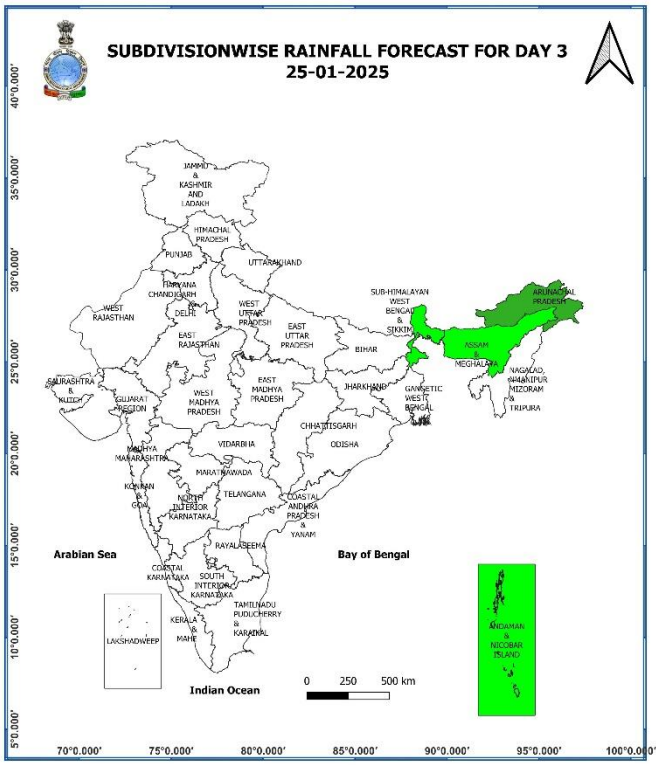
- **Dense to very dense fog** conditions very likely in isolated pockets of East Uttar Pradesh, **Dense fog** in isolated pockets of West Uttar Pradesh, Rajasthan, Bihar, West Bengal & Sikkim, Odisha.
- **Cold day** conditions very likely in isolated pockets of Himachal Pradesh and Bihar.
- **Cold wave** 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.

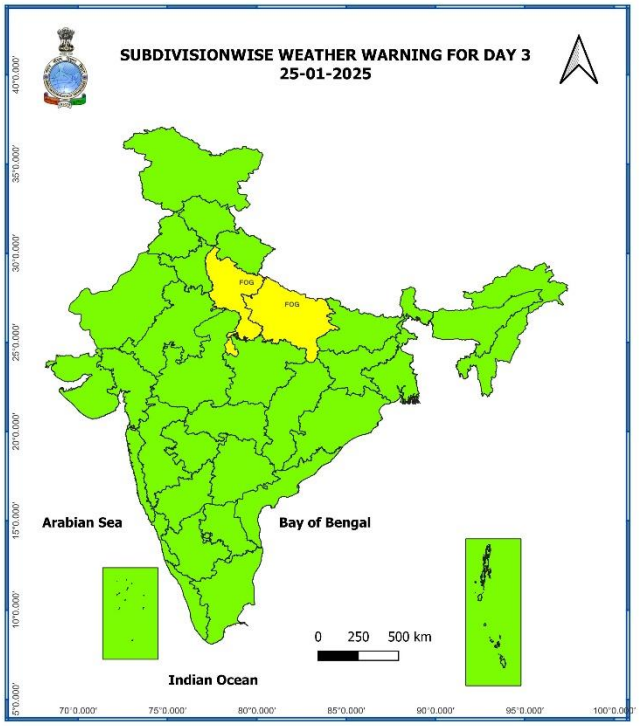




24th January (Day 2):

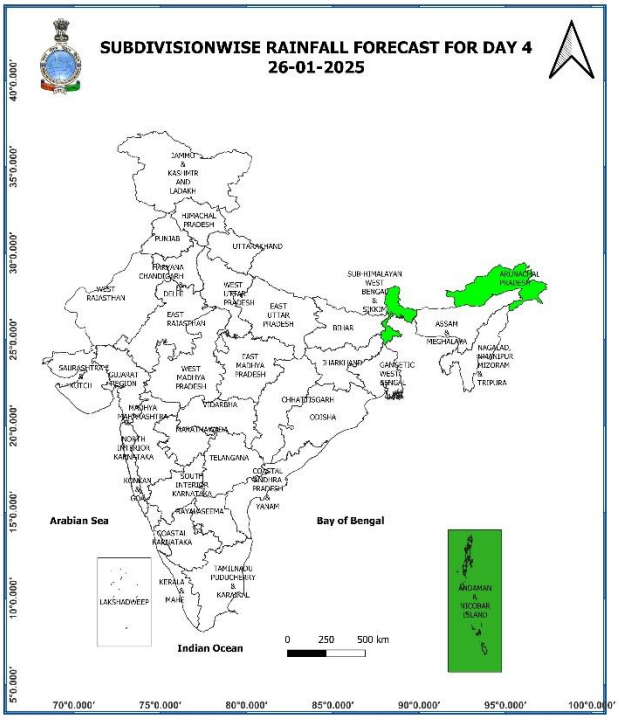
- **Dense fog conditions** very likely in isolated pockets of Uttar Pradesh.
- **Cold wave** conditions very likely in isolated pockets of Himachal Pradesh and Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.

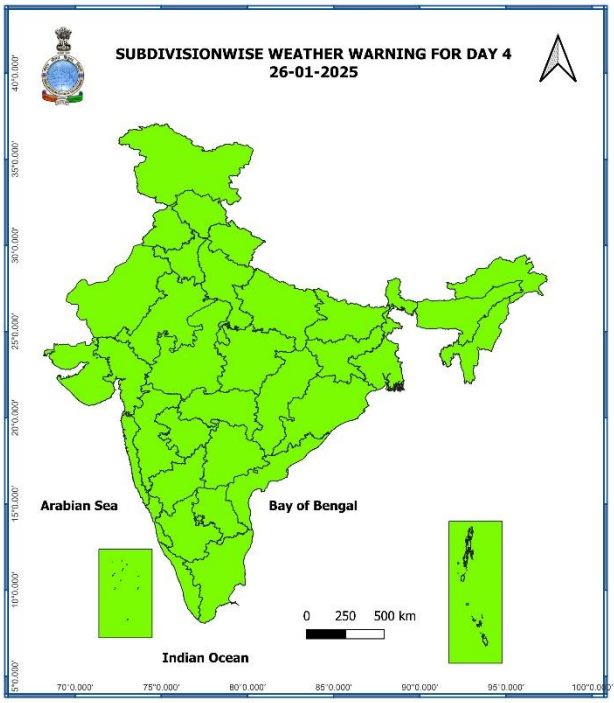




25th January (Day 3):

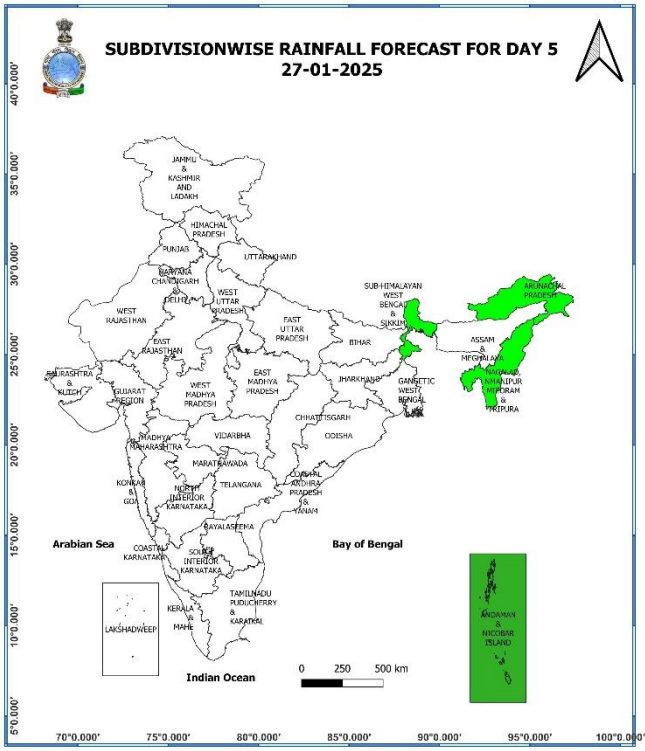
- **Dense fog conditions** likely in isolated pockets of Uttar Pradesh.

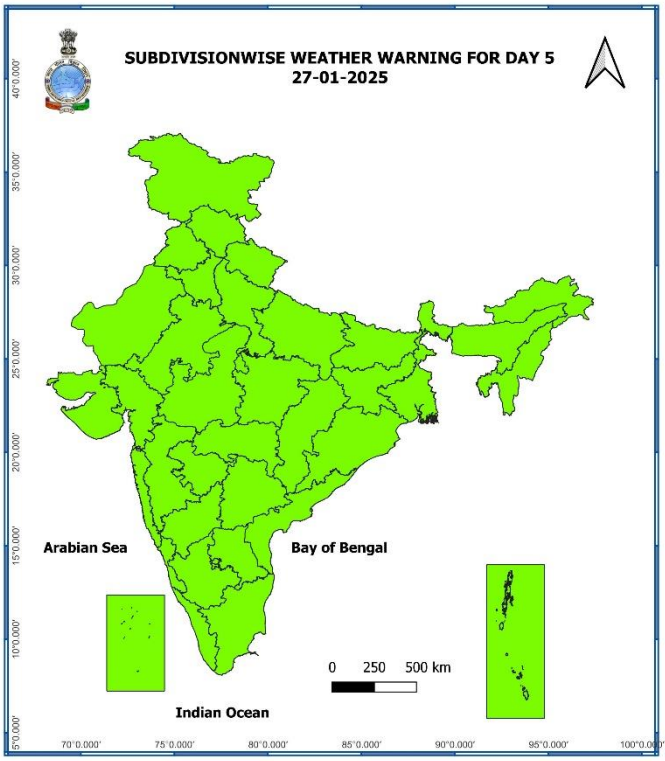




26th January (Day 4):

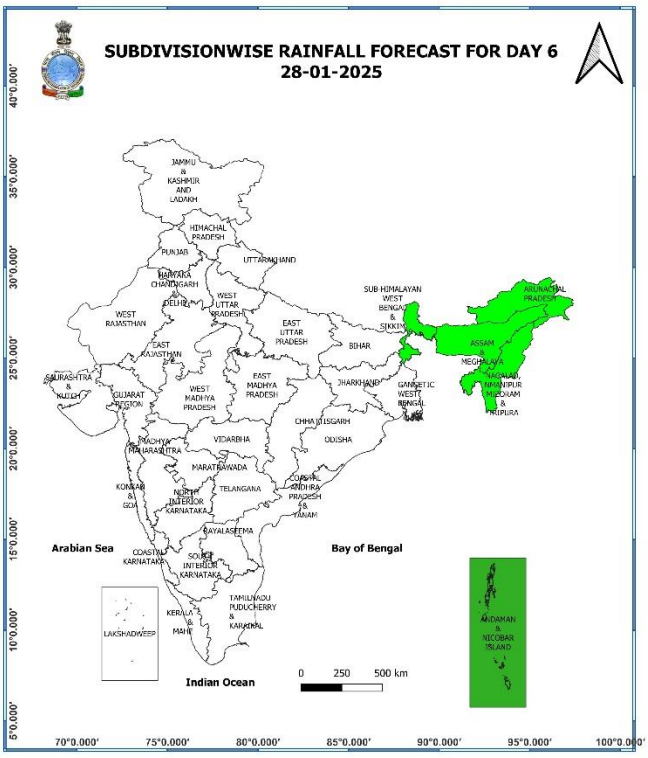
- **No Weather Warning.**

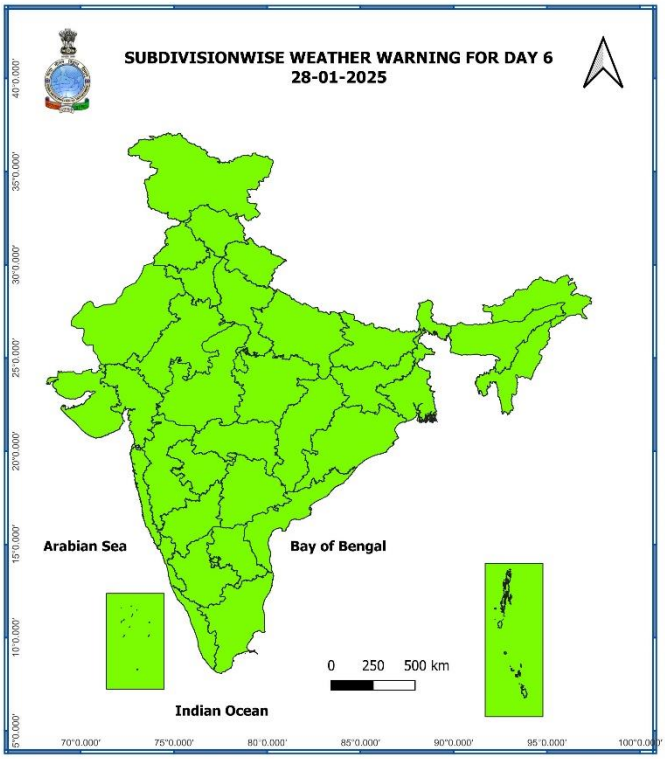




27th January (Day 5):

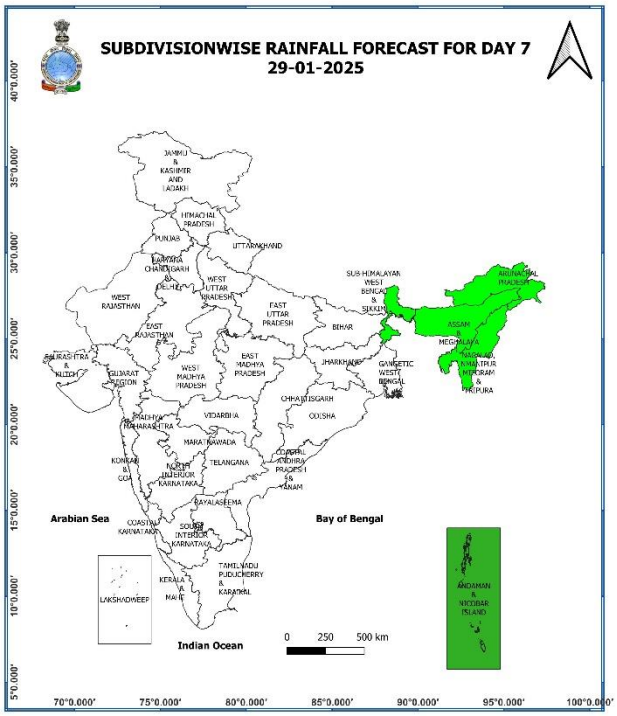
- **No Weather Warning.**

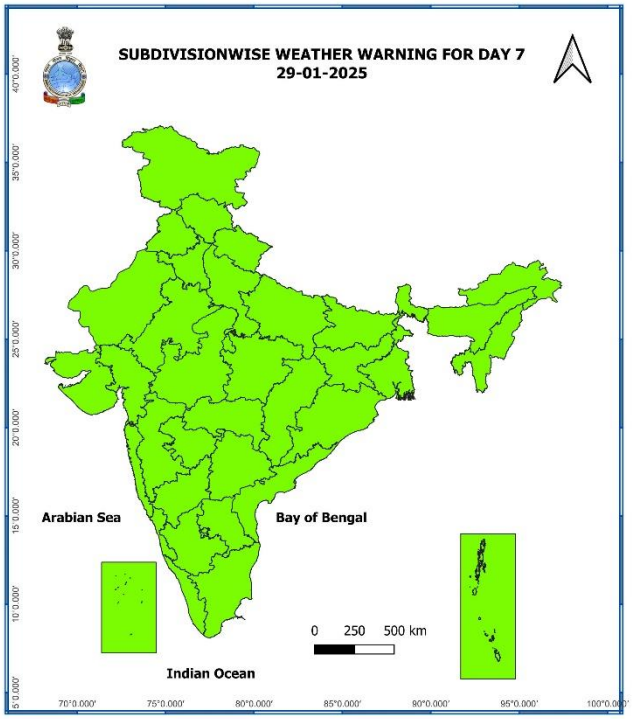




28th January (Day 6):

- **No Weather Warning.**





29th January (Day 7):

- **No Weather Warning.**

Weather Outlook for subsequent 3 days (During 30th January– 01st February, 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

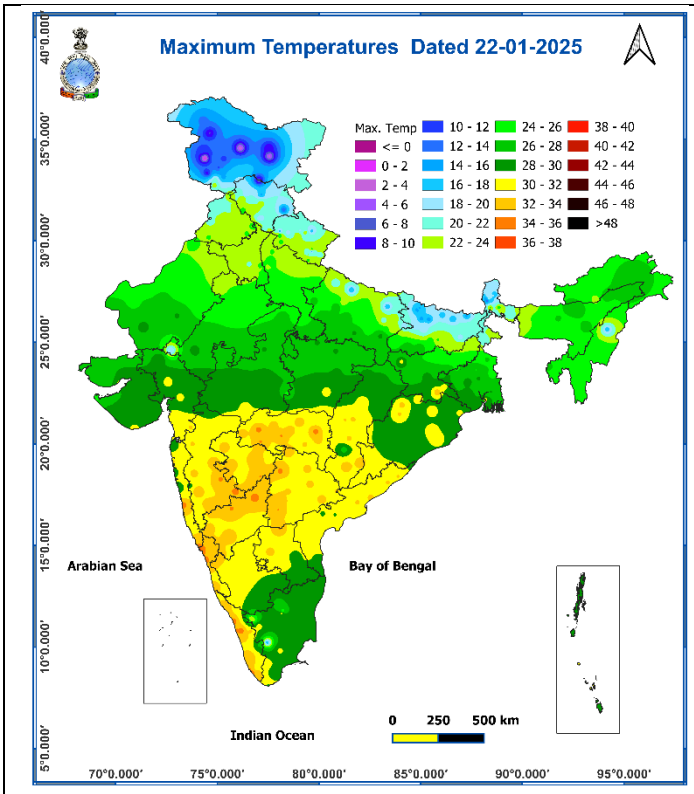


Fig. 2: Departure of Maximum Temperatures

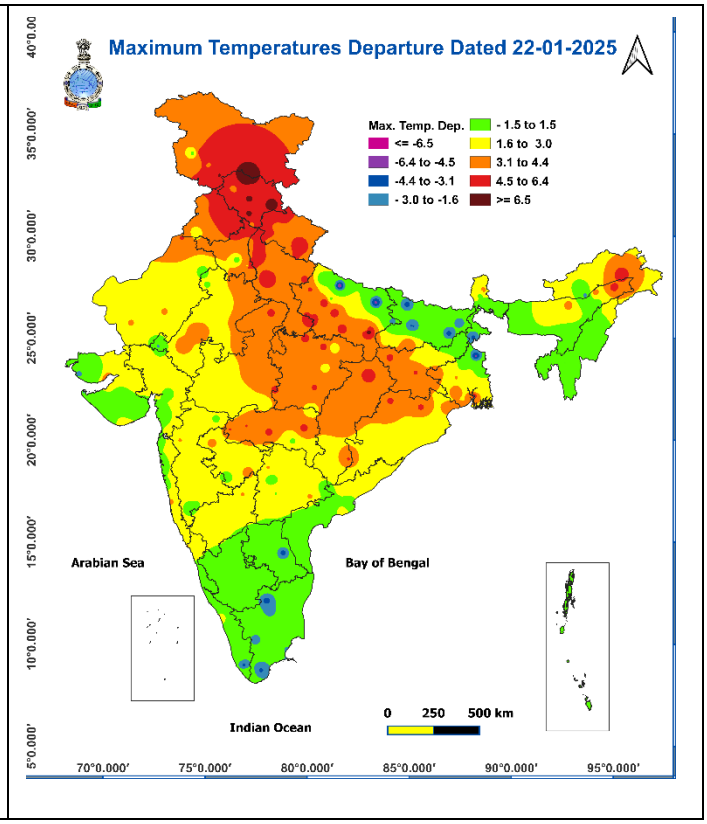


Fig. 3: Minimum Temperatures

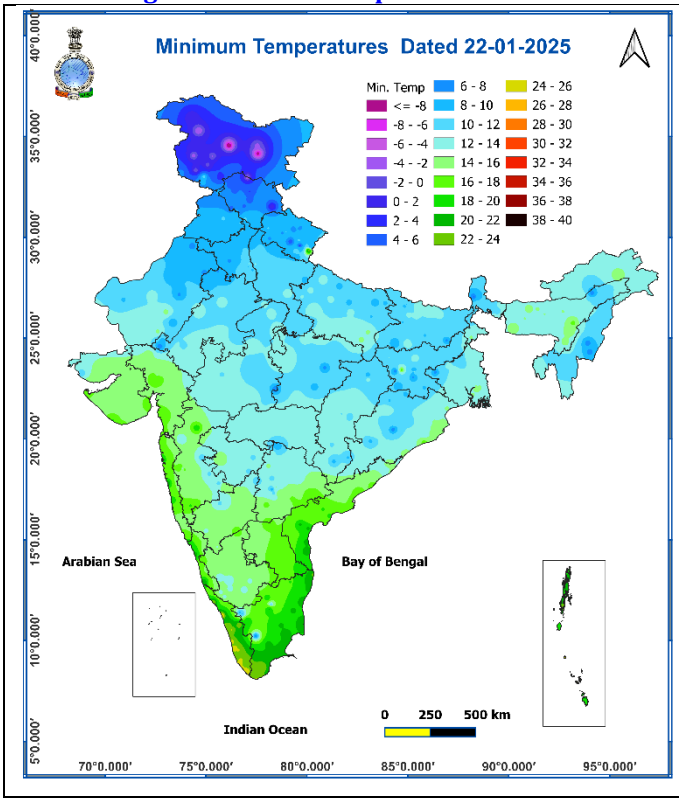
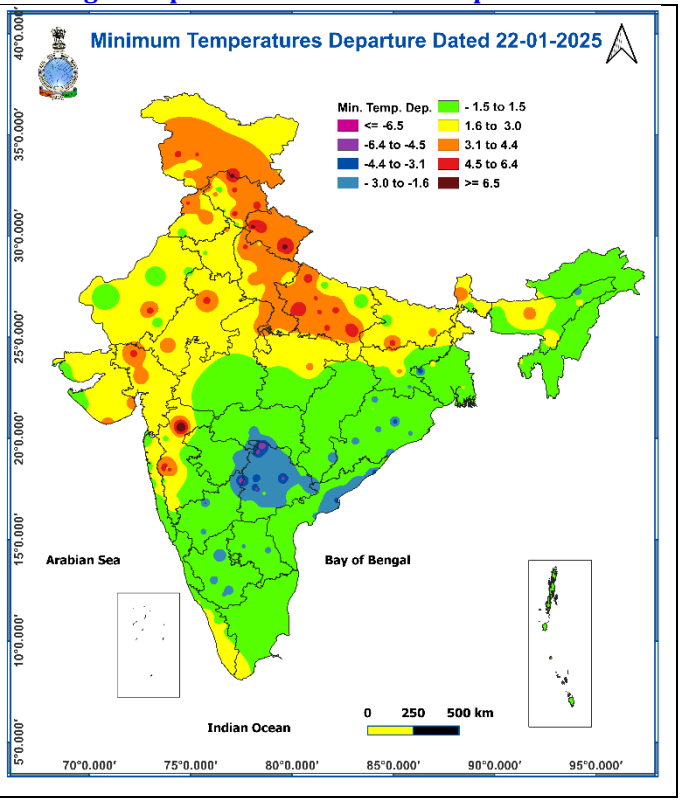


Fig. 4: Departure of Minimum Temperatures



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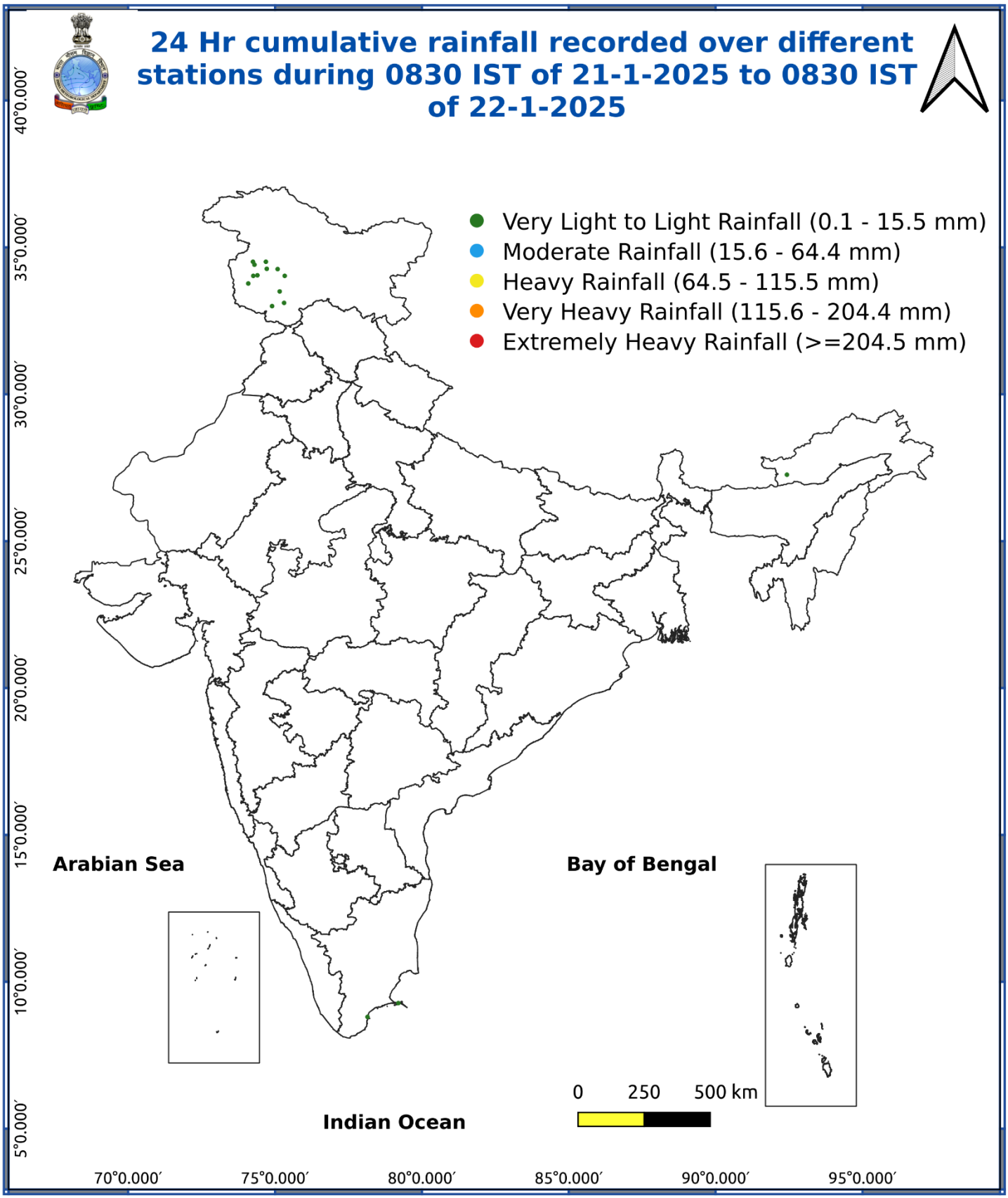
(Service to the Nation since 1875)

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

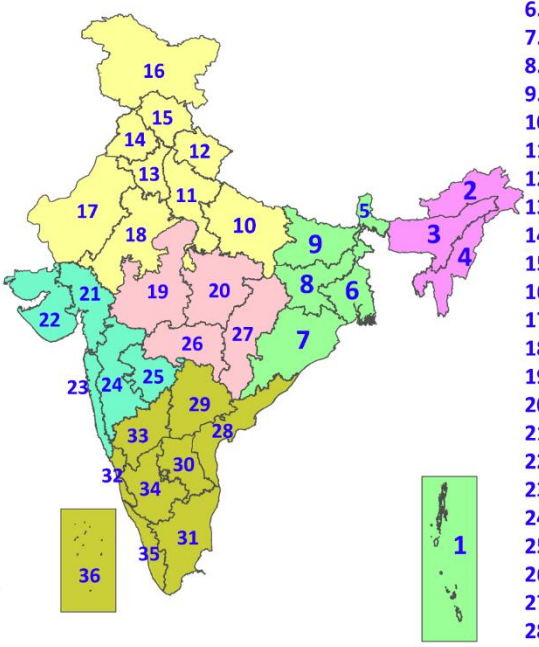
- Drain out excess water from rice, sugarcane, cotton, turmeric, vegetables, and other standing crop fields, as well as coconut and banana orchards in **Tamil Nadu** and from rice, coffee, banana, coconut, areca nut, ginger, pepper, cardamom and other standing crops in **Kerala.**
- Keep the harvested 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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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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