

Tuesday, January 28, 2025  
Time of Issue: 1330 hours IST  
(MID-DAY)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

#### **Weather Systems, Forecast and warning**

- ❖ A fresh **Western disturbance** seen as a cyclonic circulation over west Iran between lower to upper tropospheric levels. Another fresh **Western Disturbance** is likely to affect Western Himalayan Region from 01<sup>st</sup> February, 2025. Under their influence,
  - ✓ Scattered to fairly widespread light to moderate rainfall/snowfall activity likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad during 28<sup>th</sup> January- 03<sup>rd</sup> February; isolated to scattered rainfall/snowfall over Himachal Pradesh during 29<sup>th</sup> January-03<sup>rd</sup> February, Uttarakhand during 31<sup>st</sup> January-03<sup>rd</sup> February and isolated to scattered light to moderate rainfall over Punjab, Haryana, West Uttar Pradesh during 31<sup>st</sup> January-03<sup>rd</sup> February, Rajasthan, Chhattisgarh on 03<sup>rd</sup>, Madhya Pradesh and Vidarbha on 02<sup>nd</sup> & 03<sup>rd</sup> February, 2025.
- ❖ A **cyclonic circulation** lies over East Bangladesh in lower tropospheric levels. Under its influence,
  - ✓ Light to moderate rainfall accompanied with thunderstorm & lightning very likely at a few places over Sub-Himalayan West Bengal & Sikkim on 28<sup>th</sup>, Arunachal Pradesh during 28<sup>th</sup>-30<sup>th</sup>, Assam & Meghalaya on 29<sup>th</sup> & 30<sup>th</sup> January with isolated **hailstorm** likely over Sub-Himalayan West Bengal & Sikkim on 28<sup>th</sup> and Arunachal Pradesh on 30<sup>th</sup> January.
  - ✓ **Heavy rainfall/snowfall** likely over Arunachal Pradesh on 30<sup>th</sup> January.
- ❖ Under the influence of a easterly wave, Light to moderate rainfall accompanied with thunderstorm & lightning very likely at a few places over Tamil Nadu, Puducherry & Karaikal on 30<sup>th</sup> & 31<sup>st</sup> January and over Kerala & Mahe during 30<sup>th</sup> January-01<sup>st</sup> February, South Interior Karnataka on 01<sup>st</sup> February with isolated **heavy rainfall** likely over Tamil Nadu, Puducherry & Karaikal on 30<sup>th</sup> & 31<sup>st</sup> January and over Kerala & Mahe on 31<sup>st</sup> January.

#### **Temperature, Cold Wave and Fog Forecast:**

- ❖ Minimum temperatures are **4-10°C** over many parts of plains of Northwest India & adjoining Uttarakhand, East Madhya Pradesh and Jharkhand; **10-18°C** in many parts of West Madhya Pradesh, East & West India. Today, the lowest minimum temperature of **1.0°C** is reported at **Fatehpur Sikar (East Rajasthan)** over the plains of the country.
- ❖ During the past 24 hours, there has been **fall in minimum temperatures by 1-3°C** in isolated places of Gujarat Region, Konkan and **rise by 1-3°C** in some parts of Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Saurashtra & Kutch; in isolated places of Jammu- Kashmir, Uttar Pradesh, Rajasthan, Madhya Pradesh, Chhattisgarh, Gangetic West Bengal, Madhya Maharashtra, Telangana, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal.

#### **Forecast of temperature:**

- ❖ Rise in minimum temperatures by 2-4°C likely over Northwest, Central and East India during next 4 days and no significant change thereafter.
- ❖ No significant change in minimum temperatures likely over Maharashtra during next 2 days and gradual fall by 2-3°C during subsequent 3 days.
- ❖ No significant change in minimum temperatures likely over rest parts of the country.

#### **Cold Wave Warnings:**

**Cold Wave** conditions very likely in isolated pockets of Himachal Pradesh, Punjab and Haryana on 28<sup>th</sup> January.

#### **Dense Fog Warnings:**

**Dense to very Dense fog Conditions** very likely to continue to prevail during night/early morning hours in isolated pockets of Uttar Pradesh till 31<sup>st</sup> January.

**Dense fog conditions** very likely to continue to prevail during night/early morning hours in isolated pockets of Uttarakhand, Punjab, Haryana, Chandigarh till 29<sup>th</sup>; Sub-Himalayan West Bengal & Sikkim during 29<sup>th</sup>-31<sup>st</sup>; Gangetic West Bengal & coastal Odisha till 30<sup>th</sup> and over Bihar till 31<sup>st</sup> January, 2025.

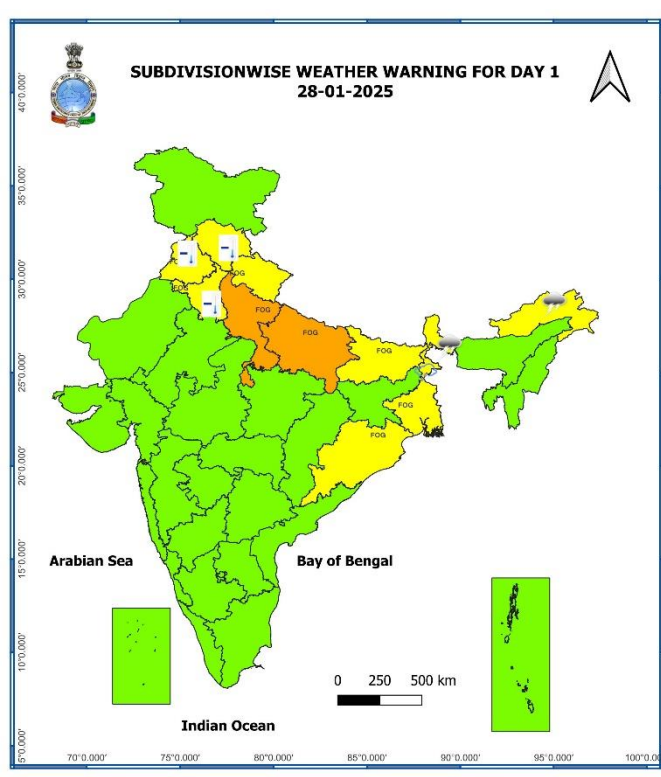
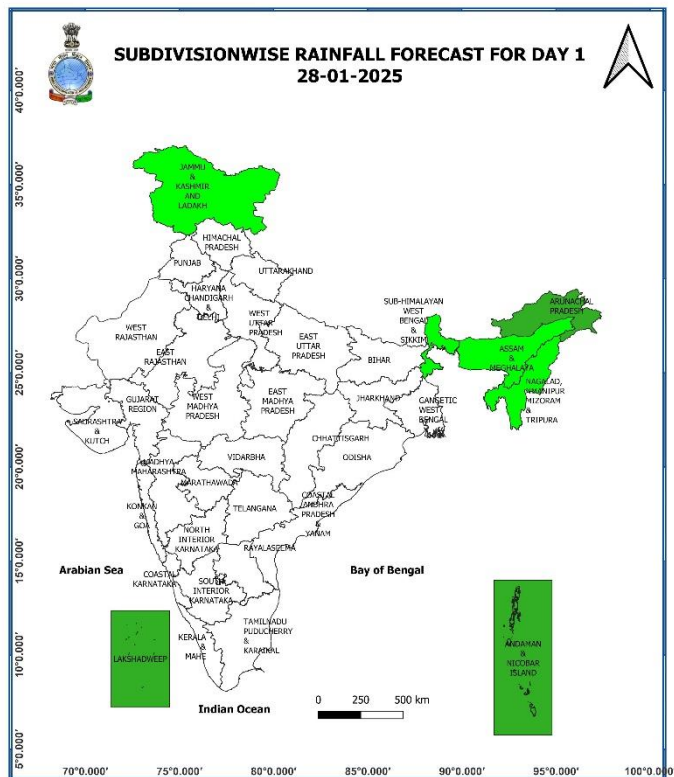
## Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at a few places over** Andaman & Nicobar Islands; **at isolated places over** Arunachal Pradesh and Assam & Meghalaya.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): **NIL**.
- ❖ **Fog reported** (at 0830 hours IST of today): **Dense to very dense fog conditions (visibility < 50 m)** reported in isolated pockets of North Uttar Pradesh, Bihar & coastal Odisha and **dense fog (visibility 50-199 m)** reported in isolated pockets of plains of Uttarakhand.
- ❖ **Visibility reported** (at 0830 hours IST of today) ( $\leq 200$  m): **West Uttar Pradesh:** Najibabad- 0 **Bihar:** Supaul, Forbesganj, Purnea-0 each, Motihari- 200; **East Uttar Pradesh:** Bahraich-0, Kushinagar- 50, Gorakhpur- 200; **Uttarakhand:** Pantnagar-100; **Odisha:** Paradip-0, Bhubaneswar-150; **Assam:** Rupsi-200.
- ❖ **Cold wave to severe cold wave conditions** prevailed in some parts of Himachal Pradesh & Punjab; in isolated pockets of East Rajasthan and **Cold Wave conditions** prevailed in isolated pockets of West Rajasthan and Haryana.
- ❖ **Minimum Temperature Departures (as on 28-01-2025):** Minimum temperatures are **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Gujarat State, Madhya Maharashtra and Bihar; **above normal (1.6°C to 3.0°C)** at a few places over Assam & Meghalaya; at isolated places over Odisha, West Madhya Pradesh, Chhattisgarh, Nagaland, Manipur, Mizoram & Tripura, Telangana. These are **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over East Rajasthan, East Madhya Pradesh; **below normal (-1.6°C to -3.0°C)** at most places over Delhi; at isolated places over Uttar Pradesh, Gangetic West Bengal, Jharkhand, Haryana-Chandigarh, Lakshadweep, Tamil Nadu, Puducherry & Karaikal and Andaman & Nicobar Islands and near normal over rest parts of the country (**Fig. 4**). Today, the **lowest minimum temperature of 1.0°C** is reported at **Fatehpur (Sikar) {East Rajasthan}** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 27-01-2025):** Maximum temperatures were **markedly above normal (5.1°C or above)** at a few over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; at isolated places over Himachal Pradesh; **appreciably above normal (3.1°C to 5.0°C)** at many places over Vidarbha, Saurashtra & Kutch; at isolated places Konkan & Goa, Madhya Maharashtra, Marathwada and Odisha ; **above normal (1.6°C to 3.0°C)** at a few places over Rajasthan, Assam, Lakshadweep; at isolated places over Punjab, Delhi, West Uttar Pradesh, Chhattisgarh, West Bengal & Sikkim, Gujarat Region, Telangana, Coastal Karnataka, Coastal Karnataka. These were **below normal (-1.6°C to -3.0°C)** at isolated places over East Madhya Pradesh and near normal over rest parts of the country (**Fig. 2**). Yesterday, the **highest maximum temperature of 37.2°C** was reported at **Kannur Airport (Kerala & Mahe)** over the plains of the country.

### Meteorological Analysis (Based on 0830 hours IST)

- ❖ A **Western disturbance** seen as a cyclonic circulation over west Iran & neighbourhood between 3.1 km & 9.4 km above mean sea level.
- ❖ The **cyclonic circulation** over East Bangladesh & neighbourhood persists and now seen between 1.5 km & 3.1 km above mean sea level.
- ❖ 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.
- ❖ A fresh **Western Disturbance** is likely to affect Western Himalayan Region from 01<sup>st</sup> February, 2025.

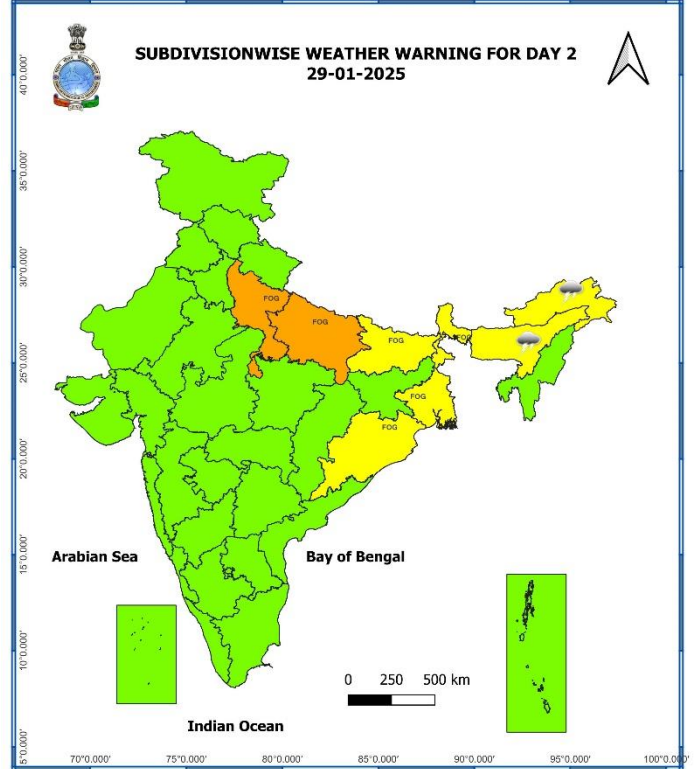
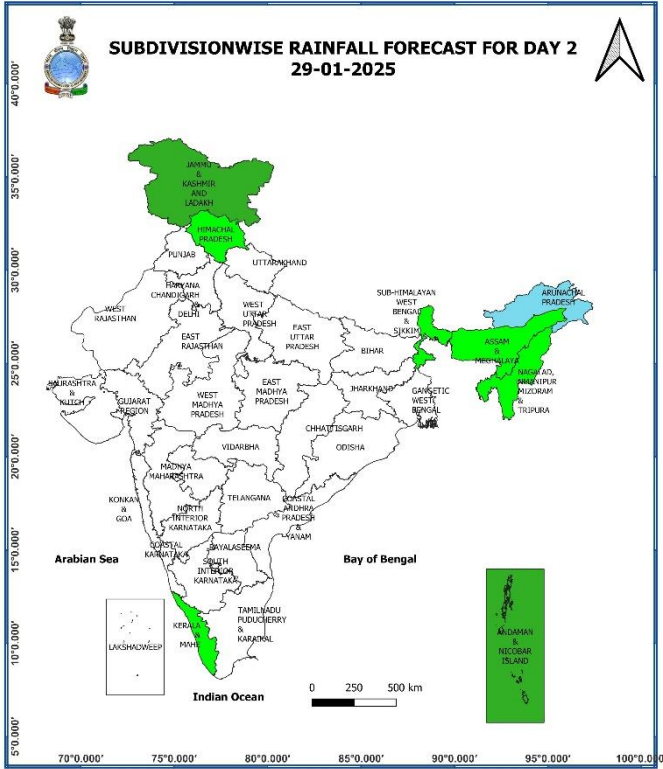
Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 04<sup>th</sup> February, 2025)



28<sup>th</sup> January (Day 1):

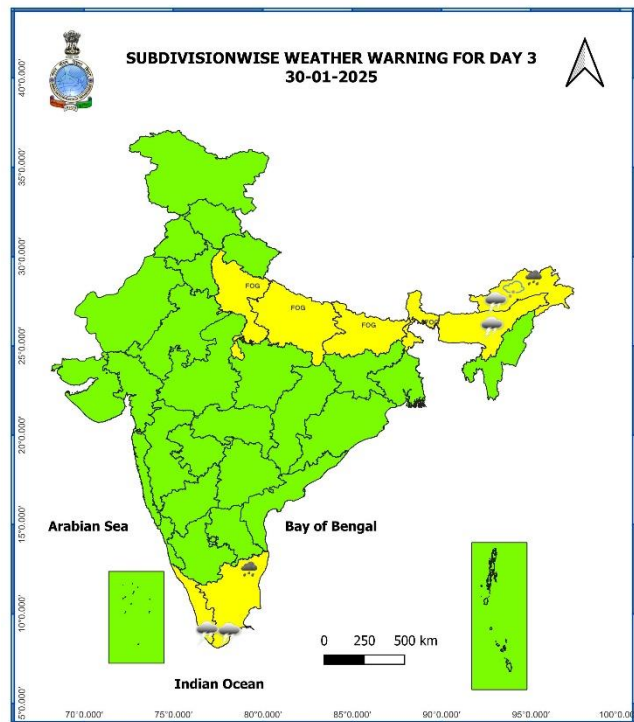
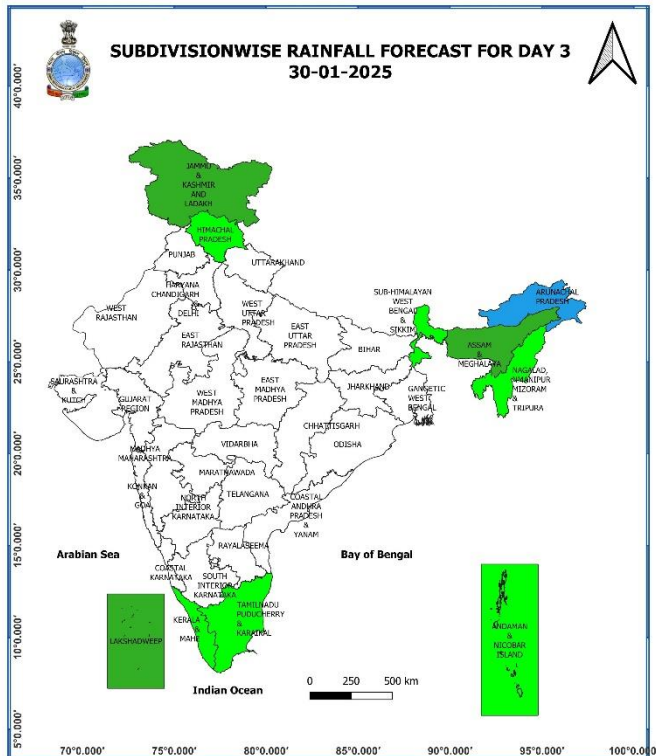
- ❖ **Dense to very dense fog conditions** very likely in isolated pockets of Uttar Pradesh and **dense fog conditions** in isolated pockets of Uttarakhand, Punjab, Haryana-Chandigarh, Gangetic West Bengal, Bihar and Odisha.
- ❖ **Cold wave conditions** very likely in isolated pockets of Himachal Pradesh, Punjab, Haryana and Chandigarh.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Arunachal Pradesh; **with hailstorm** very likely over Sub-Himalayan West Bengal & Sikkim.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over southwest Bay of Bengal and adjoining south Sri Lanka coast. Fishermen are advised not to venture into these areas.





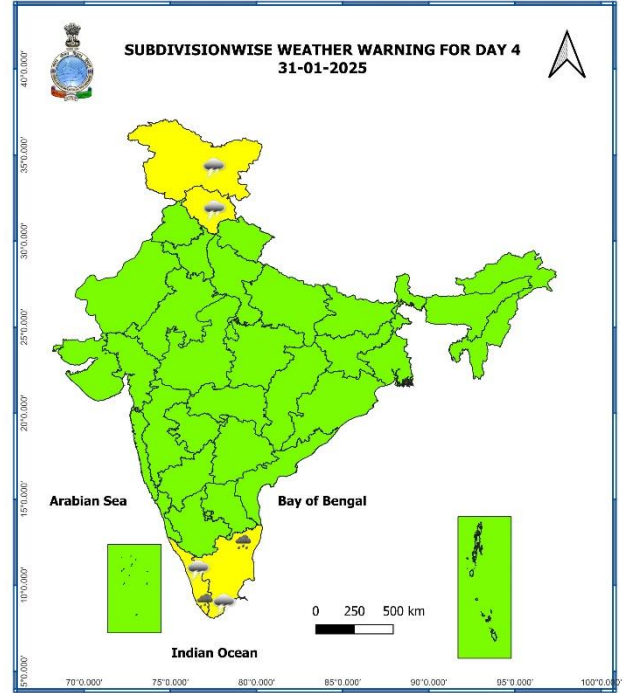
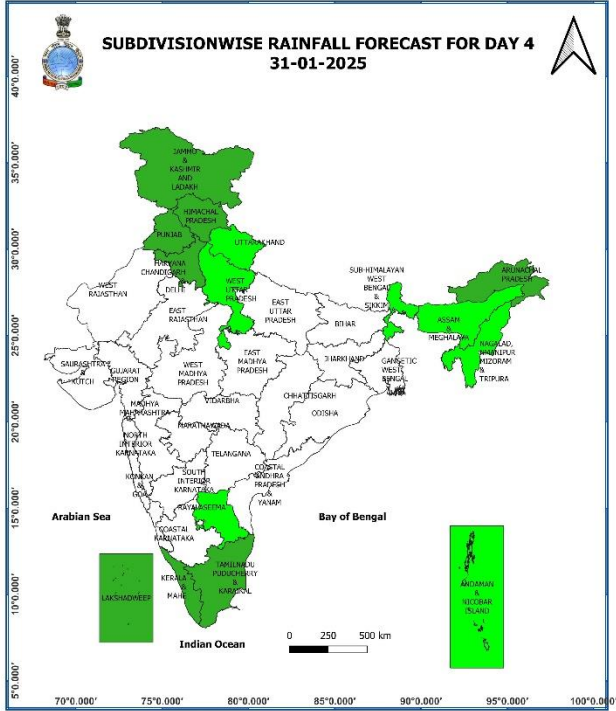
**29<sup>th</sup> January (Day 2):**

- ❖ **Dense to very dense fog conditions** very likely in isolated pockets of Uttar Pradesh and **dense fog conditions** in isolated pockets of West Bengal & Sikkim, Bihar and Odisha.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Arunachal Pradesh and Assam & Meghalaya.



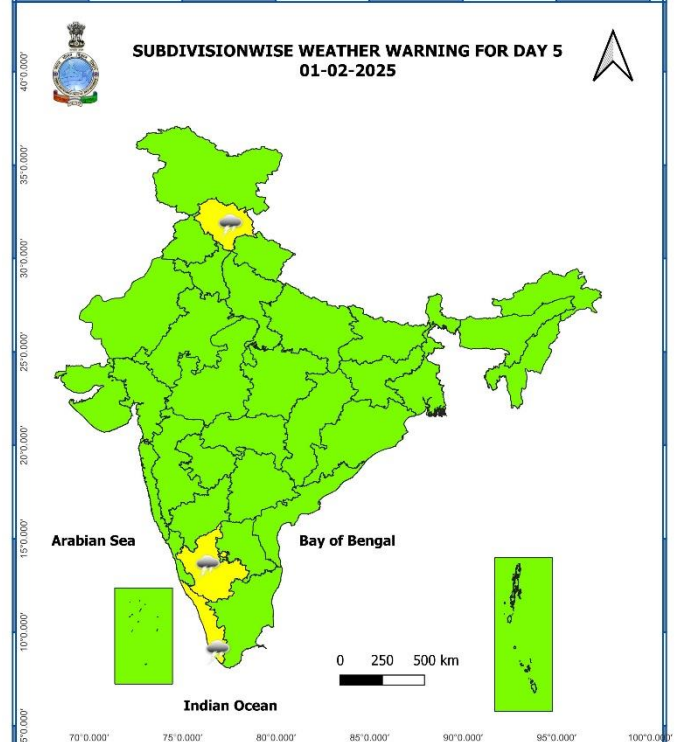
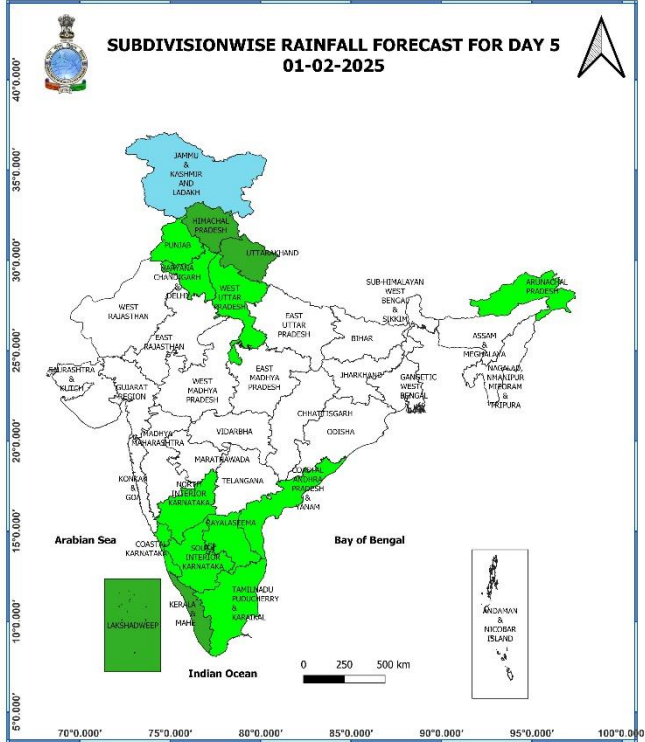
### 30<sup>th</sup> January (Day 3):

- ❖ **Heavy Rainfall/snowfall** likely at isolated places over Arunachal Pradesh; **Heavy Rainfall** likely at isolated places Tamil Nadu, Puducherry & Karaikal.
- ❖ **Dense fog conditions** likely in isolated pockets of Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim and Bihar.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Assam & Meghalaya, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe; **with hailstorm** very likely over Arunachal Pradesh.



**31<sup>st</sup> January (Day 4):**

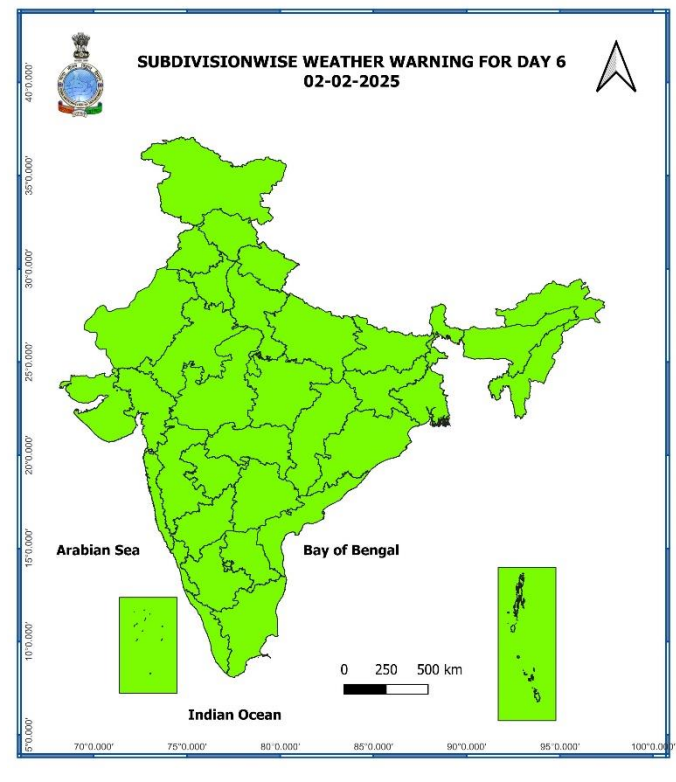
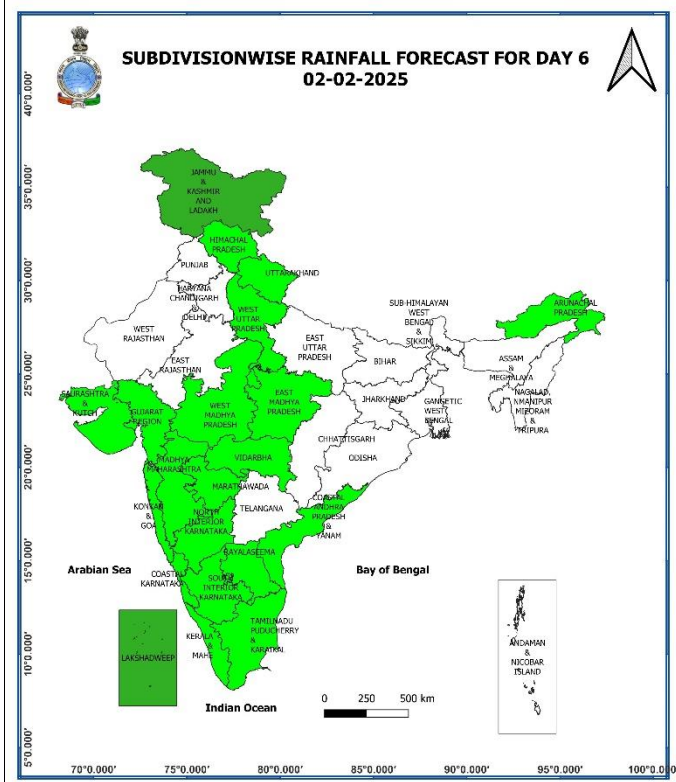
- ❖ **Heavy Rainfall** likely at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe



**01<sup>st</sup> February (Day 5):**

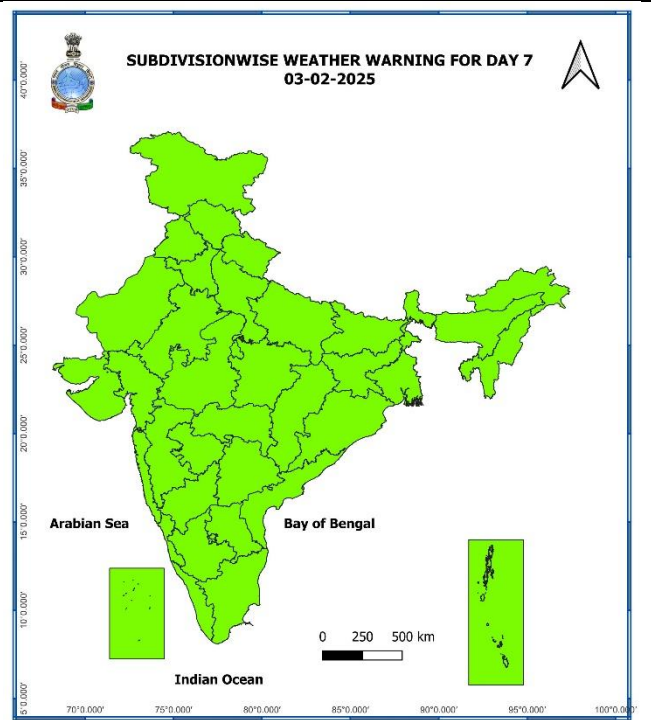
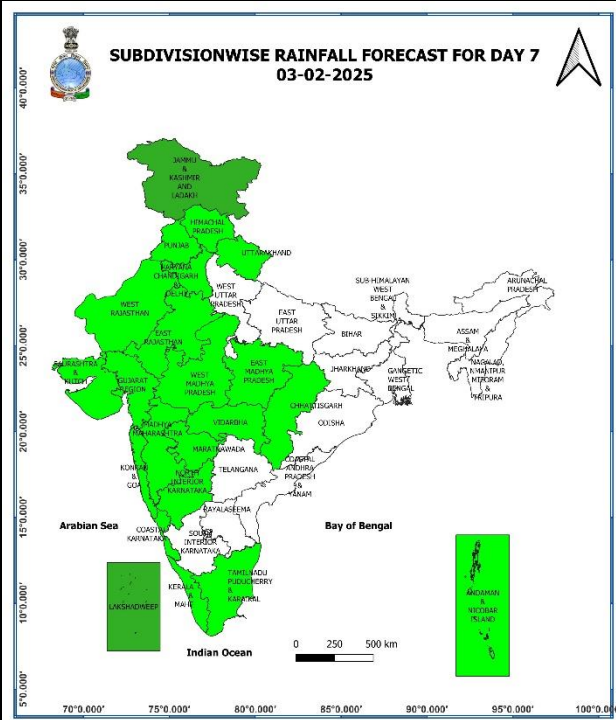
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Himachal Pradesh, Kerala & Mahe and South Interior Karnataka.





**02<sup>nd</sup> February (Day 6):**

❖ **No Weather Warning.**



**03<sup>rd</sup> February (Day 7):**

❖ **No Weather Warning.**

**Weather Outlook for subsequent 3 days (During 04<sup>th</sup> February- 06<sup>th</sup> February, 2025)**

❖ **Isolated to scattered rainfall likely** over western Himalayan region, Uttar Pradesh, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep and Andaman & Nicobar Islands

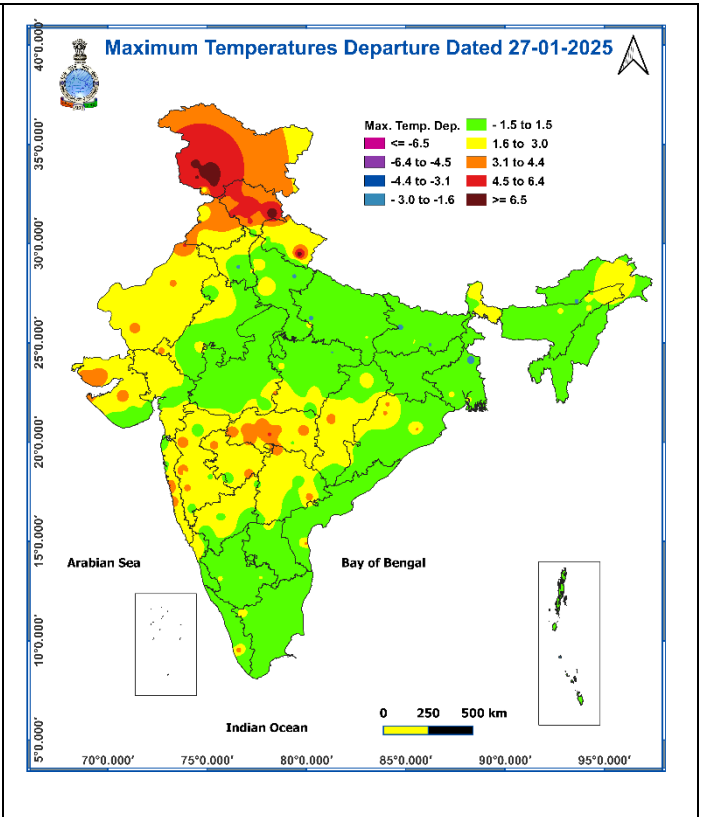
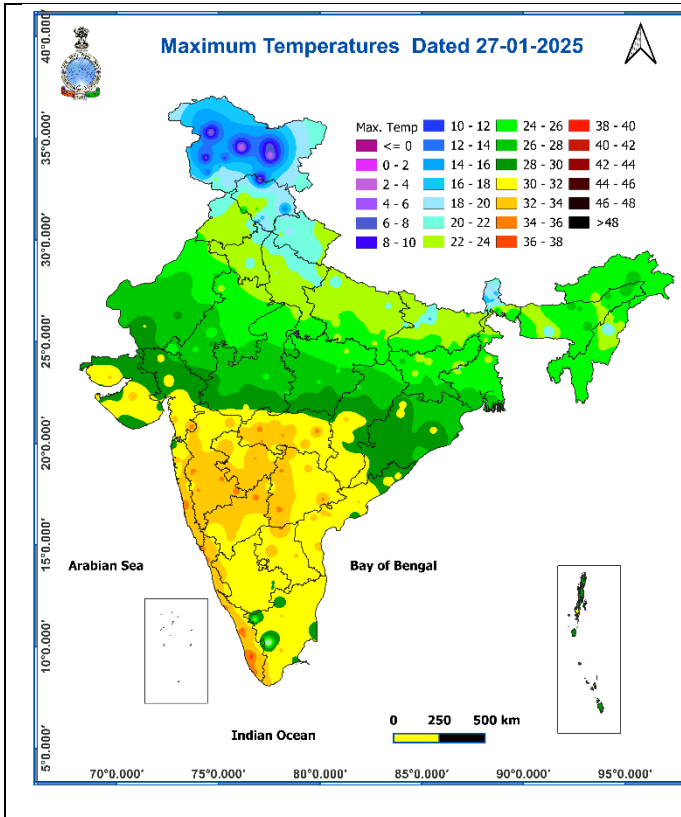
Action may be taken based on **ORANGE AND RED** COLOUR warnings.

- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

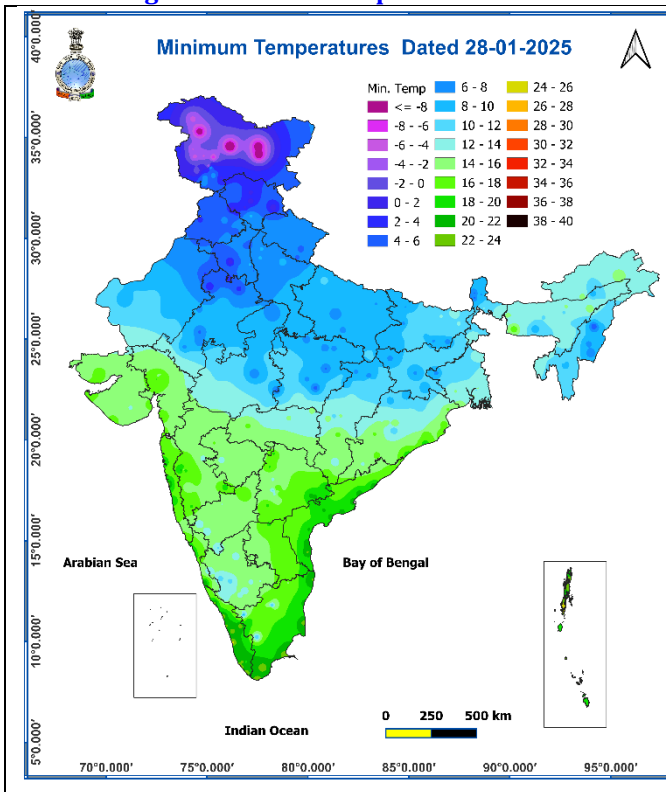
**Fig. 1: Maximum Temperatures**

**Fig. 2: Departure of Maximum Temperatures**

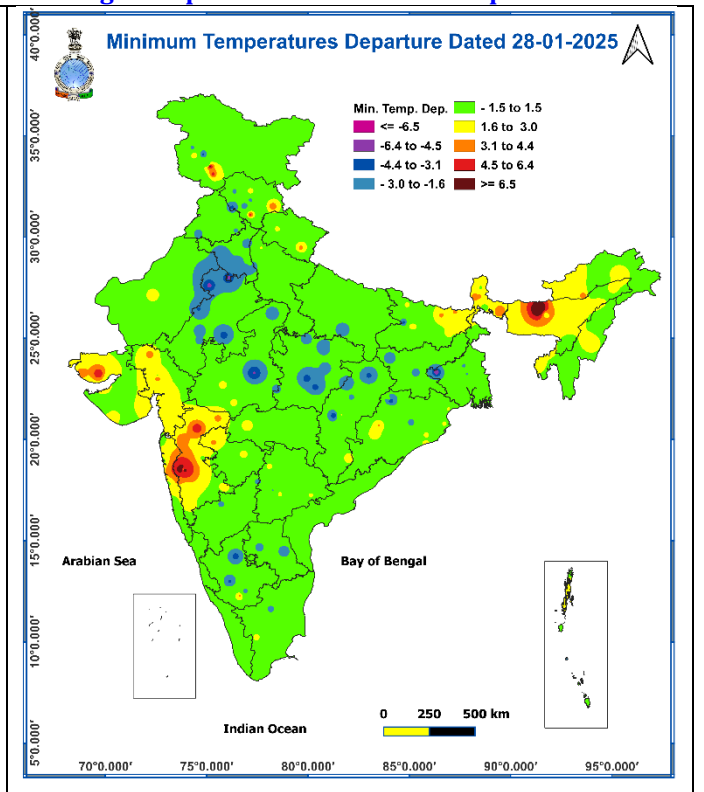
\* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".  
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.  
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599  
(Service to the Nation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



**Fig. 3: Minimum Temperatures**



**Fig. 4: Departure of Minimum Temperatures**



### 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 Wave 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.



## Impact expected and action suggested due to thunderstorm with lightning & Hailstorm.

### Impact expected:

- ❖ Strong wind/hail may damage plantation, horticulture and standing crops.
- ❖ Hail may injure people and cattle at open places.
- ❖ Partial damage to vulnerable structures due to strong winds.
- ❖ Minor damage to kutcha houses/walls and huts.
- ❖ Loose objects may fly.

### Action suggested:

- ❖ Stay indoors, close windows & doors and avoid travel if possible.
- ❖ Take safe shelters; do not take shelter under trees.
- ❖ Do not lie on concrete floors and do not lean against concrete walls.
- ❖ Unplug electrical/ electronic appliances.
- ❖ Immediately get out of water bodies.
- ❖ Keep away from all the objects that conduct electricity.

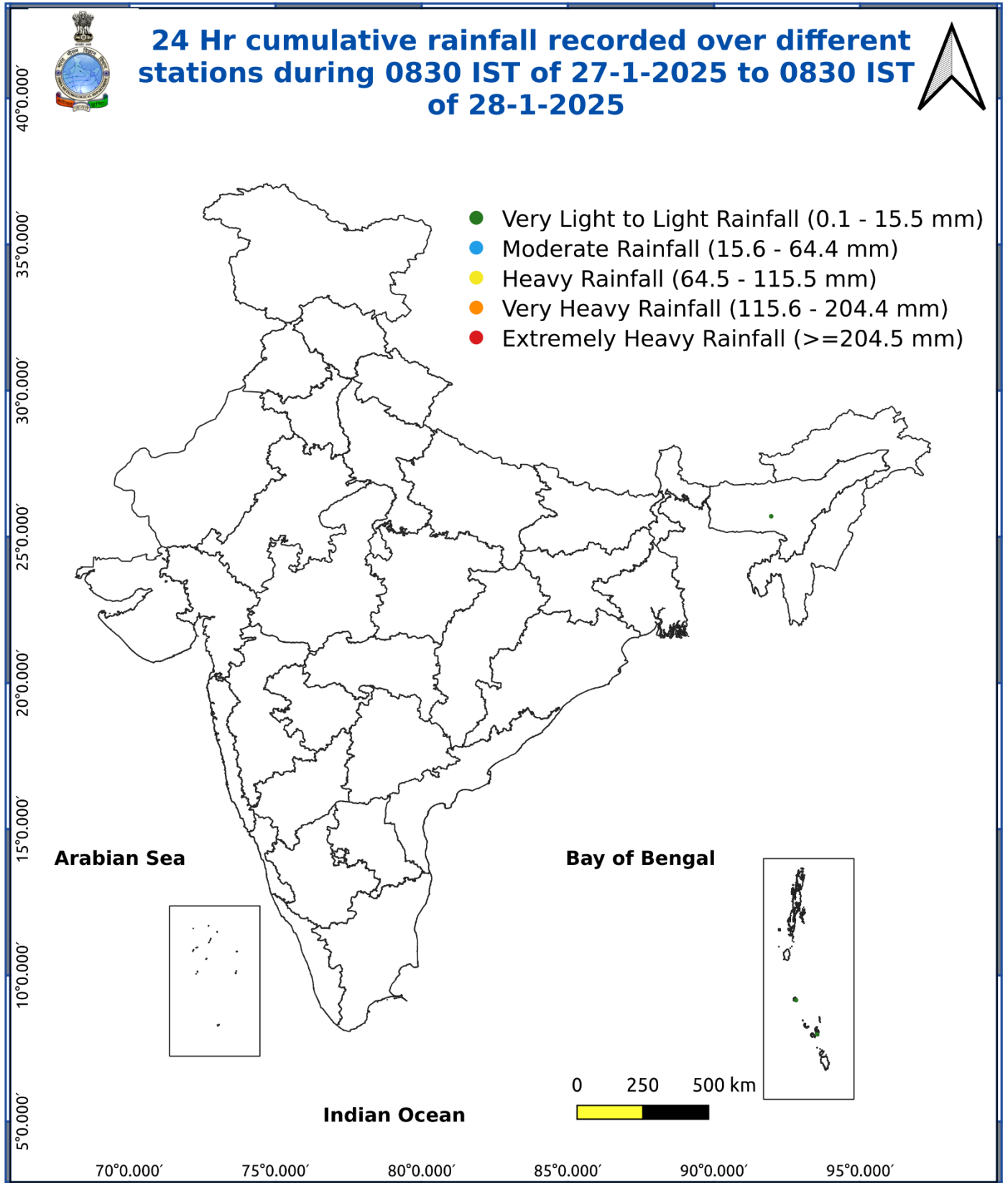
### Agromet advisories for likely impact of Hail/Cold Wave

- Use hail nets to protect orchards and vegetable plants in Sikkim.
- In Himachal Pradesh, Punjab and Haryana, apply light and frequent irrigation to the standing crops in the evening to protect them from low temperature stress or cold injuries. Use mulching and cover vegetable nurseries and young fruit plants with straw/polythene sheets to maintain optimum soil temperature.

### Livestock

- To protect from cold, keep cattle inside the sheds during night and provide dry bedding. Also keep the chicks warm by providing artificial light in the poultry sheds.

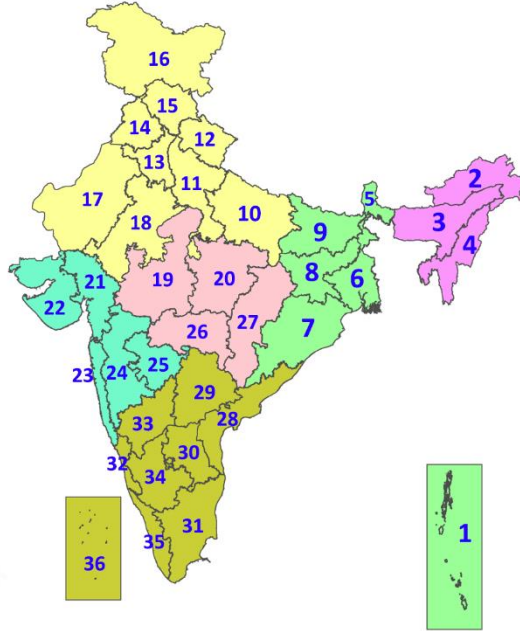
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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## 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 \*

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  $\geq 40^\circ\text{C}$  for plains and  $\geq 30^\circ\text{C}$  for hilly regions  
(a) Based on Departure from normal

Heat Wave: Maximum Temperature Departure from normal  $4.5^\circ\text{C}$  to  $6.4^\circ\text{C}$ .  
Severe Heat Wave: Maximum Temperature Departure from normal  $\geq 6.5^\circ\text{C}$

(b). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature  $\geq 45^\circ\text{C}$ .  
Severe Heat Wave: When actual maximum temperature  $\geq 47^\circ\text{C}$

(c) Criteria for heat wave for coastal stations

When maximum temperature departure is  $> 4.5^\circ\text{C}$  from normal. Heat Wave may be described provided maximum temperature  $\geq 37^\circ\text{C}$

### Warm Night

When maximum temperature remains  $40^\circ\text{C}$

Warm Night: When minimum temperature departure  $4.5^\circ\text{C}$  to  $6.4^\circ\text{C}$ .  
Severe Warm Night: When minimum temperature departure  $> 6.4^\circ\text{C}$ .

### Cold Wave

When minimum temperature of a station  $\leq 10^\circ\text{C}$  for plains and  $\leq 0^\circ\text{C}$  for hilly regions.  
(a). Based on departure

Cold Wave: Minimum Temperature Departure from normal  $-4.5^\circ\text{C}$  to  $-6.4^\circ\text{C}$ .  
Severe Cold Wave: Minimum Temperature Departure from normal  $\leq -6.5^\circ\text{C}$

(b) Based on actual Minimum Temperature (for Plains only)

Cold Wave : When Minimum Temperature is  $\leq 4.0^\circ\text{C}$   
Severe Cold Wave: When Minimum Temperature is  $\leq 2.0^\circ\text{C}$

(c) For Coastal Stations

When Minimum Temperature departure is  $\leq -4.5^\circ\text{C}$  & actual Minimum Temperature is  $\leq 15^\circ\text{C}$

### Cold Day

When minimum temperature of a station  $\leq 10^\circ\text{C}$  for plains and  $\leq 0^\circ\text{C}$  for hilly regions  
Based on departure

Cold Day: Maximum Temperature Departure from normal  $-4.5^\circ\text{C}$  to  $-6.4^\circ\text{C}$ .  
Severe Cold Day: Maximum Temperature Departure from normal  $\leq -6.5^\circ\text{C}$

### Fog

Phenomenon of small droplets suspended in air and the horizontal visibility  $< 1\text{km}$

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  $\leq 4^\circ\text{C}$  ( 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)